# National Earthquake Technical Assistance Program (NETAP)

A Resource Guide for Regional and State/Territory Earthquake Program Managers

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FEMA

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# What Is NETAP?

In accordance with the Earthquake Hazards Reduction Act of 1977 (amended in 2004) and the National Earthquake Hazards Reduction Program (NEHRP), it is the responsibility of the Federal Emergency Management Agency (FEMA) to support "the implementation of a comprehensive earthquake education and public awareness program, including development of materials and their wide dissemination to all appropriate audiences and support public access to locality-specific information that may assist the public in preparing for, mitigating against, responding to and recovering from earthquakes and related disasters."

FEMA developed the National Earthquake Technical Assistance Program (NETAP) as a mechanism for delivering direct assistance to the public through state, tribal, territory, or local government entities, to increase their knowledge and ability to analyze their risk, make a plan, and take actions aimed at reducing their earthquake risk and supporting overall community resilience.

NETAP is a program managed by FEMA to rapidly deploy trainings to organizations and communities. This Resource Guide provides information on the available NETAP training courses and how state, territory, or local government entities can request these trainings.

# What are NETAP trainings?

NETAP provides trainings and associated materials on topics related to earthquake risk reduction. The trainings, which span from a few hours to two days in duration, are intended for a wide variety of participants with diverse professional backgrounds.

NETAP pays for the salary and expenses of an approved instructor and for any educational materials used by the training participants and instructor. The state, tribal, territorial, or local government requesting the training, in cooperation with any partnering organizations, is responsible for recruitment and registration of students. For in-person trainings, the requesting organization is also responsible for local logistical requirements (e.g., meeting space, audio/visual equipment, refreshments). See "What Are the Responsibilities of the Organization Requesting the Training?" below for more information on the requirements for the requestor.

The 2023 training season is scheduled to run from February to July. Trainings in August, September, October, and November are available upon special request.

# Which States and territories are eligible for NETAP trainings?

States and territories designated by FEMA as having high or very high earthquake risk are eligible for NETAP trainings. The states and territories eligible for trainings in 2023 are: Alaska, Arizona, Arkansas, California, Commonwealth of the Northern Mariana Islands, Guam, Hawaii, Idaho, Illinois, Indiana, Kentucky, Mississippi, Missouri, Montana, Nevada, Oklahoma, Oregon, Puerto Rico, South Carolina, Tennessee, Utah, Virgin Islands, Washington, and Wyoming.

# Training Delivery Methods

NETAP trainings are offered via one of two delivery methods: **in-person** or **web-based.** The organization requesting the training selects the preferred delivery method when completing the NETAP Training Request Form, and preferences are honored to the greatest extent practicable. Due to logistical constraints, training delivery methods cannot be mixed for any state/territory (i.e., all trainings hosted by a state/territory must be either entirely web-based or entirely in-person).

**In-person trainings** are hosted by the requesting organization. See the "What Are the Responsibilities of the Organization Requesting the Training?" section below to review the responsibilities of the requestor for in-person trainings.

**Web-based trainings** are offered via an online seminar streaming service and hosted by the NETAP Contractor. At the discretion of the NETAP Contractor, web-based trainings for one state/territory may be opened to neighboring states/territories. See the "What Are the Responsibilities of the Organization Requesting the Training?" section below to review the responsibilities of the requestor for web-based trainings.

# Accessibility Policy

All NETAP trainings will integrate the needs of people with vision, hearing, and mobility disabilities to the greatest extent practicable. The accessibility policy for NETAP trainings is outlined as follows.

1. For in-person trainings, the requesting organization shall host the training in an ADA-accessible location.
2. For both training delivery methods, the following types of reasonable accommodation shall be provided when requested by at least one training registrant with at least two weeks of notice before the training:

- American Sign Language (ASL) interpretation *(in-person trainings only)*
- Closed captioning *(web-based trainings only)*
- Section 508-compliant presentation slides

The responsibility for gathering these requests from registrants and addressing them (when requested with at least two weeks of notice) depends on the delivery method:

- For in-person trainings, the requestor is responsible for all aspects of reasonable accommodation except providing 508-compliant slides. (The NETAP contractor is responsible for providing 508-compliant slides, when requested.) The requestor is responsible for arranging and covering the cost of ASL interpretation, if requested by a registrant.
- For web-based trainings, the NETAP contractor is responsible for all aspects of reasonable accommodation.

3. Training flyers shall be made 508-compliant by the NETAP contractor before issuing to the requestor for use in advertising.

Responsibilities of the requesting organization related to accessibility are also summarized under "What are the Responsibilities of the Organization Requesting the Training?"

# How to request NETAP training

The process for obtaining NETAP training is described in the following steps:


### 1. Identify Need and Request Training

Applicants are required to complete the NETAP Training Request Form, identifying the specific trainings requested, preferred training dates, training location, anticipated number of participants, and the primary point(s) of contact. The State/Territory Earthquake Program Manager or other state/territory official with responsibility for earthquake mitigation identifies the need for trainings. In some cases, this need may be identified in consultation with local organizations, such as county emergency services or nonprofits focused on earthquake risk reduction.


### 2. Request Sent to NETAP Contractor

The State/Territory Earthquake Program Manager submits the request to the NETAP Contractor (the Applied Technology Council, ATC) to evaluate the request. State/Territory Earthquake Program Managers are advised to work with their Regional Earthquake Program Managers in developing their training requests.


### 3. Review and Coordinate

The NETAP Contractor, in collaboration with the FEMA NETAP Manager, reviews the training request. Further discussion may be needed with the requestor to clarify anything that is unclear or to provide guidance on technical information about the available trainings.


### 4. Qualified Training Approved

Based on the review and coordination process, a final decision is made by the FEMA NETAP Manager based on program funding and priorities, target outcomes and benefits of the request, and other relevant factors, such as local earthquake risk and capacity of the requesting organization to execute the proposal in partnership with FEMA.


### 5. Training Delivery

If approved, the NETAP Contractor deploys approved contract resources in collaboration with the FEMA Regional and State/Territory Earthquake Program Managers (and the requesting organization, if it is not the state/territory).


### 6. Performance Reporting

After each NETAP training, evaluation forms are gathered, and the results are reviewed. After an in-person NETAP training, the requesting organization reports the number of participants and provides a copy of the sign-in sheet to the NETAP Contractor. After a web-based NETAP training, the NETAP Contractor provides the list of participants to the requesting organization.


### 7. Certificate of Participation

For in-person trainings, the requesting organization may request Certificates of Participation for training participants. For web-based trainings, Certificates of Participation are sent automatically to training participants.

# What are the responsibilities of the organization requesting training?

Once the training(s) have been approved, the State/Territory Earthquake Program Manager (or other organizer) requesting the training, in cooperation with any partnering organizations, is in charge of the following:

- Advertisement and recruitment of participants for the training. 508-compliant flyers for use by the requesting organization to advertise the training will be provided by the NETAP Contractor after the training is approved. In order to make the best use of NETAP funds and to reach as many people as possible, trainings require a minimum of 25 participants.

For **in-person trainings**, the requesting organization is also in charge of the following:

- All local logistics, including venue reservation, and audio/visual equipment (projector and screen, as well as microphone and speakers when necessary). The training must be hosted in an ADA-accessible location.
- Gathering accessibility requests from participants for American Sign Language (ASL) Interpretation and Section 508-compliant presentation slides.
    - If ASL interpretation is requested by a registrant with at least two weeks of notice, the requesting organization is responsible for arranging and covering the cost of an ASL Interpreter for the training.
    - If 508-compliant slides are requested by a registrant with at least two weeks of notice, the requesting organization is responsible for informing the NETAP Contractor as soon as the request is received. These slides will be made 508-compliant by the NETAP Contractor and provided to the requesting organization before the training.
- Submittal of completed NETAP Training Materials Request Form to the NETAP Contractor at least two weeks in advance of the scheduled training to ensure that all training materials arrive in time for the training. This form will be provided to the requestor once the training is confirmed.
- Administering a sign-in sheet for each training on which all participants record their presence at the training. An electronic copy of each completed sign-in sheet should be submitted to the trainer and the NETAP Contractor no later than one week after each training.
- Storage of course training materials until the course is delivered.
- If Certificates of Participation are requested, an electronic roster of participant names in Excel or Word format should be provided to the NETAP Contractor. If the requestor would like to distribute the certificates during the training, they should submit the electronic roster of registered participants at least five working days in advance of the scheduled training. Certificates can also be generated by the NETAP Contractor after the completion of the training. In either case, the requestor is responsible for distributing the certificates to the participants.
- Refreshments and/or snacks for participants during breaks (optional).

For **web-based trainings**, the NETAP Contractor is responsible for administering registration, hosting the training on a web-based platform, gather reasonable accommodation requests, providing reasonable accommodation when requested by registrants with at least two weeks of notice, and distributing Certificates of Participation.

# Available NETAP Courses

Table 1 provides an overview of available training courses and their durations.

**Table 1 NETAP Training Courses**

| Course Number | Course Title | In-Person Duration | Web-based Duration |
|---|---|---|---|
| FEMA E-74 | Reducing the Risks of Nonstructural Earthquake Damage | 6 hours | 4 hours |
| FEMA 232 | Homebuilders' Guide to Earthquake-Resistant Design and Construction | 6 hours | 4 hours |
| FEMA 395 | Earthquake Safety and Mitigation for Schools | 3 hours | 3 hours |
| FEMA P-50 & FEMA P-50-1 | Simplified Seismic Assessment and Retrofit Guidelines of Detached, Single-Family, Wood-Frame Dwellings | 6 hours | 4 hours |
| FEMA P-154 | Rapid Visual Screening of Buildings for Potential Seismic Hazards | 4 hours | 4 hours |
| FEMA P-154 and ATC-20 | Rapid Visual Screening of Buildings for Potential Seismic Hazards / Postearthquake Safety Evaluation of Buildings | 8 hours | 2 days, 4 hours/day |
| FEMA P-749 | Earthquake-Resistant Design Concepts: An Introduction to Seismic Provisions for New Buildings | 2 hours | 2 hours |
| FEMA P-767 | Earthquake Mitigation for Hospitals | 7 hours | 4 hours |
| FEMA P-909 | Home and Business Earthquake Safety and Mitigation: Train the Trainer | 3 hours | N/A |
| FEMA P-1000 | Safer, Stronger, Smarter: A Guide to Improving School Natural Hazard Safety | 2 hours | 2 hours |
| FEMA P-1100 | Vulnerability-Based Seismic Assessment and Retrofit of One- and Two-Family Dwellings | 6 hours | 4 hours |
| FEMA P-2055 | Post-disaster Building Safety Evaluation Guidance | 4 hours | 4 hours |
| FEMA P-2055 and ATC-20 | Post-disaster Building Safety Evaluation Guidance / Postearthquake Safety Evaluation of Buildings | 8 hours | 2 days, 4 hours/ day |
| Building Code Overview | Building Codes – Why They Matter | 2 hours | 2 hours |
| Classroom and Beyond | Reducing Earthquake Risk in the Classroom and Beyond: Seismic Mitigation of Nonstructural Hazards in Schools | 3 hours | 3 hours |
| Manufactured Homes | Improving Earthquake Performance of Manufactured Homes | 1.5 hours | 1.5 hours |
| Older Concrete Buildings | Older Concrete Buildings: Understanding the Seismic Risk and Making a Mitigation Plan | 2 hours | 2 hours |

Table 2 provides information on the target audience for each training course. The information in the table is not meant to limit participation; it is provided for guidance purposes only.

**Table 2 Target Audience for NETAP Trainings**

| Training | Architects | Building Officials | Building Owners | Business Owners | Contractors | Emergency Managers | Engineers | Facility Managers | Home/ Property Owners | Risk Analysts | School Administrators | Volunteers/ General Public |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEMA E-74 | • | • | • | • | • | • | • | • | • | • | • | |
| FEMA 232 | • | • | • | | • | | • | | • | | | |
| FEMA 395 | | | | | | | • | • | | | • | |
| FEMA P-50 & FEMA P-50-1 | • | • | • | • | • | | • | | • | | | |
| FEMA P-154 | • | • | • | | | • | • | • | • | • | | • |
| FEMA P-154 & ATC-20 | • | • | • | | | • | • | • | • | • | | • |
| FEMA P-749 | • | • | • | • | • | • | • | • | • | • | | • |
| FEMA P-767 | • | • | • | | | • | • | • | | • | | |
| FEMA P-909 | | | • | • | • | • | | | • | | | • |
| FEMA P-1000 | • | • | | | | • | • | • | | | • | • |
| FEMA P-1100 | • | • | • | • | • | | • | | • | | | |
| FEMA P-2055 | • | • | | | | • | • | | | | | |
| FEMA P-2055 & ATC-20 | • | • | | | | • | • | | | | | |
| Building Code Overview | • | • | • | • | • | • | • | • | • | • | • | • |
| Classroom and Beyond | • | • | | | • | • | | • | | | • | • |
| Manufactured Homes | • | • | | | • | • | • | • | • | | | • |
| Older Concrete Buildings | • | • | • | | | • | • | • | | • | | |

Table 3 provides recommendations for pairing of courses by theme. There is no requirement to group these trainings together, with the exception of ATC-20 (which is only offered in combination with FEMA P-154 or FEMA P-2055).

**Table 3 Recommended Pairings of NETAP Courses**

| Theme | Course A | Course B | Course C |
|---|---|---|---|
| **Basic principles of earthquake-resistant codes & design** | Building Code Overview, *Why Building Codes Matter* | FEMA P-749, *Earthquake-Resistant Design Concepts* | |
| **Understanding how different building types perform in earthquakes** | FEMA P-154, *Rapid Visual Building Screening* | ATC-20, *Postearthquake Building Safety Evaluation* | |
| **Identifying structural and nonstructural earthquake hazards** | FEMA P-154, *Rapid Visual Building Screening* | FEMA E-74, *Reducing Nonstructural Earthquake Damage* | *Reducing Earthquake Risk in the Classroom and Beyond* |
| **Using building inventories to create seismic mitigation plans** | FEMA P-154, *Rapid Visual Building Screening* | *Older Concrete Buildings: Understanding the Seismic Risk and Making a Mitigation Plan* | |
| **Post-earthquake building damage assessment** | FEMA P-2055, *Post-disaster Building Safety Evaluation Guidance* | ATC-20, *Postearthquake Building Safety Evaluation* | |
| **Making schools safer in earthquakes** | *Reducing Earthquake Risk in the Classroom and Beyond* | FEMA P-1000, *Improving School Natural Hazard Safety* | FEMA 395, *Safety & Mitigation for Schools* |
| **Making hospitals safer in earthquakes** | FEMA P-767, *Earthquake Mitigation for Hospitals* | FEMA E-74, *Reducing Nonstructural Earthquake Damage* | |
| **Earthquake-resistant wood-frame design and retrofit** | FEMA 232, *Homebuilders' Guide* | FEMA P-50 & P-50-1, *Simplified Seismic Assessment & Retrofit* | FEMA P-1100, *Vulnerability-Based Seismic Assessment and Retrofit of One- and Two-Family Dwellings* |
| **Retrofitting single-family residences** | FEMA P-50 & P-50-1, *Simplified Seismic Assessment & Retrofit* | FEMA P-1100, *Vulnerability-Based Seismic Assessment and Retrofit of One- and Two-Family Dwellings* | FEMA P-909, *Home & Business Earthquake Safety and Mitigation* |

# Description of NETAP Courses

*Note:* Trainings developed within the last two years are labelled as "new."

## FEMA E-74, Reducing the Risks of Nonstructural Earthquake Damage

The training on FEMA E-74, *Reducing the Risks of Nonstructural Earthquake Damage*, describes the sources of nonstructural earthquake damage and effective methods of reducing such damage. Nonstructural failures have accounted for the majority of damage in recent U.S. earthquakes. It is critical to raise awareness of potential nonstructural hazards, the costly consequences of nonstructural failures, and the opportunities that exist to limit future losses.

Nonstructural components of buildings include all elements that are not part of the structural system; that is, the architectural, mechanical, electrical, and plumbing systems, as well as furniture, fixtures, equipment, and other contents.

*Materials:* The FEMA E-74 document is available as a free PDF at this link. For in-person trainings only, a CD with a copy of the report is provided to each participant.

## FEMA 232, Homebuilders' Guide to Earthquake Resistant Design and Construction

The training on FEMA 232, *Homebuilders' Guide to Earthquake Resistant Design and Construction*, presents seismic design and construction guidance for one- and two-family light-frame residential structures, including information that supplements the 2024 edition of the *International Residential Code*. The FEMA 232 report may be used by homebuilders and other non-engineers.

*Materials:* The FEMA 232 document (2003 edition) is available as a free PDF at this link. For in-person trainings only, a printed copy of the report is provided to each participant. *(A new edition of FEMA 232 will be published in early 2023.)*

## FEMA 395, Earthquake Safety and Mitigation for Schools

The training on FEMA 395, *Earthquake Safety and Mitigation for Schools (K-12): Providing Protection to People and Buildings,* is for school officials, teachers, facility managers, and other stakeholders interested in reducing earthquake risks in local schools. Numerous school buildings located in multiple states and U.S. territories are vulnerable to earthquake damage that threatens safety and continued operations. In this training, participants learn how to: (1) assess and analyze seismic risks; (2) develop actionable plans for reducing and managing these risks; (3) secure nonstructural elements of school facilities; and (4) use "incremental seismic rehabilitation" as an affordable approach for protecting existing buildings and ensuring occupant safety.

*Materials:* The FEMA 395 document is available as a free PDF at this link. For in-person trainings only, a printed copy of the report is provided to each participant.

### FEMA P-50 and FEMA P-50-1, Simplified Seismic Assessment and Retrofit Guidelines of Detached, Single-Family, Wood-Frame Dwellings

The training on FEMA P-50, *Simplified Seismic Assessment of Detached, Single- Family, Wood-Frame Dwellings*, provides instruction on inspection procedures and use of a four-page Simplified Seismic Assessment Form to evaluate detached single-family wood-frame dwellings and to assign to each a seismic performance grade. The procedure takes into consideration the potential for damage or collapse in a manner that is consistent and useful to owners, purchasers, insurers, lenders, contractors, design professionals, and regulatory officials. The training on FEMA P-50-1, *Seismic Retrofit Guidelines for Single-Family, Wood-Frame Dwellings,* provides specific guidance for retrofitting a dwelling's seismic deficiencies, as identified using the FEMA P-50 procedure.

*Materials:* The FEMA P-50/50-1 documents are available as free PDFs at the following links: FEMA P-50, FEMA P-50-1. For in-person trainings only, printed copies of the reports are provided to each participant.

### FEMA P-154, Rapid Visual Screening of Buildings for Potential Seismic Hazards

In this training, participants learn how to identify potentially hazardous buildings before earthquakes occur, according to the methodology set forth in FEMA P-154, *Rapid Visual Screening of Buildings for Potential Seismic Hazards*. The training covers methods and processes that enable personnel to rapidly screen buildings for their expected safety and usability during and after earthquakes. Local officials can use these data to plan and prioritize further engineering and vulnerability analysis, emergency-response needs, and mitigation projects. The Third Edition of the document was completed in January 2015 and includes an additional level of screening form, as well as many other enhancements.

*Materials:* The FEMA P-154/P-155 documents are available as free PDFs at the following links: FEMA P-154, FEMA P-155. For in-person trainings only, a printed copy of the FEMA P-154 report is provided to each participant. Upon request, a printed copy of the FEMA P-155 report (*Supporting Documentation*) is provided to each participant.

### ATC-20, Postearthquake Safety Evaluation of Buildings

*Note:* Only available in conjunction with FEMA P-154 or FEMA P-2055

In this training, participants learn how to evaluate the safety of buildings following earthquakes. Trainees learn how to perform seismic inspections and safety evaluations of buildings, and to post appropriate safety-status placards. These evaluations and placards can be used in planning and executing evacuation, re-entry, and rebuilding strategies. Under NETAP, ATC-20 training can only be obtained if conducted in conjunction with FEMA P-154 or FEMA P-2055.

*Materials:* For both in-person trainings and web-based trainings, a printed copy of ATC-20-1, *Field Manual: Postearthquake Safety Evaluation of Buildings*, is provided to each participant.

Additional copies of ATC-20-1 (only available in hard copy) may be ordered using this link.

NEW

### FEMA P-749, Earthquake-Resistant Design Concepts: An Introduction to Seismic Provisions for New Buildings

Training on the new edition of the FEMA P-749 report, *Earthquake-Resistant Design Concepts: An Introduction to Seismic Provisions for New Buildings,* introduces earthquake-resistant design concepts and their context within the building regulatory process. Participants will learn earthquake hazard fundamentals, how current building codes approach earthquake risk, new concepts that could impact future seismic provisions, key design features for earthquake resistance, and seismic vulnerabilities of common structure types.

*Materials:* The FEMA P-749 document is available as a free PDF at this link. For in-person trainings only, a printed copy of the report is provided to each participant.

*Note:* A more in-depth version of this training, gearing toward practicing engineers and architects, is available upon request.

### FEMA P-767, Earthquake Mitigation for Hospitals

The FEMA P-767, *Earthquake Mitigation for Hospitals*, training introduces participants to earthquake hazards in healthcare settings and methods that can be used to analyze and reduce risks of damage in hospitals and other medical buildings. Such facilities have unique nonstructural components, including equipment and infrastructure systems that can become sources of injury or damage even during smaller earthquakes. By implementing sound, cost-effective mitigation measures, healthcare facilities can reduce seismic risks and ensure that, in the event of an earthquake, they can remain in operation to serve their communities.

*Materials:* The referenced documents are available as free PDFs at the following links:

- FEMA 396, *Incremental Seismic Rehabilitation of Hospital Buildings*
- FEMA E-74, *Reducing the Risks of Nonstructural Earthquake Damage*

For in-person trainings only, a CD with the FEMA E-74 report, a CD with the FEMA P-767 training PowerPoint presentation, and a printed copy of the FEMA 396 report are provided.

### FEMA P-909, Home and Business Earthquake Safety and Mitigation: A "Train the Trainer" Course

The goal of the training on FEMA P-909, *Home and Business Earthquake Safety: A "Train the Trainer" Course*, is to create a cadre of trainers with the ability to provide citizens with basic knowledge on earthquakes and simple steps toward safety and mitigation in their homes and businesses with the goal to reduce the loss of life and property from an earthquake. This training includes a demonstration how to mitigate the seismic risk of a component, such as a water heater.

*Materials:* For the in-person training, a CD with the FEMA P-909 training PowerPoint presentation is provided to each participant.

*Note*: FEMA P-909 is only available as an in-person training.

### FEMA P-1000, Safer, Stronger, Smarter: A Guide to Improving School Natural Hazard Safety

This training on FEMA P-1000, *Safer, Stronger, Smarter: A Guide to Improving School Natural Hazard Safety*, provides guidance on school operations (i.e., what to do before, during, and after an event) and on the physical protection of school facilities (i.e., what can be done to the structure and facility to improve safety). The training also includes some discussion of the FEMA P-1000 supplements, which provide guidance specific to earthquakes, floods, hurricanes, tornadoes, and tsunamis.

*Materials:* The FEMA P-1000 document is available as a free PDF at this link. For in-person trainings only, a printed copy of the report is provided to each participant

NEW

### FEMA P-1100, Vulnerability-Based Seismic Assessment and Retrofit of One- and Two-Family Dwellings

Wood light-frame residential buildings represent the most common type of dwelling in the United States. Although this type of construction in one- and two-family configurations has generally provided good performance in past earthquakes, there are well-known vulnerabilities that have led to large numbers of homes being rendered uninhabitable or even unrepairable following an earthquake. Improved seismic design and seismic retrofitting of these structures will increase the probability that homes are available to provide shelter immediately following moderate to large seismic events. FEMA P-1100, prepared by the ATC for the California Earthquake Authority (CEA) and FEMA, provides a methodology to identify and retrofit specific vulnerabilities in wood light-frame dwellings.

*Materials:* The FEMA P-1100 documents are available as free PDFs at the following links:

- Volume 1 - Prestandard
- Volume 2A - Plan Set for Crawlspace Dwellings
- Volume 2C - Plan Set for Masonry Chimneys

For in-person trainings only, printed copies of the reports are provided to each participant.

*Note*: This course includes several modules and can be tailored in length and content for the audience. Specific modules include: crawlspace dwellings; living-space-over-garage dwellings; hillside dwellings; and masonry chimneys.

NEW

### FEMA P-2055, Post-disaster Building Safety Evaluation Guidance

This training on FEMA P-2055, *Post-disaster Building Safety Evaluation Guidance: Report on the Current State of Practice, including Recommendations Related to Structural and Nonstructural Safety and Habitability*, provides an overview of existing procedures for post-disaster building safety evaluations and issues related to structural safety and habitability. Guidance is also presented on planning, managing, and implementing safety evaluation programs before and after a disaster incident.

In late 2018, Congress directed FEMA to develop and publish guidance, including best practices, for the post-disaster safety assessment of buildings by licensed architects and engineers to ensure that design professionals properly analyze the structural integrity and livability of buildings and structures following disasters. The final report, FEMA P-2055, covers current state of practice, including recommendations related to structural safety and habitability. This report serves as a comprehensive review of all facets of post-disaster safety evaluations, covering deployment management, secondary hazard events, requirements for health of occupants, and discussions on interim postdisaster use of buildings.

*Materials:* The FEMA P-2055 document is available as free PDF at this link. For in-person trainings only, a printed copy of the report is provided to each participant.

### Building Code Overview, Building Codes – Why They Matter

Building codes are regulations governing design, construction, alteration, and maintenance of structures. They are the foundation for community resilience. This training provides an overview of the building code pertaining to earthquake effects on buildings and underline the importance of code adoption and enforcement. This training also highlights why this information is important to emergency managers, decision makers, and the general public.

*Materials:* Presentation slides (PDF format) are provided to participants.

NEW

### Reducing Earthquake Risk in the Classroom and Beyond: Seismic Mitigation of Nonstructural Hazards in Schools

This training, intended for facility managers, K-12 school administrators, and teachers, teaches participants about the most common earthquake hazards in K-12 schools and empowers them to mitigate these issues. The objectives of the training are to: (1) understand what nonstructural components are and why they matter in earthquakes; (2) learn how to recognize and identify common nonstructural hazards in K-12 schools; and (3) review strategies for mitigating common hazards, including understanding when an engineer/technical consultant should be engaged.

*Materials*: Presentation slides (PDF format) are provided to participants.

## Improving Earthquake Performance of Manufactured Homes

Recent earthquakes have resulted in poor performance of manufactured homes, indicating that there is much room for improvement. The purpose of this training is to: (1) provide an overview of regulations governing design and construction of manufactured homes and home installation; (2) review relevant performance issues observed in recent earthquakes; and (3) provide available guidance for improved earthquake performance of manufactured homes.

*Materials:* Presentation slides (PDF format) are provided to participants.

NEW

## Older Concrete Buildings: Understanding the Seismic Risk and Making a Mitigation Plan

Many concrete buildings were constructed prior to the enactment of modern seismic provisions in building codes, and some of these *non-ductile concrete* buildings are prone to sudden collapse in earthquakes. One effective path to mitigating the seismic risk of non-ductile concrete buildings is to identify all older concrete buildings using a building inventory, determine which individual buildings are collapse-prone, and make a mitigation plan that prioritizes the most seismically hazardous buildings. A simplified engineering evaluation method, described in FEMA P-2018, *Seismic Evaluation of Older Concrete Buildings for Collapse Potential*, can be used to identify and prioritize the most seismically hazardous non-ductile concrete buildings within an inventory of buildings.

In this training, the participant will learn what non-ductile concrete buildings are, how they have performed in past earthquakes, and why addressing their risk is important to a community's overall seismic resilience. The participant will also be guided through the process for making a mitigation plan to address hazardous non-ductile concrete buildings within a building inventory. The role of FEMA P-2018 within the overall process is introduced, including how to implement a FEMA P-2018 evaluation program and how to interpret the results, but the technical engineering details of the methodology are not discussed.

*Materials:* Presentation slides (PDF format) are provided to participants.