## **Security RMS Publications**

- **FEMA 426**, Reference Manual to Mitigate Potential Terrorist Attacks Against Buildings
- FEMA 427, Primer for Design of Commercial Buildings to Mitigate Terrorist Attacks
- FEMA 428, Primer to Design Safe School Projects in Case of Terrorist Attacks
- **FEMA 429**, Insurance, Finance, and Regulation Primer for Terrorism Risk Management in Buildings
- FEMA 452, Risk Assessment: A How-To Guide to Mitigate Potential Terrorist Attacks Against Buildings
- FEMA 453, Design Guidance for Shelters and Safe Rooms
- E155, Building Design for Homeland Security

## Future Natural Disaster RMS Publications

- FEMA 452 (Enhanced), Risk Assessment: A How-To Guide to Mitigate Potential Terrorist Attacks Against Buildings
- FEMA 582, Design Guide for Improving Commercial Building Safety in Earthquakes, Floods, and Winds

## **Future Security RMS Publications**

- **FEMA 430**, Primer for Incorporating Building Security Components in Architectural Design
- FEMA 455, Rapid Visual Screening for Building Security
- FEMA 459, Incremental Rehabilitation to Improve Building Security

FEMA 430, Site and Urban Design for Security

For more information, please visit www.fema.gov/plan/prevent/rms/index.shtm, or e-mail, Milagros Kennett at riskmanagementseriespubs@dhs.gov

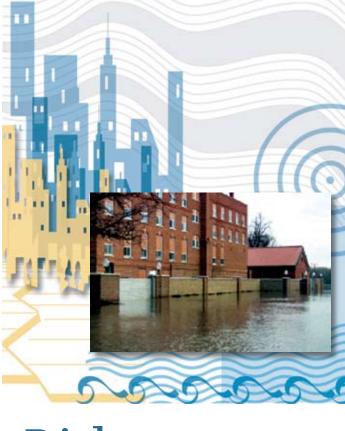
What is the Risk Management Series?

Reference Ma

Building Design for Homeland Security

he Risk Management Series (RMS) is a new FEMA series directed at providing design guidance for mitigating multihazard events. The objective of the series is to reduce physical damage to structural and nonstructural components of buildings and related infrastructure, and to reduce resultant casualties during natural and manmade disasters.

The RMS is intended to minimize conflicts that may arise from a multihazard design approach. A multihazard approach requires a complex series of tradeoffs. Security concerns need to be balanced with requirements in terms of earthquakes, floods, high speed winds, accessibility, fire protection, and aesthetics, among others. Designing to mitigate natural hazards should avoid considering manmade hazards as an afterthought, but rather as a critical concern to be studied early during the project cycle. Natural hazards are the largest single contributor to catastrophic or repetitive damage to communities nationwide. Manmade hazards can be categorized as rare events with a potential high impact and very difficult to predict.



# Risk Management Series

Minimizing the Effects of Natural Disasters and Potential Terrorist Attacks on Large Buildings





#### **FEMA 389**

Primer for Design Professionals: Communicating with Owners and Managers of New Buildings on Earthquake Risk

This Primer is directed at educating building owners and managers about seismic risk tools that can be effectively and economically employed by them during the building development phase – from site selection through design and construction – and the operational phase. This document introduces and discusses seismic risk management; guidance for identifying and assessing earthquake-related hazards during the site selection process; emerging concepts in performance-based seismic design; and seismic design and performance according to building types.



### **FEMA 424**

Design Guide for Improving School Safety in Earthquakes, Floods, and High Winds

FEMA 424 is intended to provide design guidance

for the protection of school buildings and their occupants against natural hazards, and concentrates on grade schools (K-12). The focus is on the design of new schools, but the repair, renovation, and extension of existing schools is also addressed. The manual introduces concepts on multihazard design and performance-based design and presents a general description and comparison of the hazards, including charts that show where design against each hazard interacts with design for other hazards.



#### **FEMA 454**

## Designing for Earthquakes: A Manual for Architects

This publication is intended to explain the principles of seismic design for those that have less rigorous technical backgrounds in engineering and seismology.

The primary intended audience of this publication is architects. This includes practicing architects, architectural students, and faculty in architectural schools who teach structures and seismic design. Chapters include: the Nature of Earthquake and Seismic Risk; Site Evaluation and Selection; Earthquake Effects on Buildings; Seismic Issues in Architectural Design; the Regulation of Seismic Design; Seismically Resistant Design – Past, Present, and Future; Existing Buildings: Seismic Evaluation and Retrofit; and Nonstructural Design Philosophy.



#### **FEMA 543**

Design Guide for Improving Critical Facility Safety from Flooding and High Winds — Training Course

This manual concentrates on critical facilities (hospitals, schools, fires and police stations, and emergency operations centers). It is based on the behavior of critical facilities during Hurricane Katrina and makes recommendations on the performance of

these types of buildings. It includes extensive information on the impact of storm surges to the Gulf

area. The manual is accompanied by a two-day training course.





This publication provides

design information for the construction of new hospitals and rehabilitation of existing ones with the purpose of improving their performance during the immediate aftermath of various hazard events. This manual is concerned with factors such as performance based design and continuity of operations for this type of building. It provides a multihazard approach highlighting conflicts and benefits to consider when designing.

## Incremental Seismic Rehabilitation Series

- **FEMA 395**, Schools (K-12)
- FEMA 396, Hospitals

Design Guide

- FEMA 397, Office Buildings
- **FEMA 398**, Multifamily Apartments
- FEMA 399, Retail Buildings
- FEMA 400. Hotels and Motels

These publication provide building administrators with the information necessary to assess and implement a program of incremental seismic rehabilitation in different building types. Each manual consists of three parts: Critical Decisions for Earthquake Safety, Planning and Managing the Process for Earthquake Risk Reduction in Existing Buildings, and Tools for Implementing Incremental Seismic Rehabilitation.

