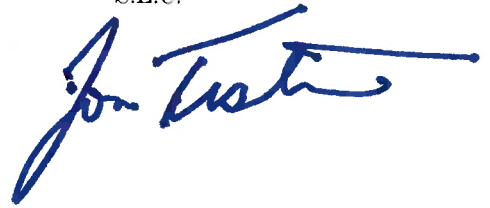


S. 3606 Tester - Substitute



AMENDMENT NO. _____

Calendar No. _____

Purpose: In the nature of a substitute.

IN THE SENATE OF THE UNITED STATES—118th Cong., 2d Sess.

S. 3606

To reauthorize the Earthquake Hazards Reduction Act of 1977, and for other purposes.

Referred to the Committee on _____ and ordered to be printed

Ordered to lie on the table and to be printed

AMENDMENT IN THE NATURE OF A SUBSTITUTE intended to be proposed by Mr. TESTER

Viz:

1 Strike all after the enacting clause and insert the fol-

2 lowing:

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the "National Earthquake
5 Hazards Reduction Program Reauthorization Act of
6 2024".

7 **SEC. 2. MODIFICATION OF FINDINGS.**

8 Section 2 of the Earthquake Hazards Reduction Act
9 of 1977 (42 U.S.C. 7701) is amended—

10 (1) in paragraph (1)—

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 of the United States population
8 resides 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 National Earthquake Hazards Reduction
12 Program Reauthorization Act of 2024”;

13 (2) in paragraph (2)—

14 (A) by inserting after the first sentence the
15 following: “A 2023 report by the Federal Emer-
16 gency Management Agency and the United
17 States Geological Survey (FEMA P-366) esti-
18 mates the annualized earthquake losses to the
19 national building stock is \$14,700,000,000 per
20 year and the total economic exposure to earth-
21 quake losses (buildings and contents) across the
22 nation is \$107,800,000,000,000.”; and

23 (B) in the third sentence—

1 (i) by striking “and construction” and
2 inserting “, construction, evaluation, and
3 retrofitting”;

4 (ii) by striking “and (E)” and insert-
5 ing the following: “(E) inventories of build-
6 ings and infrastructure with high seismic
7 risk, especially those that are critical to
8 community resilience, (F) programs that
9 require or incentivize replacement or ret-
10 rofit of existing buildings and infrastruc-
11 ture with high seismic risk, especially those
12 that are critical to community resilience,
13 and (G)”;

14 (3) in paragraph (3), by inserting “Tribal,”
15 after “local,”;

16 (4) in paragraph (4), by striking “could pro-
17 vide” and all that follows through the period at the
18 end and inserting “is necessary to provide the sci-
19 entific understanding needed to improve and expand
20 the earthquake early warning system.”;

21 (5) in paragraph (8), by striking “cave-ins” and
22 inserting “collapse”;

23 (6) in paragraph (9)—

1 (A) in the first sentence, by striking “and
2 local” and inserting “local, and Tribal govern-
3 ment”; and

4 (B) in the second sentence, by striking
5 “transfer knowledge and information to” and
6 inserting “exchange knowledge and information
7 between”; and

8 (C) in the third sentence, by striking
9 “specifications, criteria” and inserting “guide-
10 lines, codes, standards”;

11 (7) in paragraph (12)—

12 (A) in the second sentence—

13 (i) by striking “When earthquakes
14 occur, the built environment is generally”
15 and inserting “Relatively newer buildings
16 and infrastructure have generally been”;

17 (ii) by striking “and is” and inserting
18 “when earthquakes occur, but most are”;
19 and

20 (B) by adding at the end the following: “In
21 addition, buildings and infrastructure built to
22 older codes and standards may pose significant
23 risk of injury, loss of life, or irreparable dam-
24 age. A 2021 report submitted to Congress pur-
25 suant to section 8(b), as amended by section 5

1 of the National Earthquake Hazards Reduction
2 Program Reauthorization Act of 2018 (Public
3 Law 115–307), by the Federal Emergency
4 Management Agency and the National Institute
5 of Standards and Technology (FEMA P2090/
6 NST SP-1254) provides recommendations for
7 improving post-earthquake functional recovery
8 time of the built environment to support com-
9 munity resilience goals and many of these rec-
10 ommendations still need to be implemented.”;
11 and

12 (8) in paragraph (13)—

13 (A) in the first sentence, by inserting “in
14 2011” after “a study”;

15 (B) in the second sentence, by inserting
16 “(in 2011 dollars)” after “\$300,000,000”; and

17 (C) by adding at the end the following:
18 “The cost of actual seismic retrofits to reduce
19 known risks is not included in such valuation.”.

20 **SEC. 3. MODIFICATION OF PURPOSE.**

21 Section 3 of the Earthquake Hazards Reduction Act
22 of 1977 (42 U.S.C. 7702) is amended—

23 (1) in paragraph (1)—

24 (A) by striking “and local” and inserting
25 “, local, and Tribal government”; and

1 (B) by striking “locations and structures”
2 and inserting “buildings and infrastructure”;
3 (2) in paragraph (2)—

4 (A) by striking “and construction” and in-
5 sserting “, construction, evaluation, and retro-
6 fitting”; and

7 (B) by inserting “housing and care facili-
8 ties for vulnerable populations,” after “occu-
9 pancy buildings”; and
10 (3) in paragraph (4)—

11 (A) by striking “and local” and inserting
12 “, local, and Tribal government”; and

13 (B) by striking “encourage consideration
14 of” and inserting “incorporate”.

15 **SEC. 4. MODIFICATION OF DEFINITIONS.**

16 Section 4 of the Earthquake Hazards Reduction Act
17 of 1977 (42 U.S.C. 7703) is amended—

18 (1) in paragraph (3), by inserting “, including
19 secondary effects such as earthquake-caused
20 tsunamis”; and

21 (2) by adding at the end the following:

22 “(11) The term ‘Tribal government’ has the
23 meaning given the term ‘tribal government’ in sec-
24 tion in section 421 of the Congressional Budget Act
25 of 1974 (2 U.S.C. 658).

1 “(12) The term ‘functional recovery’ means a
2 post-earthquake performance state in which a build-
3 ing or lifeline infrastructure system is maintained,
4 or restored, to safely and adequately support the
5 basic intended functions associated with the pre-
6 earthquake use or occupancy of a building, or the
7 pre-earthquake service level of a lifeline infrastruc-
8 ture system.

9 “(13) The term ‘earthquake forecast’ means a
10 statement of probabilities that 1 or more earth-
11 quakes within a clearly specified magnitude range
12 may occur within a specified time interval and geo-
13 graphic region.”.

14 **SEC. 5. IMPROVEMENTS TO NATIONAL EARTHQUAKE HAZ-**
15 **ARDS REDUCTION PROGRAM.**

16 (a) PROGRAM ACTIVITIES.—Subsection (a)(2) of sec-
17 tion 5 of the Earthquake Hazards Reduction Act of 1977
18 (42 U.S.C. 7704) is amended—

19 (1) in subparagraph (B)—

20 (A) in the matter before clause (i)—

21 (i) by striking “and local” and insert-
22 ing “, local, and Tribal”; and

23 (ii) by striking “and constructing”
24 and inserting “, designing, constructing,
25 evaluating, and retrofitting”;

1 (B) by amending clause (ii) to read as fol-
2 lows:

3 “(ii) development of standards, guide-
4 lines, and voluntary standards, guidelines,
5 and consensus codes for earthquake haz-
6 ards reduction for buildings, structures,
7 and lifeline infrastructure, including post-
8 earthquake recovery-based performance ob-
9 jectives that address reoccupancy and
10 downtime of community-prioritized build-
11 ings, structures, and services provided by
12 lifeline infrastructure;”;

13 (C) in clause (iii), by striking “and haz-
14 ards reduction; and” and inserting “functional
15 recovery, and other hazards reduction topics;”;

16 (D) in clause (iv)—

17 (i) by inserting “and maintaining”
18 after “publishing”;

19 (ii) by inserting “in coordination with
20 the National Tsunami Hazards Mitigation
21 Program, tsunami susceptibility,” after
22 “liquefaction susceptibility,”; and

23 (iii) by striking “; and” and inserting
24 a semicolon; and

25 (E) by adding at the end the following:

1 “(v) subject to the availability of
2 funds, development of best practices and
3 guidelines to create an inventory of and
4 conduct seismic performance evaluations of
5 buildings, structures, and lifeline infra-
6 structure with high seismic risk, especially
7 those that are critical to community resil-
8 ience; and

9 “(vi) subject to the availability of
10 funds, the provision of technical assistance
11 upon request by a State, local, or Tribal
12 government regarding—

13 “(I) the creation of an inventory
14 of buildings, structures, and lifeline
15 infrastructure;

16 “(II) the performance of seismic
17 performance evaluations; and

18 “(III) cost-effective best practices
19 for retrofitting existing buildings,
20 structures, and lifeline infrastruc-
21 ture.”;

22 (2) in subparagraph (C), by striking “; and”
23 and inserting a semicolon;

24 (3) by redesignating subparagraph (D) as sub-
25 paragraph (E); and

1 (4) by inserting after subparagraph (C) the fol-
2 lowing:

3 “(D) improve the understanding of—

4 “(i) the multiple hazards associated
5 with earthquakes, including liquefaction,
6 tsunamis, landslides, structural fires, and
7 the compounding effects of climate on
8 these hazards; and

9 “(ii) potential mitigation measures for
10 such hazards; and”.

11 (b) DUTIES OF INTERAGENCY COORDINATING COM-
12 MITTEE ON EARTHQUAKE HAZARDS REDUCTION.—Sub-
13 section (a)(3)(D)(ii) of such section is amended—

14 (1) in subclause (V), by inserting “and associ-
15 ated secondary hazards” before the period at the
16 end; and

17 (2) by adding at the end the following:

18 “(VIII) Coordinating with the
19 Chair of the Federal Communications
20 Commission on the timely broad-
21 casting of emergency alerts generated
22 by the earthquake early warning sys-
23 tem.”.

24 (c) BIENNIAL REPORT.—Subsection (a)(4)(A) of
25 such section is amended by striking “under paragraph

1 (3)(D)(i)(I)” each place it appears and inserting “under
2 paragraph (3)(D)(ii)(I)”.

3 (d) ADVISORY COMMITTEE.—Subsection (a)(5)(A) of
4 such section is amended—

5 (1) by inserting “the Chair of the Scientific
6 Earthquake Studies Advisory Committee and” after
7 “including”;

8 (2) by striking “and local government” and in-
9 serting “, local, and Tribal governments”; and

10 (3) by inserting “social,” after “scientific.”.

11 (e) LEAD AGENCY FOR RESPONSIBILITIES OF PRO-
12 GRAM AGENCIES.—Subsection (b)(1) of such section is
13 amended—

14 (1) in subparagraph (A)—

15 (A) by striking “and local” and inserting
16 “local, and Tribal governments”; and

17 (B) by striking “plan and constructing”
18 and inserting “planning, designing, con-
19 structing, evaluating, and retrofitting”;

20 (2) by redesignating subparagraphs (C) and
21 (D) as subparagraphs (F) and (G), respectively; and

22 (3) by inserting after subparagraph (B) the fol-
23 lowing:

24 “(C) improve the understanding of earth-
25 quake-caused fires and support the development

1 of engineering tools and construction methods
2 that mitigate the risk of fire following earth-
3 quakes;

4 “(D) develop, in coordination with the Ad-
5 ministrator of the Federal Emergency Manage-
6 ment Agency, best practices and guidelines for
7 a State, local, or Tribal government to create
8 an inventory of buildings, structures, or lifeline
9 infrastructure that are critical to community re-
10 siliance or otherwise have high seismic risk;

11 “(E) provide, in coordination with the Ad-
12 ministrator of the Federal Emergency Manage-
13 ment Agency, technical assistance to a State,
14 local, or Tribal government requesting such as-
15 sistance with respect to the creation of an in-
16 ventory of buildings, structures, or lifeline in-
17 frastructure;”.

18 (f) RESPONSIBILITIES OF FEDERAL EMERGENCY
19 MANAGEMENT AGENCY.—Subsection (b)(2) of such sec-
20 tion is amended—

21 (1) in subparagraph (A)—

22 (A) in clause (i)—

23 (i) by inserting “and Tribal govern-
24 ments” after “States”;

1 (ii) by inserting “and performance
2 evaluations” after “safety inspections”;
3 and

4 (iii) by inserting “and improve post-
5 earthquake functional recovery” after
6 “seismic safety”;

7 (B) in clause (ii), by inserting “, including
8 Tribal entities,” after “appropriate audiences”;

9 (C) in clause (iii)—

10 (i) by striking “of seismic resistant”
11 and inserting “to all appropriate audi-
12 ences, including Tribal governments, of”;
13 and

14 (ii) by inserting “that enhance seismic
15 safety, improve post-earthquake functional
16 recovery, and reduce losses from earth-
17 quakes” after “and lifeline infrastructure”;

18 (D) in clause (iv)—

19 (i) in striking “and local” and insert-
20 ing “, local, and Tribal”; and

21 (ii) by striking “; and” and inserting
22 a semicolon;

23 (E) by redesignating clause (v) as clause
24 (vi); and

1 (F) by inserting after clause (iv) the fol-
2 lowing:

3 “(v) shall provide technical assistance
4 to State, local, or Tribal governmental en-
5 tities in the creation of evacuation plans in
6 the event of an earthquake, landslide, tsu-
7 nami, or other earthquake-related hazard;
8 and”;

9 (2) in subparagraph (B)—

10 (A) in the subparagraph heading, by in-
11 sserting “AND TRIBAL” after “STATE”;

12 (B) in the matter before clause (i), by in-
13 sserting “or Tribal government” after “State”;
14 and

15 (C) in clause (i), by striking “safety” and
16 inserting “performance, community resilience,
17 or public awareness”.

18 (g) RESPONSIBILITIES OF UNITED STATES GEOLOGI-
19 CAL SURVEY.—Subsection (b)(3) of such section is
20 amended—

21 (1) in subparagraph (B), by striking “and
22 local” and inserting “, local, and Tribal”;

23 (2) in subparagraph (C), by inserting “, the
24 Chair of the Federal Communications Commission,”
25 after “Agency”;

1 (3) by redesignating subparagraphs (D)
2 through (K) as subparagraphs (L) through (Q), re-
3 spectively;

4 (4) by inserting after subparagraph (C) the fol-
5 lowing:

6 “(D) coordinate with the Administrator of
7 the National Oceanic and Atmospheric Admin-
8 istration and the Administrator of the Federal
9 Emergency Management Agency on data shar-
10 ing and resource allocation to support a timely
11 response to oceanic earthquakes and tsunamis;

12 “(E) in consultation with the Chair of the
13 Federal Communications Commission, ensure
14 that earthquake alerts and early warnings are
15 broadcast as rapidly and reliably as possible, in
16 the predominant languages in the affected re-
17 gion, to ensure maximum warning time for
18 nearby persons;

19 “(F) expand the earthquake early warning
20 system within and to additional high risk haz-
21 ard areas, including making improvements as
22 practicable to improve detection and increase
23 the time between warning messages and percep-
24 tible ground motion;

1 “(G) coordinating with affected State and
2 Tribal governments on earthquake early warn-
3 ing system improvements;

4 “(H) issue earthquake forecasts, when ap-
5 propriate, for aftershocks associated with sig-
6 nificant earthquakes in the United States;”;

7 (5) in subparagraph (I), as redesignated by
8 paragraph (3), by inserting “the Chair of the Fed-
9 eral Communications Commission,” after “Agency,”;

10 (6) in subparagraph (L), as redesignated by
11 paragraph (3), by striking “; and” and inserting a
12 semicolon;

13 (7) in subparagraph (M), as redesignated by
14 paragraph (3), by striking the period at the end and
15 inserting a semicolon; and

16 (8) in subparagraph (O), as redesignated by
17 paragraph (3), by inserting “maps of natural haz-
18 ards associated with earthquakes and”.

19 (h) RESPONSIBILITIES OF NATIONAL SCIENCE
20 FOUNDATION.—Subsection (b)(4)(A) of such section is
21 amended—

22 (1) in clause (iii), by inserting “including up-
23 dated tsunami and liquefaction risk maps,”; and

24 (2) in clause (vii), by striking “Historically
25 Black Colleges and Universities and those serving

1 large proportions of Hispanics, Native Americans,
2 Asian-Pacific Americans, and other underrep-
3 resented populations” and inserting “institutions de-
4 scribed in section 371(a) of the Higher Education
5 Act of 1965 (20 U.S.C. 1067q(a))”.

6 **SEC. 6. SEISMIC PERFORMANCE PROPERTY STANDARDS.**

7 Section 947 of the Cranston-Gonzales National Af-
8 fordable Housing Act (42 U.S.C. 7704a) is amended—

9 (1) in subsection (a), by striking “safety” both
10 places it appears and inserting “performance”; and

11 (2) in subsection (b), by striking “shake-related
12 property damage” and inserting “seismic-related
13 property damage to improve the post-earthquake
14 functional recovery time”.

15 **SEC. 7. SEISMIC STANDARDS.**

16 Section 8 of the Earthquake Hazards Reduction Act
17 of 1977 (42 U.S.C. 7705b) is amended—

18 (1) in subsection (b), by striking “under para-
19 graph (1)” and inserting “under subsection (a)”;
20 and

21 (2) by adding at the end the following:

22 “(c) IMPLEMENTATION OF RECOMMENDATIONS.—

23 Each Program agency, as part of their Program respon-
24 sibilities, shall execute research, projects, grants, and
25 other activities that support, promote, advance, or other-

1 wise implement the recommendations in the report sub-
2 mitted pursuant to subsection (b) to improve the perform-
3 ance of the built environment in terms of post-earthquake
4 reoccupancy and functional recovery time.

5 “(d) BIENNIAL REPORTS.—

6 “(1) BIENNIAL REPORTS TO INTERAGENCY CO-
7 ORDINATING COMMITTEE.—No later than September
8 30, 2025, and not less frequently than once every 2
9 years thereafter, each Program agency shall submit
10 to the Interagency Coordinating Committee a report
11 on activities and progress made to support, promote,
12 or advance the implementation of the recommenda-
13 tions included in the report submitted pursuant to
14 subsection (b).

15 “(2) INCLUSION IN BIENNIAL REPORTS OF
16 INTERAGENCY COORDINATING COMMITTEE.—The
17 Interagency Coordinating Committee shall include
18 the information received under paragraph (1) in
19 each biennial report submitted under section 5(a)(4),
20 including consideration of a prioritized work plan to
21 coordinate activities among the Program agencies
22 and the necessary Program budget to fully imple-
23 ment the recommendations described in paragraph
24 (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

