BOSTON WATERFRONT PARTNERS

April 21, 2026

City of Boston Office of Climate Resilience
c/o Kathryn Roosa, Sr. Climate Resilience Project Manager
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via electronic mail: climate.ready@boston.gov, kathryn.roosa@boston.gov
cc: U.S. Army Corps of Engineers, boston.csfrm@usace.army.mil

Re: Coastal Storm Risk Management Study Alternatives Analysis

Dear Coastal Storm Risk Management Study Team,

The Boston Waterfront Partners (BWP) represent nonprofit organizations working across Boston Harbor to advance resilient infrastructure, equitable public access, ecological health, and a thriving working waterfront. Members of our coalition live, work, recreate, and/or program in and around Boston Harbor. Together, we bring local, regional, and statewide expertise on waterfront planning and development issues as well as community engagement and climate resilience. Our work seeks to strengthen and improve access to our waterfronts and improve the character and sustainability of our working waterfronts.

We appreciate the continued partnership between the City of Boston and the U.S. Army Corps of Engineers (USACE) and the shared commitment to preparing Boston's 47-mile coastline for long-term coastal flood risk. We offer the following recommendations to strengthen both the process and implementation of the ongoing Coastal Storm Risk Management Study Partnership (CSRMS).

1. Establish a System-Wide Framework for Coastal Protection

Boston's current approach to resilience combines neighborhood-based, district-scale planning studies with parcel-based requirements, but at times this approach does not clearly define a framework for how these systems function together. The Coastal Flood Resilience Overlay District (Article 25A) establishes requirements for new construction and substantial rehabilitation, including Design Flood Elevations (DFEs) and building-level floodproofing

strategies.[1] However, these requirements are primarily triggered through project review processes and, therefore, do not apply uniformly across all existing buildings, particularly smaller residential properties.[2] At the same time, the USACE CSRMS, building off Climate Ready Boston and the Coastal Resilience Solutions reports, is evaluating protection strategies at a district scale, with varying alignments and levels of intervention across neighborhoods. Without a clearly defined system-wide framework, this creates the potential for uneven protection outcomes across the waterfront.

We recommend that USACE account for how project-level and district-scale strategies function together, including by:

- Establishing the relationship between DFEs for buildings and public infrastructure.
- Defining expected protection levels for areas without redevelopment.
- Ensuring continuity of protection across neighborhood boundaries.

We commend the City of Boston for coordinating with local and state agencies and public and private waterfront ownership to support the scope of the USACE CSRM study to protect housing, evacuation corridors, critical infrastructure, natural resources, people and critical transportation. We ask the City of Boston to share an integrated analysis that includes:

- The Office of Emergency Management's evacuation routes and emergency response plans in coordination with state partners.
- Boston Water and Sewer Commission's compound stormwater management plans.
- Conservation Commission Wetlands Ordinance Phase 3 regulations, when available.
- The Office of Historic Preservation's historic resources and district flood protections.

2. Define Boston Harborwalk as Critical Infrastructure

The 43-mile Boston Harborwalk is a public amenity and a nearly continuous transportation corridor that includes intersecting flood pathways, evacuation routes, and waterfront access. We encourage USACE to define Boston Harborwalk performance standards addressing accessible design, continuity, and safety to reflect the Harborwalk's dual function as resilient infrastructure. Elevating the Harborwalk to prevent nuisance flooding for the structure's design life, or until 2070, is a best practice that allows the Harborwalk to remain connected to the water while largely protected from the impacts of permanent flooding. On days where the parts of the

[1] Boston Planning & Development Agency. "Coastal Flood Resilience Guidelines & Zoning Overlay District (Article 25A)." https://www.bostonplans.org/planning-zoning/planning-initiatives/flood-resiliency-building-guidelines-zoning-over

[2] *See* Boston Planning & Development Agency. Boston Zoning Code Article 25A Coastal Flood Resilience Review Procedures. November 17, 2021. https://www.bostonplans.org/documents/planning/waterfront-planning/flood-resiliency-building-guidelines-zoning-overla/coastal-flood-resilience-overlay-district-(cfrod)/article-25a-resilience-review-procedures-and-submi

Harborwalk are expected to flood because of storm surge or tidal flooding, we request that there be a warning system in place to close those segments of Harborwalk. In addition, we encourage USACE and the City of Boston to create comprehensive design guidelines for the Harborwalk. Guidelines should include clear processes for determining Harborwalk DFE appropriate for the respective areas and adaptable to future climate projections, consistent wayfinding and signage, and accessible design standards.

Protection strategies should avoid creating new barriers to public access wherever possible, and should mitigate those impediments that are unavoidable. Elevated Harborwalk segments should provide new opportunities to expand equitable public access to the waterfront. All alternatives should be evaluated for impacts on neighborhood connectivity, transportation and evacuation access, public realm continuity, with input from local communities. Reconstructed segments of the Harborwalk should also align with City of Boston design guidelines and planning initiatives. For example, as outlined in the 2018 Boston Public Works Department's Climate Resilient Design Standards & Guidelines for Protection of Public Rights-of-Way, Boston's Harborwalk is expected to be at a minimum of 12-feet wide. Additionally, we encourage projects to include elements reflecting the best practices outlined in Boston Harbor Now's Visualizing Harborwalk 2.0 design guidelines, which shows how Harborwalk segments that go beyond legal requirements can create more welcoming public spaces. Flood protection can be thoughtfully designed to enhance the landscape through integrated seating structures and landscaped berms, creating new viewing angles and improved public realm. These design guidelines will ensure that protection strategies do not fragment or disconnect waterfront access, which is obligated by the Massachusetts Public Waterfront Act (Chapter 91).

3. Advance Hybrid Infrastructure as the Baseline

a. Nature-Based Solutions as Part of a Cost-Effective, Comprehensive Design

We first wish to highlight the viability of nature-based solutions for climate resilience in the CSRM process. The unique permitting situation presented by the fill required to support nature-based resilience features and natural restoration should not stop USACE from pursuing nature-based and hybrid projects. Under Chapter 91, the Massachusetts Department of Environmental Protection (DEP) "shall require non-structural [coastal and shoreline engineering] alternatives where feasible."[3] The Chapter 91 regulations also provide that "shoreline stabilization or the rehabilitation of an existing shore protection structure" qualify as a permitted water-dependent use.[4] Shore protection structures and associated fill are considered water-dependent uses under Chapter 91 when they are necessary to "either protect an existing structure from natural erosion or accretion, or to protect, construct, or expand a water-dependent use."[5] Finally, the Chapter 91 and Wetlands Protection Act regulations are currently undergoing

[3] 310 CMR 9.37(3)(c).
[4] 310 CMR 9.32(2).
[5] 310 CMR 9.12(2)(a)(11).

review that will further facilitate the implementation of nature-based solutions.[6] The co-benefits of public access and ecological restoration that stem from nature-based solutions likely qualify as water-dependent uses and, taken together, the regulations show that nature-based solutions should be readily eligible for permitting.

We are concerned that the preliminary alignments do not show nature-based solutions at Boston's waterfront beaches, including Constitution Beach in East Boston, Carson Beach in South Boston, and Malibu Beach and Tenean Beach in Dorchester. Previous City of Boston *Coastal Resilience Solutions* projects have identified and developed design concepts for viable nature-based strategies at these specific locations and others, including beach nourishment, engineered dune creation, and dune enhancement. Hydrodynamic modeling for these sites also demonstrated risk-reduction benefits. Without intervention, these critical resources for Boston's residents and the broader region will be increasingly eroded by storm events and inundated by higher tides. USACE should consider these alternatives, with technical rigor consistent with prior City of Boston studies, as components of layered risk reduction systems. Benefit-cost analysis should account for the economic, recreational, cultural, and ecological value of these resources in future conditions with and without nature-based intervention.

The federal cost share for this project requires the U.S. Congress to pay up to 65% of the total project costs, with the City of Boston covering the remaining. USACE has committed to requesting funds primarily for grey infrastructure. Many of the community-preferred resilience features, such as, landscaping, green edges, and in-water plantings that attenuate wave energy, have been classified as "city betterments" not eligible for federal support. This leaves the City responsible for 35% of the grey infrastructure and 100% of any nature-based solutions, regardless of potential economic benefits and cost-savings from nature-based projects as well as green infrastructure.

In relation to our preference for hybrid solutions that advance nature-based solutions in a practical and cost-effective way, we also request:

- Clarity on the comparative costs of alignments.
- Consideration of the economic benefits associated with waterfront access and nature-based solutions.
- Defined long-term maintenance responsibilities.

This clarity will provide the public with information essential to understanding the outcomes of the CSRM process, including what the City of Boston will be responsible for funding and implementing when designs are finalized.

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[6] *See* 310 CMR 9.00: The Massachusetts Waterways Regulation, "Proposed Amendments - Redline," https://www.mass.gov/doc/310-cmr-900-resilience-proposed-amendments-redline/download; 310 CMR 10.00: Wetlands Protection Act, "Proposed Revisions - Redline/Strikeout," https://www.mass.gov/doc/310-cmr-1000-wetlands-proposed-revisions-redlinestrikeout/download.

b. Importance of a Systems-Level Layered Approach

The CSRM process appropriately evaluates a range of strategies across the categories of protection, adaptation or accommodation, and management. These categories provide a useful framework for organizing available tools, from structural measures such as floodwalls and berms, to building-level adaptations and operational strategies such as emergency response and deployable systems. We acknowledge that not every alignment can be nature-based, as such strategies may be insufficient to address conditions on many sections of Boston's waterfront. However, as currently presented, these strategies appear to be evaluated primarily as individual tools or alternatives, rather than as integrated layers within a coordinated system.

We recommend clarifying how protection, adaptation, and management strategies are intended to be combined and calibrated together to achieve consistent performance across the waterfront. In practice, resilient coastal systems function through multiple, overlapping layers:

- Primary layer that reduces or prevents floodwaters from entering, such as structural or landscape-based protection measures.
- Secondary layer that reduces damage where flooding may still occur, such as elevated infrastructure, floodproofed buildings, and adaptable public realm design.
- Tertiary layer that maintains functionality during and after flood events, such as evacuation routes, emergency operations, and recovery systems.

Evaluating tools within this layered framework would help ensure that no single strategy is relied upon in isolation and that each district demonstrates how these layers work together to provide reliable and continuous protection.

This integrated approach is particularly important in Boston, where existing parcel-level requirements, such as those established through Article 25A, operate alongside district-scale protection strategies under consideration by USACE. Without a clearly defined relationship between these scales, there is a risk that protection outcomes will vary across neighborhoods depending on redevelopment patterns or alignment decisions.

Engineering With Nature, as USACE has demonstrated in prior work, provides a model for this type of integration by aligning natural and engineered systems to deliver solutions that are ecologically sound, protective, and publicly accessible.[7] Applying this approach to Boston's waterfront would support a transition from a collection of individual interventions toward a coherent, system-wide strategy that avoids piecemeal protection and ensures consistent performance over time. Hybrid systems combining ecological and engineered approaches should be the baseline for evaluating alternatives. We encourage USACE to involve engineers from the

[7] *See* U.S. Army Corps of Engineers. Engineering With Nature®: An Atlas. ERDC/EL SR-18-8, 2018. https://ewn.erdc.dren.mil/wp-content/uploads/2021/03/ERDC-EL_SR-18-8_Ebook_file.pdf

Engineering with Nature program in the design process as early as possible to account for this relationship when selecting the most economically, culturally, and naturally viable alignment.

4. Support Working Waterfronts and Designated Port Areas

Designated Port Areas (DPAs) in Boston Harbor deeply impact many of the communities we work in and support. DPAs provide critical support for Massachusetts' maritime economy and cultural history, and it is essential that these areas, including the Chelsea Creek DPA, Mystic River DPA, East Boston DPA, and South Boston DPA, are made resilient to long-term coastal flooding. While many water-dependent industries can withstand a certain level of flooding, USACE must ensure that the chosen alignments for the City of Boston protect against extreme storm surge and inundation and ensure that no alignment impedes ongoing water access, maritime economy, and industrial use of these areas. Waterside alignments, such as manual flood gates, should not obstruct or delay maritime traffic from easily entering and exiting a DPA. We encourage USACE to prioritize alignments that advance the capacity of DPAs to support regional coastal resilience for their inland host neighborhoods, without sacrificing maritime industrial capacity.

We are concerned that the preliminary alignments show no structural protection for major port infrastructure, including Conley Terminal, the Autoport in Charlestown, and Logan International Airport's airfield. While we recognize that these facilities do not have many buildings on them and no residents, the economic, strategic, and disaster recovery importance of these critical port infrastructures should not be discounted by limitations in the USACE benefit-cost analysis framework, nor should USACE's limited toolkit dissuade the development and consideration of structural modifications that will be required to secure their long-term viability. We note that all of these assets are owned by the Massachusetts Port Authority (Massport) and strongly urge the USACE and City of Boston to deeply engage Massport leadership in the CSRM. While Massport has significant technical and financial capacity to design and construct capital improvements, the costs of the necessary modifications to these facilities may be in excess of that capacity, and further, there ought to be a strong and clear federal interest in advancing coastal resilience of these critical infrastructure facilities in coordination with Massport's existing climate adaptation plans.

We also note that, while Massachusetts places limits on placing fill in or dredging DPAs, which can present permitting challenges for using fill-intensive nature-based solutions in these areas, shore protection structures and their associated fill are permitted water-dependent industrial uses under the DPA regulations so long as they are associated with DPA operations.[8] Climate-resilient infrastructure is increasingly accepted as a supporting or ancillary use for DPAs, and USACE should not be deterred from pursuing nature-based solutions such as these in DPAs.

[8] 310 CMR 9.12(2)(b)(7)

USACE is obligated by its own regulations to ensure that federal and state requirements complement each other and to work closely with the state to abide by state regulations when there are not "significant issues of overriding national importance." Resilience strategies must be compatible with maritime uses, water-dependent infrastructure, and DPA requirements. Coordination is needed to ensure investments support long-term harbor operations, do not displace key uses, and abide by state regulations and planning initiatives.

5. Strengthen and Expand Community Engagement

We appreciate the variety of methods the project team has used to gather community feedback throughout the process so far, particularly the opportunities to schedule office hours, submit comments, and participate in focus groups. We look forward to the possible workshops that the City of Boston may hold on how to provide effective public comments as highlighted on the USACE Study Partnership webpage and request the BWP and the broader public be updated on the status of those workshops as they move forward.

To enhance public awareness, we suggest the creation of a centralized online platform to complement the Environment Department's monthly newsletter, the USACE CSRM page and the Boston Events page, as well as cross promotion by participating City of Boston agencies. Engaging local community groups in the development of a public engagement framework and partnering with them at the neighborhood level would strengthen outreach efforts, improve meeting visibility, and generate more meaningful feedback. Additionally, establishing a community advisory group would provide a mechanism for ongoing input throughout the project's lifecycle. Given the multi-year duration of this local–federal partnership, engagement activities should be strategically planned and coordinated to minimize participation fatigue. A phased and deliberate approach will be critical to sustaining public involvement and ensuring meaningful input over time.

In addition to hosting effective public comment workshops, we urge the City of Boston and USACE to be transparent on how community feedback does or does not influence planning decisions within this process. The CSRM process involves choices between coastal and inland alignments and variable levels of protection. These decisions affect connectivity, access, and system-scale continuity. In this decision-making process, we recommend that USACE transparently communicate the rationale behind its preferred alignments, the level of protection each alignment provides, and the residual risks. We also recommend:

- Clear documentation of how input shapes decisions.
- More collaborative design engagement involving waterfront users of all backgrounds.
- Clarity and transparency behind priority phasing determinations.

The evaluation criteria and reasoning must be transparent to allow for proper public input in the scoping process.

Conclusion

The BWP appreciates all that the City of Boston and USACE are doing to protect our neighborhoods and residents from projected climate impacts. The CSRM Study presents an opportunity to build a system that protects people, sustains economic activity, and maintains access to the harbor. In summary, we encourage the City of Boston and USACE to embrace a systems approach to this process that:

- Establishes a standardized process for defining appropriate design flood elevations, Harborwalk signage, accessibility measures, and for new development to work in tandem providing regional resilience.
- Defines projected protection from climate impacts in areas without redevelopment, in relation to district-scale solutions.
- Ensures continuity and public access across neighborhood boundaries.
- Reflects City of Boston planning priorities by building off of established City resilience plans and incorporating Harborwalk design guidelines wherever practicable.
- Advances nature-based and hybrid infrastructure by evaluating proposed alignments as layered, interconnected infrastructure and valuing the economic and practical efficiency of nature-based features alongside the need for hard-edge solutions.
- Provides clarity and transparency around the financial obligations for each proposed alignment, including the cost-benefit analysis, long-term maintenance obligations, and cost-sharing framework.
- Streamlines state permitting requirements by factoring in regulatory obligations under Chapter 91, the Wetlands Protection Act, and other laws and regulations.
- Strengthens the opportunities for community input throughout the scoping process and beyond with a comprehensive outreach plan and transparent and collaborative design engagement.

We appreciate this opportunity to comment and look forward to ongoing collaboration to ensure durable, effective outcomes. Please reach out to Breanne Frank (bfrank@clf.org) and Libby McLaughlin (mclaughlin@savetheharbor.org) with questions.

Sincerely,

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