



Interagency Committee on Seismic Safety in Construction (ICSSC)



ICSSC Virtual Meeting—Spring 2024

May 29, 2024

- Jay Harris
- Acting NEHRP Director
- NEHRP Office, Engineering Laboratory, NIST
- Jay.Harris@nist.gov or ICSSC@nist.gov



U.S. National Science Foundation
WHERE DISCOVERIES BEGIN



ICSSC Meeting Objective

- Continue the process of reinvigorating and possibly restructuring the ICSSC
 - last meeting was November 7, 2023
 - <https://www.nehrp.gov/about/icssc.htm>
- Create a forum to facilitate agency representatives to ask questions, create dialogue, or provide feedback on:
 - Recommended practices and guidance for federal agencies
 - EO 13717 data calls and compliance summary reports
 - What do **we** do, what do **we** need, and where do **we** go?

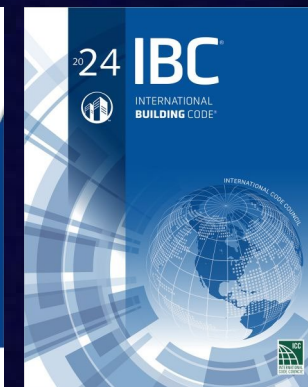
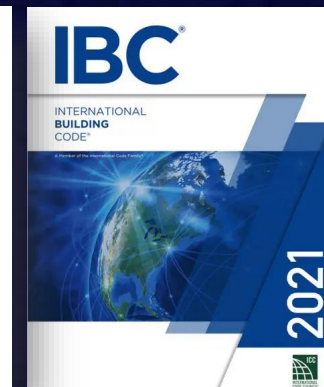
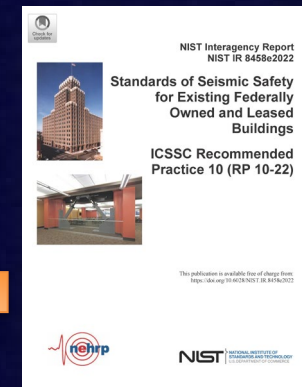


EO 13717 Compliance

EO 13717 Data Call Template

EO Reporting Period	Covered Dates	New Buildings			Existing Buildings		
		Code/Standard	Earliest Adoption Date	Adoption Deadline	Code/Standard	Earliest Adoption Date	Adoption Deadline
1	Feb. 2, 2016 – Feb. 1, 2018	2015 IBC/IRC	before reporting period	May 2, 2016	RP 8	before reporting period	May 2, 2016
		2018 IBC/IRC	Aug. 31, 2017	next reporting period			
2	Feb. 2, 2018 – Feb. 1, 2020	2015 IBC/IRC	before reporting period	<i>Terminated</i> Aug. 31, 2019	RP 8	before reporting period	before reporting period
		2018 IBC/IRC	before reporting period	Aug. 31, 2019			
3	Feb. 2, 2020 – Feb. 1, 2022	2018 IBC/IRC	before reporting period	before reporting period	RP 8	before reporting period	before reporting period
		2021 IBC 2021 IRC	Oct. 23, 2020 Jan. 29, 2021	next reporting period			
4	Feb. 2, 2022 – Feb. 1, 2024	2018 IBC 2018 IRC	before reporting period	<i>Terminates</i> Oct. 23, 2022 Jan. 29, 2023	RP 8	before reporting period	before reporting period
		2021 IBC 2021 IRC	before reporting period	Oct. 23, 2022 Jan. 29, 2023			
		2024 IBC 2024 IRC	August 2023 January 2024	next reporting period			
5	Feb. 2, 2024 – Feb. 1, 2026	2021 IBC 2021 IRC	before reporting period	<i>Terminates</i> August 2025 January 2026	RP 8	before reporting period	<i>Terminates</i> January 2025
		2024 IBC 2024 IRC	before reporting period	August 2025 January 2026			

FEMA has the [Nationwide Building Code Adoption Tracking \(BCAT\)](#) program that can be used to verify the latest IBC/IRC adopted in a jurisdiction. A component of this program is an [adoption map](#).



EO Summary Report

EO 13717 Biennial Compliance Summary Reports

- NIST has published the compliance summary reports for the biennial reporting period covering
 - 1: Feb. 2, 2016 to Feb. 1, 2018, [NIST TN 2136-1](#)
 - 2: Feb. 2, 2018 to Feb. 1, 2020, [NIST TN 2136-2](#)
 - 3: Feb. 2, 2020 to Feb. 1, 2022, [NIST TN 2136-3](#)
 - reports are referenced as needed in the NEHRP Biennial Reports to Congress (appendix dedicated to ICSSC efforts)



EO Summary Report, cont'd

EO 13717 Data Call Template

- Update data request template for the fourth biennial reporting period covering Feb. 2, 2022 to Feb. 1, 2024.
 - data call template intended to standardize the data provided by agencies reporting their progress in implementing EO 13717, and to be a data management tool to support an agency's evolving seismic risk management program.
 - simplified to focus only on agency policies
 - requires SSC to be familiar with applicable agency policies, possibly outside of real property / facility management / engineering group.
 - identical to 2022 template
 - released in Spring 2024 with August 1, 2024 deadline



EO Summary Report, cont'd

EO 13717 Data Call Template

Submission to NIST and OMB

Agencies whose activities are covered by this order shall submit biennial reports to the Director of the Office of Management and Budget (OMB) and the Director of NIST on their progress in implementing the order, commencing two years from the date of this order.

- For NIST, submit template as instructed in template (ICSSC@nist.gov). We will submit draft compliance summary report to the NIST Director
- For OMB, [recommendation] submit template with agency cover letter to agency examiner via agency legislative affairs office
 - NIST has been talking with OMB about setting up a submission site on OMB Max. When this is operational, only one submittal is needed for both NIST and OMB. Will evaluate an online form as an additional submission option.

EO Summary Report, cont'd

EO 13717 Data Call Template

Code of Federal Regulations

The EO rescinds EO 12941: *Seismic Safety of Existing Federally Owned or Leased Buildings* and EO 12699: *Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction*. The applicable provisions in the Code of Federal Regulations should be reviewed and updated.

Example 1: Title 41 Subtitle C Chapter 128 Part 128-1 Subpart 128-1.80 §128-1.8000

§ 128-1.8000 Scope. This subpart establishes a Seismic Safety Program for the Department of Justice and sets forth the policies and procedures for obtaining compliance with Executive Order 12699, *Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction*.

Example 2: Title 49 Subtitle A Part 41 §41.120

This section describes the standards that must be used to meet the seismic design and construction requirements of this part.

The following are model codes which have been found to provide a level of seismic safety substantially equivalent to that provided by use of the 1988 National Earthquake Hazards Reduction Program (NEHRP) Recommended Provisions.

EO Summary Report, cont'd

EO 13717 Data Call Template

The official version of the C.F.R. is only updated once each year, updating your C.F.R. research to ensure you have current information is essential.

PART 16 of CFR: AGENCY REPRESENTATIVES

§ 16.1 Designation.

(a) Each agency shall designate, from its officers or employees, persons to serve in the following capacities with relation to the Office of the Federal Register:

- 1) A liaison officer and an alternate.
- 2) A certifying officer and an alternate.
- 3) An authorizing officer and an alternate.

(b) In choosing its liaison officer, each agency should consider that this officer will be the main contact between that agency and the Office of the Federal Register and that the liaison officer will be charged with the duties set forth in §16.2.

§ 16.2 Liaison duties.

Each agency liaison officer shall -

- (a) Represent the agency in all matters relating to the submission of documents to the Office of the Federal Register, and respecting general compliance with this chapter;
- (b) Be responsible for the effective distribution and use within the agency of Federal Register information on document drafting and publication assistance authorized by §15.10 of this chapter;

See *Document Drafting Handbook* (Rev. 1.4, Jan. 7, 2022) – Office of the Federal Register

EO Summary Report, cont'd

ICSSC FEEDBACK ON EO 13717 REPORT OR DATA TEMPLATE

ICSSC Notes:

- *Keep simple about policy only*
- *[in progress] Create ICSSC website to house templates, etc.*
- *[in progress] OMB Max site to be fillable instead of a document upload site? Hybrid that allows upload as well?*

ICSSC Update to RP 10

Standards of Seismic Safety for Existing Federally Owned and Leased Buildings, ICSSC Recommended Practice 10 (RP 10)

- ICSSC RP 10-22 published Jan. 2023
 - <https://www.nehrp.gov/about/icssc.htm>
- Minor update planned for 2025 (RP 10-25 or RP 10-22s1 ?)
 - Update reference standards, Section 1.0
 - 2024 IBC, 2024 IRC, ASCE 7-22, ASCE 41-23
 - Editorial updates (alignment with IEBC, etc.)
 - TBD
- Major update planned for 2028 (RP 10-28)
 - Update reference standards, Section 1.0
 - 2027 IBC, 2027 IRC, address what is coming in ASCE 7-28, ASCE 41-29 ?
 - Editorial updates (alignment with IEBC, etc.)
 - Technical updates
 - TBD



ICSSC Update to RP 10, cont'd

Standards of Seismic Safety for Existing Federally Owned and Leased Buildings, ICSSC Recommended Practice 10 (RP 10)

- **Considerations for Updates to RP 10**
 - Evaluate incremental changes more regularly than every six years as per EO 13717 (i.e., six years = major update)
 - **Agency-specific changes to be universally recommended?**
 - **New provisions, codes, standards? ICC, ASCE**
 - **Updates needed to triggers, screening, commentary, etc.?**
 - ICSSC website created on www.NEHRP.gov to be a central location for information/proposals for change to support agency adoption, implementation, and interpretation
 - Implement a committee (working group) for updating the next version
 - **Note: ASCE Hazard Tool (Section 1.3) is now publicly available (<https://ascehazardtool.org/>) – others listed may not be maintained**



ICSSC Update to RP 10, cont'd

Standards of Seismic Safety for Existing Federally Owned and Leased Buildings, ICSSC Recommended Practice 10 (RP 10)

- **Compliance with RP 10**
 - EO 13717 (national policy)
 - Each agency responsible for the design and construction of an alteration to an existing building shall ensure that the alterations are designed and constructed so that the resulting building complies with Standards of Seismic Safety for Existing Federally Owned and Leased Buildings
 - Each agency responsible for leasing space in a federally or non-federally owned building shall ensure that the building has been designed and constructed in accord with Standards of Seismic Safety for Existing Federally Owned and Leased Buildings (or IBC if a new building)
 - no national policy requires existing federally-owned buildings not going through an alteration to comply with RP 10
 - agency-specific policies (?)



ICSSC Update to RP 10, cont'd

Standards of Seismic Safety for Existing Federally Owned and Leased Buildings, ICSSC Recommended Practice 10 (RP 10)

- Compliance with RP 10

- Building means “any structure, fully or partially enclosed, used or intended for sheltering persons or property”. For compliance reporting, new and existing buildings are defined as follows:

- New Building: Any building during this reporting period in at least one of three phases:
 1. programming
 2. construction
 3. award of Certificate of Occupancy (or equivalent authorization)
- Existing Building: Any building with a Certificate of Occupancy (or equivalent authorization) awarded prior to this reporting period.



ICSSC Update to RP 10, cont'd

Standards of Seismic Safety for Existing Federally Owned and Leased Buildings, ICSSC Recommended Practice 10 (RP 10)

- Compliance with RP 10 (Section 1.1)
 - An in-service building, whether occupied or unoccupied, not exempt from seismic evaluation in accordance with Section 1.3, is deemed to comply with RP 10 when it satisfies both of the following:
 - A. The building is not subject to any of the circumstances necessitating a seismic evaluation given in Section 1.2.1
 - agency-identified programming actions or building conditions (triggers)
 - B. The building has been screened in accordance with Section 1.2.2 and shown not to pose an unacceptable risk to the agency.
 - Exceptions to the requirement from Section 1.2.2:
 1. The building qualifies as a benchmark building in accordance with Section 1.4;
 2. The building has been previously seismically evaluated and determined to comply with the selected performance objective in accordance with Chapters 2 and 3;
 3. The building has been previously seismically retrofitted or otherwise mitigated to comply with the selected performance objective in accordance with Chapters 2 and 4; or
 4. A risk assessment conducted previously by the agency has determined that the building does not pose an unacceptable risk to the agency for any seismic hazard level.



ICSSC Update to RP 10, cont'd

Standards of Seismic Safety for Existing Federally Owned and Leased Buildings, ICSSC Recommended Practice 10 (RP 10)

- Compliance with RP 10 (Section 1.1)
 - Existing Building Example (see Appendix C)
 - » Exemption: buildings designated as Risk Category I or II assigned to SDC C and containing a total area less than 10,000 ft²
 - A. The building is not subject to any of the circumstances necessitating a seismic evaluation given in Section 1.2.1
 - » Alteration to a building assigned to SDC C where the project construction cost is more than 50 percent of the current pre-construction replacement cost of the building
 - B. The building has been screened in accordance with Section 1.2.2 and shown not to pose an unacceptable risk to the agency.
 - Exceptions to the requirement from Section 1.2.2:
 1. The building qualifies as a benchmark building in accordance with Section 1.4;
 2. The building has been previously seismically evaluated and determined to comply with the selected performance objective in accordance with Chapters 2 and 3;
 3. The building has been previously seismically retrofitted or otherwise mitigated to comply with the selected performance objective in accordance with Chapters 2 and 4; or
 4. A risk assessment conducted previously by the agency has determined that the building does not pose an unacceptable risk to the agency for any seismic hazard level.



ICSSC Update to RP 10, cont'd

Standards of Seismic Safety for Existing Federally Owned and Leased Buildings, ICSSC Recommended Practice 10 (RP 10)

- Compliance with RP 10 (Section 1.1)
 - Leasing Example (need workflow in Appendix C)
 - » Exemption: buildings designated as Risk Category I or II assigned to SDC C and containing a total area less than 10,000 ft²
 - A. The building is not subject to any of the circumstances necessitating a seismic evaluation given in Section 1.2.1
 - » agency enters into or renews one or more leases for a total floor area of 10,000 ft² or more in a building that would otherwise be subject to the requirements of RP 10
 - B. The building has been screened in accordance with Section 1.2.2 and shown not to pose an unacceptable risk to the agency.
 - Exceptions to the requirement from Section 1.2.2:
 1. The building qualifies as a benchmark building in accordance with Section 1.4;
 2. The building has been previously seismically evaluated and determined to comply with the selected performance objective in accordance with Chapters 2 and 3;
 3. The building has been previously seismically retrofitted or otherwise mitigated to comply with the selected performance objective in accordance with Chapters 2 and 4; or
 4. A risk assessment conducted previously by the agency has determined that the building does not pose an unacceptable risk to the agency for any seismic hazard level.



ICSSC Update to RP 10, cont'd

ICSSC FEEDBACK ON RP 10 FUTURE

ICSSC Notes:

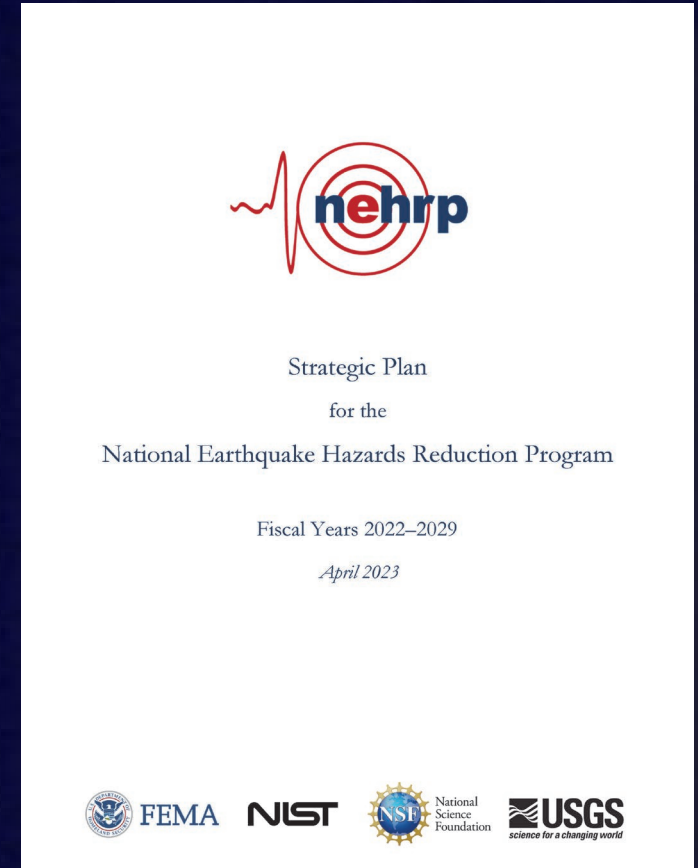
- *Committee structure? Outside consultants (maybe different logistics for supplement (say 3 years) than the 6-year major editions)*
- *Public review should be maintained?*
- *Appendix to IEBC? Two edge sword.*
 - *Needs to maintain flexibility in RP 10, can't get that in IEBC*
 - *Adopt IEBC and provide amendments to the IEBC.*
- *Open section on website to house RP 10 to accept comments, proposal for changes, organic process (private Google doc for comment only)*
- *Flexibility for leased buildings (say 10 years) for evaluation (reduced hazard from 1% in 50-year collapse)? GSA leasing requirements (desk guide)*
- *Historic buildings use a separate ICSSC guide? Must work with NPS, how in depth does IEBC go with HBs?*
- *GSA support of RP 10 update committee, include outside source and code development world*
- *FRPC involvement*
- *Time frame to start update committee*
- *List reference code/standards/guidelines in ICSSC website*

Future Efforts of the ICSSC

NEHRP Strategic Plan, FY22-29 (April 2023)

Program Identified Focus Area

- 8. Enhance risk reduction strategies for federal agencies
 - To support Executive Order (EO) 13717, there is a need to:
 - advance efforts by the ICSSC to implement state-of-the-art guidance that promotes risk reduction measures for federal agencies
 - restructure the ICSSC to support agencies implementing risk reduction policies and strategies
 - Outcomes will allow NEHRP, which oversees the ICSSC, to support federal efforts in risk reduction, allowing the federal agencies to lead by example



Future Efforts of the ICSSC

ICSSC Executive Committee

- Interest form emailed out on May 28
- Deadline for form submission is July 1, 2024
- Submit form to ICSSC@nist.gov



Future Efforts of the ICSSC, cont'd

EO 13717 (Feb. 2, 2016)

Establishes a minimum level of seismic safety compliance for new and existing buildings that will be constructed, altered, leased, financed, or regulated by the Federal Government by adopting the latest model building codes and standards.

New Buildings

International Building Code (IBC)

International Residential Code (IRC)

Existing Buildings

Standards of Seismic Safety for Existing Federally Owned and Leased Buildings (latest edition is ICSSC RP 10-22)



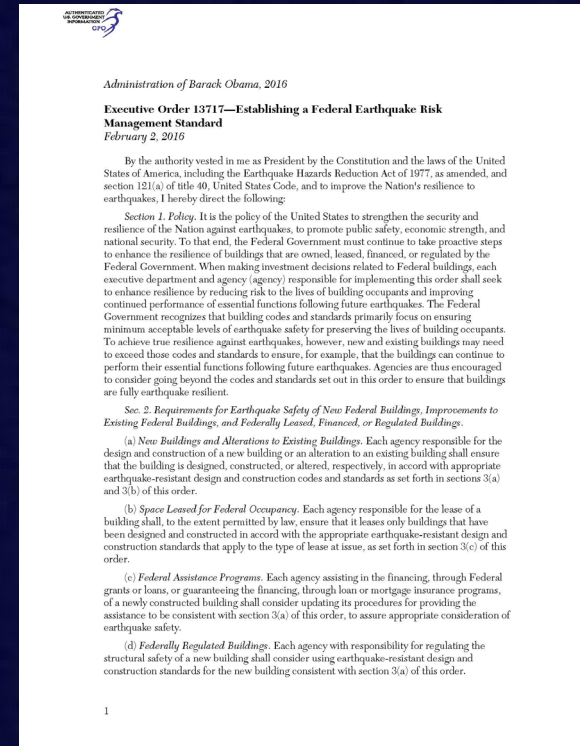
Future Efforts of the ICSSC, cont'd

EO 13717 (Feb. 2, 2016)

When making investment decisions related to federal buildings, each agency responsible for implementing this order shall seek to enhance resilience by reducing risk to the lives of building occupants and improving continued performance of essential functions following future earthquakes.

To achieve true resilience against earthquakes, however, new and existing buildings may need to exceed those codes and standards to ensure, for example, that the buildings can continue to perform their essential functions following future earthquakes.

Agencies are thus encouraged to consider going beyond the codes and standards set out in this order to ensure that buildings are fully earthquake resilient.



Future Efforts of the ICSSC, cont'd

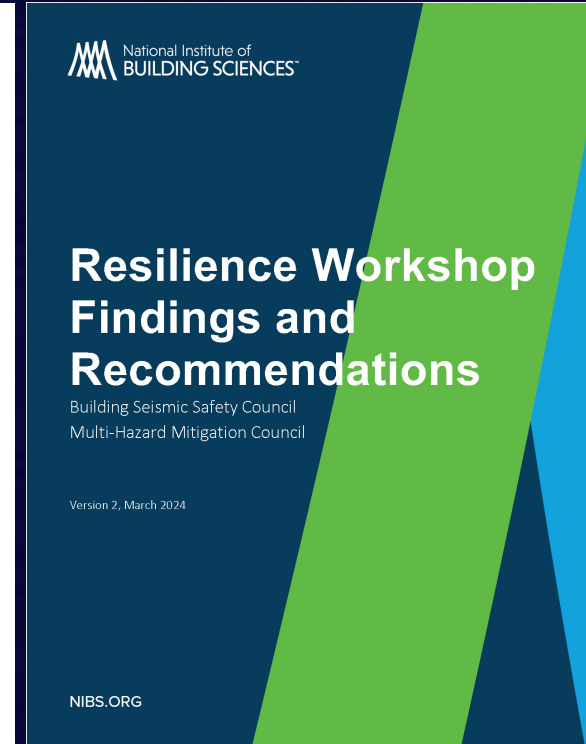
What does it mean to go beyond code?

To achieve true resilience against earthquakes, however, new and existing buildings may need to exceed those codes and standards to ensure, for example, that the buildings can continue to perform their essential functions following future earthquakes.

On May 9, 2023, the Building Seismic Safety Council (BSSC) and Multi-hazard Mitigation Council (MMC) within the National Institute of Building Sciences (NIBS) jointly hosted a one-day workshop on “resilience” needs for federal agencies; broken into two focuses:

1. assessing and mitigating risks posed to an agency by their existing building portfolio
2. addressing “functional recovery” needs of agencies in design of new buildings (or retrofit of existing buildings)

Workshop report published recently



Future Efforts of the ICSSC, cont'd

What does it mean to go beyond code?

On May 22, 2023, the Building Seismic Safety Council (BSSC) and Multi-hazard Mitigation Council (MMC) within the National Institute of Building Sciences (NIBS) jointly hosted a follow up workshop on “resilience” needs for federal agencies; broken into two focuses:

1. assessing and mitigating risks posed to an agency by their existing building portfolio
2. addressing “functional recovery” needs of agencies in design of new buildings (or retrofit of existing buildings)

Results of that meeting – unknown



National Institute of BUILDING SCIENCES™
Innovative Solutions for the Built Environment

Building Seismic Safety Council (BSSC) and Multi-Hazard Mitigation Council (MMC)

Resilience Workshop with Federal Agencies and Partners

May 9th, Tuesday, 2023, 8:30 am to 3:30 pm EDT
NIBS headquarter, 1090 Vermont Avenue, NW, Suite 700, Washington, DC
In-person and by invitation
Contact: Jiqin (JQ) Yuan, yyuan@nibs.org

The recent Public Law 117-221: Disaster Resiliency Planning Act requires OMB to establish guidance requiring the head of each agency to incorporate natural disaster resilience into real property asset management and investment decisions made by the agency. It is unclear currently what form this guidance may take. Additionally, Executive Order (EO) 13177: Establishing a Federal Earthquake Risk Management Standard, has taken proactive steps to enhance agency resilience to earthquakes by requiring buildings that are owned, leased, financed, or regulated by the Federal Government be designed, constructed, or altered in accord with appropriate earthquake-resistant design and construction codes and standards. The EO also encourages agencies to consider constructing or retrofitting their buildings for enhanced seismic performance to help achieve higher resiliency by increasing the likelihood of continued functionality of buildings essential to agency operations following future earthquakes.

The National Institute of Building Sciences (NIBS) is organizing a workshop centered on federal agencies' needs in the areas of seismic evaluation and retrofit of existing federal buildings and functional recovery of existing and new buildings to improve agency earthquake resilience. We are inviting colleagues from the Congress, White House CEQ, DOA, DOD (USACE, USAF, USN), DOE, DOI, DOJ, DoS, DOT, EPA, FEMA, GSA, HUD, NIST, NPS, NRC, ODN, and VA to discuss:


- What ongoing resilience efforts agencies have undertaken and how to leverage any potential synergies;
- What topics have been identified by these agencies but have not been started or made significant progress; and
- What short-term and long-term resilience-focused policy and practice research needs still need to be addressed.

The following two white papers on “*Understanding Functional Recovery Policies and Practices for Federal Buildings*” and “*Addressing the Challenges of Maintaining and Retrofitting Existing Federal Buildings*” are prepared by the Workshop Planning Committee to provide some background information.

The Workshop Planning Committee

Kant Yu, BSSC Board Chair/SEFT Consulting Group
Roberto Leon, BSSC Board Member/Virginia Tech
JoAnn Browning, BSSC Board Vice Chair/UT at San Antonio
William Earl, BSSC Board Member/GSA
Charles Carter, BSSC Board Member/USC
Alice Yau, MMC Board Member/ASHRAE
Jay Harris, NIST
Ryan Karsting, Buehler Engineering
Ed Lantsch, FEMA
Robert Polchinsky, Degenkolb Engineers
Roark Redwood, NIBS
JQ Yuan, BSSC & MMC Executive Director, NIBS

1090 Vermont Ave. NW, Suite 700, Washington, DC 20005
CALL: 202-299-7800 VISIT: www.nibs.org EMAIL: yyuan@nibs.org



National Institute of BUILDING SCIENCES™

Resilience Workshop Findings and Recommendations

Building Seismic Safety Council
Multi-Hazard Mitigation Council

Version 2, March 2024

NIBS.ORG



Future Efforts of the ICSSC, cont'd

2018 NEHRP Reauthorization Act (Dec. 11, 2018)

FEMA and NIST mandated to develop a framework to assess and recommend options for improving the built environment and critical infrastructure to reflect performance goals stated in terms of post-earthquake reoccupancy and functional recovery time.

Removed from originally proposed text--

(b) Standards for New and Existing Buildings Owned or Leased by Federal Agencies.—

(1) DEVELOPMENT OF GUIDELINE.—the Interagency Committee on Seismic Safety in Construction (ICSSC) shall develop a guideline recommending post-earthquake reoccupancy and functional recovery times for each of its new and existing buildings, services, and agencies.

(2) REQUIREMENT.—In developing the guideline, the ICSSC shall ensure that the guideline can be used in the development of the next edition of the Standards of Seismic Safety for Existing Federally Owned and Leased Buildings.



Recommended Options for Improving the Built Environment for Post-Earthquake Reoccupancy and Functional Recovery Time

FEMA P-2090/ NIST SP-1254 / January 2021



Future Efforts of the ICSSC, cont'd

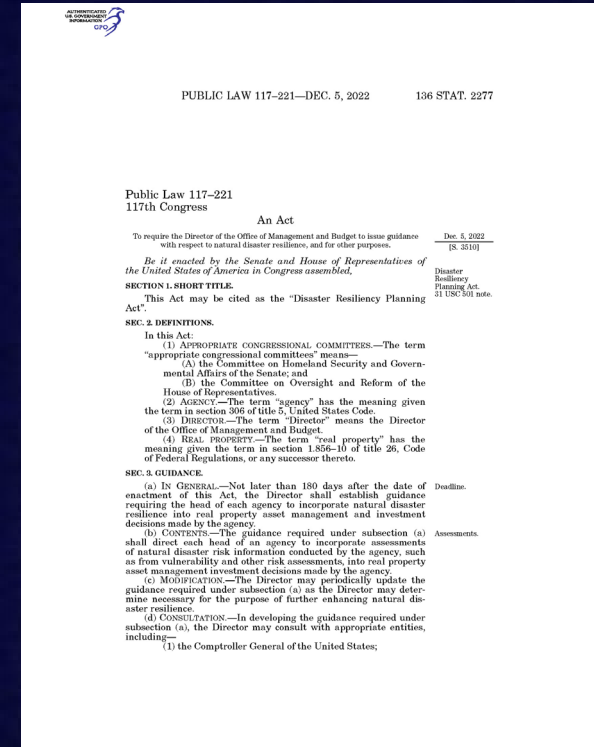
Public Law 117-221 (Dec. 5, 2022)

The Director of OMB shall establish guidance requiring the head of each agency to incorporate natural disaster resilience into real property asset management and investment decisions made by the agency.

The guidance required under shall direct each head of an agency to incorporate assessments of natural disaster risk information conducted by the agency, such as from vulnerability and other risk assessments, into real property asset management investment decisions made by the agency.

[M-24-03: Advancing Climate Resilience through Climate-Smart Infrastructure Investments and Implementation Guidance for the Disaster Resiliency Planning Act](#) issued on from OMB on 11/29/23

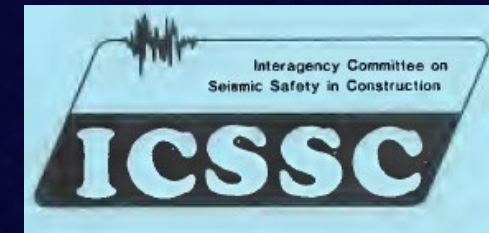
[NSM-22: National Security Memorandum on Critical Infrastructure Security and Resilience](#) issued on 04/30/24



Future Efforts of the ICSSC, cont'd

Future Work Efforts

- Provide guidance to agencies when a new code is released with recommendations regarding adoption by an agency.
 - ICSSC Code Assessment Report for EO Compliance
 - The 2018 editions of the IBC and IRC were published on August 1, 2017; therefore, agencies had until August 1, 2019 to adopt these codes.
 - The 2021 editions of the IBC and IRC were published on October 23, 2020 and January 29, 2021, respectively. Agencies have two years from these dates to adopt these codes.
 - The 2024 editions of the IBC and IRC will be published in late 2023 and early 2024.
- Provide supplements to any “in-service” RP document as updated information becomes available from codes and standards development cycle.
- Discuss new ideas for guidance documents based on agency feedback of needs.



Future Efforts of the ICSSC, cont'd

Future Work Efforts

- Participate during the development of codes and standards.
 - International Code Council (ICC)
 - FEMA
 - NIST
 - Building Seismic Safety Council (BSSC)
 - ICSSC organizational member (NIST)
 - NIST, FEMA, USGS – NEHRP “Provisions Update Committee” PUC
- Hold biannual meetings (e.g., spring and fall).
 - Next meeting around early-to-mid November 2023
 - Information posted on [NEHRP.gov](https://www.nehrp.gov)



Future Efforts of the ICSSC, cont'd

ICSSC FEEDBACK ON NEEDS AND FUTURE EFFORTS OF THE ICSSC

ICSSC Notes:

- *Standards permitted before being official adoption of building code by a jurisdiction?*
- *Road map of seismic standards?*
- *Equivalent of RP 10 associated to new buildings?*
- *Functional Recovery guidance?*
- *Resilience-based Design guidance?*
- *Involvement with Federal Real Property Council (FRPC)*
- *Quantify resilience score, what does the number mean? Relation between performance standard and resilience.*
- *What is resiliency? COO Plan, Redundancy Plan, Recovery Plan*
- *!!! ICSSC beyond-code white (position) paper for federal agencies related to seismic safety? Learn from one another*

Questions

Thank you!

Next meeting (fall) – November 2024

In-person - ?

Discussion topics:

screening methodologies

beyond-code position paper

Updates to RP 10