



Record of Decision

# Resilient Infrastructure: Coastal Flood Protection for Bridgeport Connecticut

Bridgeport, Fairfield County, Connecticut

PDMC-PJ-01-CT-2019-006

*January 2022*



**FEMA**

**U.S. Department of Homeland Security**  
**Federal Emergency Management Agency, Region I**  
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**ACRONYMS**

BMP	Best Management Practice
CFDS	Coastal Flood Defense System
C.F.R.	Code of Federal Regulations
CLOMR	Conditional Letter of Map Revision
CSO	Combined Sewer Overflow
CT DOH	Connecticut Department of Housing
CT DOT	Connecticut Department of Transportation
DEEP	Connecticut Department of Energy and Environmental Protection
DPF	Diesel Particulate Filter
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
hp	Horsepower
HUD	U.S. Department of Housing and Urban Development
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOA	Notice of Availability
NOI	Notice of Intent
PDM	Pre-Disaster Mitigation
ROD	Record of Decision
SHPO	Connecticut State Historic Preservation Officer
UI	United Illuminating

## **1.0 INTRODUCTION**

The Connecticut Division of Emergency Management and Homeland Security submitted a federal fiscal year 2019 Pre-Disaster Mitigation (PDM) grant application to the Federal Emergency Management Agency (FEMA) on behalf of the State of Connecticut Department of Housing (CT DOH or Subapplicant) to pursue additional funding for the Resilient Bridgeport project. The PDM Grant Program is authorized under Section 203 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 United States Code 5133, and under the PDM Grant Program, FEMA may provide technical and financial assistance to states and local governments to assist in the implementation of pre-disaster hazard mitigation measures that are cost-effective and designed to reduce injuries, loss of life, and damage and destruction of property, including damage to critical services and facilities resulting from natural disasters.

The Proposed Action is to construct a coastal flood defense system (CFDS) to protect the South End area of the City of Bridgeport, Connecticut. The CFDS includes raising a portion of University Avenue, installing sheet piling and floodwalls, and constructing an internal drainage system to manage stormwater during coastal storm flooding. The Proposed Action will also install a pump station and green infrastructure for internal drainage of stormwater during coastal storm conditions and to reduce stormwater flooding.

CT DOH was a recipient of U.S. Department of Housing and Urban Development (HUD) disaster recovery grant funding. As the recipient of a HUD grant, CT DOH prepared an environmental impact statement (EIS) that evaluated the environmental effects of the Proposed Action per HUD regulations at 24 Code of Federal Regulations (C.F.R.) § 58.2(a)(7)(i). Within the EIS, two other projects were also evaluated that are not part of the PDM grant: a Rebuild by Design pilot project at the Marina Village/Windward Development public housing site and a Resilience Center. The official comment period on the Draft EIS was from February 1, 2019 to March 18, 2019, with the publication of a Notice of Availability (NOA) in the *Federal Register* and local media outlets. The Final EIS was published in the *Federal Register* from October 7, 2019 to November 6, 2019. The Final EIS can be accessed via the EPA EIS Database (<https://cdxapps.epa.gov/cdx-enepa-II/public/action/eis/details?eisId=279921>).

FEMA is adopting the HUD/CT DOH EIS and documenting its decision on the proposed project in this Record of Decision (ROD). FEMA published an Initial Public Notice of work potentially affecting floodplains on January 21, 2021 in the *CT Post* newspaper, *La Voz Hispana* magazine, and the Resilient Bridgeport website. FEMA recirculated the Final EIS on February 12, 2021 per 40 C.F.R. § 1506.3(b)(1). The official comment period on the recirculated Final EIS was from February 12, 2021 to March 15, 2021 with the publication of an NOA in the *Federal Register* and local media outlets. The only comment letter received was from the EPA indicating that they did not have any additional comments on the Final EIS. FEMA published the Final Public Notice on August 12, 2021 per 44 C.F.R. Part 9.

Recent changes to the President's Council on Environmental Quality (CEQ) regulations implementing the National Environmental Policy Act (NEPA) (40 Code of Federal Regulations [C.F.R.] §§ 1500–1508) became effective on September 14, 2020, 85 Fed. R. 43304-76 (July 16, 2020). As stated in 40 C.F.R. § 1506.13, the new regulations apply to any NEPA process begun after September 14, 2020. The EIS substantively commenced prior to that date; therefore, the EIS conforms to the CEQ NEPA implementing regulations that were in place prior to September 14, 2020, and procedures adopted pursuant to Department of Homeland Security (DHS) Directive 023-01, Rev. 01, and FEMA Directive 108-1.

In accordance with the Council on Environmental Quality's NEPA implementing regulations in 40 C.F.R. § 1505.2, and FEMA's NEPA procedures in DHS Directive 023-01, Rev. 01 and FEMA Directive 108-1, FEMA is selecting the Proposed Action, which is also the agency's preferred alternative. The Proposed Action, with the required mitigation measures, is the environmentally preferable alternative. The No Action alternative would not protect the area from coastal flooding and conditions would not improve. Flood damage is expected to continue or worsen because of increased sea level rise due to climate-driven changes.

## **2.0 PURPOSE AND NEED**

The purpose of the project is to reduce the risk of flooding in the South End community and to provide dry egress during emergencies. The project is needed because the South End neighborhood experiences flooding from both coastal and inland flooding during regular rainfall events and storm surge conditions. This flooding causes damage to buildings and infrastructure and results in health and safety impacts on the residents.

## **3.0 PROJECT LOCATION AND BACKGROUND**

The project is in the South End neighborhood in the City of Bridgeport, Fairfield County, Connecticut. The South End neighborhood is a peninsula of the Connecticut coastal region between Cedar Creek, the Long Island Sound, and Bridgeport Harbor. The project area is in the eastern half of the peninsula and is generally bounded by the rail line on the north, Park Avenue on the west, and extending to Long Island Sound and Bridgeport Harbor in the south and east. The project area is a mix of residential land, parkland, energy and wastewater utility plants, and the University of Bridgeport.

The South End neighborhood experiences flooding resulting from both coastal and inland flooding and regular rainfall events. These chronic flooding issues are the result of an aged combined stormwater sewer system. Minimizing flooding at roadways leading into and out of the South End is vital to resident egress and emergency evacuation. The area experienced the highest storm surge in the state during Superstorm Sandy in 2012, with floodwaters rising approximately 7 feet above normal high tide, inundating 211 buildings.

In the eastern portion of the South End neighborhood, the sewer and stormwater system infrastructure is aging, including an existing outfall that runs along Singer Avenue and drains into Bridgeport Harbor during combined sewer overflow (CSO) events. Generally, when the area experiences a heavy rainfall event, the water volume exceeds the capacity of the system and discharges stormwater and untreated wastewater directly into the harbor. In Bridgeport, a rain event as small as 0.4 inches of precipitation can trigger a CSO event.

### **3.1 NEPA Review Process**

In 2018, CT DOH began a NEPA EIS process to evaluate alternatives for coastal flood protection in the South End neighborhood. The EIS addressed the potential environmental and historic preservation impacts of the Proposed Action and additional projects. The NEPA public review process was employed to complete the required public outreach component of the Section 106 consultation process of the National Historic Preservation Act (NHPA). Accordingly, milestones from the Section 106 consultation are incorporated with NEPA milestones in the material presented below:

- A Notice of Intent (NOI) to prepare a Draft EIS was published in the *Federal Register* on February 27, 2018 (pursuant to 40 C.F.R. § 1501.7). The public scoping period for the NOI ran until March 28, 2018. As part of the public scoping process, a Draft Scoping Document was prepared and made available for public review and comment. A public scoping meeting was held on March 14, 2018, where material was presented to the community and input was solicited.
- Section 106 consultation under the NHPA with the Connecticut State Historic Preservation Officer (SHPO) was initiated in May 2018 to develop a Programmatic Agreement for the Proposed Action.
- A Final Public Scoping Document was produced that incorporated substantive comments from the comment period and was published in June 2018.
- Federally Recognized Tribes were included in the consultation process for the Section 106 Programmatic Agreement in November 2018.
- An NOA of the Draft EIS was published in the *Federal Register* on February 1, 2019.
- The public comment period on the Draft EIS ran from February 1, 2019, to March 18, 2019, and included a public meeting held on February 26, 2019.
- State Recognized Tribes and local historic organizations were added to the consultation process for the Section 106 Programmatic Agreement in October 2019.
- An NOA of the Final EIS was published in the *Federal Register* on September 6, 2019, and had a 30-day public review period to October 7, 2019.
- The Section 106 Programmatic Agreement for the Proposed Action was executed on October 22, 2019.
- CT DOH signed a ROD on October 24, 2019, and published it in the *Federal Register*.
- FEMA consulted with the SHPO and Federally Recognized Tribes on November 25, 2020 and formally adopted the Section 106 Programmatic Agreement on August 23, 2021.
- An Initial Public Notice on floodplain management was published by FEMA on January 21, 2021, in the *CT Post* newspaper, *La Voz Hispana* magazine, and the Resilient Bridgeport website. Map requests and comments about this project and potential floodplain impacts were requested within 15 days of publication.
- A notice of FEMA's intent to adopt the Final EIS was published in the *Federal Register* on February 12, 2021, initiating a 30-day public comment period.
- A Final Public Notice on floodplain management was published by FEMA on August 12, 2021, in the *CT Post* newspaper, *La Voz Hispana* magazine, Connecticut Department of Housing website, City of Bridgeport website and the Resilient Bridgeport website.

## **4.0 ALTERNATIVES**

The alternatives considered, including the No Action alternative and alternatives considered but eliminated from further study, are described in detail in the Final EIS in Section 3, Alternatives. The alternatives considered are summarized briefly in this section of the ROD.

### **4.1 No Action Alternative**

Under the No Action alternative, there would be no measures to address either coastal storm surge or rainfall flood risk reduction. As a result, there would be no negative environmental impacts related to construction and no impacts on visual or historic resources within the South End. However, this alternative would not meet the project purpose and need. There would be no flood risk reduction from either acute or chronic flooding in the South End; therefore, risk of flooding and the associated health and safety hazards would remain. There would be no new raised egress from the South End; therefore, residents would continue to be stranded during regular rainfall and storm events, and emergency vehicles would need to navigate road closures potentially resulting in delays in emergency response times.

### **4.2 Proposed Action**

The Proposed Action is to construct a CFDS to protect the South End neighborhood. CT DOH proposes to raise a portion of University Avenue, install sheet piling and floodwalls, construct an internal drainage system to manage stormwater during coastal storm flooding, incorporate green infrastructure, and construct a pump station. The pump station would discharge stormwater outside of the floodwall through bioswales and a rain garden in the adjacent Seaside Park. The alignment of the CFDS would primarily be on private, industrial, and utility properties.

Specific elements of the CFDS would include:

- University Avenue – The road would be raised from a high point on University Avenue, starting at the parking lot adjacent to the University of Bridgeport School of Engineering building through to the east side of Main Street, to provide dry egress and multimodal transportation options (i.e., walking and cycling) for residents and students while reducing future flood risks from tidal waters during storms. Public access to the entrance of Seaside Park between Broad Street and Main Street at the intersection with University Avenue would be maintained at all times for vehicles and pedestrians via Broad Street, which would be ramped up and over University Avenue. Bicycles and pedestrians would access Seaside Park (at the intersection of Main Street and University Avenue ) via ramps built in conformance with the Americans with Disabilities Act.
- 60 Main Street – The floodwall would be constructed in the east-west direction through this currently vacant lot. After crossing the 60 Main Street site, the floodwall would become an above-grade T-wall and connect to the Harbor Unit 5 site. Future development of this lot is expected.
- 60 Main Street to the Connecticut Department of Transportation (CT DOT) New Haven Line railroad viaduct – This north-south segment of the system would tie into the existing high ground of the rail abutment near the Interstate 95 bridge. The height of the structure would be designed to reduce flood risk with considerations to reduce the potential for wave overtopping. Where the

CFDS would cross a street, a floodgate would be constructed that would remain open except during flood emergencies.

### **4.3 Other Alternatives**

In addition to the Proposed Action alternative, there were three additional alternatives that were variations of the CFDS alignment that also met the purpose and need of the project and were analyzed in the EIS. Below is a summary of these alternatives.

#### **4.3.1 Alternative 2**

The CFDS alignment would only partially pass through the 60 Main Street site before turning north to meet Russell Street. It would then follow the Bridgeport Energy property line to Singer Avenue, then follow the western edge of the future United Illuminating (UI) Pequonnock Substation site before crossing Ferry Access Road to tie in at the elevated CT DOT New Haven Line railroad viaduct.

#### **4.3.2 Alternative 3**

The CFDS alignment would only partially pass through the 60 Main Street site before turning north to meet up with Russell Street, continuing to Atlantic Street. The alignment would briefly run west along the north side of Atlantic Street before turning north along the eastern edge of the Public Service Enterprise Group property, which is currently occupied by a brick warehouse, then cross Whiting Street and continue through the public right-of-way along Singer Avenue. It would then follow the western edge of the future UI Pequonnock Substation site before crossing Ferry Access Road to tie into the CT DOT New Haven Line railroad viaduct.

#### **4.3.3 Alternative 4**

The CFDS alignment would turn north within the 60 Main Street site to the east side of 57 Henry Street and would continue across Henry Street along the east side of Russell Street. After turning west at Atlantic Street, the alignment would continue on the east side of Main Street for one block between Atlantic and Whiting Streets heading north before turning east to Singer Avenue. Thereafter, the alignment would follow the western edge of the future site of the UI Pequonnock Substation, cross Ferry Access Road, and tie in at the elevated CT DOT New Haven Line railroad viaduct.

### **4.4 Alternatives Considered but Dismissed**

Below is a summary of alternatives that were considered but dismissed because they did not meet the purpose and need of the project, and the reasons why they were dismissed.

- **In-Water Solution** – This alignment alternative consisted of a flood reduction feature built entirely in the water off the coast of Bridgeport that would extend east from the western end of Seaside Park along the coast, then extend north to tie into the higher land south of Interstate 95. This concept was eliminated because the negative environmental impacts would have been significant; the permitting process would have been lengthy and arduous, which would have affected schedule goals; and the cost would have significantly exceeded funding availability. In addition, the community voiced significant concern regarding both viewsheds and waterfront access.



- Alignment Segments in Seaside Park – Seaside Park is a historic park within the project area that has been listed on the National Register of Historic Places since 1982. An existing berm extending along the perimeter of the park provides a level of protection against flooding, so this area is considered an area of lower risk for flooding. This concept was eliminated because of the historic nature of the park and the consideration that this area can withstand flooding with little negative impact on public safety or critical infrastructure. No residences, businesses, or utility companies are located in the park.
- Waldemere Avenue – Waldemere Avenue is south of and parallel to University Avenue—marking the southern boundary of the University of Bridgeport—and adjacent to Seaside Park. The alternative to construct flood wall features along Waldemere Avenue was eliminated because the street is at a relatively low elevation, so the height of a flood wall on this alignment would need to be much higher than would be necessary along University Avenue to provide the same level of risk reduction. In addition, a flood wall of the necessary height would isolate the park from the rest of the community, hindering the community’s access to the water, and would conflict with key project goals. The proximity to the historic park would have instigated a lengthy environmental review and approval process, also making it unfavorable with regard to schedule.
- Linden Avenue – Linden Avenue is between University Avenue and Waldemere Avenue, and this alternative alignment posed similar challenges as the Waldemere Avenue alternative. The elevation of Linden Avenue is slightly higher than Waldemere Avenue but is still significantly lower than University Avenue, and thus would require construction of a very high flood wall. The size and cost of such a structure, along with the negative impact on community character and water access, resulted in the dismissal of this concept.
- Myrtle Avenue – Myrtle Avenue is a north-south roadway in the southwest region of the project area. This location is too far west to be of value for flood risk reduction and was therefore rejected.
- Hazel Street – Hazel Street is one block east of Myrtle Avenue and was eliminated for similar reason to that for Myrtle Avenue. While it is farther east than Myrtle Avenue, any alignment established in this location would be too far west to support the project goals.
- Lafayette Avenue – Lafayette Avenue is one block east of Hazel Street. Potential alignments along this segment were also eliminated because the location is too far west to provide meaningful flood protection.
- Atlantic Street – Atlantic Street is a main thoroughfare that runs east-west adjacent to the north side of the University of Bridgeport campus. A flood reduction strategy constructed in this location would be too far north to be of significant value to the neighborhood. Vulnerable residential areas, 60 Main Street and a second future development to be located at 30 University Avenue, would receive no benefit from a flood reduction strategy along Atlantic Street. In addition, because this roadway would provide access to both Bridgeport Energy and the Public Service Enterprise Group property, this alternative would have presented significant construction constraints and would not have been favorable. This alternative was therefore eliminated from consideration.
- Broad Street – Broad Street is the final north-south alignment that was eliminated in the initial assessment. Like the aforementioned north-south alignments, Broad Street is located too far west to provide a benefit to critical areas that need to be protected to meet project goals. Any north-south

alignments west of Main Street were thus eliminated because they would not be able to provide adequate protection to many residences and critical infrastructure.

- Gregory Street – Gregory Street was considered as an alternative for a raised street to provide dry egress to the potential development property at 375 Main Street. Gregory Street is densely built up with residences and community religious centers. Raising the street would have a major adverse impact on the community, as many of the existing buildings are close to the street, making transitions and access from the raised road to the adjacent parcels a challenge. In addition, there are several streets that would have to be raised to cross the raised elevation of Gregory Street. Because the impacts of raising Gregory Street outweighed the benefits, this alternative was eliminated.

#### **4.5 Environmentally Preferred Alternative**

The environmentally preferred alternative is the Proposed Action. The Proposed Action provides the greatest protection from inland and coastal flooding in the South End neighborhood and reduces potential future flood damage. The No Action alternative would not provide protection from flooding —flood-related damage would likely continue —and it does not meet the purpose and need of the project. The summary of potential effects in the Summary of Environmental Consequences, Section 4.4.2 of the Final EIS, shows that there would be the potential for greater significant impacts from the No Action alternative from continued flooding than there would be from any of the other alternatives. The other alternatives considered would not provide as much protection as the Proposed Action.

### **5.0 AGENCY AND PUBLIC INVOLVEMENT**

The agency and public involvement process is summarized below.

#### **5.1 Cooperating and Participating Agencies**

Cooperating agencies for the CT DOH EIS included HUD, the EPA, the Connecticut Department of Energy and Environmental Protection, and the Connecticut SHPO. These federal and state agencies were involved in the EIS process because they have special expertise in or knowledge of environmental and historic preservation issues, they have jurisdiction by law, or they must approve a portion of the Proposed Action. The cooperating agencies assisted with the preparation of the EIS by providing input on the purpose and need statement, range of alternatives, methodologies for documenting environmental conditions, identifying issues that could delay or prevent granting approval of the project, and mitigation measures.

Participating agencies for the CT DOH EIS included the U.S. Army Corps of Engineers; U.S. Fish and Wildlife Service; Connecticut Department of Transportation; Delaware Nation, Oklahoma; Delaware Tribe of Indians; Mashantucket Pequot Tribal Nation; Mohegan Tribe; and the Narragansett Indian Tribe. Like the cooperating agencies, these agencies and Tribes provided expertise and knowledge of environmental and historic preservation issues and provided input on the EIS, as they have an interest in the project or project area. However, they do not have jurisdiction by law and do not have to approve a portion of the Proposed Action. Technical experts from the cooperating and participating agencies and Tribes served as a Technical Advisory Committee to aid in community engagement.

## **5.2 National Historic Preservation Act Section 106 Consultation**

CT DOH, with authority delegated from HUD, initiated a formal Section 106 consultation under the NHPA with the SHPO in May 2018, with Federally Recognized Tribes in November 2018, and with State Recognized Tribes, local organizations with an interest in historic properties, and the Advisory Council on Historic Preservation on July 26, 2019. The Section 106 consultation resulted in a Programmatic Agreement for Resilient Bridgeport: National Disaster Resilience and Rebuild by Design Projects that was executed on October 22, 2019, for the resolution of adverse effects to historic properties. The Mary and Eliza Freeman Center for History and Community, the City of Bridgeport, the Mohegan Tribe of Indians of Connecticut, the Delaware Tribe of Indians, and the Delaware Nation, Oklahoma, were invited to be concurring parties. FEMA initiated consultation with the SHPO and Federally Recognized Tribes on November 25, 2020, and formally adopted the Section 106 Programmatic Agreement on August 23, 2021, agreeing with the resolution of adverse effects.

## **5.3 Public Involvement**

Prior to the public comment period for the Draft EIS, consultation and coordination with the public took place during project development. Public meetings related to this early coordination, public involvement during the EIS review process, and subsequent public outreach and involvement related to this project include the following meetings:

- Project Kickoff Meeting (#1) on October 18, 2017
- Concept Screening Meeting (#2) on December 12, 2017
- Scoping Meeting and Design Workshop (#3) on March 14, 2018
- Alternatives Analysis Meeting (#4) on June 6, 2018
- DEIS Public Hearing and Design Workshop (#5) on February 26, 2019
- Main Street Workshop (#6) on June 26, 2019
- Resilient Bridgeport Public Information Meeting on April 28, 2021

Other outreach mechanisms included a project website ([www.ResilientBridgeport.com](http://www.ResilientBridgeport.com)) that provided an overview of the project; project updates and timelines; an archive of public meetings; information on upcoming meetings; contact information; and links to published documents, social media accounts, and related websites. A Resilient Bridgeport social media account was developed, which included the project Facebook account @resilientbridgeport and Twitter account @ResilientBPCT. CT DOH also provided regular press releases to the following media outlets, all of which have online presences:

- *Only in Bridgeport* – Newspaper
- *La Voz Hispana* (Spanish) – Magazine
- *CT Post* – Newspaper
- WTNH – Television
- News 12 – Television
- WPKN – Radio
- WNLK-WSTC – Radio
- WNPR – Radio
- Radio Cumbre (Spanish) – Radio

#### 5.4 Public and Agency Comments

The 45-day public comment period for the Draft EIS began February 1, 2019, and ended March 18, 2019. CT DOH received 207 public comments during the comment period and from the March 14, 2018 public scoping meeting. The comments included concerns and suggestions about purpose and need, the alternatives, mitigation measures, regulatory compliance, potential impacts on a variety of natural and human environment resources, and the schedule and cost of project implementation.

CT DOH also received 48 comments from five federal and state agencies during the 45-day public comment period. Comments were supplied by the Connecticut Department of Public Health and Drinking Water, Connecticut Department of Economic and Community Development, U.S. Department of the Interior, Office of Environmental Policy and Compliance, Connecticut Department of Energy and Environmental Protection (DEEP), and the EPA. Comments included concerns about agency coordination, impacts to historic properties, potential need for permits, and clarifying questions. CT DOH's responses to public and agency comments are summarized in Appendix H of the Final EIS.

The 30-day public review period for the Final EIS began September 6, 2019, and ended October 7, 2019. Comments from 10 agencies and stakeholders were received, and a summary table of the comments and CT DOH's responses is provided in Attachment 3 of CT DOH's ROD.

FEMA published an Initial Public Notice on January 21, 2021, in the *CT Post* newspaper, *La Voz Hispana* magazine, and the Resilient Bridgeport website. Map requests and comments about this project and potential floodplain impacts were requested within 15 days of publication. A summary of the comments received is presented in Table 5.1.

**Table 5.1 Summary of Comments**

Commentor	Comment Summary	Response Summary
Stuart Sachs, Chairman of the Historic District Commission #1 and Chairman of the BPT Environmental Task Force	Requested documentation of the location and design of the berm/wall features in order to be informed. Also requested a copy or link to a map of the project.	FEMA provided a visual rendering document as well as aerial images that show the locations of the wall/berms. In addition, FEMA provided a map of the flood zones relative to the project area.
Clopha Deshotel	Requested pictures of the bioswale only.	FEMA explained that photos of the actual site bioswale are not yet available but provided preliminary design plans and photos of typical bioswales.

Commentor	Comment Summary	Response Summary
Frank LaGrotteria, Bridgeport International Academy	Requested a copy of the FIRM panel and maps that might help indicate how the project would protect the school from 100-year storm events.	FEMA provided the most applicable FIRM panel with the location of the school indicated. FEMA explained that the Connecticut Department of Housing is currently working on their submittal of a Conditional Letter of Map Revision (CLOMR) that will show the changes in the 100-year floodplain. Until that is completed, the exact benefits the school may receive have not yet been documented.
Luis Cartagena, New Beginnings Family Academy	Requested a copy of the special flood hazard area map for the project.	FEMA provided a map of the flood zones relative to the project area.
Maisa Tisdale, The Mary & Eliza Freeman Center for History and Community	Requested a copy of the map and FEIS and inquired about the total amount and budget items FEMA is proposing to fund.	FEMA provided a map of the flood zones, a link to the project website and FEIS and recommended that Ms. Tisdale reach out to the City of Bridgeport for further inquiries about the budget items.
Peter Mossa, Holzner Construction	Contacted FEMA by phone to inquire about the adoption of the CT Department of Housing/U.S. Department of Housing and Urban Development’s Final Environmental Impact Statement and FEMA’s role in funding, the project timeline, and requested additional details beyond the scope of work.	FEMA provided a general timeline for the environmental and historic preservation review but noted that the exact timeline for final approval of the FEMA grant and the actual project implementation was not yet available. FEMA advised Mr. Mossa to contact the CT Department of Emergency Management and Homeland Security and CT HUD to obtain details beyond the scope.

FEMA recirculated the Final EIS with a 30-day comment period that began February 12, 2021 and ended March 15, 2021. FEMA received a letter from the EPA noting they had no comments. No other comments were received from the public or agencies on the recirculated Final EIS.

FEMA prepared the Floodplain Management 8-Step analysis and Final Public Notice of the 8-Step analysis was published on August 12, 2021 with a 15-day comment period in the *CT Post* newspaper, *La Voz Hispana* magazine, Connecticut Department of Housing website, City of Bridgeport website, and the Resilient Bridgeport website. No comments were received during the comment period.

## **6.0 SIGNIFICANT ISSUES**

The Proposed Action would result in unavoidable significant adverse impacts on Seaside Park, a National Register-listed historic property. As described in Section 4.4.2 of the Final EIS, the entrance to Seaside Park would be redesigned to accommodate the increased elevation of University Avenue to provide coastal flood defense to the eastern portion of the South End neighborhood. In addition, the south ends of Broad and Main Streets, along either side of the park entrance, would be elevated. The proposed changes to that section of Seaside Park would provide benefits, such as views of Long Island Sound and new pedestrian amenities. In addition, the adverse effects would be mitigated to the extent possible through measures agreed upon through the Programmatic Agreement, which would reduce the severity of the adverse impact.

A very small amount of land would be irretrievably used for the construction of the north-south segment of the Proposed Action, and the project would require a one-time expenditure of federal and state funds, which is not retrievable. However, the combined result of the Proposed Action would be reduced flooding associated with regular rainfall events and storm surges, such that maintenance, repair, and replacement costs for both public and private development in the project area would be significantly reduced.

## **7.0 MITIGATION**

The Proposed Action would have the potential to adversely affect multiple environmental, cultural, and socioeconomic resources. Measures to avoid and minimize potential impacts include best management practices (BMPs) and project-specific mitigation measures. The proposed mitigation measures were described in Section 4.17.4 of the Final EIS and are compiled below. The Subapplicant will be responsible for compliance with all applicable local, state, and federal laws, obtaining any needed permits, and complying with all applicable permit conditions.

### **7.1 Cultural Resources**

Agreed-upon mitigation and procedures for additional consultation have been memorialized in the Programmatic Agreement for Resilient Bridgeport: National Disaster Resilience and Rebuild by Design Projects, executed October 22, 2019, between CT DOH and SHPO (see Appendix C of the Final EIS) and adopted by FEMA on August 23, 2021. Archaeological data recovery programs, comprising the removal of all or part of a site, would be appropriate in areas where significant archaeological sites will be impacted, if those areas are accessible and safe to excavate. All data recovery programs would be prepared in consultation with CT DOH, SHPO, and interested Federally Recognized Tribes.

### **7.2 Hazardous Materials**

Measures to mitigate risk and reduce potential impacts from hazardous materials include the following:

- A subsurface site investigation (or equivalent Phase II sampling), will be conducted as appropriate, that targets contaminants of concern in the soils based on historical use of the site. This would include limited grab groundwater sampling if groundwater is encountered within the depth of disturbance.
- Development of site-specific plans/procedures including a health and safety plan, a sampling analysis and monitoring plan, and a materials management plan.

- Implementation of selected BMPs (e.g., use of dust control measures and use of stockpile liners).
- Adherence to regulations regarding proper handling, management, storage, and transport of hazardous substances. This includes any potential reuse of polluted soil, consistent with DEEP guidance and coordinated with DEEP's Remediation Division. If polluted soil is reused, it would be placed above the water table and capped by clean soil or pavement to eliminate the potential for direct exposure to contaminated soil and prevent erosion.

### **7.3 Noise and Vibration**

Potential sources of noise and vibration effects were identified during the EIS analysis, with the loudest source being the use of pile drivers. Mitigation measures to minimize these effects include the following:

- Use of noise barriers along the edges of work zones.
- Use of alternative pile driving methods such as a hydraulic pile pushing system in specific locations identified in the Final EIS.
- Use of drilled caissons or slurry walls instead of piles in specific locations, as identified in the Final EIS.
- Wrap the pile with noise curtains or bellows that collapse as the pile is driven in specific locations, as identified in the Final EIS.
- Pretrench holes with a long-arm backhoe when work is close to tunnels, utilities, or other sensitive structures.
- Include a noise specification and a vibration specification in the contractor's bid documents.
- Require the contractor to develop a noise and vibration control and mitigation plan based on proposed equipment and methods to document expected noise levels and noise control measures that would be implemented.
- Perform noise and vibration monitoring during construction to ensure the contractor is complying with thresholds specified in the Final EIS.

### **7.4 Natural Resources**

For the duration of construction, relevant federal and state regulations will be followed to ensure that significant consequences to ecological communities are avoided or suitably mitigated. Integrated pest management plans will be developed to address the potential for rats and other rodents that may be disturbed and mobilized by construction work. To protect the threatened and endangered sea turtles and sturgeon near the project area, recommendations provided by the EPA and National Oceanic and Atmospheric Administration Fisheries regarding harm mitigation measures, such as the use of silt management and soil erosion best practices and disposing of contaminated sediment and sludge at a suitable upland facility, will be applied during any in-water work or during any activities that could affect water resources. In addition, during the maintenance of existing outfalls, appropriate protective strategies, such as the use of temporary erosion control fencing and storage of construction equipment away from the shoreline, would be implemented to preserve ecological communities (e.g., beach-dune complexes) potentially affected by storm drain system modifications.

To minimize potential impacts, seasonal tree-cutting restrictions will be developed based on avian breeding seasons, and additional mitigation measures (e.g., restoring affected landscapes, replacing uprooted trees, and shielding undisturbed vegetation) near the project site will be implemented, as necessary. In addition, protective measures will be taken to ensure that trees are safeguarded against adverse impacts associated with the construction process. For instance, the contractor will be required to station heavy equipment and vehicles away from intact root systems. The contractor will also be responsible for effectively mitigating any damage to existing trees that may occur as a result of construction activities.

### **7.5 Water Resources and Water Quality**

The Proposed Action will be designed to comply with Connecticut's Water Quality Standards. No intentional use or discharge to groundwater is expected from project work and all necessary BMPs will be implemented to avoid unintentional groundwater use/discharge of untreated waters.

Water from dewatering will be sampled and handled/disposed of appropriately, in accordance with state and federal requirements. Impacts on water quality from soil erosion will be mitigated through existing regulatory programs and controls and by the use of BMPs.

During the installation of subterranean features, erosion and sediment control mitigation measures will be implemented. These measures may include vegetation; temporary sediment barriers such as silt fences, hay bales, and fabric-wrapped catch basin grates; and strategic stormwater management.

Connecticut has construction requirements for mitigation and management of stormwater and erosion. Stormwater runoff during construction resulting from the project will be managed in accordance with DEEP stormwater management regulations.

The Subapplicant would be responsible for coordination with the U.S. Army Corps of Engineers and DEEP who will advise the Subapplicant regarding the requirement for an individual permit or authorization of work under nationwide or general permits. The Subapplicant must obtain new or modified permit authorizations and/or approvals and maintain documentation of compliance with applicable permits or exemption from the requirements prior to construction. Subapplicant must comply with all applicable permit conditions.

### **7.6 Coastal Zone Management**

The effects of any potential outfall work as part of the Proposed Action (such as sludge clearing or gate installation) will be suitably mitigated through a combination of BMPs and design choices. For example, where feasible, debris clearing would be conducted from an upland access point (e.g., a manhole) to reduce littoral sediment disturbance.

Appropriate erosion control measures, including the use of removable sediment barriers (e.g., silt fences, hay bales) and planting of stabilizing vegetation, will be applied during construction activities that require ground/soil disturbance (e.g., sewer pipe upsizing, force main installation, pump station construction, flood wall construction, and flood gate installation) to sufficiently minimize impacts.

Construction will not begin until the Connecticut DEEP has determined that the Proposed Action is consistent with the state Coastal Zone Management Plan.



## **7.7 Infrastructure**

The following mitigation measures and BMPs will be implemented to minimize effects on infrastructure:

- Where the Proposed Action crosses or impacts sewer lines or other utility lines, design accommodations and construction methods (e.g., hand excavation, use of jet grout seals or use of sleeves) will be implemented to reduce impacts.
- Relocation of sewer and other utility lines will be considered only if other design solutions are impractical.
- A traffic management plan will be developed to minimize impacts on existing traffic patterns.
- Public outreach during construction will be implemented to notify the public of the construction schedule, upcoming activities, and potential impacts. As needed, construction project staff will reach out to local community groups to provide in-person updates on construction progress and potential impacts.
- Variable message signs will be used throughout the project area to warn motorists, pedestrians, and cyclists of changes in traffic patterns, including road closures.

## **7.8 Air Quality**

To minimize temporary construction impacts, the following mitigation measures will be implemented:

- **Dust Control** – To minimize fugitive dust emissions from construction activities, a fugitive dust control plan, including a robust watering program, will be required as part of contract specifications. For example, all trucks hauling loose material could be equipped with tight-fitting tailgates and their loads securely covered prior to leaving the construction area, and water sprays could be used for all demolition, excavation, and transfer of soils to ensure that materials would be dampened as necessary to avoid the suspension of dust into the air.
- **Clean Fuel** – Ultra-low-sulfur-diesel fuel will be used exclusively for all diesel engines used during construction.
- **Idling Restriction** – In addition to adhering to the local laws restricting unnecessary idling on roadways, on-site vehicle idle time would be restricted to 5 minutes for all equipment and vehicles that are not using their engines to operate a loading, unloading, or processing device (e.g., concrete mixing trucks) or are otherwise required for the proper operation of the engine.
- **Best Available Tailpipe Reduction Technologies** – Nonroad diesel engines with a power rating of 50 horsepower (hp) or greater, and controlled truck fleets (i.e., truck fleets under long-term contract with the project), including concrete mixing and pumping trucks, will use the best available tailpipe technology for reducing diesel particulate matter emissions. Diesel particulate filters (DPFs) comprise the tailpipe technology proven to have the highest reduction capability. Retrofitted DPFs must be verified by the EPA. Active DPFs or other technologies proven to achieve an equivalent reduction may also be used.
- **Use of Newer Equipment** – EPA’s Tiers 1 through 4 standards for nonroad diesel engines regulate the emission of criteria pollutants from new engines, including particulate matter, carbon oxides, nitrogen oxides, and hydrocarbons. All diesel-powered nonroad construction equipment with a power rating of 50 hp or greater should meet at least the Tier 3 emissions standard.

- Diesel Equipment Reduction – Electrically powered equipment is preferred over diesel-powered and gasoline-powered versions of that equipment, to the extent practicable.

### **7.9 Environmental Justice (Executive Order 12898)**

Environmental Justice populations on the east side of the South End Neighborhood would experience direct, short-term impacts from construction that would be managed through BMPs previously described in the Noise and Vibration (Section 7.3) and Air Quality (Section 7.8) Sections. For air quality, BMPs include dust control, use of ultra-low-sulfur diesel fuel, idling restrictions, and use of best available tailpipe reduction technologies, Tier 3 emissions standard equipment and electrically powered equipment to the extent possible. For noise and vibration control, BMPs include requiring impact devices be equipped with acoustic attenuation shields, internal combustion equipment to have mufflers and shield paneling, and debris conveyors and containers to be lined or covered with sound absorbing materials. In addition, construction will be limited to daytime hours as outlined in the Programmatic Agreement.

In addition to air quality and noise and vibration BMPs, there would be mitigation to reduce impacts from increased traffic due to construction activity. These include developing a Traffic Management Plan that addresses coordination with the Connecticut Department of Transportation in developing construction schedules, road/lane closures, and street realignments to avoid conflicts and reduce impacts. If required, monitoring of intersections of concern may be implemented, combined with adaptive management to reduce cumulative traffic impacts to the extent possible.

### **7.10 Hydrology and Flooding (Executive Order 11988)**

As part of the adoption of the Final EIS, FEMA conducted an 8-Step Floodplain Management analysis per Executive Order 11988. The 8-Step analysis identified the following required mitigation measures and conditions:

- Prior to construction, the Subapplicant must demonstrate that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than 1 foot at any point within the community in accordance with 44 C.F.R. § 9.11(d)(4) and 44 C.F.R. § 60.3(c)(10). If this is not the case, the Subapplicant must submit a Conditional Letter of Map Revision (CLOMR) for FEMA to review.
- The Subapplicant must design the Resilient Bridgeport floodwall to meet the requirements in conformance with 44 C.F.R. § 65.10.
- The Subapplicant must comply with the City of Bridgeport Flood Damage Prevention Ordinance (Chapter 15.44) for work within and adjacent to flood hazard areas. This includes obtaining a local floodplain permit for the Proposed Action prior to construction work that demonstrates compliance with the Bridgeport Flood Damage Prevention Ordinance (Chapter 15.44.110) in accordance with 44 C.F.R. § 9.11(d)(6).
- Within 180 days following completion of construction of the Proposed Action, the Subapplicant will apply to FEMA for a Letter of Map Revision in accordance with 44 C.F.R. 65.6 and 44 C.F.R. § 9.11(d)(4).

In addition to the 8-step mitigation measures, the Subapplicant must coordinate with DEEP to obtain a Dam Safety Permit pursuant to Connecticut General Statutes (C.G.S.) section 22a-403, or documentation stating that a permit is not needed, and comply with all applicable permit conditions.

## **8.0 ADDRESSES AND APPEAL**

The FEMA ROD will be available on the FEMA and CT DOH websites. For further information, contact David E. Robbins, Regional Environmental Officer, Region 1, FEMA, 99 High Street 6th Floor, Boston, MA 02110 or via email at [fema-r1-hma-ehp@fema.dhs.gov](mailto:fema-r1-hma-ehp@fema.dhs.gov).

The FEMA Environmental Officer has the authority to approve this project. The Environmental Officer's decision constitutes the final decision by FEMA and, in accordance with FEMA Directive 108-1, is not subject to appeal. Any challenge of this decision, including the authorization of grant funding as directed by this decision, must be brought in federal district court.

## **9.0 ISSUED**

### **FEMA APPROVAL AUTHORITY:**

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Portia Ross, FEMA, Environmental Officer

### **REGION 1 ENDORSEMENT:**

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Paul F. Ford, FEMA, Region 1 Deputy Regional Administrator