

Article 25A

**COASTAL FLOOD RESILIENCE
Overlay District**

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SECTION 25A-1 STATEMENT OF PURPOSES, GOALS, AND OBJECTIVES

The purposes of this Article are to protect persons and structures from the adverse effects of sea level rise associated with climate change by:

- promoting resilient planning and design;
- providing consistent standards for the review of projects;
- maximizing the benefits of long-lived investments in coastal resilience;
- promoting the co-benefits of sustainable designs that address multiple climate impacts;
- advancing adaptation strategies that are future-looking and draw on best practices for long-term resilience; and
- encouraging design that responds to the unique conditions of Boston's building types, advancing resilience for individual buildings, district-scale resilience plans, and enhancing the public realm.

SECTION 25A-2 DEFINITIONS

For the purposes of this Article 25A only, words and phrases defined in Appendix B hereto shall have the meanings indicated in that Appendix, notwithstanding any contrary provisions of the Underlying Zoning.

SECTION 25A-3 ESTABLISHMENT OF COASTAL FLOOD RESILIENCE OVERLAY DISTRICT (CFROD)

1. Physical Boundaries. The geographic areas and zoning districts shown on Appendix A (Coastal Flood Resilience Overlay District) are subject to the provisions of this Article 25A.

2. Warning and Disclaimer of Liability. The degree of flood protection and resilience design required by this Article 25A is based on scientific and engineering considerations and best resilience practices. Larger floods may occur. This Article 25A does not imply that areas or structures in compliance with the requirements and guidelines of this Article will be free from flooding or flood damage. This Article shall not create liability on the part of the City of Boston or any officer or employee thereof for any flood damage that may result from reliance on this Article 25A, or from any administrative decision lawfully made thereunder.

3. Interpretation of Boundaries; Appeal. The Commissioner of Inspectional Services shall make interpretations, where needed, as to the exact boundaries of a Coastal Flood Resilience Overlay District. If the sea level rise flood hazard information on which the boundaries of a CFROD are based does not reflect actual site conditions in relation to the Sea Level Rise – Base Flood Elevation, the Commissioner may determine that a location is within or outside the CFROD, based on actual elevations provided by a registered professional surveyor or registered professional engineer. The Commissioner’s determination may be appealed to the Board of Appeal under the provisions of Section 5-2 (Procedure for Appeal) of this Code.

SECTION 25A-4 APPLICABILITY

1. Projects Subject to CFROD. Within the CFROD, this Article 25A applies to the following Proposed Projects:

- (a) Addition of gross floor area. Any Proposed Project:
 - (i) outside the Harborpark, for the erection or extension of one or more buildings that results in the addition of an aggregate gross floor area of twenty thousand (20,000) or more square feet; or
 - (ii) within the Harborpark, for the erection or extension of ten thousand (10,000) or more square feet.
- (b) Addition of dwelling units. Any Proposed Project for the construction of fifteen (15) or more Dwelling Units (but not including rehabilitation or alteration projects unless they result in a net increase of fifteen (15) or more Dwelling Units).
- (c) Establishment or change of use. Any Proposed Project:
 - (i) outside the Downtown, to establish or change the uses of a gross floor area of fifty thousand (50,000) or more square feet; or
 - (ii) within the Downtown, to establish or change to allowed uses the uses of a gross floor area of one hundred thousand (100,000) or more square feet, or to establish or change to conditional or forbidden uses, or to any High Impact Subuse of an Institutional Use, the uses of a gross floor area of fifty thousand (50,000) or more square feet.
- (d) Substantial rehabilitation. Any Proposed Project to substantially rehabilitate a building or structure having, or to have after rehabilitation, a gross floor area of one hundred thousand (100,000) or more square feet.

2. Projects Exempt from CFROD. Notwithstanding any contrary provision of this Section 25A-4, the following Proposed Projects are exempt from the provisions of this Article, and are governed by the rest of this Code:

- (a) Prior application for permit. Any Proposed Project for which application to the Inspectional Services Department for a building or use permit has been made prior to the first notice of hearing before the Zoning Commission for adoption of this Article, and for which no Zoning Relief is required.
- (b) Prior appeal for zoning relief. Any Proposed Project for which appeal to the Board of Appeal for any Zoning Relief has been made prior to the first notice of hearing before the Zoning Commission for adoption of this Article, provided that such Zoning Relief has been or thereafter is granted by the Board of Appeal pursuant to such appeal.

3. Election to Comply with CFROD. An applicant for a building or use permit for a Proposed Project within a CFROD may elect in its application to comply with the provisions of this Article 25A, in which event the Proposed Project shall be governed by the provisions of this Article, notwithstanding any contrary provision of this Section 25A-4 (Applicability).

SECTION 25A-5 ZONING REGULATIONS IN EFFECT; CONFLICT PROVISIONS

1. CFROD Zoning. This Article 25A together with the rest of this Code constitutes the zoning regulation for the Coastal Flood Resilience Overlay District (CFROD) and applies as specified in Section 4-1 of the Code regarding the conformity of buildings and land to this Code.

2. Relationship to Underlying Zoning. A Coastal Flood Resilience Overlay District constitutes a special purpose overlay district pursuant Section 3-1A(p) of this Code. The provisions of the Underlying Zoning, as they may be amended from time to time, continue to apply, except as expressly superseded by this Article 25A. Where conflicts exist between this Article 25A and the remainder of this Code, the more restrictive provision shall govern.

3. Relationship to Planned Development Areas and Institutional Master Plans. Notwithstanding any contrary provision of any Planned Development Area, PDA master plan, or Institutional Master Plan, where conflicts exist between this Article 25A and provisions of a Planned Development Area, PDA master plan, or Institutional Master Plan, the more restrictive provision shall govern.

4. Relationship to Municipal Harbor Plans and Designated Port Areas Under M.G.L. Chapter 91. Portions of the Coastal Flood Resilience Overlay District depicted in Appendix A hereto are subject to Municipal Harbor Plans (MHPs) and Designated Port Areas (DPAs), approved under Massachusetts General Laws, chapter 91. Where conflicts exist between this Article 25A and an MHP or DPA, the provisions of the applicable MHP or DPA shall govern, except where otherwise stated in the MHP or DPA.

SECTION 25A-6 USE AND DIMENSIONAL REGULATIONS

1. Regulations for All Uses and Structures. The provisions of this Section 25A-6.1 apply to any Proposed Project that is subject to, or elects to comply with, the provisions of the CFROD.

- (a) Essential Facilities and High Risk Structures – An Essential Facility or High Risk Structure that is classified as Allowed in the Underlying Zoning shall be Conditional in the CFROD.
- (b) Minimum Sea Level Rise – Design Flood Elevation. The Sea Level Rise – Design Flood Elevation (SLR-DFE) shall be no lower than the following distance above the Sea Level Rise – Base Flood Elevation (SLR-BFE):
 - i. In a FEMA (V) or (VE) zone: two (2) feet.
 - ii. In areas not within a FEMA (V) or (VE) zone:
 - where any part of the lowest occupiable floor is used for a Residential Use, Essential Facility, or High Risk Structure: two (2) feet;
 - otherwise: one (1) foot.
- (c) Limitation on Use of Space Below Required Sea Level Rise – Design Flood Elevation. The following regulations apply to the use of space below the SLR-DFE required by Section 25A-6.1(b):
 - i. Allowed Uses.
 - *Accessory uses that provide:*
 - access or vertical circulation (including lobbies, stairs, and similar spaces);
 - flood prevention (including permanent or deployable flood barriers; detention tanks for stormwater or floodwater; and similar uses);

- storage;
- parking accessory to non-residential uses.
- *Temporary uses* – including, but not limited to, farmers markets and other temporary shops.
- ii. Conditional Uses. Except for uses allowed under paragraph (i) of this subsection 6(c), any non-residential use that is Allowed or Conditional in the Underlying Zoning is Conditional below the required SLR-DFE.
- iii. Forbidden Uses. Any use not classified in this subsection 25A-6.1(c) as Allowed or Conditional is forbidden below the required SLR-DFE.

2. Regulations for Proposed Projects Subject to Resilience Review.

Notwithstanding any contrary provision of the Underlying Zoning, the following regulations apply to any Proposed Project that is subject to, or has elected to comply with, Resilience review under Section 25A-7 (Resilience Review).

(a) Measurement of Dimensions.

- i. Building Height. Building Height shall be measured from the higher of: (a) Grade, or (b) two (2) feet above the Sea Level Rise – Base Flood Elevation (SLR-BFE), except that in no case shall Building Height be measured from an elevation higher than five (5) feet above the Sea Level Rise – Base Flood Elevation (SLR-BFE).
- ii. Gross Floor Area. In addition to areas excluded by the Underlying Zoning, the following shall be excluded from the measurement of Gross Floor Area:
 - (1) areas devoted to interior vertical circulation from Grade to the Sea Level Rise – Design Flood Elevation (SLR-DFE); and
 - (2) areas devoted to flood protection measures (including, but not limited to, permanent or deployable flood barriers and retention tanks for stormwater or floodwater).
- iii. Lot coverage; required open space. The following areas shall be excluded from the measurement of required usable open space on a lot:

- (1) areas used for vertical circulation from Grade to the required SLR-DFE; and
 - (2) structures housing mechanical equipment above the required SLR-DFE.
- (b) Front, Rear, and Side Yards. The following may be located within required setbacks:
- i. *in Front, Rear, and Side Yards*: areas used for vertical circulation from Grade to the required SLR-DFE; and
 - ii. *in Rear and Side Yards*: structures housing mechanical equipment above the required SLR-DFE.
- (c) Primary entrance. A building's primary entrance may be located on a side street or in a Side Yard.

SECTION 25A-7. RESILIENCE REVIEW

1. Applicability of Resilience Review. Resilience review is required for any Proposed Project that is subject to, or elects to comply with, this Article 25A (under Section 25A-4, Applicability).

2. Procedure. The Resilience review required by this Section 25A-7 consists of the Resilience component of either Large Project Review or Small Project Review under Article 80.

If a Proposed Project is not subject to Large Project Review (under Section 80B-2), the Boston Redevelopment Authority shall conduct Resilience review under the Resilience component of Small Project Review.

3. Resilience Review Standards. A Proposed Project that is subject to Resilience review shall be consistent with the principles set forth in Section 25A-7.4 (Coastal Flood Resilience Design Principles). To determine consistency with those principles, the Boston Redevelopment Authority shall review the Proposed Project under the *Coastal Flood Resilience Design Guidelines* (see Section 25A-2 – Definitions).

4. Coastal Flood Resilience Design Principles.

(a) Resilience

- Proposed designs and renovations should incorporate best practices and standards to reduce or eliminate coastal flood risk or damage resulting from future climate conditions.
- In considering coastal flood risk or damage, the Boston Redevelopment Authority shall use the most recent flood hazard modeling and mapping data specified in the Coastal Flood Resilience Design Guidelines.

(b) Urban Design and Public Realm

- To the greatest extent possible, resilience measures should be designed to support pedestrian connections and enhance the character of the public realm within the CFROD.
- Resilience measures should be designed to maintain access and egress between a building and the public realm during flood conditions for people of all abilities.

(c) Relationship to District-Scale Resilience Solutions

- To the extent feasible, enhancements at an individual parcel or project level should support the goals and implementation of plans for coastal resilience throughout the CFROD.
- Enhancements at an individual parcel or project level should not worsen risk at adjacent parcels or restrict future implementation of larger coastal resilience plans for the CFROD.

(d) Sustainability Co-Benefits

- Wherever feasible, proposed flood resilience upgrades should also enhance a building's energy efficiency, greenhouse gas reduction potential, and passive survivability.
- Site improvements should improve stormwater retention and infiltration and reduce heat island effects, through the use of vegetation and permeable surfaces.

SECTION 25A-8 REGULATIONS

The Boston Redevelopment Authority may promulgate, and amend from time to time, regulations to administer this Article 25A.

SECTION 25A-9 ENFORCEMENT

The Commissioner of Inspectional Services shall not issue any building or use permit for a Proposed Project that is subject to, but fails to comply with, the provisions of this Article 25A.

SECTION 25A-10 SEVERABILITY

The provisions of this Article 25A are severable, and if any provision or provisions of this Article are held invalid by a decision of any court of competent jurisdiction, such decision shall not impair or otherwise affect any other provision of this Article 25A.

SECTION 25A-11 APPENDICES

The following appendices are made part of this Article 25A:

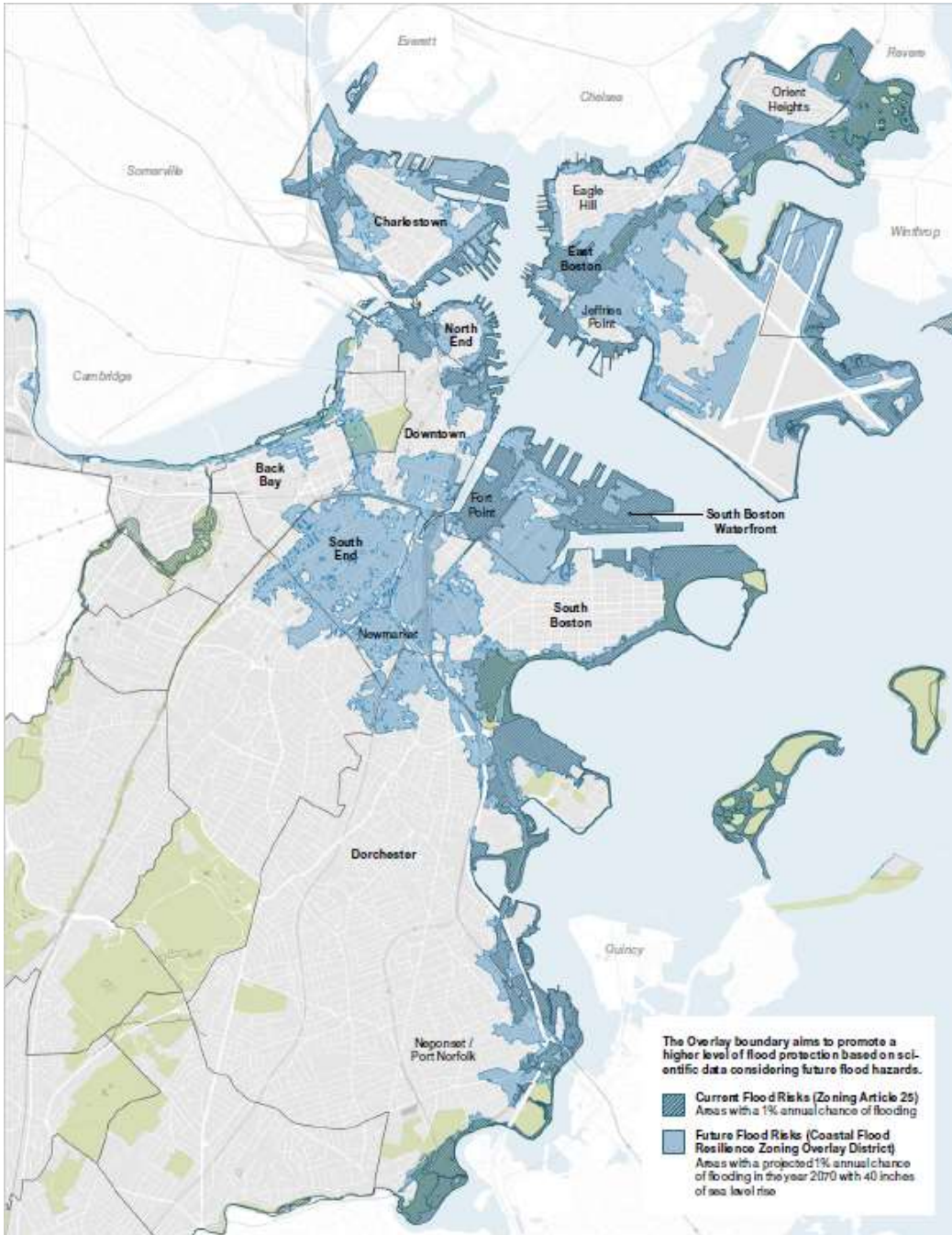
- Appendix A – Map: Coastal Flood Resilience Overlay District (CFROD)
- Appendix B – Definitions
- Appendix C – Essential Facilities and High-Risk Structures

APPENDIX A

Coastal Flood Resilience Overlay District

Map

[Map from Design Guidelines. ADD reference to mapping tool.]



APPENDIX B

Coastal Flood Resilience Overlay District

Definitions

- **Coastal Flood Resilience Design Guidelines** – The Boston Redevelopment Authority’s Coastal Flood Resilience Design Guidelines, adopted in September 2019, as they may be modified by the Authority from time to time. (Also “CFR Design Guidelines”.)
- **Essential Facilities** – See Appendix C to this Article.
- **FEMA zones V, VE** – Areas designated as “V” or “VE” zones on the Suffolk County Flood Insurance Rate Map (FIRM) issued by the Federal Emergency Management Agency (FEMA) for the administration of the National Flood Insurance Program. (These zones indicate coastal areas identified by FEMA as having a 1% or greater chance of flooding and an additional hazard associated with storm waves.)
- **Freeboard** – The distance between the Sea Level Rise – Base Flood Elevation (SLR-BFE) and the Sea Level Rise – Design Flood Elevation (SLR-DFE).
- **High Risk Structures** – See Appendix C to this Article.
- **Sea Level Rise – Base Flood Elevation (SLR-BFE)** – The top of the water elevation predicted by the coastal flood risk scenario specified in the Coastal Flood Resilience Design Guidelines. (*See Coastal Flood Resilience Design Guidelines definition of Sea Level Rise – Base Flood Elevation (SLR-BFE).*) The SLR-BFE is separated from the SLR-DFE by the Freeboard.
- **Sea Level Rise – Design Flood Elevation (SLR-DFE)** – The minimum elevation of the lowest occupiable floor for residential uses, or dry flood-proofing for non-residential uses. (The SLR-DFE is separated from the SLR-BFE by the Freeboard.)
- **Underlying Zoning** – The zoning regulations that are otherwise applicable to a Proposed Project or site within the CFROD, including the regulations of any other overlay districts as set forth in this Code, without regard to the provisions of any applicable PDA Development Plan, PDA Master Plan, or Institutional Master Plan.

APPENDIX C

Essential Facilities and High-Risk Structures

Essential Facilities – uses defined as Essential Facilities in the Massachusetts State Building Code, 780 CMR, as amended (SBC).

The following definition and list of uses from the SBC, 9th Edition, is provided as guidance, but in the event of a conflict between this edition and later editions (or between the guidance printed here and the SBC), the provisions of the latest edition of the SBC govern:

Uses that “contain essential facilities and services necessary for emergency response and recovery, or that pose a substantial risk to the community at large in the event of failure, disruption of function, or damage by flooding.” [SBC Class 4] Essential Facilities include:

- (1) hospitals and health care facilities having surgery or emergency treatment facilities;
- (2) fire, rescue, ambulance, and police stations and emergency vehicle garages;
- (3) designated emergency shelters;
- (4) designated emergency preparedness, communication, and operations centers and other facilities required for emergency response;
- (5) power generating stations and other public utility facilities required in emergencies;
- (6) critical aviation facilities such as control towers, air traffic control centers, and hangars for aircraft used in emergency response
- (7) ancillary structures such as communication towers, electrical substations, fuel or water storage tanks, or other structures necessary to allow continued functioning of a Class 4 facility during and after an emergency;
- (8) buildings and other structures (including, but not limited to, facilities that manufacture, process, handle, store, use, or dispose of such substances as hazardous fuels, hazardous chemicals, or hazardous waste) containing sufficient quantities of highly toxic substances

where the quantity of the material exceeds a threshold quantity established by the authority having jurisdiction and is sufficient to pose a threat to the public if released.

High Risk Structures – uses defined as High Risk Structures in the Massachusetts State Building Code, 780 CMR, as amended (SBC).

The following definition and list of uses from the SBC, 9th Edition, is provided as guidance, but in the event of a conflict between this edition and later editions (or between the guidance printed here and the SBC), the provisions of the latest edition of the SBC govern:

Uses that “pose a high risk to the public or significant disruption to the community should they be damaged, be unable to perform their intended functions after flooding, or fail due to flooding.” [SBC Class 3] High Risk Structures include:

- (1) buildings and structures in which a large number of persons may assemble in one place, such as theaters, lecture halls, concert halls, and religious institutions with large areas used for worship;
- (2) museums;
- (3) community centers and other recreational facilities;
- (4) athletic facilities with seating for spectators;
- (5) elementary schools, secondary schools, and buildings with college or adult education classrooms;
- (6) jails, correctional facilities, and detention facilities;
- (7) healthcare facilities not having surgery or emergency treatment capabilities;
- (8) care facilities where residents have limited mobility or ability, including nursing homes but not including care facilities for five or fewer persons;
- (9) preschool and childcare facilities not located in one- and two-family dwellings;
- (10) buildings and structures associated with power generating stations, water and sewage treatment plants, telecommunication facilities, and other utilities which, if their operations were interrupted by a flood,

would cause significant disruption in day-to-day life or significant economic losses in a community; and

- (11) buildings and other structures not included in Class 4 (including but not limited to facilities that manufacture, process, handle, store, use, or dispose of such substances as hazardous fuels, hazardous chemicals, hazardous waste, or explosives) containing toxic or explosive substances where the quantity of the material exceeds a threshold quantity established by the authority having jurisdiction and is sufficient to pose a threat to the public if released.

DRAFT
September 9, 2020

**COASTAL FLOOD RESILIENCE
Overlay District
(CFROD)**

Related Amendments

**Section 3-1A
Special Purpose Overlay Districts**

In Section 3-1A, after subsection 3-1A(o) (Greenway Overlay District), INSERT the following subsection:

p. **Resilience Overlay District.** All or part of one or more districts or subdistricts may be established as a Resilience Overlay District when the Zoning Commission determines that this designation is necessary and appropriate to advance the City's goal of protecting persons and structures from adverse impacts of climate change through resilient planning and design. The Zoning Commission may designate different types of Resilience Overlay District to address specific impacts and responses. These may include, but are not limited to:

- coastal flooding,
- stormwater flooding,
- urban heat islands,
- urban forest protection.

The requirements and regulations for Coastal Flood Resilience overlay districts are set forth in Article 25A.

DRAFT
September 9, 2020

**COASTAL FLOOD RESILIENCE
Overlay District
(CFROD)**

Related Amendments

ARTICLE 80

LARGE PROJECT REVIEW

In Section 80B-3 (Scope of Large Project Review; Content of Reports):

- In the numbered list of components:
 - after component (7) (Tidelands), DELETE “; and”
 - after component (8) (Development Impact Project), DELETE the final period (.) and INSERT the following additional component:

(9) Resilience.

- At the end of Section 80B-3, ADD the following subsection:

9. Resilience. If a Proposed Project is located in a Resilience overlay district established under Section 3-1A(p) (Resilience Overlay Districts), the Boston Redevelopment Authority, in its Scoping Determination, shall require the Applicant to submit an analysis of the Proposed Project together with such plans, drawings and specifications as are necessary for the Boston Redevelopment Authority to determine that the Proposed Project complies with the requirements of the zoning article for the Resilience Overlay District.

SMALL PROJECT REVIEW

In Section 80E-2 (Applicability of Small Project Review), after the first sentence, INSERT the following:

The components of Small Project Review consist of the following:

- Design (Section 80E-2.1)
- Site Plan (Section 80E-2.2)
- Comprehensive Sign Design (Section 80E-2.3)
- Resilience (Section 80E-2.5)

After Section 80E-2.4 (Waiver or Modification of Small Project Review Requirements), INSERT the following **Section 80E-2.5:**

5. Resilience Component: Projects in Resilience Overlay Districts.

The Resilience Component of Small Project Review shall apply to any Proposed Project in a Resilience Overlay District established under Section 3-1(p) where required by the zoning article for that overlay district.

In Section 80E-3 (Scope of Small Project Review; Content of Application):

- In the first sentence, DELETE “and” before (3). After “comprehensive sign design” (and before the period), INSERT:

(4) resilience

- After subsection (3) (Comprehensive Sign Design), INSERT the following **Section 80E-3.4:**

4. Resilience Component. If a Proposed Project is subject to the Resilience Component of Small Project Review, the application submitted pursuant to Section 80E-5 (Procedures) shall include those plans, drawings, and specifications the Boston Redevelopment Authority finds necessary to determine whether the Proposed Project is consistent with the standards set forth in Section 80E-4.4 (Standards - Resilience Component).

In Section 80E-4 (Standards for Small Project Review):

After subsection 3 (Comprehensive Sign Design), INSERT the following **Section 80E-4.4:**

4. Resilience Component. Any Proposed Project that is subject to the Resilience Component of Small Project Review shall be consistent with the applicable standards for Resilience review required by the Resilience Overlay District where the Proposed Project is located.