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1994 Northridge Earthquake Performance of Structures, Lifelines, and Fire Protection Systems

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Northridge Earthquake 1994 Performance Of Structures Lifelines And Fire Protection Systems

Robert B. Olshansky



Northridge Earthquake 1994 Performance Of Structures Lifelines And Fire Protection Systems:

1994 Northridge Earthquake Diana Todd,1994 *1994 Northridge earthquake* ,1994 *Northridge Earthquake 1994 - Performance of Structures, Lifelines and Fire Protection Systems* DIANE Publishing Company,1994-07-01 A team of experts reports that the earthquake that struck the Los Angeles area in January 1994 revealed both good grades bad for current building codes The team found that most structures designed built after the mid 1970s when tougher building codes were enacted performed well However it urged improvements in codes for parking garages due to several unexpected collapses of relatively modern structures It also called for national seismic standards for protection of electrical power gas water telecommunications other lifelines **1994 Northridge earthquake** ,1994 **1994 Northridge Earthquake** nist,National Institute of Standards and Technology,2014-01-17 A magnitude 6.8 Ms earthquake centered under the community of Northridge in the San Fernando Valley shook the entire Los Angeles metropolitan area at 4:31 a.m. local time on Monday January 17, 1994. Moderate damage to the built environment was widespread; severe damage included collapsed buildings and highway overpasses. A total of 58 deaths were attributed to the earthquake by the Los Angeles Coroner. About 1,500 people were admitted to hospitals with major injuries; another 16,000 or so were treated and released. Estimates of the number of people temporarily or permanently displaced because of damage to their houses or apartments ranged from 80,000 to 125,000. Estimates indicate that this will be the United States' most costly natural disaster ever. A multi-agency team organized under the auspices of the Interagency Committee on Seismic Safety in Construction and headed by the National Institute of Standards and Technology arrived at the earthquake site within days of the event to document the effects of the earthquake. The team focused on the effects to the built environment with the goal of capturing perishable data and quickly identifying situations deserving in-depth study. This report includes a summary of the team's observations. While most structural damage occurred in buildings and bridges of construction type and vintage known to be vulnerable to earthquake shaking, there were some unexpected failures. Notable among these were the collapses of relatively modern parking structures and a bridge that appeared to be adequate by today's standards. Recommendations are made for further studies of the Northridge earthquake that can lead to improved mitigation of earthquake effects. SEE ALSO NISTIR 5396 *Directory of Northridge Earthquake Research* Brian Cowan,Michael Mahoney,Stephen A. Mahin,2000-07 This invitation conference held Dec 2 and 3, 1994 included earth scientists, engineers, social scientists, agency program managers and practitioners and others who implement earthquake research. Chapters include NSF-funded Northridge Earthquake researchers' summary of USGS Northridge supplementary funding, NIST Northridge research, FEMA Northridge research, organizational research programs, Calif. Div. of Mines and Geology, Calif. Seismic Safety Comm., EERI, NCEER, NHRAIC, Rand Critical Technologies Inst. and SAC Joint Venture Info Services, EERC, NISEE, NCEER Info Services and OES, DFO and individuals' research projects.

Publications of the National Institute of Standards and Technology ... Catalog National Institute of Standards and

Technology (U.S.), National Institute of Standards and Technology (U.S.). Information Resources and Services Division, 1994
Building and Fire Research Laboratory Publications Building and Fire Research Laboratory (U.S.), 1994 **Monthly Catalogue, United States Public Documents**, 1995-03 *The January 17, 1995 Hyōgo-ken-Nanbu (Kobe) Earthquake*, 1996 **National Earthquake Hazards Reduction Program** United States. Congress. Senate. Committee on Commerce, Science, and Transportation. Subcommittee on Science, Technology, and Space, 1997 **Earthquake Engineering for Structural Design** W.F. Chen, E.M. Lui, 2005-11-02 Many important advances in designing earthquake resistant structures have occurred over the last several years Civil engineers need an authoritative source of information that reflects the issues that are unique to the field Comprising chapters selected from the second edition of the best selling Handbook of Structural Engineering this book provides a tightly focused economical guide to the theoretical practical and computational aspects of earthquake engineering It discusses the fundamentals of earthquake engineering the various types of earthquake damage to structures seismic design of buildings and bridges and performance based seismic design and evaluation of building structures *NIST Special Publication*, 1994 *NIST Building & Fire Research Laboratory Publications*, 1994

Handbook of Structural Engineering W.F. Chen, E.M. Lui, 2005-02-28 Continuing the best selling tradition of the Handbook of Structural Engineering this second edition is a comprehensive reference to the broad spectrum of structural engineering encapsulating the theoretical practical and computational aspects of the field The contributors cover traditional and innovative approaches to analysis design and rehabilitation New topics include fundamental theories of structural dynamics advanced analysis wind and earthquake resistant design design of prestressed structures high performance steel concrete and fiber reinforced polymers semirigid frame structures structural bracing and structural design for fire safety

Promoting the Adoption and Enforcement of Seismic Building Codes Robert B. Olshansky, 1998 Provides background information and educational materials to help state officials promote the adoption and enforcement of state and local model building codes that contain the latest seismic provisions These codes can reduce the damage that will occur when future earthquakes strike at risk parts of the country It is intended for state earthquake program managers and hazard mitigation officers in the emergency management agencies of the states and territories prone to earthquakes It is designed to help you convince your state and local governments that codes are effective inexpensive and a good investment for the future of our communities Illustrated **Seismic Retrofit of Existing Buildings** Matthew Fox, Weng Yuen Kam, Damian Grant, 2024-09-19 Seismic Retrofit of Existing Buildings is a concise and easy to use guideline for practising engineers to assess and design successful seismic retrofit interventions for existing vulnerable buildings It offers readers guidance on both conceptual design strategies and relevant detailed design considerations **Emergency Management and Social Intelligence** Charna R. Epstein, Ameya Pawar, Scott. C. Simon, 2014-12-19 For effective preparedness emergency managers must comprehend how a disaster impacts not only the physical infrastructure of the affected community but also the

population They must understand how the people interact with one another how they interact with government and how they react to the disaster event In other words they must have social capital
Journal of Research of the National Institute of Standards and Technology ,1994 **National Earthquake Hazards Reduction Program** United States. Congress. House. Committee on Science. Subcommittee on Basic Research,1997

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