118	TH CONGRESS 2D SESSION  S.
7	To reauthorize the Earthquake Hazards Reduction Act of 1977, and for other purposes.
	IN THE SENATE OF THE UNITED STATES
Mr.	Padilla introduced the following bill; which was read twice and referred to the Committee on
Т	A BILL To reauthorize the Earthquake Hazards Reduction Act of 1977, and for other purposes.
1	Be it enacted by the Senate and House of Representa-
2	tives of the United States of America in Congress assembled,
3	SECTION 1. SHORT TITLE.
4	This Act may be cited as the [" Act
5	of 2004" <b>]</b> .
6	SEC. 2. MODIFICATION OF FINDINGS.
7	Section 2 of the Earthquake Hazards Reduction Act
8	of 1977 (42 U.S.C. 7701) is amended—

(1) in paragraph (1)—

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1	(A) by striking "50 States, and the Com-
2	monwealth of Puerto Rico," and inserting
3	"States and Tribal jurisdictions";
4	(B) by striking "of them" and inserting
5	"States"; and
6	(C) by adding at the end the following:
7	"Almost half o the United States population re-
8	sides in areas that are at risk or experiencing
9	a damaging earthquake during the 50-year pe-
10	riod beginning on the date of the enactment of
11	the Act of 2004";
12	(2) in paragraph (2)—
13	(A) by inserting after the first sentence the
14	following: "A 2023 report by the Federal Emer-
15	gency Management Agency and the United
16	States Geological Survey (FEMA P-366) esti-
17	mates the annualized earthquake losses to the
18	national building stock is \$14,700,000,000 per
19	year and the total economic exposure to earth-
20	quake losses (buildings and contents) across the
21	nation is \$107,800,000,000,000."; and
22	(B) in the third sentence—
23	(i) by striking "and construction" and
24	inserting ", construction, evaluation, and
25	retrofitting";

1	(ii) by striking "and (E)" and insert-
2	ing the following: "(E) inventories of build-
3	ings and infrastructure with high seismic
4	risk, especially those that are critical to
5	community resilience, (F) programs that
6	require or incentivize replacement or ret-
7	rofit of existing buildings and infrastruc-
8	ture with high seismic risk, especially those
9	that are critical to community resilience,
10	and (G)";
11	(3) in paragraph (3), by inserting "Tribal,"
12	after "local,";
13	(4) in paragraph (4), by striking "could pro-
14	vide" and all that follows through the period at the
15	end and inserting "is necessary to provide the sci-
16	entific understanding needed to improve and expand
17	the earthquake early warning system.";
18	(5) in paragraph (8), by striking "cave-ins" and
19	inserting "collapse";
20	(6) in paragraph (9)—
21	(A) in the first sentence, by striking "and
22	local" and inserting "local, and Tribal govern-
23	ment"; and
24	(B) in the second sentence, by striking
25	"transfer knowledge and information to" and

1	inserting "exchange knowledge and information
2	between"; and
3	(C) in the third sentence, by striking
4	"specifications, criteria" and inserting "guide-
5	lines, codes, standards";
6	(7) in paragraph (12)—
7	(A) in the second sentence—
8	(i) by striking "When earthquakes
9	occur, the built environment is generally"
10	and inserting "Relatively newer buildings
11	and infrastructure have generally been";
12	(ii) by striking "and is" and inserting
13	"when earthquakes occur, but most are";
14	and
15	(B) by adding at the end the following: "In
16	addition, buildings and infrastructure built to
17	older codes and standards may pose significant
18	risk of injury, loss of life, or irreparable dam-
19	age. A 2021 report to Congress required by
20	[the National Earthquake Hazards Reduction
21	Program Reauthorization Act of 2018 (Public
22	Law 115–307) —Note: Which section? pro-
23	duced by the Federal Emergency Management
24	Agency and the National Institute of Standards
25	and Technology (FEMA P2090/NST SP-1254)

1	provides recommendations for improving post-
2	earthquake functional recovery time of the built
3	environment to support community resilience
4	goals and many of these recommendations still
5	need to be implemented."; and
6	(8) in paragraph (13)—
7	(A) in the first sentence, by inserting "in
8	2011" after "a study";
9	(B) in the second sentence, by inserting
10	"(in 2011 dollars)" after "\$300,000,000"; and
11	(C) by adding at the end the following:
12	"The cost of actual seismic retrofits to reduce
13	known risks is not included in such valuation.".
14	SEC. 3. MODIFICATION OF PURPOSE.
15	Section 3 of the Earthquake Hazards Reduction Act
16	of 1977 (42 U.S.C. 7702) is amended—
17	(1) in paragraph (1)—
18	(A) by striking "and local" and inserting
19	", local, and Tribal government"; and
20	(B) by striking "locations and structures"
21	and inserting "buildings and infrastructure";
22	(2) in paragraph (2)—
23	(A) by striking "and construction" and in-
24	serting ", construction, evaluation, and retro-
25	fitting"; and

1	(B) by inserting "housing and care facili-
2	ties for vulnerable populations," after "occu-
3	pancy buildings"; and
4	(3) in paragraph (4)—
5	(A) by striking "and local" and inserting
6	", local, and Tribal government"; and
7	(B) by striking "encourage consideration
8	of" and inserting "incorporate".
9	SEC. 4. MODIFICATION OF DEFINITIONS.
10	Section 4 of the Earthquake Hazards Reduction Act
11	of 1977 (42 U.S.C. 7703) is amended—
12	(1) in paragraph (3), by inserting ", including
13	secondary effects such as earthquake-caused
14	tsunamis''; and
15	(2) by adding at the end the following:
16	"(11) The term 'Tribal government' has the
17	meaning given the term 'tribal government' in sec-
18	tion in section 421 of the Congressional Budget Act
19	of 1974 (2 U.S.C. 658).
20	"(12) The term 'functional recovery' means a
21	post-earthquake performance state in which a build-
22	ing or lifeline infrastructure system is maintained,
23	or restored, to safely and adequately support the
24	basic intended functions associated with the pre-
25	earthquake use or occupancy of a building, or the

1	pre-earthquake service level of a lifeline infrastruc-
2	ture system.".
3	SEC. 5. IMPROVEMENTS TO NATIONAL EARTHQUAKE HAZ-
4	ARDS REDUCTION PROGRAM.
5	(a) Program Activities.—Subsection (a)(2) of sec-
6	tion 5 of the Earthquake Hazards Reduction Act of 1977
7	(42 U.S.C. 7704) is amended—
8	(1) in subparagraph (B)—
9	(A) in the matter before clause (i)—
10	(i) by striking "and local" and insert-
11	ing ", local, and Tribal"; and
12	(ii) by striking "and constructing"
13	and inserting ", designing, constructing,
14	evaluating, and retrofitting";
15	(B) in clause (ii), by striking "voluntary
16	consensus codes for earthquake hazards reduc-
17	tion" and inserting "consensus codes for earth-
18	quake hazards reduction, including improved
19	post-earthquake functional recovery,";
20	(C) in clause (iii), by striking "and haz-
21	ards reduction; and" and inserting "functional
22	recovery, and other hazards reduction topics;";
23	(D) in clause (iv)—
24	(i) by inserting "and maintaining"
25	after "publishing";

1	(ii) by inserting "tsunami suscepti-
2	bility," after "liquefaction susceptibility,";
3	and
4	(iii) by striking "; and and inserting
5	a semicolon; and
6	(E) by adding at the end the following:
7	"(v) development of best practices and
8	guidelines to create an inventory of and
9	conduct seismic performance evaluations of
10	buildings, structures, and lifeline infra-
11	structure with high seismic risk, especially
12	those that are critical to community resil-
13	ience; and
14	"(vi) the provision of technical assist-
15	ance upon request by a State, local, or
16	Tribal government regarding—
17	"(I) the creation of an inventory
18	of buildings, structures, and lifeline
19	infrastructure;
20	"(II) the performance of seismic
21	performance evaluations; and
22	"(III) cost-effective best practices
23	for retrofitting existing buildings,
24	structures, and lifeline infrastruc-
25	ture.";

1	(2) in subparagraph (C), by striking "; and"
2	and inserting a semicolon;
3	(3) by redesignating subparagraph (D) as sub-
4	paragraph (E); and
5	(4) by inserting after subparagraph (C) the fol-
6	lowing:
7	"(D) improve the understanding of—
8	"(i) the multiple hazards associated
9	with earthquakes, including liquefaction,
10	tsunamis, landslides, structural fires, and
11	the compounding effects of climate on
12	these hazards; and
13	"(ii) potential mitigation measures for
14	such hazards; and".
15	(b) Duties of Interagency Coordinating Com-
16	MITTEE ON EARTHQUAKE HAZARDS REDUCTION.—Sub-
17	section (a)(3)(D)(ii) of such section is amended—
18	(1) in subclause (V), by inserting "and associ-
19	ated secondary hazards" before the period at the
20	end; and
21	(2) by adding at the end the following:
22	"(VIII) Coordinating with the
23	Chair of the Federal Communications
24	Commission on the timely broad-
25	casting of emergency alerts generated

I	by the earthquake early warning sys-
2	tem.".
3	(c) Biennial Report.—Subsection (a)(4)(A) of
4	such section is amended by striking "under paragraph
5	(3)(D)(i)(I)" each place it appears and inserting "under
6	paragraph (3)(D)(ii)(I)".
7	(d) Advisory Committee.—Subsection (a)(5)(A) of
8	such section is amended—
9	(1) by striking "and local government" and in-
10	serting ", local, and Tribal governments"; and
11	(2) by inserting "social," after "scientific,".
12	(e) Lead Agency for Responsibilities of Pro-
13	GRAM AGENCIES.—Subsection (b)(1) of such section is
14	amended—
15	(1) in subparagraph (A)—
16	(A) by striking "and local" and inserting
17	"local, and Tribal governments"; and
18	(B) by striking "plan and constructing"
19	and inserting "planning, designing, con-
20	structing, evaluating, and retrofitting";
21	(2) by redesignating subparagraphs (C) and
22	(D) as subparagraphs (F) and (G), respectively; and
23	(3) by inserting after subparagraph (B) the fol-
24	lowing:

1	"(C) improve the understanding of earth-
2	quake-caused fires and support the development
3	of engineering tools and construction methods
4	that mitigate the risk of fire following earth-
5	quakes;
6	"(D) develop, in coordination with the Ad-
7	ministrator of the Federal Emergency Manage-
8	ment Agency, best practices and guidelines for
9	a State, local, or Tribal government to create
10	an inventory of buildings, structures, or lifeline
11	infrastructure that are critical to community re-
12	silience or otherwise have high seismic risk;
13	"(E) provide, in coordination with the Ad-
14	ministrator of the Federal Emergency Manage-
15	ment Agency, technical assistance to a State,
16	local, or Tribal government requesting such as-
17	sistance with respect to the creation of an in-
18	ventory of buildings, structures, or lifeline in-
19	frastructure;".
20	(f) Responsibilities of Federal Emergency
21	Management Agency.—Subsection (b)(2) of such sec-
22	tion is amended—
23	(1) in subparagraph (A)—
24	(A) in clause (i)—

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1	(i) by inserting "and Tribal govern-
2	ments" after "States";
3	(ii) by striking "safety inspections"
4	and inserting "performance evaluations";
5	and
6	(iii) by inserting "and improve post-
7	earthquake functional recovery' after
8	"seismic safety";
9	(B) in clause (ii), by inserting ", including
10	Tribal entities," after "appropriate audiences";
11	(C) in clause (iii)—
12	(i) by striking "of seismic resistant"
13	and inserting "to all appropriate audi-
14	ences, including Tribal governments, of";
15	and
16	(ii) by inserting "that enhance seismic
17	safety, improve post-earthquake functional
18	recovery, and reduce losses from earth-
19	quakes" after "and lifeline infrastructure";
20	(D) in clause (iv)—
21	(i) in striking "and local" and insert-
22	ing ", local, and Tribal"; and
23	(ii) by striking "; and" and inserting
24	a semicolon;

1	(E) by redesignating clause (v) as clause
2	(vi); and
3	(F) by inserting after clause (iv) the fol-
4	lowing:
5	"(v) shall provide technical assistance
6	to State, local, or Tribal governmental en-
7	tities in the creation of evacuation plans in
8	the event of an earthquake, landslide, tsu-
9	nami, or other earthquake-related hazard;
10	and"; and
11	(2) in subparagraph (B)—
12	(A) in the subparagraph heading, by in-
13	serting "AND TRIBAL" after "STATE";
14	(B) in the matter before clause (i), by in-
15	serting "or Tribal government" after "State";
16	and
17	(C) in clause (i), by striking "safety" and
18	inserting "performance, community resilience,
19	or public awareness".
20	(g) Responsibilities of United States Geologi-
21	CAL SURVEY.—Subsection (b)(3) of such section is
22	amended—
23	(1) in subparagraph (B), by striking "and
24	local" and inserting ", local, and Tribal";

1	(2) in subparagraph (C), by inserting ", the
2	Chair of the Federal Communications Commission,"
3	after "Agency";
4	(3) by redesignating subparagraphs (D)
5	through (K) as subparagraphs (J) through (O), re-
6	spectively;
7	(4) by inserting after subparagraph (C) the fol-
8	lowing:
9	"(D) coordinate with the Administrator of
10	the National Oceanic and Atmospheric Admin-
11	istration and the Administrator of the Federal
12	Emergency Management Agency on data shar-
13	ing and resource allocation to support a timely
14	response to oceanic earthquakes and tsunamis;
15	"(E) in consultation with the Chair of the
16	Federal Communications Commission, ensure
17	that earthquake alerts and early warnings are
18	broadcast as rapidly and reliably as possible, in
19	the predominant languages in the affected re-
20	gion, to ensure maximum warning time for
21	nearby persons;
22	"(F) expand the earthquake early warning
23	system within and to additional high earth-
24	quake hazard areas, including making improve-
25	ments as practicable to improve detection and

1	increase the time between warning messages
2	and perceptible ground motion;
3	"(G) coordinating with affected State and
4	Tribal governments on earthquake early warn-
5	ing system improvements;";
6	(5) in subparagraph (H), as redesignated by
7	paragraph (3), by inserting "the Chair of the Fed-
8	eral Communications Commission," after "Agency,";
9	(6) in subparagraph (K), as redesignated by
10	paragraph (3), by striking "; and" and inserting a
11	semicolon;
12	(7) in subparagraph (L), as redesignated by
13	paragraph (3), by striking the period at the end and
14	inserting a semicolon; and
15	(8) in subparagraph (N), as redesignated by
16	paragraph (3), by inserting "maps of natural haz-
17	ards associated with earthquakes and".
18	(h) Responsibilities of National Science
19	FOUNDATION.—Subsection (b)(4)(A) of such section is
20	amended—
21	(1) in clause (iii), by inserting "including up-
22	dated tsunami and liquefaction risk maps,"; and
23	(2) in clause (vii), by striking "Historically
24	Black Colleges and Universities and those serving
25	large proportions of Hispanics, Native Americans,

1	Asian-Pacific Americans, and other underrep-
2	resented populations" and inserting "institutions de-
3	scribed in section 371(a) of the Higher Education
4	Act of 1965 (20 U.S.C. 1067q(a))".
5	SEC. 6. SEISMIC PERFORMANCE PROPERTY STANDARDS.
6	Section 947 of the Cranston-Gonzales National Af-
7	fordable Housing Act (42 U.S.C. 7704a) is amended—
8	(1) in subsection (a), by striking "safety" both
9	places it appears and inserting "performance"; and
10	(2) in subsection (b), by striking "shake-related
11	property damage" and inserting "seismic-related
12	property damage to improve the post-earthquake
13	functional recovery time".
14	SEC. 7. SEISMIC STANDARDS.
15	Section 8 of the Earthquake Hazards Reduction Act
16	of 1977 (42 U.S.C. 7705b) is amended—
17	(1) in subsection (b), by striking "under para-
18	graph (1)" and inserting "under subsection (a)";
19	and
20	(2) by adding at the end the following:
21	"(c) Implementation of Recommendations.—
22	Each Program agency, as part of their Program respon-
23	sibilities, shall execute research, projects, grants, and
24	other activities that support, promote, advance, or other-
25	wise implement the recommendations in the report sub-

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- 1 mitted pursuant to subsection (b) to improve the perform-
- 2 ance of the built environment in terms of post-earthquake
- 3 reoccupancy and functional recovery time.
- 4 "(d) BIENNIAL REPORTS.—
- 5 "(1) Biennial reports to interagency co-6 ORDINATING COMMITTEE.—No later than June 30, 7 2025, and not less frequently than once every 2 8 years thereafter, each Program agency shall submit 9 to the Interagency Coordinating Committee a report 10 on activities and progress made to support, promote, 11 or advance the implementation of the recommenda-12 tions included in the report submitted pursuant to 13 subsection (b).
  - "(2) Inclusion in Biennial Reports of Interagency Coordinating Committee shall include the information received under paragraph (1) in each biennial report submitted under section 5(a)(4), including consideration of a prioritized work plan to coordinate activities among the Program agencies and the necessary Program budget to fully implement the recommendations described in paragraph (1).".

1	SEC. 8. IMPROVEMENTS TO POST-EARTHQUAKE INVES-
2	TIGATIONS PROGRAM.
3	Section 11 of the Earthquake Hazards Reduction Act
4	of 1977 (42 U.S.C. 7705e) is amended, in the matter be-
5	fore paragraph (1)—
6	(1) in the first sentence, by inserting "domestic
7	and international" after "investigate major"; and
8	(2) in the fifth sentence, by inserting "Federal
9	Emergency Management" before "Agency".
10	SEC. 9. AUTHORIZATION OF APPROPRIATIONS.
11	(a) General Authorization for Program.—Sub-
12	section (a)(8) of section 12 of the Earthquake Hazards
13	Reduction Act of 1977 (42 U.S.C. 7706) is amended—
14	(1) in subparagraph (I), by striking ", and"
15	and inserting a comma; and
16	(2) by inserting after subparagraph (J) the fol-
17	lowing:
18	``(K) \$10,590,000  for fiscal year  2024,
19	"(L) $10,590,000$ for fiscal year $2025$ ,
20	(M) \$10,590,000 for fiscal year 2026,
21	"(N) $$10,590,000$ for fiscal year $2027$ ,
22	and
23	" (O) $10,590,000$ for fiscal year $2028$ ,".
24	(b) United States Geological Survey.—Sub-
25	section (b)(2) of such section is amended—

1	(1) in subparagraph (I), by striking "; and"
2	and inserting a semicolon;
3	(2) in subparagraph (J), by striking the period
4	at the end and inserting a semicolon; and
5	(3) by adding at the end the following:
6	"(K) $$100,900,000$ for fiscal year 2024, of
7	which not less than \$36,000,000 shall be made
8	available for completion of the Advanced Na-
9	tional Seismic System established under section
10	13;
11	"(L) $$100,900,000$ for fiscal year $2025$ , of
12	which not less than \$36,000,000 shall be made
13	available for completion of the Advanced Na-
14	tional Seismic System established under section
15	13;
16	(M) \$100,900,000 for fiscal year 2026, of
17	which not less than \$36,000,000 shall be made
18	available for completion of the Advanced Na-
19	tional Seismic System established under section
20	13;
21	"(N) $$100,900,000$ for fiscal year 2027, of
22	which not less than \$36,000,000 shall be made
23	available for completion of the Advanced Na-
24	tional Seismic System established under section
25	13; and

1	"(O) \$100,900,000 for fiscal year 2028, of
2	which not less than \$36,000,000 shall be made
3	available for completion of the Advanced Na-
4	tional Seismic System established under section
5	13.".
6	(c) National Science Foundation.—Subsection
7	(c)(2) of such section is amended—
8	(1) in subparagraph (I), by striking ", and"
9	and inserting a comma;
10	(2) in subparagraph (J), by striking the period
11	at the end and inserting a comma; and
12	(3) by adding at the end the following:
13	"(K) $$58,000,000$ for fiscal year 2024,
14	"(L) $$58,000,000$ for fiscal year $2025$ ,
15	"(M) $$58,000,000$ for fiscal year 2026,
16	"(N) $$58,000,000$ for fiscal year 2027,
17	and
18	"(O) $$58,000,000$ for fiscal year 2028.".
19	(d) NATIONAL INSTITUTE OF STANDARDS AND
20	Technology.—Subsection (d)(2) of such section is
21	amended—
22	(1) in subparagraph (I), by striking ", and"
23	and inserting a comma;
24	(2) in subparagraph (J), by striking the period
25	at the end and inserting a comma; and

1	(3) by inserting after subparagraph (J) the fol-
2	lowing:
3	"(K) $$5,900,000$ for fiscal year $2024$ ,
4	"(L) $$5,900,000$ for fiscal year 2025,
5	"(M) $$5,900,000$ for fiscal year 2026,
6	"(N) $$5,900,000$ for fiscal year 2027, and
7	"(O) \$5,900,000 for fiscal year 2028,".