

FINAL

**Environmental Assessment (EA)
Hurricane Rebuild at Base San Juan
United States Coast Guard
Base San Juan
San Juan, Puerto Rico**

A/E CONTRACT NUMBER: 70Z05018DAECOMT06

PROJECT NUMBER:

CG SFRL P/N: 07-11062507



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AUGUST 2021

USCG HURRICANE REBUILD AT BASE SAN JUAN IN SAN JUAN, PUERTO RICO, FINAL ENVIRONMENTAL ASSESSMENT

The Final Environmental Assessment (EA) for the United States Coast Guard (USCG) Hurricane Rebuild Project at Base San Juan has been prepared in accordance with the requirements of the National Environmental Policy Act (NEPA) (42 U.S. Code [USC]); Council on Environmental Quality (CEQ) *Regulations for Implementing NEPA* (40 Code of Federal Regulations [CFR] Parts 1500-1508); Department of Homeland Security Management Directive 023-01; and Coast Guard Commandant Instruction (COMDTINST) M16475.1D, *National Environmental Policy Act Implementing Procedures and Policy for Considering Environmental Impacts*.

This Final EA serves as a concise public document to briefly provide sufficient evidence and analysis for determining the need to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI). This Final EA concisely describes the Proposed Action, the need for the Proposed Action, alternatives, and the environmental impacts of the Proposed Action and alternatives. This Final EA also contains a comparative analysis of the action and alternatives, a statement of the environmental significance of the preferred alternative, and a list of the agencies and persons consulted during the Final EA preparation.

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United States Coast Guard Finding of No Significant Impact (FONSI) for Hurricane Rebuild Project at Base San Juan

The U.S. Coast Guard (USCG) proposes to rebuild hurricane-damaged facilities and infrastructure at Base San Juan as a result of Hurricanes Irma and Maria in 2017. The Preferred Action Alternative is described in the Final Environmental Assessment (EA). The overarching need for the Proposed Action is to address resiliency, redundancy, and operational deficiencies at the Base. The USCG proposes to develop storm-resilient facilities and infrastructure that are required to support continued Base operations during a severe weather event or unscheduled outage.

Summary of the results of the environmental impact evaluation: The Final EA prepared for this proposal presents the purpose and need for the action, the Proposed Action and its alternatives, a description of the affected environment, and an analysis of direct and indirect environmental consequences. Based on the findings of the Final EA, the USCG concluded no significant impacts would result from implementing the Proposed Action (Preferred Action Alternative) or other alternatives (Build Alternative) evaluated in the Final EA. In addition, there is no practicable alternative to construction of the Proposed Action within a floodplain, per Executive Order 11988.

Mitigation commitments that will be implemented to reduce otherwise significant impacts: The USCG will comply with all regulatory requirements, mitigation measures, and best management practices (BMPs) as described in the Final EA to eliminate or reduce adverse impacts, ensuring that no significant adverse impacts will occur. In consultation with the Puerto Rico State Historic Preservation Office (SHPO), the USCG developed a project-specific Memorandum of Agreement (MOA). The USCG would implement the avoidance, minimization, and mitigation measures outlined in the MOA, in consultation with the SHPO, throughout the final design and construction process to ensure adverse effects on historic properties are less than significant. This agreement is included as an Appendix in the Final EA document. **USCG will continue to consult with NOAA Fisheries during the ACOE permitting phase, once designs are finalized. The conclusion of this consultation is unlikely to change our NEPA analysis.**

This FONSI is based on the attached contractor-prepared Final EA that has been independently evaluated by the USCG and determined to adequately and accurately discuss the environmental issues and impacts of the Proposed Action and its alternatives, and provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required. USCG takes full responsibility for the accuracy, scope, and content of the attached contractor-prepared Final EA.

I reviewed the Final EA, which is the basis for this FONSI, and submitted my comments to the Proponent.

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U. S. Coast Guard Base San Juan, Puerto Rico Final EA – August 2021

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In reaching my decision/recommendation for USCG's Proposed Action, I considered the information contained in this Final EA/FONSI and considered the written comments submitted to me from the Environmental Reviewer(s). Based on the information in the Final EA and this FONSI document, I agree that the Proposed Action as described above, and in the Final EA, will have no significant impact on the environment.



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Executive Summary

ES. 1 Introduction

This Environmental Assessment (EA) has been prepared in accordance with the National Environmental Policy Act of 1969 (NEPA; 42 United States Code [USC] §§ 4321 et seq.); the President's Council on Environmental Quality (CEQ) *Regulations Implementing the Procedural Provisions of NEPA* (40 Code of Federal Regulations [CFR] Parts 1500-1508); Department of Homeland Security (DHS) Management Directive 023-01, *Implementation of NEPA*; and Coast Guard Commandant Instruction (COMDTINST) M16475.1D, *National Environmental Policy Act Implementing Procedures and Policy for Considering Environmental Impacts*.

This EA evaluates the environmental effects of the United States Coast Guard's (USCG) proposal to rebuild hurricane-damaged facilities (Proposed Action) and its alternatives. The information and analysis contained within this EA will determine whether implementation of the Proposed Action would have a significant impact on the environment, requiring preparation of an Environmental Impact Statement (EIS). If no significant impacts would occur, a Finding of No Significant Impact (FONSI) would be appropriate.

ES. 2 Scope of the Environmental Assessment

This EA evaluates the potential environmental effects of implementing the Proposed Action and reasonable alternatives. In accordance with NEPA and CEQ regulations, this EA considers three alternatives, as described in **Section 2.3**: the Preferred Action Alternative, the Build Alternative, and No Action Alternative. The No Action Alternative is also evaluated, as required by CEQ regulations and COMDTINST M16475.1D.

Further, the USCG determined that the Technical Resource Areas requiring in-depth evaluation within this EA are: *Traffic and Transportation*; *Utilities*; *Geology and Seismic Conditions*; *Climate and Air Quality*; *Noise*; *Hazardous and Toxic Materials and Waste (HTMW) and Non-Hazardous Solid Waste*; *Water Resources*; *Biological Resources*; and *Cultural Resources*. Existing conditions for these Technical Resource Areas at and in the vicinity of Base San Juan are described in **Section 3.0**. The Proposed Action's potential impacts on them are discussed in **Section 4.0**. Technical Resource Areas not expected to experience meaningful effects and, therefore, not evaluated in this EA include: *Land Use and Zoning*; *Socioeconomics* (including *Local Economy*, *Housing*, *Community Service and Medical Facilities*, *Recreational Facilities*, *Emergency Response Services*, and *Schools*); *Environmental Justice*; *Topography*; *Soils*; and *Wetlands*. The rationale for dismissing these resources from evaluation in the EA is described in **Section 3.2**.

ES.3 Background

The USCG has prepared this EA to evaluate the potential environmental impacts from constructing and operating new facilities, and renovating and/or demolishing existing facilities that do not meet USCG resiliency requirements. Collectively, these activities constitute the Proposed Action evaluated in this EA. Construction and renovation of facilities would replace and repair infrastructure damaged during the 2017 hurricane season, while demolitions would occur to accommodate these new facilities. Personnel and Base operations would be relocated to the new facilities following the completion of construction, renovation, and demolition activities. Existing utilities are insufficient and do not provide adequate supply or resiliency, and would be upgraded to provide redundancy and resiliency for normal Base operations, and to allow for the continuation of operations during an extended emergency event.



ES.4 Purpose and Need

The *purpose* of the Proposed Action is to comply with the basic requirements to ensure Base facilities remain functional and operational during an emergency event. The Proposed Action is *needed* to address resiliency, redundancy, and operational deficiencies at the Base resulting from Hurricanes Irma and Maria. Failure to meet USCG-prescribed facility and resiliency requirements would leave the Base vulnerable to adverse weather events and similar types of natural disasters, and further hinder the Base's operational readiness and response.

ES.5 Description of the Proposed Action

The USCG's Proposed Action consists of two primary components: 1) construction and operation of new facilities; and 2) renovations of existing facilities that do not meet USCG resistance and resiliency requirements, and facility demolitions to accommodate new facilities.

The Proposed Action would construct a three-story Multi-Mission Building (MMB) near the eastern waterfront that would house Armory, STA and ANT functions, drive-through boat bays, and other support spaces on the first floor. The second level would house transformers and water pumps, while a new Central Utility Plant (CUP) would be located on the third floor. In addition, the USCG proposes to construct a new Shop Building to the southwest of the new MMB. In the western section of the Base, the USCG would construct a two-story Health Services Building. A new Guard House and access control area would also be developed, as well as a new primary roadway to provide direct access from the western section of the Base to the eastern section. The eastern waterfront would be modified to include a new travel lift, new boat ramp, and extended travel lift piers between existing Piers Alpha and Bravo.

Buildings 100, 101, 116, 117, 119, 124, 125, and 126 would undergo renovations to optimize floorplan layouts, provide adequate functional space, and improve operational efficiencies. The USCG would also rehabilitate the northwestern portion of the coastal revetment. Buildings 103, 104, 108, 110, 111, 112, 112A, 113A, 120, 121, 122, 123, 133, and R04 would be demolished to accommodate new facilities or eliminate redundant facilities following the relocation of existing operations to new buildings.

The Proposed Action would also update critical systems such as electrical, mechanical, and communications for flood resiliency. New occupied facilities and critical systems would be elevated above the 100-year base flood elevation. In addition, two 256,000-gallon water tanks would be built to provide for 10-day water resiliency on the Base.

ES.6 Alternatives Considered

NEPA, CEQ regulations, and COMDTINST M16475.1D require all reasonable alternatives to be explored and objectively evaluated. The USCG evaluated 20 different alternatives to the Proposed Action. Nine alternatives were immediately dismissed from further consideration because they were speculative and impractical. An additional nine alternatives were eliminated because they did not meet one or more of the planning factors developed by the USCG to identify potential sites and actions that would meet the Proposed Action's purpose and need. All viable alternatives must satisfy the planning factors to the greatest extent practicable; those that did not were eliminated from further consideration.



The USCG identified two reasonable action alternative that are carried forward – the Preferred Action Alternative and the Build Alternative. In addition, the No Action Alternative is also evaluated as required by CEQ regulations.

- **Preferred Action Alternative:** The Preferred Action Alternative would implement the components of the Proposed Action, as described in **Section ES.5**. The Preferred Action Alternative best meets the needs of Base San Juan, and fulfills the planning factors developed by the USCG.
- **Build Alternative:** The Build Alternative would be similar to the Preferred Action Alternative, except for differences primarily in the renovation of Building 100 and the construction of the Health Services Building. The Build Alternative meets the planning factors developed by the USCG and provides many of the same advantages as the Preferred Action Alternative.
- **No Action Alternative:** The No Action Alternative is retained to provide a comparative baseline against which to analyze the effects of the Proposed Action, as required under the CEQ regulations (40 CFR 1502.14[d]). Under the No Action Alternative, new facilities would not be constructed, damaged buildings would not be renovated or demolished, and current operations would continue.

ES.7 Agency and Public Involvement

Pursuant to the requirements of NEPA (40 CFR 1506.6), this EA is subject to public involvement. Agencies, organizations, and members of the public with a potential interest in the Proposed Action have been invited and encouraged to participate. The USCG published and distributed the Draft EA for a 30-day public review and comment period from 26 June to 26 July 2021, which was announced by a Notice of Availability (NOA) published in the *El Vocero*, *Primera Hora*, *Nuevo Día*, and *San Juan Daily Star*. The Draft EA was made available for public review online and at the San Juan Community Library. No comments were received during the public review period. The USCG published and distributed the Final EA and FONSI, as announced in the above listed newspapers. The Final EA and FONSI are available online at: <https://www.dcms.uscg.mil/Our-Organization/Assistant-Commandant-for-Engineering-Logistics-CG-4-/Program-Offices/Environmental-Management/Environmental-Planning-and-Historic-Preservation/>.

Interagency and intergovernmental coordination is a federally mandated process for informing and coordinating with other governmental agencies regarding federal proposed actions. CEQ regulations require intergovernmental notifications prior to making any detailed statement of environmental impacts. Executive Order 13175, *Consultation and Coordination with Indian Tribal Governments* also requires the invitation of federally recognized Indian tribes to participate in the NEPA and NHPA Section 106 processes as Sovereign Nations based on their potential ancestral ties to the Proposed Action area. A complete list of federal, Commonwealth, and local agencies consulted for this EA can be found in **Section 9.0**. Information and comments received from these agencies have been addressed in this EA as appropriate.

ES.8 Summary of Potential Environmental Consequences

A summary of the environmental impacts of each alternative is provided in **Table ES-1**. The analysis assumes that best management practices (BMPs) included as standard provisions of USCG contracts and project-specific mitigation measures would be employed to avoid or minimize significant adverse effects on the environment. A complete list of BMPs and mitigation measures for each technical resource area analyzed in



this EA are described in **Section 4.6**. Implementing BMPs and mitigation measures would ensure that the Proposed Action would avoid significant impacts or reduce potential impacts to less-than-significant levels.

Table ES-1: Summary of Environmental Effects by Alternative

Technical Resource Area	No Action Alternative	Preferred Action Alternative	Build Alternative
Traffic and Transportation	No impact.	<i>Short-term, less-than-significant adverse impacts</i> on construction-related traffic and parking, and congestion at the Base entrance. <i>Long-term beneficial impacts</i> on traffic and parking during operation due to improved entrance configuration and additional parking spaces.	Same impacts as under the Preferred Action Alternative.
Utilities	<i>Short- and long-term potentially significant adverse impacts</i> on utilities due to their inadequate state and potential to become less reliable over time in the event of future natural disasters and emergencies.	<i>Short-term, less-than-significant adverse impacts</i> during construction due to potential service disruptions. <i>Long-term, beneficial impacts</i> from increased water resiliency and electrical redundancy during operation.	Same impacts as under the Preferred Action Alternative.
Geology and Seismic Conditions	No impact.	<i>Short-term, less-than-significant adverse impacts</i> on geologic features from installation of building foundations during construction; <i>no impact</i> on seismic conditions during construction. <i>Long-term, beneficial impacts</i> during operation from building upgrades compliant with seismic requirements; <i>no impacts</i> on geology during operation.	Same impacts as under the Preferred Action Alternative.
Air Quality and Climate	No impact.	<i>Short-term, less-than-significant adverse impacts</i> from pollutants, including GHGs, generated by construction equipment. <i>Long-term, less-than-significant adverse impacts</i> from operational air emissions; <i>long-term beneficial impact</i> on climate change from reduction in GHGs.	Construction impacts would be slightly greater than the Preferred Action Alternative due to more demolition activities. Operational impacts would be the same as under the Preferred Action Alternative.



Table ES-1: Summary of Environmental Effects by Alternative

Technical Resource Area	No Action Alternative	Preferred Action Alternative	Build Alternative
Noise	No impact.	<i>Short-term, less-than-significant adverse impacts</i> from noise generation by construction equipment. <i>No impacts</i> during operation.	Construction impacts would be slightly greater than the Preferred Action Alternative due to more demolition activities. Operational impacts would be the same as under the Preferred Action Alternative.
HTMW	No impact.	<i>Short-term, less-than-significant adverse impacts</i> due to the use of hazardous materials, potential generation of hazardous wastes, and the potential for releases during construction activities. <i>Long-term beneficial impacts</i> from improved HTMW storage facilities on Base; <i>no impact</i> on HTMW generation, disposal, and management during operation.	Construction impacts would be slightly greater than the Preferred Action Alternative due to more construction activities. Operational impacts would be the same as under the Preferred Action Alternative.
Water Resources	No impact.	<i>Short-term, less-than-significant adverse impacts</i> to surface waters during construction from erosion, sedimentation, and potential spills; <i>long-term, less-than-significant adverse impact</i> from construction in the floodplain; <i>short-term, negligible adverse impact</i> on coastal resources from construction disturbances. <i>Long-term, less-than-significant adverse impact</i> to stormwater from an increase in impervious surfaces; <i>no impact</i> on floodplains or coastal resources during operation.	Construction impacts on surface water quality and stormwater would be slightly greater than the Preferred Action Alternative due to more construction activities. Impacts to floodplains and coastal resources would be the same as under the Preferred Action Alternative. Operational impacts would be the same as under the Preferred Action Alternative.



Table ES-1: Summary of Environmental Effects by Alternative

Technical Resource Area	No Action Alternative	Preferred Action Alternative	Build Alternative
Biological Resources	No impact.	<i>Short- and long-term, less-than-significant adverse impacts</i> to terrestrial vegetation and habitat from land clearing during construction; <i>short-term, less-than-significant adverse impacts</i> to terrestrial wildlife and aquatic wildlife and habitat from construction disturbance and sedimentation; construction <i>may affect but is not likely to adversely affect</i> potentially present T&E species. <i>No impacts</i> to biological resources during operation.	Construction impacts on terrestrial wildlife would be slightly greater than the Preferred Action Alternative due to more construction activities. Impacts to other biological resources during construction would be the same as under Preferred Action Alternative. Operational impacts would be the same as under the Preferred Action Alternative.
Cultural Resources	No impact.	Adverse effect on architectural resources from demolition of contributing resources to the NRHP-eligible Base San Juan Historic District; adverse effect on significant archaeological resources from ground disturbance during construction. <i>Long-term, less-than-significant impact</i> on the surrounding viewshed from new construction and demolition of historic buildings; <i>no effect</i> on archaeological resources during operation.	Construction would result in a greater adverse effect on archaeological resources from additional potential to disturb significant deposits during demolition of the Building 100 Annex; impacts on architectural resources would be the same as under the Preferred Action Alternative



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Acronyms and Abbreviations

ACM	asbestos-containing material
ANT	Aids to Navigation
APE	Area of Potential Effects
ARPA	Archaeological Resources Protection Act
AST	aboveground storage tank
ATFP	Anti-Terrorism/Force Protection
BFR	Basic Facility Requirements
BMP	Best Management Practice
C	Celsius
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CES	Control of Erosion and Prevention of Sedimentation
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CGIS	US Coast Guard Investigative Service
cm	centimeter
COMDTINST	Coast Guard Commandant Instruction
CO	carbon monoxide
CUP	Central Utility Plant
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
CZMP	Coastal Zone Management Program
dB	decibel
dBA	A-weighted decibel scale
DHS	Department of Homeland Security
DoD	Department of Defense
DoDI	Department of Defense Instruction
DRNA	Puerto Rico Department of Natural and Environmental Resources



EA	Environmental Assessment
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EISA	Energy Independence and Security Act
EJ	environmental justice
EO	Executive Order
ESA	Endangered Species Act
F	Fahrenheit
FCD	Federal Consistency Determination
FEMA	Federal Emergency Management Agency
FONSI	Finding of No Significant Impact
GHG	greenhouse gas
GI/LID	green infrastructure/low impact development
HAP	hazardous air pollutant
HTMW	hazardous and toxic materials and wastes
HVAC	heating, ventilation, and air conditioning
IPaC	Information for Planning and Consultation
kVA	kilovolt amps
LBP	lead-based paint
m	meter
MAT/ESD	Maintenance Assistance Team/Electronics System Support Detachment
MMB	Multi-mission Building
MMPA	Marine Mammal Protection Act
MOA	Memorandum of Agreement
mph	miles per hour
MSA	Magnuson-Stevens Fishery Conservation and Management Act
MSL	mean sea level
MS4	Municipal Small Separate Sewer System
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act



NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
NOA	Notice of Availability
NOAA	National Oceanic Atmospheric Administration
NOI	Notice of Intent
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSPS	New Source Performance Standards
O ₃	ozone
OGPe	Puerto Rico Permit Management Office
PM	particulate matter
PRASA	Puerto Rico Aqueduct and Sewer Authority
PREPA	Puerto Rico Electric Power Authority
PRPB	Puerto Rico Planning Board
RCRA	Resource Conservation and Recovery Act
SFSM	Shore Facilities Standards Manual
SHPO	State Historic Preservation Office
SO ₂	sulfur dioxide
SPCC	Spill Prevention, Control, and Countermeasure
SQG	small quantity generator
STA	Station
SWPPP	Stormwater Pollution Prevention Plan
T&E	threatened and endangered
TMDL	Total Maximum Daily Load
UFC	United Facilities Criteria
US	United States



USACE	US Army Corps of Engineers
USC	United States Code
USCG	United States Coast Guard
USDA	US Department of Agriculture
USEPA	US Environmental Protection Agency
USFWS	US Fish and Wildlife Service
VOC	volatile organic compound



1.0 Purpose of and Need for the Proposed Action

1.1 Introduction

This Environmental Assessment (EA) evaluates the proposal by the United States (US) Coast Guard (USCG) to build, renovate, and demolish structures and supporting infrastructure at Base San Juan (the Base) to repair and replace hurricane-damaged facilities, address storm resiliency deficiencies, and sustain USCG operations (Proposed Action). This EA has been prepared in accordance with the National Environmental Policy Act of 1969 (NEPA; 42 United States Code [USC] §§ 4321 et seq.); the President's Council on Environmental Quality (CEQ) *Regulations Implementing the Procedural Provisions of NEPA* (40 Code of Federal Regulations [CFR] Parts 1500-1508); Department of Homeland Security (DHS) Management Directive 023-01, *Implementation of NEPA*; and Coast Guard Commandant Instruction (COMDTINST) M16475.1D, *National Environmental Policy Act Implementing Procedures and Policy for Considering Environmental Impacts*.

1.2 Background

1.2.1 Base San Juan

Base San Juan is located in La Puntilla in Old San Juan, in San Juan Municipality (18°27'38.862"N, -66°7'1.2282"W). It is surrounded by the San Juan Bay to the east, south, and west, and by Old San Juan to the north (**Figure 1-1**). The Base supports multiple functions and units, including Base San Juan, Station (STA) San Juan, Aids to Navigation Team (ANT) Puerto Rico, USCG Investigative Service (CGIS), Río Bayamón Housing, and exchange and morale functions. The Base is also a homeport to eight vessels and provides maintenance support to homeported cutters and small boats assigned to both the STA and ANT.

Base San Juan is responsible for all USCG missions in the Eastern Caribbean area. This includes the enforcement of US laws and regulations relative to national defense, smuggling/counter narcotics operations, fisheries management, marine transportation, marine safety, maritime security, protection of natural resources, and waterways management. Base San Juan is a designated Rescue Sub-Center and is responsible for Search and Rescue operations in the Eastern Caribbean Sea east of and including the Dominican Republic and the Lesser Antilles island chain. USCG also carries out general duties in military readiness by the organization, indoctrination, training, and discipline of all members assigned.



Photo 1: Base San Juan



Photo 2: Eastern Waterfront at Base San Juan



Figure 1-1: Regional Location of Base San Juan





1.2.2 Hurricane Damage

In September 2017, Hurricanes Irma and Maria swept through the Commonwealth of Puerto Rico within a two-week period, causing widespread damage to the Commonwealth's infrastructure, utilities, homes, and facilities. Both hurricanes were designated as Category 5, the highest category on the Saffir-Simpson Hurricane Wind Scale, indicating catastrophic damage and sustained winds at or greater than 157 miles per hour (mph) (National Hurricane Center, 2021). Following the initial devastation, 95 percent of the island was left without power and more than half of the island's residents were left without running tap water (Bacon, 2017).

As a result of the two hurricanes, the Base sustained extensive damage to existing infrastructure and facilities, leaving buildings and electrical and water utility systems vulnerable to major storm events. Currently, several of the damaged buildings do not meet the required base flood elevation requirements to prevent water intrusion during storm events. In addition, the electrical distribution system lacks storm resiliency and redundancy, and existing generators do not support their respective facilities. The water reserve volume is also insufficient to meet water supply requirements during an emergency event where the normal water supply is interrupted. As such, these facilities do not meet USCG-prescribed hurricane resistance and resiliency requirements.

1.3 Purpose and Need

The *purpose* of the Proposed Action is to comply with the basic requirements necessary to ensure Base facilities remain functional and operational during an emergency event. Currently, Base facilities are not fortified or adequately sized to support USCG missions and lack adequate resiliency to remain operational during severe storm events. Storm-resilient facilities and infrastructure are required to support continued operational capabilities during a severe weather event or unscheduled outage.

The Proposed Action is *needed* to address resiliency, redundancy, and operational deficiencies at the Base resulting from Hurricanes Irma and Maria. The Proposed Action would fortify and increase the storm resiliency of facilities and infrastructure at the Base. This would enable the Base to remain operational with a sustained duration of no less than 10 days during an emergency or outage event, and have the capability to return to full operation, independent of the local utility, for extended periods of time or until the outage is over. Due to the designated missions and responsibilities of the Base, restoring mission capabilities and repairing facilities for the affected units as quickly as possible is vital to federal, Commonwealth, local, and private recovery efforts from these natural disasters. Failure to meet USCG-prescribed facility and resiliency requirements would leave the Base vulnerable to adverse weather events and similar types of natural disasters, and further hinder the Base's operational readiness and response.

1.4 Scope of the EA

This EA evaluates the potential environmental, cultural, socioeconomic, and physical effects of implementing the Proposed Action and reasonable alternatives. A detailed description of the Proposed Action is provided in **Section 2.2**. The USCG developed 10 planning factors (described in **Section 2.3.1**) to identify potential alternatives that would meet the Proposed Action's purpose and need. Alternatives were eliminated from further consideration when they did not meet one or more of these planning factors (see **Section 2.3.2**). In accordance with NEPA and CEQ Regulations, this EA considers three alternatives for implementing the Proposed Action as described in **Section 2.3**: the Preferred Action Alternative, the Build Alternative, and the



No Action Alternative. The No Action Alternative is evaluated as required by CEQ Regulations and COMDTINST M16475.1D.

In accordance with CEQ Regulations, the USCG conducted internal and external scoping, including coordination with pertinent regulatory agencies, to “identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (40 CFR Part 1506.3), narrowing the discussion of these issues in the statement [EA] to a brief presentation of why they will not have a significant effect on the human environment or providing a reference to their coverage elsewhere” (40 CFR Part 1501.7(a)(3)). This approach is consistent with NEPA and CEQ Regulations.

Through this process, the USCG determined that the resource areas requiring detailed evaluation in this EA are: *Traffic and Transportation, Utilities, Geology and Seismic Conditions, Air Quality and Climate, Noise, Hazardous and Toxic Materials/Waste (HTMW) and Non-Hazardous Solid Waste, Water Resources, Biological Resources, and Cultural Resources*. These resource areas are described in **Section 3.0** and in **Section 4.0**. Resource areas not expected to experience meaningful effects and, therefore, not evaluated in this EA include: *Land Use and Zoning, Socioeconomics (including Local Economy, Housing, Community Service and Medical Facilities, Recreational Facilities, Emergency Response Services, and Schools), Environmental Justice (EJ), Topography, Soils, and Wetlands*. The rationale for dismissing these resources from evaluation in this EA is briefly discussed in **Section 3.2**.

1.5 Regulatory Framework

This EA has been prepared in accordance with NEPA, CEQ Regulations, DHS Management Directive 023-01, and COMDTINST M16475.1D. The information and analysis contained in this EA will serve as the basis for the USCG’s decision-making process for the Proposed Action.

The primary legislation affecting the decision-making process associated with this Proposed Action is NEPA. NEPA requires that federal agencies consider potential environmental consequences of their proposed actions. The intent of NEPA is to protect, restore, or enhance the environment through well-informed federal decisions with public input. The CEQ was established by NEPA for the purpose of implementing and overseeing federal policies as they relate to this process. The CEQ issued *Regulations for Implementing the Procedural Provisions of the NEPA* (40 CFR Parts 1500-1508) in 1978. These regulations specify that an EA be prepared to:

- Briefly provide sufficient analysis and evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI). A FONSI is the “decision document” that closes the EA process when no unavoidable significant impacts are identified;
- Aid in an agency’s compliance with NEPA when no EIS is necessary; and
- Facilitate the preparation of an EIS when one is necessary.

This EA also includes a thorough examination of relevant environmental issues to comply with other applicable environmental regulatory requirements (e.g., Endangered Species Act [ESA], National Historic Preservation Act [NHPA], Clean Water Act [CWA] and assess potential environmental impacts on resources addressed by those requirements. Information regarding applicable federal, Commonwealth, and local regulations and requirements, Executive Orders (EOs), and USCG- and DHS-specific regulations is presented in **Sections 3.0** and **4.0**, as appropriate.



1.6 Agency and Public Involvement Process

Pursuant to the requirements of NEPA (40 CFR 1506.6), this EA is subject to public involvement. Consideration of the views and information provided by all interested persons promotes open communication and enables better decision-making. Agencies, organizations, and members of the public with a potential interest in the Proposed Action, including minority, low-income, and disadvantaged groups, are encouraged to participate. A complete list of agencies and individuals consulted during preparation of this EA is included in **Section 9.0**.

1.6.1 Public Review

The USCG, as the proponent of the Proposed Action, published and distributed the Draft EA for a 30-day public review and comment period from 26 June to 26 July 2021, as announced by a Notice of Availability (NOA) published in the *El Vocero*, *Primera Hora*, *Nuevo Dia*, and *San Juan Daily Star*. The Draft EA was made available for public review online and at the San Juan Community Library. No comments were received during the public review period. The USCG published and distributed the Final EA and FONSI, as announced in the above listed newspapers. The Final EA and FONSI are available online at: <https://www.dcms.uscg.mil/Our-Organization/Assistant-Commandant-for-Engineering-Logistics-CG-4-/Program-Offices/Environmental-Management/Environmental-Planning-and-Historic-Preservation/>.

1.6.2 Agency Coordination / Consultation

Interagency and intergovernmental coordination is a federally mandated process for informing and coordinating with other governmental agencies regarding federal proposed actions. CEQ Regulations require intergovernmental notifications prior to making any detailed statement of environmental impacts. This coordination also fulfills requirements under EO 12372 (*Intergovernmental Review of Federal Programs*; superseded by EO 12416, and subsequently supplemented by EO 13132), which requires federal agencies to cooperate with and consider state and local views in implementing a federal proposal.

Federal agencies consulted for this EA include the US Environmental Protection Agency (USEPA), US Army Corps of Engineers (USACE), US Department of Agriculture (USDA), US Fish and Wildlife Service (USFWS), and National Oceanic and Atmospheric Administration (NOAA). Commonwealth and local entities consulted include the Department of Natural and Environmental Resources (*Departamento de Recursos Naturales y Ambientales* [DRNA]), Puerto Rico State Historic Preservation Office (SHPO; *Oficina Estatal de Conservación Histórica*), Puerto Rico Ports Authority (*Autoridad de los Puertos de Puerto Rico*), Puerto Rico Planning Board (PRPB; *Junta de Planificación*), Permit Management Office (OGPe; *Oficina de Gerencia de Permisos*), and the Autonomous Municipality of San Juan (*Municipio Autónomo de San Juan*).

Agency responses have been addressed in this EA as appropriate. **Appendix A** and **Appendix B** contain copies of relevant agency correspondence, with **Appendix B** pertaining to Section 106 of the NHPA.

1.6.3 Native American Consultation

EO 13175, *Consultation and Coordination with Indian Tribal Governments* (2000), requires the invitation of federally recognized Indian tribes to participate in the NEPA and NHPA Section 106 processes as Sovereign Nations based on their potential ancestral ties to the Proposed Action area. There are no federally recognized



tribes affiliated with Puerto Rico; therefore, Native American consultation regarding the Proposed Action was not required.



2.0 Description of the Proposed Action and Alternatives

2.1 Introduction

NEPA, CEQ Regulations, and COMDTINST M16475.1D require all reasonable alternatives to be explored and objectively evaluated. The Proposed Action is described in detail in **Section 2.2**. This EA presents a detailed analysis of three alternatives to the Proposed Action: the Preferred Action Alternative, the Build Alternative, and the No Action Alternative, which are described in **Section 2.3.1**. The alternatives development and screening process established by the USCG to evaluate viable alternatives is discussed in **Section 2.3.1**. Detailed descriptions of the No Action Alternative, Build Alternative, and Preferred Action Alternative are provided in **Section 2.3.1**. Alternatives that were eliminated from further consideration because they did not meet one or more of the USCG's planning factors are described in **Section 2.3.2**.

2.2 Proposed Action

The Proposed Action evaluated in this EA consists of three primary components: (1) construction and operation of new facilities, including a Multi-Mission Building (MMB) and Health Services Building; (2) facility demolitions to accommodate new facilities; and (3) renovations of existing facilities that do not meet USCG resistance and resiliency requirements (**Figure 2-1**). These components are discussed in **Sections 2.2.1, 2.2.2, and 2.2.3** respectively. Base personnel working in existing hurricane-damaged facilities would be relocated to the new and renovated facilities as those projects are completed.

The Proposed Action also includes utility and infrastructure updates associated with the new and renovated facilities. Additional resiliency would be applied to select facilities that indirectly support rescue and recovery with a focus on life, health and safety, energy, communication, water, and sanitary systems. Facilities would be built above the base flood elevations and facilities and infrastructure would be designed with a functional flexibility to meet current and potential future requirements. Utility and infrastructure updates are discussed in **Section 2.2.4**.

The Proposed Action would not result in an increase in the number of personnel or vessels assigned to Base San Juan. Implementation of the Proposed Action is anticipated to begin in 2022 and be completed in 2023.

2.2.1 Construction of New Facilities

The Proposed Action includes construction of a 44,000-square foot three-story MMB near the eastern waterfront that would house the Armory, STA and ANT functions, a kitchen and locker rooms, drive-through boat and maintenance bays, and an FRC storage area on the first floor. The second level would house transformers and water pumps, while a new Central Utility Plant (CUP) would be located on the third floor of the MMB. The third floor would also hold office spaces, classrooms, and building support spaces. The MMB would be outfitted with photovoltaic solar panels on the roof, and the building would be set back 45 feet from the waterfront. In addition, the USCG proposes to construct a new 5,240-square foot one-story Shop Building to the southwest of the MMB. The Shop Building would contain space for Shop functions and also include a hazardous waste storage area.



Figure 2-1: Proposed Action Area





In the western section of the Base, the USCG would develop a 24,350-square foot two-story Health Services Building. The first level would comprise parking space, a barber shop, counseling offices, and building support spaces; while the second level would include Health Services and private offices. Existing open areas and green space at the Base would be used as temporary staging areas during construction.

A new 1,4005-square foot Guard House and access control area would also be developed. The new Guard House location would provide clear sight lines and a dedicated pass holder lane, visitor entrance lane, and exit lane, while also providing a turn-around for small vehicles that are rejected from entry. The proposed entry configuration would provide better security and Anti-Terrorism/Force Protection (ATFP) measures. The USCG also proposes to construct a new primary roadway to provide direct access from the western section of the Base to the eastern section to enhance wayfinding, safety, and navigability. Expanded and new parking areas would provide a total of 218 new parking spaces.

The eastern waterfront would be modified to include a new travel lift, a new boat ramp, and extensions to the existing travel lift piers between existing Piers Alpha and Bravo. A buoy storage area would be provided at the south end of Pier Echo, while a wash bay would be on the north side of the new MMB. Boat trailer parking would be provided near the northern boundary of the Base, adjacent to the existing Pier Alpha. The waterfront configuration would provide mooring for six cutters and one visiting vessel at Pier Echo. The only in-water work to support this construction would occur between Piers Alpha and Bravo. No dredging would be required under the Proposed Action.

New facilities would be designed in accordance with applicable USCG criteria to ensure a consistent and coherent architectural character while meeting resiliency and resistance requirements. Appropriately sized heating, ventilation, and air conditioning equipment would provide climate control to finished interior spaces. Construction activities would include all necessary site work, including vegetation clearing, grading, compacting, and installation of buried connections to existing utility systems currently serving the Base.

2.2.2 Renovation of Existing Facilities

Buildings 100, 101, 116, 117, 119, 124, 125, and 126 would undergo renovation to optimize floorplan layouts, provide adequate functional space, and improve operational efficiencies. Building 100 would be retrofitted to include space for the Response, Emergency Management, and Prevention functions. Building 100 is a contributing resource within the Base San Juan Historic District that is eligible for listing on the National Register of Historic Places (NRHP). The historic eastern portion of the building is currently in an unusable state due to hurricane damage. Building 101, which houses the Maintenance Assistance Team/Electronics System Support Detachment (MAT/ESD), would also be renovated to provide adequate functional space for these activities.

Building 116 would undergo interior renovations, and would continue to house Base Command functions as it currently does. Building 117 would undergo exterior and interior renovations, including new heating, ventilation, and air conditioning (HVAC) and electrical systems, and serve as the USCG's shipping, receiving, and mail distribution center. Building 119 would be renovated into the new Chief's Mess. Building 124 would be repurposed as the Coast Guard Exchange. Building 125 would largely remain as-is aside from updates to the existing CGIS wing that was damaged during Hurricane Maria. A portion of Building 125 is potentially eligible for listing on the NRHP; no renovations would be made to this portion



of the building. Building 126 would undergo minimal renovations and would be repurposed for Base Command, Personnel Support Department, Chaplain, and attorney offices. The USCG also proposes to rehabilitate approximately 228 feet of the revetment along the northwestern coastline using a land-based crane to remove and replace the existing debris and concrete, and a barge to install a new more uniform, clean rubble mound stone structure to improve shore protection and visual appeal along the waterfront.

2.2.3 Facility Demolitions

Buildings 103, 104, 108, 110, 111, 112, 112A, 113A, 120, 121, 122, 123, 133, and R04 would be demolished to accommodate new facilities or eliminate redundant facilities following the relocation of existing operations to new buildings. The sequence for demolishing the remaining facilities has not been determined; however, it is anticipated that facilities would be demolished individually rather than simultaneously to minimize logistical concerns and disruption of ongoing Base operations. The proposed facility demolitions would adhere to established demolition practices and waste management and disposal procedures.

2.2.4 Resiliency Improvements to Existing Utilities and Infrastructure

Under the Proposed Action, critical systems such as electrical, mechanical, and communications would be updated for flood resiliency. New occupied facilities would be elevated above the Federal Emergency Management Agency (FEMA) 100-year base flood elevation at 6.9 feet (2.1 meters [m]) with surge at 8.9 feet (2.7 m) from the Mean Sea Level (MSL). All critical systems (electrical, mechanical and communications) would be elevated at least 3 feet (0.9 meter) above the FEMA 100-year base flood elevation to avoid damage during a weather event. Utility lines would be routed underground through ducts via manholes, connecting new and existing buildings. The new CUP would help to achieve electrical resiliency on the Base and house up to four generators and new electrical distribution equipment. In addition, two 256,000-gallon water tanks would be placed in between Building 100 and the new Guard House to provide for 10-day water resiliency on the Base.

2.3 Alternatives Considered

NEPA, CEQ Regulations, and COMDTINST M16475.1D require all reasonable alternatives to be explored and objectively evaluated. Alternatives that are eliminated from detailed study must be identified along with a brief summary of the reasons for their dismissal. For the purpose of this analysis, an alternative is considered “reasonable” if it would meet the Proposed Action’s purpose and need. “Unreasonable” alternatives that would not meet the Proposed Action’s purpose and need were dismissed from further consideration and evaluation in this EA.

2.3.1 Planning Factors and Alternatives Development

The USCG developed and applied the following 10 planning factors to screen and evaluate possible alternatives that would meet the Proposed Action’s purpose and need. The USCG identified that a suitable alternative must meet the following criteria:

1. Comply with the Basic Facility Requirements (BFRs) developed in accordance with the USCG Shore Facilities Standard Manual (SFSM) (COMDTINST M11012.9) to meet functional space requirements.



2. Utilize existing USCG-owned sites where possible and avoid the acquisition of new or additional land.
3. Be consistent with other existing uses at the Base, while minimizing construction and lifetime operating costs to the extent possible.
4. Support operational and functional needs of the Base, including hurricane resiliency requirements.
5. Avoid or minimize disruptions to Base personnel and operations, or any activities that would impair or preclude the use of existing Base facilities or functions including waterfront access and operations.
6. Reduce the footprint of facilities at the Base in accordance with USCG facility management requirements by consolidating similar or related functions into a single or smaller number of facilities, and/or removing facilities that are redundant, undersized, or outdated to encourage efficient utilization of available space.
7. Avoid or minimize potential impacts on the natural environment, such as threatened and endangered species, floodplains, and coastal resources, to the extent practical.
8. Avoid or minimize potential impacts on historic properties at or near the Base to the extent practicable.
9. Avoid or minimize potential impacts on the physical environment, such as traffic/parking, hazardous materials, and existing utility connections, to the extent practical.
10. Comply with all current laws, including NEPA and other environmental regulations as applicable, executive orders, DHS Guiding Principles, and building and life safety codes, including FEMA base flood elevation recommendations and long-term resiliency protections.

The USCG evaluated 20 different alternatives to the Proposed Action. Nine alternatives were immediately dismissed from further consideration because they were speculative and impractical. An additional nine alternatives were eliminated because they did not meet one or more of the planning factors. For the purposes of this analysis these nine alternatives were grouped into three distinct actions and further described in **Section 2.3.2**. Only two of the nine alternatives were determined to be viable and carried forward for further analysis (**Section 2.3.1**). The No Action Alternative is also evaluated as required by CEQ regulations. **Table 2-1** summarizes the conformance of these alternatives to the 10 planning factors.

2.3.1 Evaluated Alternatives

2.3.1.1 No Action Alternative

Under the No Action Alternative, new facilities would not be constructed, damaged buildings would not be renovated or demolished, and current operations would continue. While the No Action Alternative would not satisfy the Proposed Action's purpose and need, it is retained for analysis in this EA to provide a comparative baseline against the Proposed Action, as required by the CEQ Regulations (40 CFR Part 1502.14). The No Action Alternative reflects the status quo and serves as a benchmark against which the effects of the Proposed Action can be evaluated.

Under the No Action Alternative, the USCG would continue to operate and work in facilities that do not meet basic requirements necessary to ensure Base facilities remain functional and operational during an emergency event. Failure to upgrade and improve facility resiliency would continue to hinder the Base's operational readiness and response and the USCG's ability to carry out its mission requirements.



Table 2-1: Summary of Alternatives Considered

Planning Factor	Alternatives Considered and the Planning Factors that would be met					
	No Action Alternative	Preferred Action Alternative	Build Alternative	Design Alternatives to the Multi-Mission Building (Alternatives East 1 and East 3)	Alterations to the Eastern Waterfront (Alternatives East 2a, East 2b, East 4, and East 5)	Extensive Demolitions in the Western Section (Alternatives West 1, West 2, and West 3)
Planning Factor 1: Complies with BFRs	NO	YES	YES	YES	YES	YES
Planning Factor 2: Utilizes USCG-owned sites	NO	YES	YES	YES	YES	YES
Planning Factor 3: Consistent with other existing uses while minimizing costs	YES	YES	YES	YES	YES	NO
Planning Factor 4: Meets operational, functional, and hurricane resilience requirements	NO	YES	YES	YES	NO	NO
Planning Factor 5: Avoids disruptions to existing personnel and operations	NO	YES	YES	NO	NO	NO



Table 2-1: Summary of Alternatives Considered

Planning Factor	Alternatives Considered and the Planning Factors that would be met					
	No Action Alternative	Preferred Action Alternative	Build Alternative	Design Alternatives to the Multi-Mission Building (Alternatives East 1 and East 3)	Alterations to the Eastern Waterfront (Alternatives East 2a, East 2b, East 4, and East 5)	Extensive Demolitions in the Western Section (Alternatives West 1, West 2, and West 3)
Planning Factor 6: Reduces the existing footprint of facilities	YES	YES	YES	YES	YES	YES
Planning Factor 7: Avoids impacts on the natural environment	YES	YES	YES	YES	NO	NO
Planning Factor 8: Avoids impacts on cultural or historic resources	YES	YES	YES	YES	NO	NO
Planning Factor 9: Avoids impacts on the physical environment	YES	YES	YES	NO	NO	NO
Planning Factor 10: Complies with federal, commonwealth, local, and DHS regulations	NO	YES	YES	YES	YES	YES



2.3.1.2 Preferred Action Alternative

The Preferred Action Alternative would implement the primary components of the Proposed Action described in **Sections 2.2.1** through **2.2.4**. This is the USCG's Preferred Alternative because it best meets the needs of Base San Juan, as reflected in the planning factors identified in **Section 2.3.1**. **Figures 2-2a** and **2-2b** provide conceptual site layouts of the Preferred Action Alternative. This alternative provides many advantages, including but not limited to:

- Compatible with existing uses at the Base and would not require land acquisition, substantial modification, or reconfiguration of existing spaces;
- Combines facilities and functions to reduce and optimize the existing built footprint;
- Meets USCG operational, readiness, and resilience requirements;
- Complies with DHS requirements, in addition to federal and Commonwealth regulations;
- Minimizes impacts to cultural resources to the extent practicable through careful design to take into account less disturbance of historic resources;
- Located in an area with minimal or no impacts on sensitive environmental resources; and
- Avoids or minimizes disruptions to Base personnel and operations.

2.3.1.1 Build Alternative

The Build Alternative would be similar to the Preferred Action Alternative, except for differences with the renovation of Building 100 and construction of the Health Services Building. Under the Build Alternative, the the western half of Building 100 (also referred to as the Building 100 Annex) would be demolished. The eastern half of Building 100 would be renovated as described for the Preferred Action Alternative (**Section 2.2.2**) to house Response, Emergency Management, and Prevention operations. The two 256,000-gallon water tanks would be placed within the footprint of the demolished Building 100 Annex, which would allow for the expansion of a parking area between the water tanks and the Guard House.

Under the Build Alternative, the new Health Services Building would be a three-level facility. The first two levels would provide the same functions as described for the Preferred Action Alternative (**Section 2.2.1**), while the third level would provide operational space for the Prevention & Planning sector. **Figures 2-2c** and **2-2d** provide conceptual site layouts of the Build Alternative. This alternative meets the planning factors identified in **Section 2.3.1** and provides many of the same advantages as the Preferred Action Alternative. However, additional demolition and construction activities in support of Building 100 and the new Health Services Building could present additional cultural concerns with regard to the historic resources in and surrounding the Base.



Figure 2-2a: Preferred Alternative – Conceptual Diagram #1 (Eastern Portion)

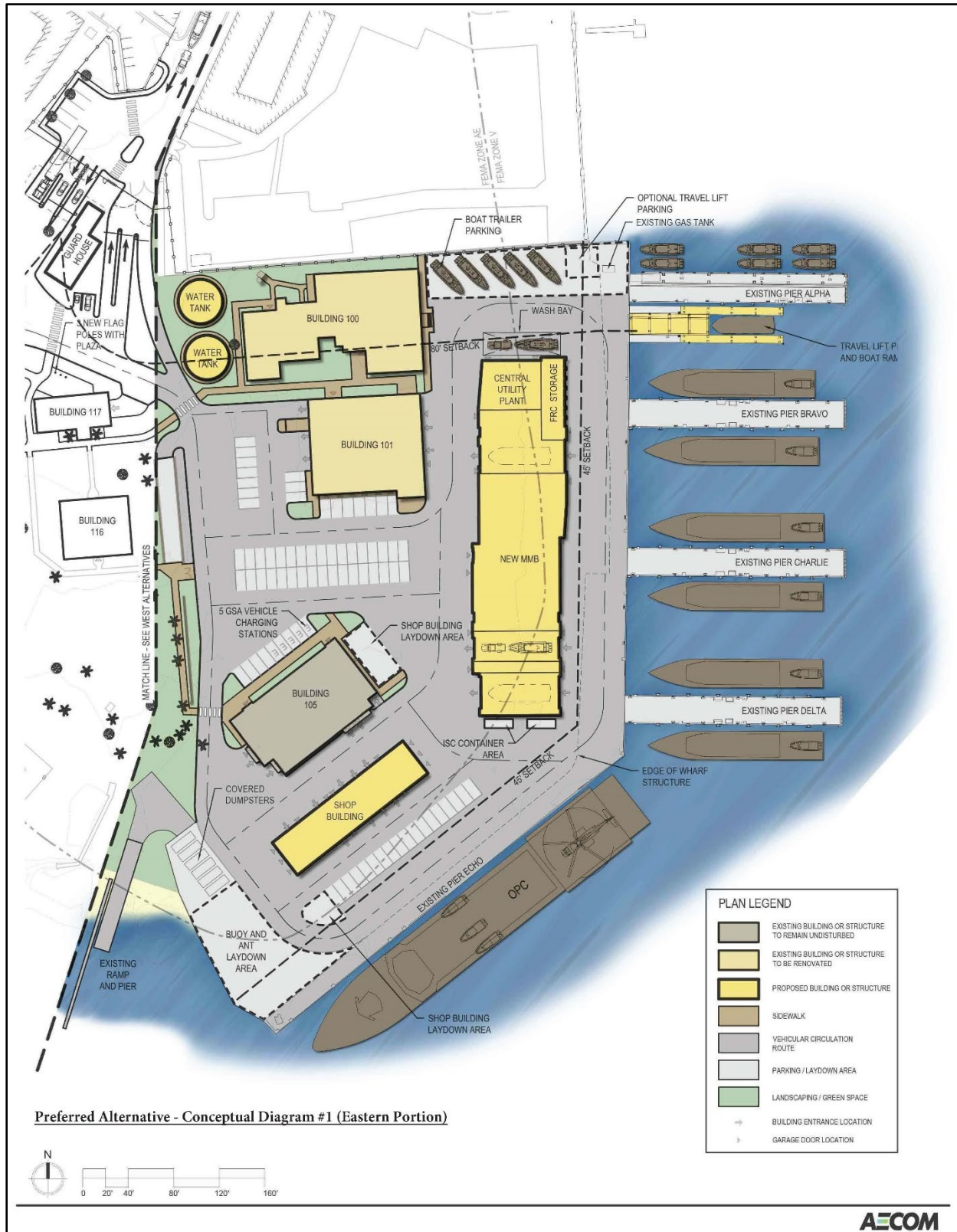




Figure 2-2b: Preferred Alternative – Conceptual Diagram #2 (Western Portion)





Figure 2-3a: Build Alternative – Conceptual Diagram #1 (Eastern Portion)

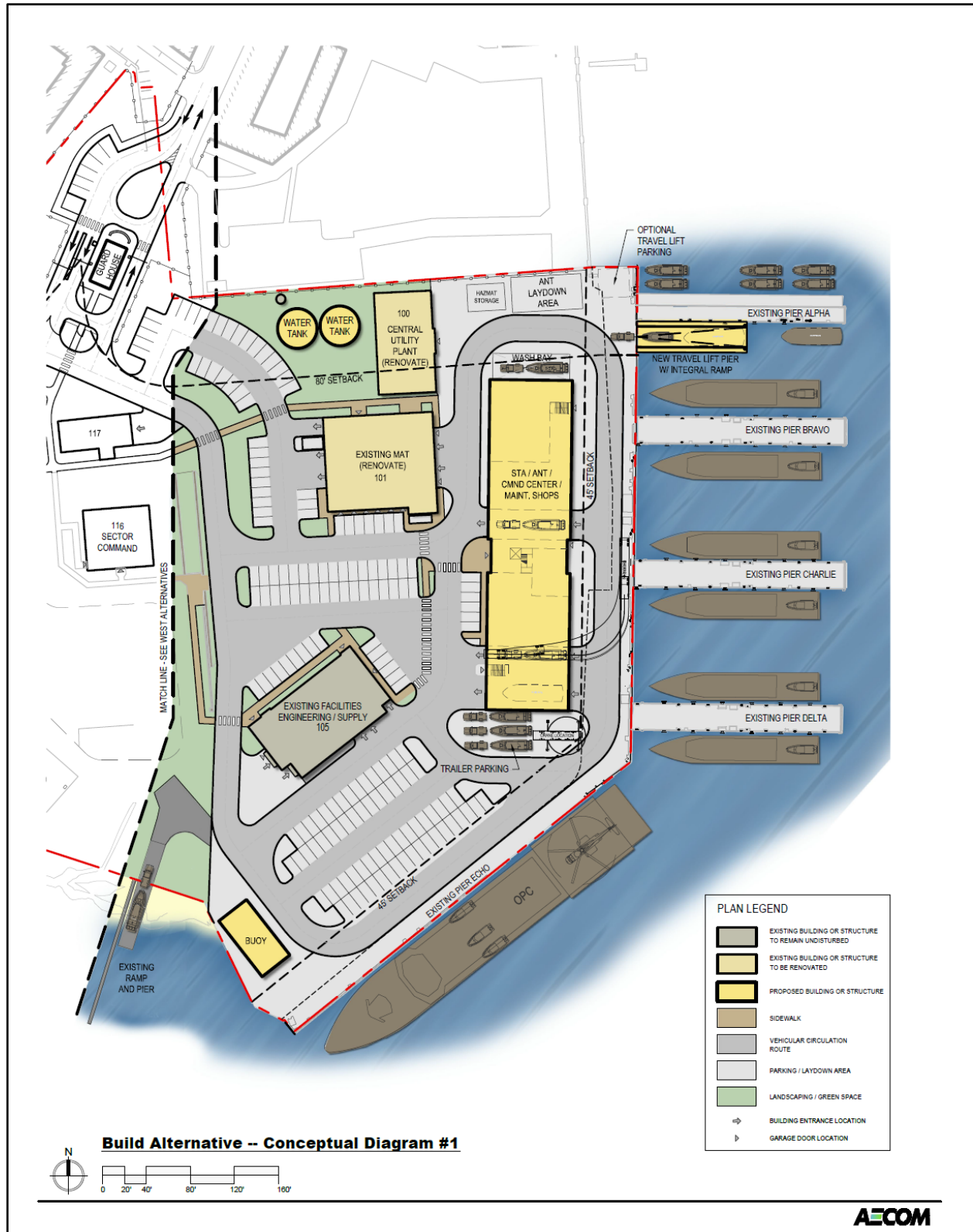
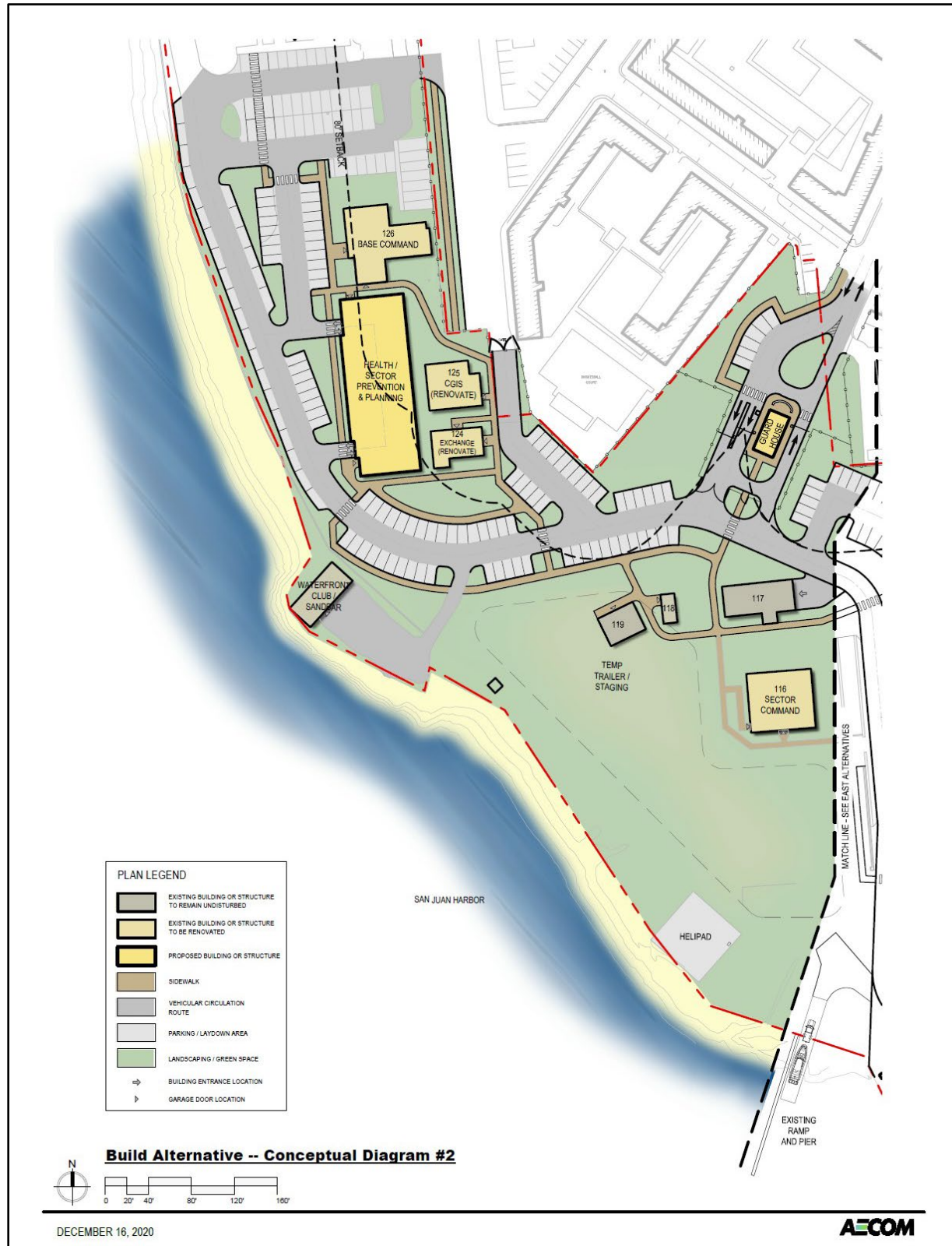




Figure 2-3b: Build Alternative – Conceptual Diagram #2 (Western Portion)





2.3.2 Alternatives Eliminated from Further Consideration

The USCG evaluated 18 different alternatives to the Proposed Action, in addition to the Preferred Action Alternative and Build Alternative. As previously mentioned, nine alternatives were immediately dismissed from further consideration because they were unrealistic. The other nine alternatives were eliminated because they did not meet one or more of the planning factors presented in **Section 2.3.1**. These alternatives are grouped into three distinct alternative groupings and further summarized below.

2.3.2.1 Design Alternatives to the Multi-Mission Building

The USCG considered two alternatives (East Alternative 1 and East Alternative 3) that would reconfigure the design of the MMB. East Alternative 1 would develop the MMB with a separate CUP along the waterfront at Pier Delta. East Alternative 3 would be similar to East Alternative 1 except that the MMB would be constructed in the northwestern portion of the Base. These alternatives presented several functional issues as certain Base operations currently in the western section of the Base would not be able to operate efficiently if moved to the east side. The relocation of USCG personnel and functions to the other side of the Base would be disruptive to station personnel and affect optimal mission performance. Relocating these functions to one side of the Base would likely cause parking shortages in an already limited parking lot. These alternatives would not meet planning factors #5 and #9, and therefore were dismissed from further consideration.

2.3.2.2 Alterations to the Eastern Waterfront

The USCG considered four alternatives that would alter the eastern waterfront area. East Alternatives 2a and 2b would position the new MMB in a north-south orientation in the Operational/Waterfront area, parallel to the waterfront. A new buoy storage area would be located at Pier Echo under Alternative 2a, and a new travel lift and integral slip would be constructed at Pier Delta under East Alternative 2b. Similarly, East Alternative 4 would develop a new STA/ANT building parallel to the waterfront, and East Alternative 5 would build an Administration Building along the waterfront in addition to a new pier. These alternatives were dismissed from further consideration because of their impacts on the waterfront. New developments along the waterfront would cause potential cultural impacts on the viewshed. Activities at and around the waterfront would also present additional environmental concerns with regard to coastal resources and marine species. Construction of these facilities would also cause temporary or permanent disruption to waterfront operations and water access. As a result, these four alternatives would not meet planning factors #4, #5, #7, #8, and #9, and therefore were dismissed from further consideration.

2.3.2.3 Extensive Demolitions in the Western Section

The USCG considered three alternatives that would require extensive demolitions in the western section of the Base. West Alternatives 1, 2, and 3 would require demolition of some or all of the following buildings: 117, 118, 119, 121, 122, 123, 124, and 125. Additional demolition activities required under these alternatives would require further investigations and regulatory consultation surrounding potential cultural or environmental concerns. Specifically, Buildings 124 and 125 are identified as contributing resources to the NRHP-eligible Base San Juan Historic District. These alternatives would increase demolition costs and require considerable reconfiguration of the Base due to the proposed demolition of several buildings. As a result, these three alternatives would not meet planning factors #3, #4, #5, #7, #8, and #9, and therefore were dismissed from further consideration.



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3.0 Affected Environment

3.1 Introduction

This section describes the current baseline conditions for resources potentially affected by the Proposed Action at and in the vicinity of Base San Juan. In compliance with NEPA, CEQ Regulations, and COMDTINST M16475.1D, this section focuses only on resources that would be potentially affected by the implementation of the Proposed Action. **Section 4.0, *Environmental Consequences***, identifies potential effects of the identified project alternatives on each of the resources discussed in this section.

3.2 Resources Eliminated from Further Analysis

The CEQ recommends agencies “identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (40 CFR § 1506.3), narrowing the discussion of these issues in the [EA] to a brief presentation of why they will not have a significant effect on the human environment or providing a reference to their coverage elsewhere” (40 CFR § 1501.7(a)(3)). **Table 3-1** lists the Technical Resource Areas considered for evaluation in this EA, and identifies those analyzed in this EA or provides the rationale for resources that were dismissed from further analysis.

Table 3-1: Technical Resource Areas Evaluated in this EA

Technical Resource Area	Analyzed in Detail in this EA?	If Yes, EA Section If No, Rationale for Elimination
Socioeconomic Environment		
Land Use and Zoning	No	Construction and operation of the Proposed Action would not change existing land use within Base San Juan. The Proposed Action would be implemented on a previously disturbed site that is entirely within Base San Juan, and would be similar to and compatible with other existing administrative and operational support functions at the Base. New construction would occur within previously developed locations within the Base, and no open space would be lost. In addition, the new and renovated buildings would have no effect on aesthetic quality at the Base. Further, rehabilitating the shoreline revetment would improve the visual appeal of the waterfront in the northwestern corner of the Base. Implementation of the Proposed Action would have no potential to disrupt, interfere with, or prevent the continued operation of existing land uses outside the Base. Considering the present density of development adjacent to the Base, regional development would likely continue, although encroachment is not anticipated. Therefore, the Proposed Action would have no effect on land use and zoning, and was dismissed from further analysis in this EA.



Table 3-1: Technical Resource Areas Evaluated in this EA

Technical Resource Area	Analyzed in Detail in this EA?	If Yes, EA Section If No, Rationale for Elimination
Local Economy, Housing, Community Service and Medical Facilities, Recreational Facilities, Fire, Rescue, and Police Services, Schools	No	The Proposed Action would have no or negligible adverse impacts on local community resources, and negligible beneficial impacts on the local economy. No personnel increases are anticipated to result from implementation of the Proposed Action, so there would be no change in demand for housing and community services such as schools, community services, first responder services, health care, and recreational facilities. Construction and demolition activities under the Proposed Action would likely have a beneficial effect on the local economy from increased spending by contractors on supplies, equipment, lodging, and meals; however, these effects would be small in the context of the San Juan urban center and would cease upon the completion of these activities. Execution of the construction and demolition projects by qualified contractors and adherence to applicable safety practices would prevent or minimize the potential for injuries requiring medical treatment or emergency response services. Thus, these topics were dismissed from further analysis in the EA.
Environmental Justice and Protection of Children	No	In accordance with applicable EOs and CEQ guidance, the Commonwealth of Puerto Rico would be considered an EJ community of concern with respect to both income and race. In consideration of the Proposed Action, however, the race and income attributes prevalent throughout Puerto Rico are considered standard and the discussion of EJ should focus on localized communities and their conditions against the backdrop of Puerto Rico as a whole. Given this consideration, no EJ communities of concern with respect to race or income are present immediately surrounding Base San Juan. Two EJ communities are present approximately 0.5 miles away from the Base; however, any adverse impacts to air, noise, or traffic resulting from construction, demolition, or operational activities at the Base occurring under the Proposed Action would not extend to these communities. There would be no adverse impacts and no disproportionate impacts to EJ communities of concern. Therefore, this resource was dismissed from detailed analysis in the EA.
Traffic and Transportation	Yes	See Sections 3.3.1 and 4.2.1.
Utilities	Yes	See Sections 3.3.2 and 4.2.2.
Physical Environment		
Geology and Seismic Conditions	Yes	See Sections 3.4.1 and 4.3.1.
Topography	No	Surface topography at Base San Juan is flat with a slight slope to the southwest, and with an elevation of approximately 5.5 feet above mean sea level. No unique or noteworthy topographic features are present that would be altered or affected by the Proposed Action. With the exception of localized grading to prepare for facility construction, the Proposed Action would not substantively alter topography at the Base or introduce new topographic features that would intrude in the visual landscape at or outside the Base. Therefore, this resource was dismissed from detailed analysis in the EA.



Table 3-1: Technical Resource Areas Evaluated in this EA

Technical Resource Area	Analyzed in Detail in this EA?	If Yes, EA Section If No, Rationale for Elimination
Soils	No	Soils within Base San Juan have not been mapped by the Natural Resources Conservation Service (NRCS). Generally, soils at the Base have been extensively disturbed through the construction of existing infrastructure and other development activities. No hydric soils, prime farmland, or farmland of statewide importance are present. Most soils underlying the Base are fill material, reflecting the highly developed nature of the Base. Soil disturbance would be relatively shallow and similar to previous development activities at the Base. Excavated soils would be backfilled as necessary with clean soils meeting USCG requirements. The distribution of the proposed projects over several years would ensure that not all soil disturbance occurs simultaneously, further minimizing impacts. Therefore, this resource was dismissed from detailed analysis in the EA.
Air Quality and Climate	Yes	See Sections 3.4.2 and 4.3.2 .
Noise	Yes	See Sections 3.4.3 and 0 .
Hazardous and Toxic Materials and Waste	Yes	See Sections 3.4.4 and 4.3.4 .
Natural Environment		
Surface Water and Water Quality	Yes	See Sections 3.5.1.1 and 4.4.1 .
Stormwater	Yes	See Sections 3.5.1.2 and 4.4.1 .
Wetlands	No	No wetlands are located within or near the Base; thus, the Proposed Action would not impact any wetlands. The San Juan Bay is classified as an estuarine and deepwater habitat, as further discussed under Sections 3.5.1.1 and 4.4.1 . Due to the absence of wetlands with the Base, this resource was dismissed from further analysis in the EA.
Floodplains	Yes	See Sections 3.5.1.3 and 4.4.1 .
Coastal Resources	Yes	See Sections 3.5.1.1 and 4.4.1 .
Biological Resources	Yes	See Sections 0 and 4.4.2 .
Cultural Resources		
Cultural Resources	Yes	See Sections 3.6 and 4.54.4.2.3 .



3.3 Socioeconomic Environment

This section describes the existing socioeconomic environment of Base San Juan and the surrounding area, including traffic and transportation and utilities.

3.3.1 Traffic and Transportation

Traffic conditions within and surrounding Base San Juan are congested, particularly during peak hours as Base personnel are commuting to and from the Base. There is currently only one access road to and from Base San Juan at the southern end of Calle La Puntilla. The single access road into and out of the Base routinely causes traffic back-ups while Base security confirms personnel entering the Base, and as visitors try to gain access. Traffic issues stemming from the security checkpoint at the Base entrance are compounded by the lack of pull-off space for visitors who must get their identity confirmed, or who are denied entry and must turn around to exit the Base. Back-ups at the security checkpoint lead to back-ups along the surrounding roadways, which are narrow and do not allow other traffic to pass.

Once inside the Base, there is only one roadway that connects the eastern and western portions of the Base, which requires passing the main entrance. Calle Santo Toribio traverses the western shoreline of the Base, and connects to the main entrance of the Base. Access to the eastern portion is provided via a driveway leading from the entrance to the parking areas along the eastern waterfront. Parking on the Base is also limited – there are designated parking lots in both the eastern and western areas near main buildings, but these lots are small and do not provide sufficient parking space for all Base personnel. As a result, personnel routinely park along the sides of the roadways and on grassy, open space areas.

3.3.2 Utilities

Existing utility infrastructure on the Base includes stormwater management, sanitary sewer lines, water distribution and fire pumps, and electrical service and generators. The stormwater management system manages runoff using a combination of piping and surface draining. This system, along with the sanitary sewer lines, remain intact and are of good condition and sufficient capacity.

Water at the Base is supplied by the Puerto Rico Aqueduct and Sewer Authority (PRASA) via two supply lines which are connected to the Base's internal water distribution loop. The Base also maintains a 43,000-gallon water storage tank for redundancy in the event water service from PRASA is unavailable. Of this emergency water, only approximately 14,000 gallons are reserved for normal operations, while the remainder is kept in reserve for fire emergencies. The limited capacity of the existing water tank is insufficient to address water supply requirements during an extended emergency event, such as a hurricane, leaving the Base with limited functionality. The water tank is connected to an on-site pumping system that distributes the water through a pumping station with two pumps. The pumps at this station were recently upgraded to address distribution inefficiencies. Three buildings on the Base – Buildings 120, 127, and 128 – contain interior sprinklers in the event of fire; a total of 18 fire hydrants are located throughout the Base.

Electricity at the Base is supplied by the Puerto Rico Electric Power Authority (PREPA) via a single 13.2 kilovolt feeder connected to a single utility pole. This utility pole is connected to three output feeders routed through manholes to various transformers ranging from 225 kilovolt amps (kVA) to 1,500 kVA, and one 500 kVA unit-substation to supply electricity throughout the Base. This equipment is loop-fed to provide redundancy in the result of a cable failure, but the system is not fully redundant owing to the single utility



feed to the Base. Exterior electrical equipment including the unit-substation and transformers are corroding due to the salty sea air and coastal environment. Recently updated electrical equipment serves Piers Alpha through Delta, but Pier Echo cannot sustain shore power. In addition to the electrical lines, six fuel-powered generators are located throughout the Base to provide emergency or stand-by power.

3.4 Physical Environment

This section describes the existing physical environment of Base San Juan and the surrounding area, including geology and seismic conditions, climate and air quality, noise, and HTMW and non-hazardous solid waste.

3.4.1 Geology and Seismic Conditions

3.4.1.1 Geology

Puerto Rico's geology can be divided into two broad formations belonging to rocks of volcanic or sedimentary origin. Those of sedimentary origin consist mostly of limestone, and are normally found underlying the northern part of the Island and areas of the southern coastal plains. Depths to limestone vary from approximately 40 to more than 100 feet (12.2 to 30.5 m) (USACE, 2018).

The coastal plain in the vicinity of the San Juan metropolitan area shows a surficial geology dominated by lagoon and estuarine environments, covered by fluvial and eolian deposits that have dictated the geomorphologic evolution of this region. Estuary areas are characterized by low-lying flat land that has evolved to its present condition through current and historic processes of erosion, deposition, compaction, and subsidence (USACE, 2016).

No unique or noteworthy geological formations or conditions have been documented under or in the vicinity of Base San Juan.

3.4.1.2 Seismic Conditions

The island of Puerto Rico is in a seismically active area near the boundary of the North American tectonic plate and the northeast corner of the Caribbean tectonic plate. The North American plate is moving westward relative to the Caribbean plate at approximately 0.8 inch (2 centimeters [cm]) per year. During a 12-month period between March 2014 and March 2015, the region experienced an average of five earthquakes (including aftershocks) per day with a magnitude greater than 1.5. The majority of these earthquakes were too small to be felt by people (NOAA, 2015).

More recently, a magnitude 6.4 earthquake occurred on 7 January 2020 near the barrio of Indios, Guayanilla along Puerto Rico's southwest coast. A magnitude 5.4 earthquake, which was an aftershock of the 7 January earthquake, occurred on 2 May 2020 approximately 4 miles offshore of the community of Tallaboa in the barrio of Encarnación, Peñuelas (USGS, 2020a; USGS, 2020c). The annual chance of a magnitude 6 or greater aftershock will remain above 25 percent for 3 months to 3 years, although the rate of aftershocks is expected to decline. Within the next year, there is a 20 to 30 percent chance of an aftershock as large as the mainshock or larger, and a 5 to 10 percent chance of a magnitude 7 or greater earthquake (USGS, 2020b).

A geotechnical study conducted in 2019 determined there is a potential for soil liquefaction to occur at Base San Juan during an earthquake. Liquefaction of loose soils can lead to displacements of foundations, slope failures, ground surface settlement, and post-earthquake stability failures. Three factors identified at the



Base contribute to soil liquefaction potential: loose, uniformly graded soils; high groundwater table and saturated soils; and sufficiently high, earthquake induced ground acceleration and sustained shaking (DHS, 2019).

Facilities at the Base are built and renovated in accordance with the 2018 International Building Code as adopted in Puerto Rico under the International Code Council, and applicable Department of Defense (DoD) Unified Facilities Criteria (UFC) including UFC 3-301-01, *Structural Engineering* (DoD, 2019) and *Standards of Seismic Safety for Existing Federally Owned and Leased Buildings – ICSSC Recommended Practice 8* (NIST, 2011). These codes, criteria, and standards specify additional seismic resiliency requirements for facility construction and renovation projects in areas with a higher potential for earthquakes.

3.4.2 Air Quality and Climate

3.4.2.1 Ambient Air Quality

Ambient air quality is characterized by the concentrations of certain airborne pollutants present in a particular area. The Clean Air Act (CAA), as amended, authorizes the USEPA to establish primary and secondary National Ambient Air Quality Standards (NAAQS) for pollutants considered harmful to public health and the environment. The primary and secondary NAAQS are established for six “criteria pollutants” as listed under Section 108 of the CAA: carbon monoxide (CO); lead (Pb)¹; nitrogen dioxide (NO_x); ozone (O₃); particulate matter equal to or less than 10 micrometers in diameter (PM₁₀) and equal to or less than 2.5 micrometers in diameter (PM_{2.5}); and sulfur dioxide (SO₂). The General Conformity Rule (40 CFR Part 51, Subpart W) requires federal agencies to prepare written Conformity Determinations for federal actions in or affecting NAAQS in non-attainment areas, except when the action is covered under the Transportation Conformity Rule or when the action is exempt because the total increase in emissions is insignificant, or de minimis. Areas that exceed NAAQS are considered to be non-attainment.

The primary regulatory authority for air quality in Puerto Rico is the Air Quality Group within the DRNA. The municipality of San Juan is located in a non-attainment area for SO₂ (USEPA, 2021). The *de minimis* level for SO₂ is 100 tons per year (40 CFR § 93.153(b)(1)). The USCG must evaluate the emissions of SO₂ to determine the applicability of the general conformity regulations.

Section 112 of the CAA authorizes the USEPA and local governments to regulate 186 types of toxic and hazardous air pollutants (HAPs), such as benzene, asbestos, naphthalene, toluene, and xylenes. The USEPA established New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAPs) to minimize emissions of criteria pollutants and HAPs. NESHAPs primarily apply to “stationary sources,” which are emission sources that have a fixed location (e.g., fuel-burning boilers and generators, entire facilities/plants), as opposed to “mobile sources,” which are emission sources that have the capability to move from one location to another (e.g., motor vehicles, trains, airplanes). A

¹ Lead is not considered further in this analysis because none of the project activities have the potential to generate lead emissions.



“major source” is defined by the USEPA as stationary sources, or groups of stationary sources, with a potential to emit more than 100 tons per year of any criteria pollutant, 10 tons per year of any HAP, or 25 tons per year of any combination of HAPs. Major source facilities are required to obtain a Title V operating permit, which specifies limits on the concentrations and quantities of pollutants that the source may emit. The Base is not designated as a major source and therefore, is not required to maintain a Title V operating permit.

Sensitive receptors are those who are at a higher risk of health impacts from air pollution. These include, but are not limited to, asthmatics, children, and the elderly, as well as long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, and childcare centers. Multiple potentially sensitive air quality receptors occur within 1 mile of the Base, including apartment complexes adjacent to the Base, 8 schools, 12 churches, and 1 hospital.

3.4.2.2 Climate

The climate of northern Puerto Rico is characterized as tropical marine with warm, sunny days and a high relative humidity of 80 percent throughout most of the year. The normal average annual temperature ranges from a minimum of 75.4 degrees Fahrenheit (°F) (24.1° Celsius [C]) to a maximum of 86.7°F (30.4°C). Annual total precipitation averages 56.4 inches, with the least rainfall occurring in January through March (NOAA, 2018). Hurricane season lasts from June to November, and contributes heavy rainfall and gusty winds (PRCCC, 2015).

Greenhouse gases (GHGs) include water vapor, carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. GHGs are regulated under Section 202 of the CAA, which establishes fuel efficiency and renewable fuel standards on light-duty, medium-duty, and heavy-duty vehicles. The USEPA also regulates GHGs through mobile source emission standards and operating permits issued under Title V of the CAA. In 2019, a total of 12.5 million metric tons of CO₂ were reportedly emitted in Puerto Rico (USEPA, 2019). The Base is not a reporting facility on USEPA’s GHG Reporting Program website (USEPA, 2019). Federal actions are also subject to EO 13990, *Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis*, which requires federal agencies to take action to address the climate crisis.

3.4.3 Noise

Noise may be defined as unwanted or objectionable sound that may interfere with communications, human activities, or adversely affect hearing. Noise may be intermittent, continuous, or impulsive. Sound is composed of tiny fluctuations in air pressure and is characterized by its amplitude (how loud it is), frequency (pitch), and duration. The perception of sound within the range of human hearing can vary in intensity, and the human ear does not hear all frequencies equally. The logarithmic decibel (dB) scale is used to quantify sound intensity and to compress the scale to a more manageable range. The A-weighted decibel scale (dBA) is used to reflect the selective sensitivity of human hearing. The human range of hearing amplitude extends from 0 dBA to 120 dBA, with 0 dBA representing the threshold of normal human hearing and 120 dBA representing the threshold at which an individual begins to experience pain.

The USEPA recommends a human average exposure limit for environmental noise of 70 dBA over a 24-hour period or 75 dBA over an 8-hour period (USEPA, 1974). The USCG *Safety and Environmental Health*



Manual (COMDTINST M5100.47) recommends 86 dBA as the maximum noise level that watercraft may generate while operating at full speed at a distance of 50 feet from a receptor (PWIA, 2006). Primary sources of noise at the Base include ships, onshore vehicles, and support equipment (e.g., light-duty trucks, towing vehicles, cranes, travel lifts, pneumatic and electrical power tools). Sound from persistent winds and waves also contributes to the ambient noise environment at and around the Base. Puerto Rico's noise ordinance prohibits activities that result in noise contamination, defined as sound emissions that exceed the regulated levels. Emitted sounds from different categories of sound producers may not be heard above certain dBA levels by different categories of receptors (see **Table 3-2**) (PREQB, 2011). Sound levels are also regulated depending on the time of day: the daytime period lasts from 7:00 a.m. to 10:00 p.m., and the nighttime period lasts from 10:01 p.m. to 6:59 a.m. Base San Juan is classified as a Zone III (i.e., industrial) emitter and receptor, and so emitted sounds may not be heard above the regulated levels in other receiving zones (see **Table 3-2**). In addition, construction activities are prohibited during the nighttime period (PREQB, 2011).

Table 3-2: Sound Level Limits (dBA)

Emitting Source	Receiving Zones							
	Zone I (Residential)		Zone II (Commercial)		Zone III (Industrial)		Zone IV (Tranquil)	
	Day (D)	Night (N)	D	N	D	N	D	N
Zone I (Residential)	60	50	65	55	70	60	55	50
Zone II (Commercial)	65	50	70	60	75	65	55	50
Zone III (Industrial)	65	50	70	65	75	75	55	50
Zone IV (Tranquil)	65	50	70	65	75	75	55	50

Source: (PREQB, 2011)

Noise sensitive receptors are facilities or land uses that may experience an increased degree of annoyance or disruption from elevated or persistent noise levels. Such receptors may include hospitals, schools, churches, daycare facilities, and nursing facilities, as well as residential areas. Numerous noise sensitive receptors are located within a 1-mile radius of Base San Juan: 8 schools, 12 churches, and 1 hospital. In addition, the majority of Old San Juan is residential.

3.4.4 Hazardous and Toxic Materials and Wastes

Hazardous wastes are defined by the Resource Conservation and Recovery Act (RCRA) at 42 USC §6903(5), as amended by the Hazardous and Solid Waste Amendments, as “a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may (a) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (b) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise



managed.” Hazardous materials and wastes at Base San Juan are managed in accordance with applicable requirements of the RCRA and the *Coast Guard Hazardous Waste Management Manual* (COMDTINST M16478.1B). The Base maintains and adheres to a Spill Prevention, Control, and Countermeasure (SPCC) plan to prevent and manage accidental releases of petroleum products and other hazardous materials.

Hazardous materials used and stored at Base San Juan include fuels and lubricating oils, chlorinated solvents and other solvents/degreasers, paints and thinners, antifreeze, and acids. These are stored in Building 111 near the southeastern waterfront. Gasoline, diesel fuel, used oil, oily water, and similar petroleum products are stored in multiple above-ground storage tanks (ASTs) in the fuel farm along the Base’s northern boundary between Building 100 and Pier Alpha. The fuel farm is at grade and is equipped with secondary containment and emergency shutoff systems. In addition, six emergency back-up generators located throughout are equipped with a sub-base fuel tank that requires manual refueling. These generators are associated with Buildings 100, 101, 103, 104, 105, 108, 110, 111, 126, 127, and 128 (DHS, 2021).

In addition, Buildings 100, 101, 103, 125, and 126 were surveyed for asbestos-containing materials (ACM) and lead-based paint (LBP) in 2019. No ACM was detected in any of the surveyed buildings. LBP was detected in Buildings 100, 125, and 126. No LBP was identified in Building 101 or Building 103 (USCG, 2019). The use and manufacture of LBP was banned in the United States in 1978. Therefore, there is a potential for LBP to be present in buildings constructed before that time. Puerto Rico’s Industrial Landfill Facilities are permitted by the DRNA to receive and dispose ACM as long as they are not mixed with or contain hazardous constituents as defined by RCRA. Similarly, the DRNA allows the disposal of LBP abated from structures in authorized, non-Hazardous waste industrial landfills.

Base San Juan is regulated by the USEPA as a Small Quantity Generator (SQG) of hazardous waste in accordance with RCRA (USEPA, 2021a). As an SQG, the Base generates more than 220 pounds (100 kilograms) but less than 2,205 pounds (1,000 kilograms or 1.1 tons) of hazardous waste per month (USEPA, 2021b). There are no known or documented hazardous waste remediation sites at Base San Juan that are regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or similar statutes.

3.4.5 Non-Hazardous Solid Waste

Non-hazardous solid waste at Base San Juan is generated, stored, handled, and disposed of in accordance with applicable federal, state, and COMDTINST regulations. Solid waste generated at the Base includes office and domestic waste, construction and demolition debris such as drywall, scrap metal, and scrap lumber, and recyclable materials such as aluminum cans, paper, cardboard, and glass and plastic bottles. Solid waste at Base San Juan is placed in appropriate receptacles and routinely collected by licensed private contractors for transport to permitted off-Base facilities for disposal or recycling as applicable.



3.5 Natural Environment

This section describes the existing natural environment within and surrounding Base San Juan, including biological resources, water resources, and coastal resources.

3.5.1 Water Resources

Water resources in this analysis include surface waters, stormwater, floodplains, and coastal resources. The CWA is the primary federal regulation that addresses surface waters and includes provisions that regulate water quality standards and the discharge of pollutants. Section 404 of the CWA authorizes USACE to regulate impacts to surface waters, by issuing permits for the discharge of dredged or fill material. Section 401 of the CWA gives the Commonwealth the authority to regulate proposed federally permitted activities that may result in a discharge to water bodies. Section 10 of the Rivers and Harbors Act of 1899 authorizes USACE to ensure activities do not adversely affect the navigability or other uses of navigable waters.

3.5.1.1 Surface Water and Water Quality

Base San Juan is surrounded to the east, west, and south by the San Juan Bay, an estuarine, subtidal waterbody primarily enclosed by land, but with one main connection to the Atlantic Ocean at its northern end (Cowardin, Carter, Golet, & LaRoe, 1979). The San Juan Bay is incorporated within the San Juan Bay Estuary, a highly productive and diverse watershed system, located along the northeastern coast of Puerto Rico, and extending from Toa Baja in the west to Loíza in the east (Bauzá-Ortega, 2015). No surface waters are present within the boundaries of the Base.

All surface waters in Puerto Rico are assigned a primary classification based on their designated uses and associated levels of protection. These classifications are used to develop and identify suitable water quality standards for the designated use (DRNA, 2019). The DRNA is responsible for maintaining and monitoring these standards, to preserve water quality and designated uses, and prevent degradation. The San Juan Bay is classified as Class SB, which are waters designated for use in primary and secondary contact recreation, and for the maintenance of desirable species; this is the second highest classification issued by the DRNA (DRNA, 2019).

Section 303(d) of the CWA requires states and territories to identify and list waters which do not meet water quality standards for specified pollutants or substances. Waters not meeting the established thresholds are considered to be impaired, and agencies are required to develop total maximum daily loads (TMDLs) for the applicable pollutants to bring the listed water into compliance. States must assess their waters every two years, and submit the list of impaired waters, known as an Integrated Report, to the USEPA for approval. The entire coastline of the San Juan Bay, extending from Isla de Cabras to Punta del Morro, and including the coastline of La Puntilla (i.e., Assessment Unit PREC11), is not currently listed as impaired. According to the 2020 Integrated Report and Final 303(d) list, this stretch of coastline has not been impaired since 2010; it was previously listed for arsenic, copper, dissolved oxygen, and fecal coliform (USEPA, 2020).

3.5.1.2 Stormwater

Topography at the Base is relatively flat, with a slight slope to the southwest. As such, stormwater collects in small localized pools on impervious surfaces, and is collected by a subsurface stormwater system that drains into the San Juan Bay. Stormwater and runoff may also flow over impervious surfaces directly into the San Juan Bay. The Base is not currently covered under a National Pollutant Discharge Elimination



System (NPDES) permit, although as a federal facility, activities at the Base are covered under a Small Municipal Separate Storm Sewer System (MS4) NPDES general permit for the Commonwealth of Puerto Rico, issued in 2016 (Permit Number PRR04000) (USEPA, 2016).

The USEPA is the permitting authority for Puerto Rico with regard to stormwater management. Under USEPA requirements, a NPDES Construction General Permit is required for construction activities that disturb 1 or more acres (4,046.8 square m) of land, and permittees must develop and implement a Stormwater Pollution Prevention Plan (SWPPP) as a condition of approval (USEPA, 2020). In addition to requirements under NPDES, Puerto Rico also implements its own regulations with respect to managing erosion and sedimentation. In accordance with its 1998 *Regulation for the Control of Erosion and Prevention of Sedimentation*, construction and demolition activities disturbing more than 0.22 acre (900 square meters) or generating more than 1,412.4 cubic feet (40 cubic meters) of soil material, must obtain a Control of Erosion and Prevention of Sedimentation (CES) Permit (PREQB, 1998). Further, construction activities that would disturb 5,000 square feet (464.5 square meters) or more of land would be subject to federal requirements established in Section 438 of the Energy Independence and Security Act (EISA), which dictates that the pre-development hydrology of a project site must be maintained. This can be achieved by incorporating green infrastructure/low impact development (GI/LID) features in the project design.

3.5.1.3 Floodplains

FEMA maintains maps of flood inundation zones for development restrictions and insurance requirements. EO 11988, *Floodplain Management*, requires federal agencies to consider action alternatives to avoid adverse effects and incompatible developments for any proposed action in a floodplain, or if avoidance is infeasible, to design or modify the proposed action to minimize potential harm to the floodplain.

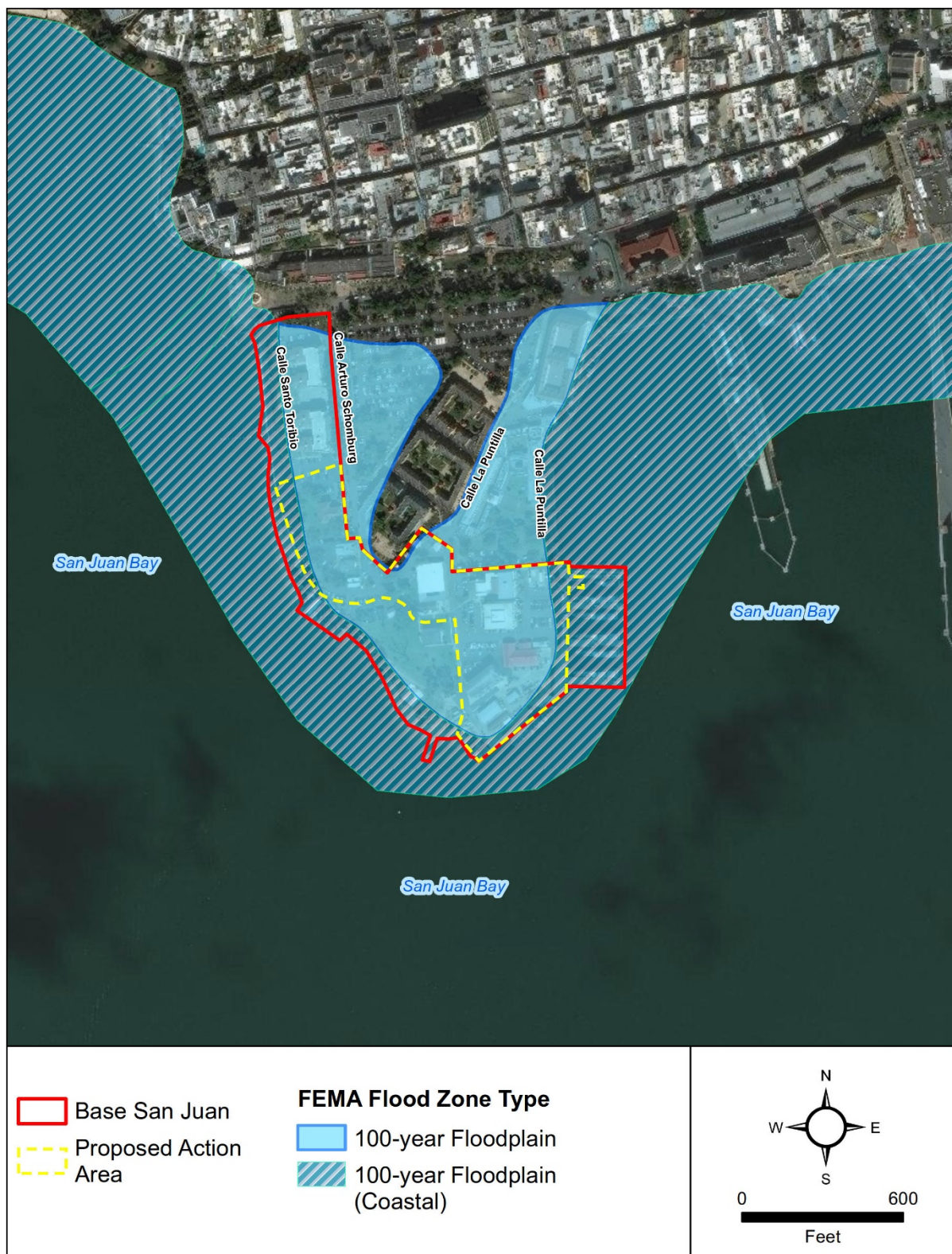
The entirety of Base San Juan is located within a 100-year floodplain with a base flood elevation of 6.9 feet (2.1 m). The waters surrounding the Base have a base flood elevation of 8.6 feet (2.7 m), and are considered to have additional flood hazard associated with storm surges (FEMA, 2021). Therefore, the Base is subject to FEMA flood zone regulations, which limit development within the floodplain. Additionally, the PRPB maintains its own floodplain regulations, which requires that all new construction be elevated above the regulatory flood elevation level (PRPB, 2010).

3.5.1.1 Coastal Resources

The Federal Coastal Zone Management Act of 1972 (CZMA) enables states and territories to implement federally approved coastal programs to protect coastal areas in conjunction with environmental, economic, and human health. Federal actions occurring under the CZMA require completion of a Federal Consistency Determination (FCD) to determine consistency, to the maximum extent practicable, with the enforceable policies of the state or territory's coastal management program.



Figure 3-1: 100-Year Floodplain at Base San Juan





Puerto Rico's Coastal Zone Management Program (CZMA) was approved in 1978 and defines the Commonwealth's coastal zone as the land 1,000 m inland from the shoreline. It also includes Puerto Rico's territorial waters and the ocean floor up to nine nautical miles beyond the coastline (DRNA, 2009). In addition to the federal requirements, Puerto Rico's CZMP requires the completion of Form JP-833, "Application for Certification of Consistency with Puerto Rico's Coastal Management Program," for any direct federal actions occurring with the Commonwealth's coastal zone. Puerto Rico's CZMP is administered by the Coastal Zone and Climate Change Program Office within the DRNA.

Base San Juan is located within Puerto Rico's coastal zone, and as such, is subject to comply with the applicable enforceable policies of the CZMP. These enforceable policies are located within the 1978 CZMP and associated Environmental Impact Statement, and are primarily derived from policies established within Puerto Rico's 1977 *Islandwide Land Use Plan*. The 1978 CZMP elaborates on these policies, and identifies additional coastal resources to be considered, along with new resource-specific policies or criteria (DRNA & PRPB, 1978).

To demonstrate compliance with Puerto Rico's CZMP, the USCG submitted an FCD and the supplemental Form JP-833 to the DRNA and the PRPB which administers the federal consistency process, on 13 May 2021 (**Appendix C**).

3.5.2 Biological Resources

This section describes the biological resources potentially present at or near Base San Juan, including vegetation, wildlife, and threatened and endangered (T&E) species.

3.5.2.1 Terrestrial Environment

Vegetation

Terrestrial vegetation composition at Base San Juan is representative of a developed area with human disturbance and altered lands. The Base comprises different types of development, ranging from low to high intensity, with patches of open space (MRLC, 2016). Vegetation is limited to small areas of maintained lawn and scattered trees and shrubs, primarily located in the western portion of the Base in between buildings, along the coastline, and at the tip of La Puntilla. The majority of the Base is covered in impervious surfaces (i.e., parking lots and pavement), except for the sandy beach and landscaped open spaces in the western section, suggesting that the Base has little to no terrestrial ecological value.

Old growth trees, however, including palm trees, are present throughout the Base, specifically in the northwestern area. Puerto Rico's *Regulation on Tree Planting, Cutting, and Afforestation* establishes tree permitting and mitigation requirements for general tree cutting, as well as specific requirements for construction projects (DRNA, 1998). This regulation and associated permits are administered by the DRNA. Similarly, the OGP issues a Tree Cutting, Pruning, Transplanting and Planting Permit for all projects, including construction or development, that would "grow, cut, peel, transfer or otherwise affect one or more trees" (SIP, 2021).

Wildlife

Terrestrial wildlife occurring at Base San Juan is likely limited to species that have adapted to urbanized environments and a high degree of human activity. Suitable habitat for wildlife is generally limited to small



unimproved areas within the Base, such as landscaped and small beach areas located in the western portion of the Base and near the tip of La Puntilla. Common species of wildlife potentially occurring at or near Base San Juan include those typically observed in the Caribbean region and coastal areas of Puerto Rico, including: Indian mongoose (*Herpestes auropunctatus*), house mouse (*Mus musculus*), feral dog (*Canis familiaris*), feral cat (*Felis catus*), bananaquit (*Coereba flaveola*), Puerto Rican flycatcher (*Myiarchus antillarum*), Puerto Rican crested toad (*Peltophryne lemur*), green iguana (*Iguana iguana*), crested anole (*Anolis cristatellus*), and common coquí (*Eleutherodactylus coqui*) (Miller & Lugo, 2009; US Forest Service, 2021).

Although Puerto Rico has a large diversity of wildlife species, many species commonly found elsewhere on the island are not likely to be present at the Base due to the absence of suitable habitat. Terrestrial habitat at the Base is more likely to support low biodiversity predominantly comprising generalist and urbanized species given the developed nature of the site.

3.5.2.2 Aquatic Environment

Vegetation

Aquatic vegetation at and surrounding Base San Juan is characterized by estuarine habitats. The San Juan Bay surrounding the Base primarily consists of dredged or sandy bottoms, and does not support notable or diverse aquatic vegetation communities (The Nature Conservancy, 2021). Most of the San Juan Bay is comprised of sandy bottoms, and has a vegetative cover of less than 30 percent, due to its unconsolidated bottom which lacks stable surfaces for plant attachment (Cowardin, Carter, Golet, & LaRoe, 1979).

Wildlife

Aquatic wildlife species found in the San Juan Bay include mollusks, crustaceans, corals, fish, marine mammals, and reptiles. Over 124 species of fish and 19 species of reptiles and amphibians have been observed within the overall San Juan Bay Estuary system (Bauzá-Ortega, 2015; SJBE, 2000). The most commonly observed shellfish and fish species include striped mojarra (*Diaperus plumieri*), common snook (*Centropomus undecimalis*), checkered puffer (*Sphoeroides tetinudes*), four-teeth blue crab (*Callinectes* spp.), and dog snapper (*Lutjanus joccu*) (SJBE, 2000). These and other aquatic species, while abundant in other parts of the estuary system, are not expected to occur in abundance near Base San Juan due to the area's disturbed nature and frequent human and vessel activity.

Essential Fish Habitat

The NOAA National Marine Fisheries Service (NMFS) regulates Essential Fish Habitat (EFH) under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), which is defined as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." A list of EFH areas was obtained from the NOAA EFH Mapper for the surrounding San Juan Bay. The query identified EFH for 52 species (NOAA, 2021). No Habitat Areas of Particular Concern were identified in the Proposed Action area; however, all Caribbean waters surrounding Puerto Rico are considered EFH Areas Protected from Fishing and are subject to Caribbean Economic Exclusion Zone gear restrictions.



**Table 3-3: EFH Species and Life Stages Potentially Found in the
Proposed Action area**

Species	Egg	Larvae	Juvenile	Adult
Almaco Jack	YES	YES	NO	NO
Anchor Tilefish	YES	YES	NO	NO
Banded Rudderfish	YES	YES	NO	NO
Black Grouper	YES	YES	NO	NO
Blackfin Snapper	YES	YES	NO	NO
Blackline Tilefish	YES	YES	NO	NO
Blue Marlin	NO	NO	NO	YES
Blueline Tilefish	YES	YES	NO	NO
Caribbean Reef Shark	YES	YES	YES	YES
Corals	YES	YES	NO	NO
Cubera Snapper	YES	YES	NO	NO
Dog Snapper	YES	YES	NO	NO
Dwarf Sand Perch	YES	YES	NO	NO
Hogfish	YES	YES	NO	NO
Gag	YES	YES	NO	NO
Golden Tilefish	YES	YES	NO	NO
Goldface Tilefish	YES	YES	NO	NO
Goliath Grouper	YES	YES	NO	NO
Gray Snapper	YES	YES	NO	NO
Gray Triggerfish	YES	YES	NO	NO
Greater Amberjack	YES	YES	NO	NO
Lane Snapper	YES	YES	NO	NO
Lesser Amberjack	YES	YES	NO	NO
Mahogany Snapper	YES	YES	NO	NO
Marbled Grouper	YES	YES	NO	NO
Misty Grouper	YES	YES	NO	NO
Mutton Snapper	YES	YES	NO	NO
Nassau Grouper	YES	YES	NO	NO
Oceanic Whitetip Shark	YES	YES	YES	YES
Queen Conch	YES	YES	NO	NO
Queen Snapper	YES	YES	NO	NO
Red Grouper	YES	YES	NO	NO
Red Hind	YES	YES	NO	NO
Red Snapper	YES	YES	NO	NO
Rock Hind	YES	YES	NO	NO
Sailfish	NO	NO	YES	YES
Sand Perch	YES	YES	NO	NO
Scamp	YES	YES	NO	NO
Schoolmaster	YES	YES	NO	NO
Silk Snapper	YES	YES	NO	NO
Slipper Lobster	YES	YES	NO	NO
Snowy Grouper	YES	YES	NO	NO



**Table 3-3: EFH Species and Life Stages Potentially Found in the
Proposed Action area**

Species	Egg	Larvae	Juvenile	Adult
Speckled Hind	YES	YES	NO	NO
Spiny Lobster	YES	YES	NO	NO
Vermilion Snapper	YES	YES	NO	NO
Warsaw Grouper	YES	YES	NO	NO
Wenchman	YES	YES	NO	NO
White Marlin	NO	NO	YES	YES
Yellowedge Grouper	YES	YES	NO	NO
Yellowfin Grouper	YES	YES	NO	NO
Yellowmouth Grouper	YES	YES	NO	NO
Yellowtail Snapper	YES	YES	NO	NO

Base San Juan is a previously disturbed marine area that is heavily used for industrial and docking activities. Regular human activity and vessel traffic are not conducive toward suitable EFH. Additionally, no seagrass beds or coral reefs are known to be present around the Base, with surrounding habitat considered either dredged or sand (The Nature Conservancy, 2021). As such, EFH species are not expected to occur or would occur in low densities around the Base. Any present adult and juvenile individuals would be highly mobile and capable of moving out of affected areas, occupying more favorable habitats nearby.

3.5.2.3 Threatened and Endangered Species

The USFWS and NMFS administer the federal ESA of 1973, which protects listed species against killing, harming, harassing, or any action that may damage their habitat. The USFWS has primary responsibility for terrestrial and freshwater organisms, while the responsibilities of NMFS are mainly marine wildlife. The Marine Mammal Protection Act (MMPA) of 1972 prohibits the take of all marine mammals, and is also jointly administered by USFWS and NMFS. The DRNA identifies and designates rare, threatened, or endangered species within the Commonwealth of Puerto Rico and maintains a list of these species. Consultation with the USFWS, NMFS, and DRNA was initiated on 13 May 2021. Agency correspondence is provided in **Appendix A**.

An official species list was obtained from the USFWS Information for Planning and Consultation (IPaC) project planning tool on 19 March 2021 to identify potential T&E species that may occur in the Proposed Action area, and/or may be affected by the Proposed Action. The IPaC query returned a list of four federally listed T&E species with the potential to occur in the Proposed Action area: hawksbill sea turtle (*Eretmochelys imbricata*), leatherback sea turtle (*Dermochelys coriacea*), Puerto Rican boa (*Chilabothrus inornatus*), and West Indian manatee (*Trichechus manatus*) (USFWS, 2021). Correspondence with the DRNA dated 3 June 2021 indicated potential presence of the green sea turtle (*Chelonia mydas*) around the Base; however, this species was not identified by the IPaC query and is therefore not likely to occur in the Proposed Action area.

Two species identified by the USFWS IPaC tool fall under the jurisdiction of NMFS: the hawksbill sea turtle and the leatherback sea turtle. One additional federally listed T&E species under the sole jurisdiction of NMFS, the giant manta ray (*Manta birostris*), has the potential to occur within the Proposed Action area (NOAA Fisheries, 2020a). No critical habitat has been designated at or surrounding Base San Juan In



addition, no migratory birds of concern, including eagles, have been identified at or within the vicinity of the Base.

Table 3-4 summarizes the T&E species that may potentially occur and their preferred habitat. Only three of the five species have potential occurrence at or near the Base.

A search of the species lists maintained by the DRNA revealed two Commonwealth-listed T&E species with potential occurrence in the San Juan municipality: humpback whale (*Megaptera novaeangliae*) and Vanderbilt's palo de Ramón (*Banara vanderbiltii*), an evergreen shrub (DRNA, 2016). In addition, correspondence with the DRNA dated 3 June 2021 indicated potential presence of the Commonwealth-endangered brown pelican (*Pelecanus occidentalis*) and the peregrine falcon (*Falco peregrinus*). No suitable habitat is present for either the humpback whale or Vanderbilt's palo de Ramón at or surrounding the Proposed Action area, as the surrounding waters are shallow, and the Base does not contain moist forests with limestone substrates, respectively (Miller & Lugo, 2009). While the brown pelican lives year-round in Puerto Rico and inhabits coastal waters, the species prefers to stay away from populated areas and nests on island cliffs or on the ground (National Audubon Society, 2021; National Wildlife Federation, 2021). Therefore, brown pelicans are not likely to inhabit the beaches surrounding the Base or the Base itself due to high levels of human and vessel activity. Peregrine falcons could occur near the Base as the species is found in a variety of habitats, including coastal areas and cities.



Table 3-4: Federally listed species with the potential to occur in the Proposed Action area

Category	Species Common Name	Species Scientific Name	Federal Status	Habitat Description	Potential Occurrence
Mammals	West Indian manatee	<i>Trichechus manatus</i>	T	This species prefers seagrass beds along the shoreline of marine, brackish, and freshwater systems, in addition to both coastal and riverine areas (USFWS, 2019). No seagrass beds have been documented surrounding the Base; moreover, manatees in Puerto Rico are typically observed along the eastern and southern coastlines (Miller & Lugo, 2009; USFWS, 2018a). Suitable habitat is not expected to be present at Base San Juan.	No
Reptiles	Hawksbill sea turtle	<i>Eretmochelys imbricata</i>	E	Suitable habitat for this species includes coral reef habitat, open sea, and mangroves in bays and estuaries (NOAA Fisheries, 2020b). This species is not common along the northeastern coastline of Puerto Rico, but occasional, individual nests have been observed at the western beach area at the Base (USFWS, 2018b). Limited suitable habitat for this species is likely present.	Yes
	Leatherback sea turtle	<i>Dermochelys coriacea</i>	E	Leatherback sea turtles prefer open ocean waters, and nest on wide sandy beaches with access to deep water (USFWS, 2018c). The western beach area does not meet these criteria; however, there is the potential for this species to utilize it for nesting. Therefore, suitable habitat may be present for this species.	Yes
	Puerto Rican boa	<i>Chilabothrus inornatus</i>	E	This species primarily occurs in forested areas and in the northern karst region of Puerto Rico (DRNA, 2016). The Base does not exhibit karst topography and does not contain forested areas due to its developed nature; no suitable habitat is present.	No
Fish	Giant manta ray	<i>Manta birostris</i>	T	Giant manta rays are found in both offshore and nearshore waters, and commonly use shallow, sandy estuarine waters as nursery grounds (Miller & Kilmovitch, 2017). The San Juan Bay comprises estuarine waters with a direct connection to the Atlantic Ocean, and the waters surrounding the Base are shallow and have sandy bottoms. Suitable habitat is present for this species.	Yes

Federal Status Key:

T = Threatened

E = Endangered



3.6 Cultural Resources

This section describes existing cultural resources within and surrounding Base San Juan, including above- and below-ground resources.

3.6.1 Overview

Cultural resources include historic properties as defined by Section 106 of the NHPA, as amended, archaeological resources as defined by the Archaeological Resources Protection Act, cultural items as defined by the Native American Graves Protection and Repatriation Act (NAGPRA), sacred sites as defined in EO 13007, *Indian Sacred Sites*, to which access is afforded under the American Indian Religious Freedom Act, and collections and associated records as defined in 36 CFR Part 79. The NHPA, as amended, is the basic federal law protecting historic properties. The NHPA defines historic properties as “any prehistoric or historic districts, sites, buildings, structures, or objects” (36 CFR 800) with known or potential historic, architectural, archaeological, cultural, or scientific importance that are listed in or eligible for listing in the NRHP. Pursuant to Section 110 of the NHPA, federal agencies are required to establish historic preservation programs to identify, evaluate, and nominate historic and cultural resources under their jurisdiction for listing in the NRHP. Department of Defense Instruction (DoDI) 4715.16, *Cultural Resources Management*, sets forth guidelines and procedures for the management of cultural resources on DoD lands.

The NHPA as amended, outlines federal policy to protect historic properties and promote historic preservation in cooperation with States, Tribal governments, local governments, the public, and other consulting parties. Section 106 of the NHPA outlines the procedures that federal agencies follow to identify historic properties in the Area of Potential Effect (APE) and take into account the effect of their actions on historic properties. If it is determined that the undertaking would result in an adverse effect, the lead federal agency must through consult with the SHPO, federally recognized Native American tribes, and other consulting parties determine ways to avoid, minimize, or mitigate the adverse effects to historic properties.

3.6.1.1 Native American Consultation

In accordance with EO 13175, *Consultation and Coordination with Indian Tribal Governments*, and DoDI 4710.02, *DoD Interactions with Federally Recognized Tribes*, the USCG sought to identify federally recognized Native American Tribes that may have ancestral ties to Base San Juan. There are no federally recognized Tribes with links to the Proposed Action area; therefore, the USCG did not pursue Native American consultation.

3.6.2 Area of Potential Effect

The APE as defined in the NHPA accounts for the full extent and range of potential impacts on historic and cultural resources that could occur on or in the vicinity of the Proposed Action area. APEs are determined by the scale and nature of an “undertaking” and its potential effects on the resource(s) from such things as ground disturbance, changes in the surrounding landscape or viewshed, and noise. Consultation with the SHPO is required to determine an appropriate APE that will serve as a geographic area for analysis of the potential effects of an “undertaking.”

The above-ground (architectural) APE for the Proposed Action is inclusive of the limits of ground disturbance, as well as those area that may be visually or contextually impacted by the Proposed Action. The above-ground



APE includes all of Base San Juan (see **Figure 3-2**). Viewshed and streetview studies conducted by USCG indicated that there are minimal views of the Base outside of this APE due to intervening buildings and trees. The APE also encompasses the entire limits of the NRHP-eligible USCG Base San Juan Historic District, which is concentrated in the southeastern portion of the Base.

The archaeological APE is the limits of the Proposed Action area (see **Figure 3-2**). Ground disturbance from proposed demolition and construction activities would be contained within the Proposed Action area, or to existing paved surfaces.

Consultation with the Puerto Rico SHPO regarding the Proposed Action was initiated on 29 July 2020, and additional information and revised site plans were provided to the SHPO on 19 February 2021. The USCG received a response from the SHPO on 15 March 2021 providing additional comments on the Proposed Action and concurring with a determination of adverse effect. The USCG developed a project-specific Memorandum of Agreement (MOA) with the SHPO pursuant to 36 CFR Parts 800.6(c) and 800.14(b)(1) that identifies impact minimization and mitigation measures. Copies of consultation documentation in accordance with Section 106 of the NHPA are included in **Appendix B**. A copy of the signed MOA is included in **Appendix D**.

3.6.1 Archaeological Resources

Previous archaeological surveys have been conducted at Base San Juan, dating from 1992. During these surveys, which have included Phase II and Phase III archaeological investigations, copious artifacts have been discovered, both within and outside of the Proposed Action's archaeological APE. Some resources identified during these surveys have been recommended eligible for listing in the NRHP. Outside of the Proposed Action's APE, 48 previously recorded archaeological sites have been documented within a 1-mile radius of the APE, 20 of which are listed in the NRHP, and one of which is considered eligible.

There is a high potential for archaeological deposits within the archaeological APE. Two archaeological sites have been recorded within the APE, both of which are registered with the SHPO: Superintendent of Lighthouses' Dwelling (SHPO ID SJ0200030) and the US Coast Guard Base (SHPO ID SJ0100017). In addition, remains of the Santo Toribio Battery, which were determined eligible for the NRHP, are located under the pavement within the APE. Other archaeological deposits associated with the historic Spanish and US occupation of La Puntilla are anticipated to be present within the archaeological APE.

The USCG is coordinating with the SHPO regarding its plans to conduct a Phase I archaeological survey within the APE. This investigation will consist of a pedestrian survey, a shovel test pit excavation, and a geophysical survey. As this investigation would be conducted on federal property, no permit under the Archaeological Resources Protection Act (ARPA) is required.

3.6.2 Above-ground Historic Resources

Multiple above-ground historic properties are present within the APE. Base San Juan is located within the Old San Juan Historic District, which was listed in the NRHP in 1972, and updated in 2013 (NRHP ID 13000284). In addition, a portion of Base San Juan was determined to be eligible for listing as an NRHP historic district in 1998, independent of the Old San Juan Historic District. Numerous buildings located on the Base are considered or recommended as contributing resources to this district: Buildings 100, 103, 104, 116, 117, and 120. Building 116, the Superintendent of Lighthouses' Dwelling, has also been individually listed in the NRHP (NRHP ID 81000694). In addition to the resources within the district, Buildings 124, 125, and 126 are contributing properties to a tuberculosis treatment facility established by the Puerto Rico Insular Government



and determined eligible for listing in the NRHP by the SHPO in 2016. SHPO also recommended Buildings 124 and 125 as potentially individually eligible despite some loss of integrity.

The USCG conducted a review of records and previous data to identify and inventory the historic properties located at Base San Juan. No additional historic properties were identified. A subsequent viewshed analysis determined that existing historic properties and contributing resources located on the Base are not readily visible from outside of the APE (**Appendix E**).



Figure 3-2: Area of Potential Effects at Base San Juan





4.0 Environmental Consequences

4.1 Introduction

This section identifies potential effects of the Preferred Action Alternative, the Build Alternative, and the No Action Alternative, as well as Best Management Practices (BMPs) and mitigation measures that would reduce the level of identified impacts. The USCG considers BMPs integral to implementation, and they are not considered separate from the Proposed Action. Mitigation measures are identified as those that, when implemented, would reduce impacts to acceptable, *less-than-significant* levels. For more information on BMPs and mitigation measures, refer to **Section 4.6**. For purposes of this analysis, discussion of construction impacts includes renovation and demolition activities.

4.2 Socioeconomic Environment

4.2.1 Traffic and Transportation

The following criteria were used to address impacts to traffic and transportation:

- The alternative would have an adverse impact if it would temporarily worsen existing traffic conditions or decrease parking availability. The adverse impact would be *significant* if it would permanently worsen traffic conditions and congestion, both inside and outside the Base, and would permanently remove available parking spaces on the Base.
- The alternative would have a *beneficial* impact if it would decrease congestion at the Base entrance and provide for additional designated parking spaces within the Base.

4.2.1.1 No Action Alternative

The No Action Alternative would have *no impact* on traffic and transportation at and around Base San Juan. While beneficial impacts from improving the main access point would not be realized, traffic conditions would remain the same as current conditions. Congestion stemming from the Base entrance and security checkpoint would neither increase nor decrease, and no additional parking would be provided within the Base.

4.2.1.2 Preferred Action Alternative

Construction

Proposed construction, renovation, and demolition activities under the Preferred Action Alternative would temporarily increase traffic within and surrounding the Base, and would also result in the temporary loss of parking space. Construction vehicles would travel to and from the Base at least once daily, and may make several trips to transport construction or demolition materials. Construction trucks and the personal vehicles of construction workers would wait to gain access to the Base, lengthening the line and wait times at the entrance, especially if they encounter any access issues. Once on the Base, these vehicles would increase competition for an already limited amount of on-site parking, and may end up parking in non-designated areas, such as on grass or along the sides of Base roadways. Scheduling the arrival of trucks and personnel to occur outside of typical commuting hours for Base personnel would minimize impacts to traffic congestion. Staging of temporary parking areas for construction traffic may also decrease competition for limited spaces. Adherence to these BMPs would result in *short-term, less-than-significant adverse impacts* on construction-related traffic and parking at and surrounding the Base.



Construction of the new Guard House and access road in particular would also increase congestion at the Base entrance. Proposed activities to demolish the existing facility and rebuild a new, larger access road would cause additional delays at the entrance, as personnel arriving at the Base would have to maneuver through an active construction zone. The USCG would set up temporary security operations or not demolish the existing Guard House until the new one is completed in order to minimize or avoid impacts to Base access. Overall, construction sequencing would be implemented in a manner that would avoid interruptions to Base and off-post operations. The creation of temporary entrance lanes during construction on the access road would also minimize impacts to traffic congestion at the entrance, resulting in *short-term, less-than-significant adverse impacts*.

Operation

Operation of the Preferred Action Alternative would improve access to the Base via an expanded access road with dedicated lanes for pass holders and visitors and new turn-around space for visitors who are denied entrance. This would reduce back-ups occurring at the Base entrance, as authorized personnel would be able to easily gain entry, and denied visitors would be able to turn around and exit the Base without impeding other traffic. Additional parking space would be constructed, providing up to 249 new spots for personnel. The Preferred Action Alternative would have a *long-term, beneficial impact* on traffic and parking as a result of improvements to traffic flow, Base access, and parking availability.

4.2.1.3 Build Alternative

Impacts to traffic and transportation under the Build Alternative would be the same as those under the Preferred Action Alternative. No additional adverse impacts would occur during construction. During operation, the Build Alternative would have a *long-term, beneficial impact* on parking.

4.2.2 Utilities

The following criteria were used to address impacts to utilities:

- The alternative would have an adverse impact if it would result in service disruptions to utility end users both on- and off-site, or if it would increase utility demand. The adverse impact would be *significant* if it would result in prolonged or repeated utility service disruptions or would substantially increase utility demand beyond service providers' capacity. The impact would be *less-than-significant* if utility disruptions would be temporary, and if increases in utility demand could be controlled through BMPs.
- The alternative would have a *beneficial impact* if it would improve utility conditions or increase supply either on- or off-site.

4.2.2.1 No Action Alternative

Under the No Action Alternative, proposed utility upgrades and increased water and electrical resiliency would not occur. Utilities at the Base would remain in their current, inadequate state, and would remain insufficient to meet the needs of the Base and provide redundancy in the event of an emergency. Damaged utilities may continue to fall into disrepair and may become less reliable over time. Therefore, implementation of the No Action Alternative would have *short- and long-term potentially significant adverse impacts* on the condition, function, and future reliability of utilities on the Base.



4.2.2.2 Preferred Action Alternative

Construction

In addition to construction and renovation of facilities and demolition activities, the Proposed Action would update and repair existing, damaged utilities and construct two new 256,000-gallon water storage tanks. The existing electrical system would also be updated as well. These activities may result in potential service disruptions, but would not affect utility connections or operations outside of the Base boundaries. These disruptions would be temporary and avoided to the extent practicable. Utility extensions would occur in already developed areas of the Base and the USCG would obtain and adhere to all required permits before any utility work commences. Utility requirements during construction would not increase the Base's demand on PRASA or PREPA. Therefore, the Preferred Action Alternative would result in *short-term, less-than-significant adverse impacts* on utilities during construction activities.

Operation

Operation of the Preferred Action Alternative would not increase the Base's utility usage as no additional personnel would be required and facilities would be consolidated or renovated to operate more efficiently. In addition, the utility upgrades would increase water and electrical availability and resiliency. The two proposed 256,000-gallon water tanks would yield a combined water storage of 512,000 gallons to provide for 10-day water resiliency on the Base and allow for water storage more than 10 times the current capacity. The proposed CUP would house four new generators and electrical distribution equipment, all of which would be protected from the elements to prevent rusting and corrosion. Two new 20,000-gallon fuel tanks would ensure sufficient fuel is available on the Base to power generators if needed. Further, the potential use of a photovoltaic system on buildings within the Base would decrease dependency on electrical service from PREPA. Additionally, shore upgrades such as new feeders and transformers would increase electrical service to Pier Echo.

Utility operation on the Base under the Proposed Action would improve following the proposed upgrades, as they would ensure that the Base has sufficient daily supply, and sufficient supply to continue operations during an emergency event. Increased water resiliency and electrical redundancy on the Base would result in *long-term beneficial impacts* to utility supply and Base operations.

4.2.2.3 Build Alternative

Impacts to utilities under the Build Alternative would be similar to those under the Preferred Action Alternative as utility upgrades and construction activities would generally be the same. *Short-term, less-than-significant adverse impacts* from construction disruptions could occur; however, *no impacts* to utility service or demand outside of the Base would occur, and the proposed upgrades to water and electrical systems on the Base would result in *long-term beneficial impacts* to utility supply within the Base due to improved functionality, and increased redundancy.

4.3 Physical Environment

4.3.1 Geology and Seismic Conditions

The following criteria were used to address impacts to geology and seismic conditions:

- The alternative would have an adverse impact if it would involve the temporary or permanent disturbance of geologic strata, or if it would not be designed or engineered in consideration of local



seismic conditions. The adverse impact would be *significant* if it would disturb or penetrate unique or noteworthy geologic features at the Base or contributes to increased seismic risk.

- The alternative would have a *beneficial* impact if it would construct facilities that meet or exceed federal and local seismic resiliency requirements.

4.3.1.1 No Action Alternative

The No Action Alternative would have *no impact* on geological conditions or seismic conditions at the Base. Ongoing USCG operations would not involve the disturbance or penetration of geological strata underlying the Base. The seismic resilience of existing facilities would be upgraded as determined necessary to support ongoing operations based on applicable engineering studies and funding availability.

4.3.1.2 Preferred Action Alternative

Construction

Construction of the proposed facilities such as the MMB and Health Services Building would likely involve the installation of intermediate or deep foundations to provide sufficient structural support. Site-specific geotechnical and engineering assessments would be conducted as project planning and design continues to determine the type and design of foundation structures for each facility. These assessments would prescribe methods that would minimize potential adverse impacts on geological resources to the extent practicable. Construction of the proposed projects would not involve the disturbance of unique or noteworthy geological features, as none are present under the Base. Therefore, the Preferred Action Alternative would have *short-term, less-than-significant adverse impacts* on geological resources.

Facilities would be built, demolished, or renovated in accordance with applicable construction practices, building codes, and engineering requirements, and would not contribute to an increased risk of seismic activity at or near the Base during their construction. Site-specific geotechnical studies would be conducted prior to the construction of new facilities or the substantial renovation of existing facilities to determine applicable seismic resiliency requirements for each project. The Proposed Action would have *no impact* on seismic conditions during construction.

Operation

Following construction, adverse impacts on geology would cease. The operation of the proposed facilities would not involve the continued disturbance of geological features under Base San Juan. Therefore, operation of the Proposed Action would have *no impact* on geology.

New and renovated facilities would have a *beneficial impact* on seismic conditions at the Base. These facilities would be built in accordance with current seismic resiliency requirements. The use of intermediate or deep foundations for new buildings would reduce the risk of substantial earthquake damage to Base infrastructure during operation to the extent practicable.

4.3.1.3 Build Alternative

Impacts to geology and seismic conditions under the Build Alternative would be similar to those described for the Preferred Action Alternative. Adverse impacts on geology would be *short-term and less-than-significant* from construction disturbance. All proposed facilities would be built or renovated in accordance with



applicable federal and local seismic requirements, resulting in a *long-term beneficial impact* on seismic considerations at the Base.

4.3.2 Air Quality and Climate

The following criteria were used to address impacts to air quality:

- The alternative would have an adverse impact if it would result in emissions of regulated air pollutants that would not otherwise occur. This impact would be *significant* if emissions exceed regulatory thresholds (for criteria pollutants and HAPs) or alter the region's attainment status.
- The alternative would have a *beneficial* impact if it would result in a permanent reduction in regulated air pollutant emissions.

4.3.2.1 No Action Alternative

Under the No Action Alternative, the ambient air quality environment would remain as is. *No impacts* on air quality would occur and current operations at the Base would continue.

4.3.2.2 Preferred Action Alternative

Construction

Air emissions generated from the construction, renovation, and demolition activities would have *short-term, less-than-significant adverse impacts* to the existing air quality environment at and surrounding the Base. Air pollutant generating sources would generally be heavy duty construction and maintenance equipment. NO_x emissions would likely be generated by equipment engines and PM emissions would result from excavation, grading, and vehicle and equipment exhaust. Demolition activities could also increase localized concentrations of PM₁₀ and PM_{2.5} emissions. A minor increase in fugitive dust and vehicular engine emissions would be expected as well.

While USCG is only required to evaluate SO₂ emissions, the remaining criteria pollutants were also evaluated and compared to nonattainment *de minimis* thresholds for completeness. As shown in **Table 4-1**, construction activities under the Proposed Action would generate approximately 0.01 tons of SO₂ per year, well below the 100 tons per year *de minimis* threshold.

Table 4-1: Estimated Annual Criteria Pollutant Emissions

Project Phase	Projected Emissions (tons per year)					
	CO	NO _x	VOC	PM ₁₀	PM _{2.5}	SO ₂
Construction	2.94	6.74	0.84	0.90	0.88	0.01
Operation	2.51	20.1	0.69	0.11	0.11	0.02
Total	5.45	26.8	1.53	1.01	0.99	0.03
<i>de minimis</i> Threshold	100	50	50	100	100	100



Impacts on sensitive receptors would be temporary, highly localized, and cease once construction is completed. The USCG would implement the following standard BMPs to further reduce particulate emissions generated during construction activities:

- Watering during demolition or excavation activities;
- Covering of stockpiled debris or soil;
- Covering of truck loads;
- Requiring a speed of less than 15 miles per hour for construction equipment on unpaved surfaces;
- Use of electricity from established electrical power sources instead of generators whenever possible;
- Use of low volatile organic compound (VOC) architectural materials, supplies, and equipment;
- Regularly repairing and servicing construction equipment to prevent excess emissions;
- Shutting down heavy equipment when not needed; and,
- Cleaning excess soil from heavy equipment and trucks leaving the construction zone to prevent off-site transport.

The Preferred Action Alternative would result in *short-term, less-than-significant adverse impacts* on GHGs and climate change. Construction activities would increase GHG emissions; however, these activities would be temporary and only last for the duration of construction. GHG emissions would be negligible on a regional level.

Operation

Air emissions generated from operation of the new facilities would result in *long-term, less-than-significant adverse impacts*. The new Health Services Building and MMB would be primarily used for administrative functions and there would be no increase in personnel. Periodic air emissions would occur from operating diesel-fired emergency generators; however, as shown in **Table 4-1**, the estimated emissions would be well below *de minimis* thresholds. The USCG would implement, to the extent practicable, BMPs such as properly operating and maintaining emergency generators and conducting regular visual observations to minimize or avoid permanent impacts on air quality. While the newly constructed and renovated buildings would be more efficient and use less electricity for cooling, this beneficial impact would likely be minimized by criteria pollutant emissions from the three 1-MW emergency generators, as presented in **Table 4-1**.

The Preferred Action Alternative would result in a *long-term beneficial impact* on climate change. The new Guard House, additional parking spaces, and entrance improvements would reduce transportation-related GHG emissions from traffic congestion and vehicle idling. Operation of the new facilities could generate GHG emissions from the use of generators; however, this amount would be negligible and the long-term reduction in emissions from transportation improvements would outweigh the short-term carbon releases. There would be no changes in site usage, and generated emissions would not impact the Commonwealth or region's climate change vulnerability.



4.3.2.3 Build Alternative

Impacts on air quality from construction and operation of the Build Alternative would be similar to those under the Preferred Action Alternative. The Build Alternative would require slightly more construction activities to demolish the western half of Building 100 and to construct the third floor of the Health Services Building, so air emissions, including GHGs, emitted during construction would be greater than those emitted under the Preferred Action Alternative². Emissions would be well below *de minimis* levels. Similar to the Proposed Action Alternative, the Build Alternative would result in the same *long-term, less-than-significant adverse impacts* on air quality, and *long-term beneficial impacts* on climate change from transportation improvements.

4.3.3 Noise

The following criteria were used to assess noise impacts:

- The alternative would have an adverse impact on noise if it would create a new source of noise that would temporarily or permanently increase general noise levels in the area. The impact would be *significant* if it would result in a violation of the permissible levels by federal, Commonwealth, or local noise regulations, or if it would be permanently intrusive to sensitive receptors.
- The alternative would have a *beneficial* impact if it leads or could lead to a permanent reduction of ambient noise levels.

4.3.3.1 No Action Alternative

Implementation of the No Action Alternative would have *no effect* on the existing noise environment, as current operations and noise levels would continue.

4.3.3.2 Preferred Action Alternative

Construction

The use of construction equipment and vehicles would generate noise levels which may potentially affect nearby off-site sensitive receptors, such as private residences, churches, and schools. The noisiest activities would take place in the early stages of construction during excavation, and when demolition occurs.

Relatively high noise levels in the range of 93-108 dBA would occur on the construction and demolition sites, decreasing with distance from areas of disturbance. **Table 4-2** presents noise levels that could be expected from a range of construction equipment during proposed construction activities. Combined noise levels, or worst-case noise levels, occur when several loud pieces of equipment are used in a small area at the same time as described in **Table 4-3**.

² For purposes of this analysis, it was conservatively assumed that the Build Alternative would require 10 percent more effort than the Proposed Action Alternative.



Table 4-2. Noise Levels Expected from Typical Construction Equipment

Noise Level (dBA)								
Source	Distance from Source (feet)							
	0	50	100	200	400	1,000	1,700	2,500
Heavy Truck	95	84-89	78-93	72-77	66-71	58-63	54-59	50-55
Dump Truck	108	88	82	76	70	62	58	54
Concrete Mixer	108	85	79	73	67	59	55	51
Jackhammer	108	88	82	76	70	62	58	54
Scraper	93	80-89	74-82	68-77	60-71	54-63	50-59	46-55
Bulldozer	107	87-102	81-96	75-90	69-84	61-76	57-72	53-68
Generator	96	76	70	64	58	50	46	42
Crane	104	75-88	69-82	63-76	55-70	49-62	45-48	41-54
Loader	104	73-86	67-80	61-74	55-68	47-60	43-56	39-52
Grader	108	88-91	82-85	76-79	70-73	62-65	58-61	54-57
Pile driver	105	95	89	83	77	69	65	61
Forklift	100	95	89	83	77	69	65	61

Source: (Tipler, 1976)

Table 4-3. Worst Case Combined Noise Levels from Typical Construction Equipment

Worst-case Combined Noise Level (Bulldozer, Jackhammer, Scraper)					
Combined Peak Noise Level	Distance from Source (feet)				
	50	100	200	0.25 Mile	0.50 Mile
	103	97	91	74	68

Source: (Tipler, 1976)

Since current noise levels at Base San Juan generally exist at ambient levels in accordance with Puerto Rico's noise regulation, it is anticipated that demolition and construction noise would result in *short-term, less-than-significant adverse impacts*. Noise levels generally decrease with distance and would be considered insignificant at a distance of 0.25 mile (1,320 feet or 402.3 m) from the source; however, residential areas are located within 700 feet (213.4 m) of the Base. According to Puerto Rico's noise regulation, residential areas are classified as Zone I, so during the day, construction and demolition noise should not exceed 65 dBA in these areas (see **Table 3-2**). No schools, hospitals, or churches are located within 0.25 mile (402.3 m) of Base San Juan, but five schools are located within 0.5-mile (2,640 feet or 804.7 m); these are classified as Zone IV (i.e., tranquil) receptors, and daytime noise should not exceed 55 dBA (PREQB, 2011). Intervening public parks, other buildings, and noises typical of an urban environment may serve to reduce off-site noise levels and minimize the amount of construction noise heard by sensitive receptors off-base.



Noise associated with demolition and construction activities would be intermittent and temporary, and equipment and machinery used at the Base would meet all Commonwealth and federal noise regulations. All activities would occur within Puerto Rico's regulated daytime frame of 7:00 a.m. to 10:00 p.m.; thus, noise disturbance to off-site sensitive receptors would be minimized. Additional noise BMPs would also be implemented to minimize the potential impacts on nearby receptors, which may include installing noise abatement measures (e.g., mufflers and engine enclosures) on motorized equipment; periodically inspecting construction equipment to ensure proper maintenance of noise control devices; keeping noise levels relatively uniform; avoiding impulse noise levels and the use of equipment which would create a "worst-case" noise level; and developing and implementing a construction noise monitoring program. Adherence to applicable noise regulations and BMPs would minimize noise impacts to the extent practicable.

Operation

Following the completion of construction, renovation, and demolition activities, the ambient noise environment in the Proposed Action area would not be affected from operation of the new facilities. The Preferred Action Alternative would not appreciably alter the noise environment as activities occurring at demolished facilities would be relocated to new or renovated buildings, and activities occurring in buildings proposed for renovation would remain. Generated noise would be consistent with other activities already occurring at the Base and would occur primarily indoors and during daytime hours. Thus, operation would have *no impact* on noise.

4.3.3.3 Build Alternative

Potential noise impacts under the Build Alternative would be similar to those under the Preferred Action Alternative. While the Build Alternative would require slightly more construction activities and result in greater construction noise than the Preferred Action Alternative, these impacts would be temporary, and would be restricted by the same noise regulations. The USCG would implement BMPs as discussed above, resulting in *short-term, less-than-significant adverse impacts*. Operation of the Build Alternative would not introduce new sources of noise and would also result in *no impact*.

4.3.4 Hazardous and Toxic Materials and Wastes

Impacts to HTMW were assessed using the following criteria:

- Adverse impacts would occur if the alternative increased the amount of HTMW and/or non-hazardous solid waste used, stored, generated, managed, or disposed of at Base San Juan. This adverse impact would be *significant* if the total amount of HTMW or non-hazardous solid waste exceeds regulatory thresholds or allowable limits under existing permits and procedures; if it increased the risk of contamination from HTMW; or if it would create new or substantial human or environmental health risks.
- The alternative would have a *beneficial* effect if it improved the management of HTMW and/or non-hazardous solid waste at Base San Juan; resulted in a substantial decrease in the amount of HTMW and/or non-hazardous solid waste generated, used, stored, managed, or disposed of at the Base; or if it would result in or facilitate the cleanup of a contaminated site.



4.3.4.1 No Action Alternative

Under the No Action Alternative, existing conditions regarding HTMW and non-hazardous solid waste at Base San Juan would continue. While beneficial impacts from upgrading the HTMW storage facility would not be realized, HTMW and non-hazardous solid waste would continue to be generated, stored, managed, and disposed of as they currently are; there would be no increase in the amount or volume of hazardous materials used or stored at the Base or in the amount or volume of hazardous waste and non-hazardous solid waste generated and disposed of. Therefore, the No Action Alternative would result in *no impact* from HTMW.

4.3.4.2 Preferred Action Alternative

Construction

Construction, renovation, and demolition activities under the Preferred Action Alternative would have *short-term, less-than-significant adverse impacts* from HTMW and non-hazardous solid waste at Base San Juan. These activities would involve the use of hazardous materials and temporarily increase the generation of hazardous waste and non-hazardous solid waste above volumes currently generated at the Base. HTMW and non-hazardous waste associated with these activities would be used, managed, stored, and disposed of or recycled in accordance with applicable federal, local, and USCG regulatory requirements as they currently are, including the SPCC Plan. Waste generation associated with the proposed projects would be distributed over the Preferred Action Alternative's multi-year implementation period, thereby minimizing impacts and ensuring that waste volumes at the Base do not increase substantially over current amounts.

LBP in Buildings 100, 125, and 126 would be removed by licensed professionals and disposed of at permitted off-Base facilities prior to the renovation of those facilities. Prior to conducting ground-disturbing activities, final geotechnical studies would be conducted to characterize underlying soils and identify potential contaminants. In the event that these studies identify a previously undocumented area of localized subsurface contamination, further characterization and remediation would be conducted to remove the contaminants and restore the site in accordance with applicable regulatory requirements.

Operation

The Preferred Action Alternative would have *no impacts* from HTMW and non-hazardous solid waste. Following the completion of the proposed projects, hazardous and non-hazardous waste volumes generated at Base San Juan would be similar to existing volumes. HTMW and non-hazardous solid waste would continue to be managed and disposed of as they currently are.

The Preferred Action Alternative would have *long-term beneficial effects* on HTMW management and storage at Base San Juan by providing new HTMW and petroleum storage facilities that are elevated above the base flood elevation and meet applicable regulatory, containment, and safety requirements, and by demolishing Building 111 and the existing fuel farm. Building 111's current location at grade along the waterfront makes it vulnerable to damage from weather events or other natural disasters. The removal of LBP during renovation of Buildings 100, 125, and 126 would also contribute to long-term beneficial effects on the management of HTMW at Base San Juan.

4.3.4.3 Build Alternative

Short-term adverse impacts and *long-term beneficial effects* from HTMW and non-hazardous solid waste during the Build Alternative would be similar to the Preferred Action Alternative. The Build Alternative would



potentially generate a somewhat larger volume of non-hazardous construction debris due to more construction activity (i.e., demolition of the Building 100 Annex). However, this additional volume would remain within the management capacity of Base San Juan and its contractors, and of receiving landfills and disposal facilities.

4.4 Natural Environment

4.4.1 Water Resources

The following criteria were used to assess impacts to water resources:

- The alternative would have a *significant* adverse impact if it would threaten or damage unique hydrologic characteristics, impede navigability, degrade water quality below Commonwealth thresholds or prevent water quality from improving; substantially increase the amount of stormwater entering surrounding surface waters or would increase impervious surfaces; permanently alter or diminish the quality of surface water through the placement of fill, structures, or other discharge; or alter flooding, flood elevations, flood levels, or induce flooding.
- The alternative would have a *significant* adverse impact on the coastal zone and coastal resources if it would substantially alter the coastal zone or induce activities that would be inconsistent with Puerto Rico's coastal management policies.
- The alternative would have a *beneficial impact* if it improved the quality of surface water; reduced the amount of stormwater and runoff or decreased impervious surfaces; increased or improved the quantity or quality of wetlands; or resulted in improvements to floodplains or coastal resources.

4.4.1.1 No Action Alternative

Implementation of the No Action Alternative would have *no impact* on water resources. Existing floodplain and coastal conditions would remain, and there would be no changes in water quality and existing hydrologic characteristics. These resources would remain as described in **Section 3.5.1**.

4.4.1.2 Preferred Action Alternative

Construction

Proposed construction, renovation, and demolition activities, such as grading, excavation, and rehabilitating the coastal revetment, could potentially increase erosion and sedimentation in receiving surface waters, resulting in *short-term, less-than-significant adverse impacts* on surface water quality. The use of construction equipment and vehicles would also result in an increased risk of spills. To avoid or minimize potential adverse impacts to surface water quality in the San Juan Bay, the USCG would comply with federal and Commonwealth stormwater requirements to manage runoff, including development of an SWPPP as required under the NPDES program. The USCG would obtain authorizations and permits from USACE pursuant to Section 404/401 under the CWA to regulate in-water activities, in addition to a Commonwealth CES Permit from the DRNA. Additional BMPs would be implemented to manage impacts to surface water quality from accidental releases of HTMW. Adherence to these and other appropriate BMPs described in **Section 4.3.4** would further reduce impacts.

Proposed construction activities would occur within the 100-year floodplain and disturb land within the flood hazard zone. Since the project is specific to Base San Juan, which is entirely contained within the 100-year



floodplain, there is no practicable alternative to construction within the floodplain. Therefore, a Finding of No Practicable Alternative has been prepared in accordance with EO 11988 and is included in the FONSI for this EA. To avoid or minimize effects to the floodplain, the USCG would comply with PRPB regulations for construction in the floodplain. Potentially adverse impacts would be addressed throughout the final stages of the design process. As a result, there would be no interference with the long-term function of the 100-year floodplain or increased potential for flooding either on-site or off-site, resulting in *long-term, less-than-significant adverse impacts* to the floodplain.

Proposed construction and demolition may result in disturbances to coastal resources from onshore ground and soil disturbances that may result in erosion, sedimentation, and increased turbidity. However, the Proposed Action would be consistent with Puerto Rico's enforceable coastal policies with implementation of BMPs, compliance with applicable regulations, and appropriate agency coordination. The Proposed Action would avoid impacts to the Commonwealth's coastal zone to the maximum extent practicable; therefore, the Proposed Action would result in *short-term, negligible adverse impacts* on the coastal zone and coastal resources.

Operation

Following construction and demolition activities, there would be a minor increase in the amount of impervious surfaces at Base San Juan, which would result in an increase in stormwater runoff and pollutant loading of surrounding surface waters. New building construction would typically occur in or around the footprint of buildings demolished under the Proposed Action, or in already developed areas, such as construction of the new MMB along the eastern waterfront. Changes in impervious surfaces from building demolition and construction would primarily offset each other, except in instances where new construction would occupy a larger footprint, such as construction of the proposed Health Services Building. One wing of Building 125 would be demolished to accommodate this new construction, but the proposed Health Services Building would have a larger footprint, thereby resulting in additional impervious surfaces. The proposed construction of a new Guard House, access road, and parking lot next to Building 100. As a result, impervious surfaces at the Base would increase slightly; if construction occurs outside of previously developed areas, demolished locations would be revegetated. GI/LID infrastructure would also be incorporated into the design of proposed new buildings to maintain the hydrology of the Base, to the extent practicable, in accordance with Section 438 of the EISA. These considerations would manage and minimize stormwater runoff, and aim to improve stormwater absorption and infiltration at the Base. Therefore, operation of the Preferred Action Alternative would have a *long-term, less-than-significant adverse impact* to stormwater.

Operation of the new and renovated facilities at the Base would occur entirely within the floodplain. These facilities, however, would not result in additional modifications to or activities within the floodplain. Further, the new facilities and critical systems would all be operating at a minimum elevation of 2 or 3 feet (0.6 or 0.9 m) above the base flood elevation. As a result, there would be no interference with the long-term function of the 100-year floodplain and the potential for flooding at the Base would decrease. Therefore, operation of the Preferred Action Alternative would have *no impact* on floodplains.

Operational activities at the Base would not constitute further development along the coastal shoreline, and would not cause additional disturbances within the coastal zone that are inconsistent with Puerto Rico's enforceable policies. Operation would be consistent with applicable regulations to the maximum extent practicable, and would therefore have *no impact* on the coastal zone and coastal resources.



4.4.1.3 Build Alternative

Potential impacts to water resources under the Build Alternative would be similar to those under the Preferred Action Alternative. The Build Alternative requires slightly more construction and demolition activities than the Preferred Action Alternative, resulting in greater *short-term, less-than-significant adverse impacts* on surface water quality from erosion and sedimentation occurring as a result of soil disturbances. All construction, renovation, and demolition, and operational activities would occur within the limits of the Base, and therefore within the 100-year floodplain, and would result in *long-term, less-than-significant adverse impacts* to the floodplain. The Build Alternative would have similar disturbances to the coastal zone as the Preferred Action Alternative, and would be consistent with Puerto Rico's enforceable policies to the maximum extent practicable. In the long term, the Build Alternative may result in a smaller increase in the amount of impervious surfaces than under the Preferred Action Alternative, as the Building 100 Annex would be demolished. Resulting adverse impacts on stormwater runoff would remain *long-term* and *less-than-significant*.

Any permits that may be required for the Preferred Action Alternative would also be obtained under the Build Alternative. BMPs and site design features as described under the Preferred Action Alternative would be implemented as applicable for the Build Alternative to minimize potential adverse impacts to water resources to the maximum extent practicable.

4.4.2 Biological Resources

The following criteria were used to assess impacts to biological resources:

- The alternative would have a *significant* adverse impact if it would substantially alter or destroy existing terrestrial or aquatic habitats, or displace terrestrial or aquatic wildlife, including T&E species.
- The alternative would have a *beneficial impact* if it would improve the quality of existing terrestrial or aquatic habitat, bring additional species to the area, or enhance habitat and introduce protection for T&E species.

4.4.2.1 No Action Alternative

Under the No Action Alternative, the existing terrestrial and aquatic environment would remain undisturbed. Biological resources would be the same as described in **Section 0**. Therefore, there would be *no impact* to biological resources.

4.4.2.2 Preferred Action Alternative

Construction

Construction, renovation, and demolition activities would primarily occur in previously developed areas. Small landscaped areas containing maintained lawn and trees surrounding the proposed Health Services Building and Building 100 would be cleared to support the larger footprint of the Health Services Building, and to support construction of a new parking lot next to Building 100. Vegetated areas throughout the Proposed Action area may also be disturbed by construction staging equipment or the placement of construction laydown areas. However, these landscaped areas have little or no ecological value and do not provide critical habitat. Disturbed areas would be planted with native vegetation or maintained in a similar permeable condition to the extent feasible. The natural beach area in the western portion of the Base would remain undisturbed. Prior to removing



any trees, necessary permits would be obtained from the DRNA and the OGPe as appropriate; each tree proposed for removal would require its own permit. Any tree removal or transplanting activities would comply with the requirements and applicable mitigation established in DRNA's tree removal regulation. In addition, appropriate protection measures would be implemented during construction in accordance with DRNA's regulation to avoid damaging remaining trees. As a result, there would be *short- and long-term, less-than-significant adverse impacts* to terrestrial vegetation and habitat from the Proposed Action.

Terrestrial wildlife living at or near the Base may be affected by proposed demolition and construction activities from an increase in noise, land disturbance, and dust. Potential disturbances would be temporary and cease once construction and demolition activities have ended. In addition, common terrestrial wildlife at and surrounding the Base are typically accustomed to human activity. Mobile individuals may temporarily vacate the area or inhabit other nearby suitable green spaces. Impacts would be further managed through applicable BMPs (see **Sections 4.3.2** and **0**). Similarly, any peregrine falcons that occupy the Base or surrounding areas could temporarily vacate and inhabit other spaces to avoid noise disturbance and human activity. Therefore, *short-term, less-than-significant adverse impacts* would occur to terrestrial wildlife. Limited in-water work would occur to support the construction of a new travel lift pier, boat ramp, and travel lift pier extensions between Piers Alpha and Bravo, and to rehabilitate the revetment along the northwestern coastline; no dredging would occur. In-water disturbances and erosion and sedimentation from on-shore activities may adversely affect aquatic vegetation and wildlife due to increased turbidity, but with implementation of an SWPPP and other stormwater management practices, such an effect would be temporary. There is a potential for EFH species to be present, primarily in the egg and larvae stages; however, limited aquatic habitat surrounding the Base and piers would likely be unsuitable for supporting the early life stages of EFH species given the frequent human and vessel activity in the area. Other aquatic wildlife that may be found in the San Juan Bay surrounding the Base may be impacted by in-water construction disturbances, but any such species are likely to be mobile, and would occur in low densities due to the absence of habitat. Both in-water and on-shore construction and demolition activities would not lead to the loss of aquatic habitat and are not expected to notably affect EFH species; therefore, the Proposed Action would result in *short-term, less-than-significant adverse impacts* to aquatic wildlife and habitat. In a response dated 21 May 2021, NMFS concurred with the USCG's findings that any adverse effects on EFH would be minimal (**Appendix A**).

The USCG identified five federally listed T&E species, three of which have a limited potential to be present at or in the vicinity of the Proposed Action area (**Section 3.5.2.3**). These water-dependent species (giant manta ray, hawksbill sea turtle, and leatherback sea turtle) are not likely to be adversely affected by the implementation of proposed demolition, renovation, and construction activities. The Preferred Action Alternative would only require minimal in-water work near the developed waterfront and along the coastal revetment. Any temporary increase in turbidity from sediment plumes related to in-water work would be small and settle out of the water column within a few hours. Runoff from on-shore activities would increase in the short-term and may temporarily impact water quality and the aquatic environment, but any changes are anticipated to be minor. Disturbance to potential giant manta ray habitat and individuals would be minimal and temporary. The sea turtle species are not anticipated to be found in the waters surrounding Piers Alpha and Bravo or the coastal revetment, due to the absence of potential aquatic habitat. Potential sea turtle nesting habitat located at the western beach area is excluded from the Proposed Action area and would not be disturbed. In addition, the stretch of coastal revetment that would be rehabilitated does not contain any beach habitat. The USCG would comply with applicable nighttime lighting regulations in Puerto Rico Law 218 of 2008, as



amended, *Control and Prevention of the Lighting Pollution of Puerto Rico*, to the maximum extent practicable, and USFWS *General Project Design Guidelines* applicable to hawksbill and leatherback sea turtles to minimize potential impacts to nesting sea turtles and sea turtle hatchlings. Due to the low potential presence of these species and limited disturbances to aquatic and beach habitat, the Proposed Action *may affect but is not likely to adversely affect* T&E species. The USFWS concurred with the USCG's findings in an email dated 21 May 2021 (**Appendix A**).

Operation

Operation of the Proposed Action would not lead to further disturbances of terrestrial or aquatic vegetation, habitat, and wildlife. Operational activities would primarily remain indoors, would not involve in-water activities, and would not include new maritime activities which could disturb habitat or entangle or strike aquatic species. No additional runoff from current operational levels is anticipated. Operations at the Base would be similar to existing operations and primarily comprise mission support functions, which would not affect terrestrial or aquatic resources, including T&E species. Therefore, operation of the Proposed Action would have *no impacts* on biological resources.

4.4.2.3 Build Alternative

Potential impacts to terrestrial and aquatic biological resources under the Build Alternative would be similar to those under the Preferred Action Alternative. The Build Alternative would not disturb any additional terrestrial areas, and the western beach area would be excluded from the Proposed Action area. Terrestrial wildlife may be impacted by the slightly greater amount of construction disturbance under the Build Alternative; however, adverse impacts would remain *short-term and less-than-significant*. Proposed in-water work under the Build Alternative would not be different in either scope or size from the Preferred Action Alternative. Potential runoff would also occur at a similar magnitude, resulting in *short-term, less-than-significant adverse impacts* to aquatic wildlife and habitat, and *may affect but is not likely to adversely affect* T&E species. Operational activities would remain consistent, and would have *no impact* on biological resources.

4.5 Cultural Resources

The following criteria were used to assess impacts to cultural resources:

- The alternative would have a *significant* adverse impact on cultural resources if an adverse effect as defined under Section 106 occurs and it cannot be mitigated. An adverse effect is defined as occurring “when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for including the National Register [of Historic Places]” (36 CFR 800.5(a)(1) and (2)).
- The alternative would have a *beneficial impact* on cultural resources if it would support the maintenance or preservation of above- and below-ground resources.

4.5.1 No Action Alternative

Implementation of the No Action Alternative would have *no effect* on cultural resources within either the archaeological or above-ground APE. Existing archaeological and architectural resources would remain undisturbed, and their respective APEs would remain as described in **Section 3.5**.



4.5.2 Preferred Action Alternative

Construction

As described in **Section 3.6**, several NRHP-eligible architectural and archaeological resources exist within the Proposed Action area.

Demolition of Buildings 103, 104, and 120 would result in an *adverse effect* to historic properties at Base San Juan. Demolition of these contributing resources to the NRHP-eligible Base San Juan Historic District would result in the loss of the historic district's integrity of design, setting, materials, workmanship, and feeling. Renovations to Buildings 116, 117, 124, 125 and 126 would have *no adverse effect* on architectural resources. Interior renovations and modifications to these buildings would be coordinated with the Puerto Rico SHPO, which has purview over the interiors of historic buildings, and would also follow the Secretary of the Interior's *Standards for Rehabilitation*.

Ground disturbance from proposed demolition and construction activities could result in an *adverse effect* on significant archaeological resources. These activities would occur in areas considered to have a high potential for archaeological deposits, including the NRHP-eligible Santo Toribio Battery, the remains of which are located under Buildings 100, 101b, 116, and 120. Demolition of Buildings 103, 104, 117, and 120 would also disturb the ground underneath these buildings, and has the potential to disturb or destroy below-ground resources. However, extensive archaeological investigations would be completed in order to identify archaeological deposits in the APE, prior to beginning any construction or demolition activities. In the event archaeological materials are inadvertently discovered during construction or demolition, the USCG would cease work immediately and notify the Puerto Rico SHPO.

Through implementation of the MOA in consultation with the SHPO, the USCG would ensure potential adverse effects would be *less-than-significant*. The MOA includes measures to avoid, minimize, or mitigate the adverse effects on historic properties throughout the final design and construction process (**Appendix D**).

Operation

Changes to the surrounding viewshed would result from construction and demolition as existing intervening trees and buildings contribute to minimal views of the above-ground APE from areas outside of the Base. New buildings would be no more than two stories high, and would incorporate design features that complement historic design features to the extent practicable. New areas for fuel storage would be screened with decorative metal screens and landscaping, and stormwater collection and solar panel features would be placed on building roofs. Therefore, any changes to the viewshed would be *less-than-significant*.

Operation of the Proposed Action would have *no effect* on archaeological resources, as there would be no ground disturbance associated with operational activities.

4.5.3 Build Alternative

Impacts to cultural resources under the Build Alternative would be similar to those under the Preferred Action Alternative, with a few key differences. During the construction and demolition phase of the Proposed Action, Building 100, which is a contributing resource to the NRHP-eligible Base San Juan Historic District, would only partly remain; the historic portion of the building would be retained and renovated, while the newer annex would be removed. The removal of the newer annex portion of Building 100 would have *no adverse effect* on architectural resources. However, *adverse effects* on other architectural resources would be the same as under



the Preferred Action Alternative. In addition, demolition activities occurring around Building 100 would have a greater impact on archaeological resources due to the potential to disturb archaeological deposits associated with the Santo Toribio Battery, contributing to an *adverse effect* on archaeological resources.

Implementation of the Build Alternative would include the same BMPs, and minimization and mitigation measures as under the Preferred Action Alternative to reduce or avoid adverse effects to cultural resources to *less-than-significant* levels.

4.6 Mitigation Measures and BMPs

Per established protocols, procedures, and requirements, the USCG would implement BMPs and satisfy all applicable regulatory requirements in association with the Proposed Action. BMPs are included as components of the Proposed Action Alternative and described below. BMPs are regulatory compliance measures that the USCG regularly implements as part of their activities, as appropriate. These are different from “mitigation measures,” which are defined as project-specific requirements, not routinely implemented by the USCG, necessary to reduce identified potentially significant adverse environmental impacts to less-than-significant levels.

4.6.1 Mitigation Measures

Cultural Resources. The USCG would coordinate closely with the Puerto Rico SHPO in order to minimize impacts and mitigate adverse effects to architectural and archaeological resources. Interior renovations for above-ground resources would be coordinated with the SHPO and would be completed in accordance with the Secretary of the Interior’s *Standards for Rehabilitation*. New construction would incorporate exterior design features that complement historic features to the extent practicable. The USCG would conduct extensive archaeological investigations prior to beginning construction, and would implement standard protocols for the treatment of unanticipated archaeological discoveries during demolition and construction activities. If previously unknown resources are encountered, construction would be halted and the resource evaluated. To ensure potential adverse effects on historic properties would be avoided, minimized, and/or mitigated, the USCG would implement the project-specific MOA between USCG and Puerto Rico SHPO throughout the final design and construction process (**Appendix D**).

4.6.2 Best Management Practices

Traffic and Transportation. The USCG would schedule construction trucks and construction workers to arrive at the Base outside of the normal commuting hours for Base personnel in order to avoid contributing to or worsening existing congestion at the Base entrance. Temporary parking areas for construction vehicles would also be created within the Base to minimize competition for limited parking spaces. The USCG would sequence construction of the new Guard House and demolition of the existing Guard House so that the existing one remains operational until new construction is complete, and would consider creating temporary entrance lanes during construction of the new access road to minimize increased congestion at the Base entrance during the transition to new infrastructure.

Utilities. The USCG would not implement any BMPs related to utilities, as the Proposed Action would either result in no impacts or beneficial impacts during both construction and operation.

Geology and Seismic Conditions. The USCG would complete final site-specific geotechnical and engineering assessments prior to construction to prescribe methods that would minimize potential impacts on geologic



resources. All facilities would be constructed in accordance with applicable construction practices, building codes, engineering requirements, and seismic resiliency requirements.

Air Quality and Climate. The USCG would ensure demolition and construction activities are performed in conformance with applicable federal and Commonwealth regulations, and that such activities do not result in the exceedance of regulated air quality thresholds. Reasonable precaution and implementation of dust control measures would be taken to prevent particulate matter from becoming airborne and affecting nearby sensitive receptors. These dust control measures may include watering during demolition or excavation activities, covering stockpiled debris or soil, covering truck loads, and requiring a speed of less than 15 miles per hour for construction equipment on unpaved surfaces. These dust reduction measures would be incorporated into construction contracts, and briefed to the contractor prior to construction. Other BMPs, such as the use of low VOC architectural materials, supplies, and equipment; regularly repairing and servicing construction equipment; and shutting down heavy equipment when not needed, would serve to minimize emissions of NO_x and GHGs during demolition and construction activities.

Noise. The USCG would implement BMPs as appropriate to limit noise impacts during demolition and construction activities. The USCG would limit activity to the daytime hours of 7 a.m. to 10 p.m. in accordance with Puerto Rico's noise regulation. Equipment would be operated per manufacturer's recommendations, and noise-generating heavy equipment would be shut down when not needed. Construction equipment would be outfitted with noise abatement measures, such as mufflers and engine enclosures, and would be periodically inspected to ensure the proper maintenance of such noise control devices. Construction personnel would be directed to keep noise levels relatively uniform, and to avoid impulse noises and the use of multiple pieces of heavy equipment which would create intrusive noise levels. A construction noise monitoring program may also be developed; this and other noise-reduction measures would be briefed to the contractor prior to construction.

HTMW. The USCG would follow established procedures to minimize the potential for accidental releases and contamination from any releases during demolition, construction, and operation, including Base San Juan's SPCC, COMDTINST M16000.14A, and COMDTINST M16478.1B. Any hazardous materials discovered, generated, or used during construction would be handled and disposed of in accordance with applicable federal, Commonwealth, and local regulations.

Water Resources. The USCG would implement the SPCC as described for *HTMW* to minimize impacts to water quality resulting from potential releases of hazardous substances. The USCG would also develop and implement a SWPPP in accordance with the NPDES General Construction Permit to minimize impacts to water quality resulting from sedimentation and stormwater runoff. The USCG would obtain Section 404/401 approvals from the USACE and a CES Permit from the DRNA for in-water activities and discharge to surface waters. Other measures to prevent pollutant loading of surface waters would be implemented by the USCG such as fueling construction equipment in designated areas, confining equipment maintenance to upland locations, and ensuring equipment is in good condition and not leaking. Stormwater control measures would be incorporated to further protect surface waters in accordance with federal regulations under Section 438 of the EISA. The USCG would include GI/LID features in its design for new construction to maintain the pre-development hydrology of Base San Juan. The USCG would further comply with Puerto Rico's requirements to ensure adequate flood protection, and would construct new facilities at least 2 feet (0.6 m) above the minimum base elevation of the floodplain. The USCG would also comply with EO 11988, as applicable.



Construction BMPs identified under *HTMW*, *Surface Water*, and *Stormwater* would also be implemented to minimize impacts to the coastal resources.

Biological Resources. The USCG would re-vegetate disturbed areas to the maximum extent practicable to offset impacts to vegetation from the loss of grasslands. Impacts to trees would be coordinated with the DRNA. The USCG would obtain all required tree removal permits from the DRNA and OGPe, and would develop a tree replanting plan and implement measures to protect remaining trees during construction. The demolition and construction BMPs identified under *Noise* would be implemented to minimize disturbances to terrestrial wildlife from increased noise levels. Impacts to aquatic wildlife, including potentially present aquatic T&E species, would be managed through compliance with the BMPs identified under *Water Resources*, particularly through development of a SWPPP.



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5.0 Comparison of Alternatives and Conclusions

5.1 Comparison of the Environmental Consequences of the Alternatives

This EA has evaluated the potential socioeconomic, physical, natural, and cultural effects of the USCG's proposal to repair and replace hurricane-damaged facilities at Base San Juan. The Proposed Action consists of construction and operation of new facilities, including a MMB, Health Services Building, and CUP; and renovation or demolition of existing facilities that do not meet USCG resiliency requirements (see **Section 2.2**). The Preferred Action Alternative was evaluated in addition to a Build Alternative and the No Action Alternative. A comparison of the environmental consequences of these alternatives is provided in **Table 5-1**. All impacts would be reduced with the implementation of BMPs and minimization measures (see **Section 4.6**).

5.2 Conclusion

This EA concludes that there would be no significant adverse impact to the local physical and natural environment as a result of implementing the Proposed Action, with the adherence to mitigation measures and BMPs specified in this EA. Therefore, an EIS is unnecessary for implementing the Proposed Action and a FONSI is appropriate. The Preferred Action Alternative was determined by the USCG to best meet the purpose of and need for the Proposed Action by satisfying the USCG's planning factors while minimizing potential adverse effects to environmental and cultural resources. Implementation of the Preferred Action Alternative would reduce the USCG's vulnerability to adverse weather events, would improve operational readiness and response, and ensure that Base facilities remain functional and resilient during an emergency event. Implementation of the Build Alternative would still achieve the purpose of and need for the Proposed Action, but would result in additional adverse effects to archaeological resources that would be avoided under the Preferred Action Alternative (see **Section 4.5.3**). The No Action Alternative was found not to satisfy the purpose of and need for the Proposed Action. As such, this EA recommends implementation of the Preferred Action Alternative.



Table 5-1: Alternatives Comparison Matrix

Technical Resource Area	No Action Alternative	Preferred Action Alternative	Build Alternative
Traffic and Transportation	No impact.	<i>Short-term, less-than-significant adverse impacts</i> on construction-related traffic and parking, and congestion at the Base entrance. <i>Long-term beneficial impacts</i> on traffic and parking during operation due to improved entrance configuration and additional parking spaces.	Same impacts as under the Preferred Action Alternative.
Utilities	<i>Short- and long-term potentially significant adverse impacts</i> on utilities due to their inadequate state and potential to become less reliable over time in the event of future natural disasters and emergencies.	<i>Short-term, less-than-significant adverse impacts</i> during construction due to potential service disruptions. <i>Long-term, beneficial impacts</i> from increased water resiliency and electrical redundancy during operation.	Same impacts as under the Preferred Action Alternative.
Geology and Seismic Conditions	No impact.	<i>Short-term, less-than-significant adverse impacts</i> on geologic features from installation of building foundations during construction; <i>no impact</i> on seismic conditions during construction. <i>Long-term, beneficial impacts</i> during operation from building upgrades compliant with seismic requirements; <i>no impacts</i> on geology during operation.	Same impacts as under the Preferred Action Alternative.
Air Quality and Climate	No impact.	<i>Short-term, less-than-significant adverse impacts</i> from pollutants, including GHGs, generated by construction equipment. <i>Long-term, less-than-significant adverse impacts</i> from operational air emissions; <i>long-term, beneficial impact</i> on climate change from reduction in GHGs.	Construction impacts would be slightly greater than the Preferred Action Alternative due to more demolition activities. Operational impacts would be the same as under the Preferred Action Alternative.



Table 5-1: Alternatives Comparison Matrix

Technical Resource Area	No Action Alternative	Preferred Action Alternative	Build Alternative
Noise	No impact.	<i>Short-term, less-than-significant adverse impacts from noise generation by construction equipment.</i> <i>No impacts during operation.</i>	Construction impacts would be slightly greater than the Preferred Action Alternative due to more demolition activities. Operational impacts would be the same as under the Preferred Action Alternative.
Hazardous and Toxic Materials and Waste	No impact.	<i>Short-term, less-than-significant adverse impacts due to the use of hazardous materials, potential generation of hazardous wastes, and the potential for releases during construction activities.</i> <i>Long-term beneficial impacts from improved HTMW storage facilities on Base; no impact on HTMW generation, disposal, and management during operation.</i>	Construction impacts would be slightly greater than the Preferred Action Alternative due to more construction activities. Operational impacts would be the same as under the Preferred Action Alternative.
Water Resources	No impact.	<i>Short-term, less-than-significant adverse impacts to surface waters during construction from erosion, sedimentation, and potential spills; long-term, less-than-significant adverse impact from construction in the floodplain; short-term, negligible adverse impact on coastal resources from construction disturbances.</i> <i>Long-term, less-than-significant adverse impact to stormwater from an increase in impervious surfaces; no impact on floodplains or coastal resources during operation.</i>	Construction impacts on surface water quality and stormwater would be slightly greater than the Preferred Action Alternative due to more construction activities. Impacts to floodplains and coastal resources would be the same as under the Preferred Action Alternative. Operational impacts would be the same as under the Preferred Action Alternative.
Biological Resources	No impact.	<i>Short- and long-term, less-than-significant adverse impacts to terrestrial vegetation and habitat from land clearing during construction; short-term, less-than-significant adverse impacts to terrestrial wildlife and aquatic wildlife and habitat from construction disturbance and sedimentation; construction may affect but is not likely to adversely affect potentially present T&E species.</i> <i>No impacts to biological resources during operation.</i>	Construction impacts on terrestrial wildlife would be slightly greater than the Preferred Action Alternative due to more construction activities. Impacts to other biological resources during construction would be the same as under Preferred Action Alternative. Operational impacts would be the same as under the Preferred Action Alternative.



Table 5-1: Alternatives Comparison Matrix

Technical Resource Area	No Action Alternative	Preferred Action Alternative	Build Alternative
Cultural Resources	No impact.	<i>Adverse effect</i> on architectural resources from demolition of contributing resources to the NRHP-eligible Base San Juan Historic District; <i>adverse effect</i> on archaeological resources from ground disturbance during construction. <i>Long-term, less-than-significant impact</i> on the surrounding viewshed from new construction and demolition of historic buildings; <i>no effect</i> on archaeological resources during operation.	Construction would result in a <i>greater adverse effect</i> on archaeological resources from additional potential to disturb significant deposits during demolition of the Building 100 Annex; impacts on architectural resources would be the same as under the Preferred Action Alternative Operational impacts would be the same as under the Preferred Action Alternative.



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7.0 Glossary

100-Year Flood – A flood event of such magnitude that it occurs, on average, every 100 years; this equates to a one percent chance of its occurring in a given year.

Ambient – The environment as it exists around people, plants, and structures.

Archaeological Resource – Any material of human life or activities that is at least 100 years of age and is of archaeological interest (32 CFR Part 229.3(a)).

Area of Potential Effect (APE) – The geographical area within which the undertaking may cause changes in the character of or use of historic properties, if any such properties exist. The APE may change according to the regulation under which it is being applied and should be established in coordination with consulting parties.

Asbestos – Incombustible, chemical-resistant, fibrous mineral forms of impure magnesium silicate used for fireproofing, electrical insulation, building materials, brake linings, and chemical filters. Asbestos is a carcinogenic substance.

Attainment Area – Region that meets the National Ambient Air Quality Standard (NAAQS) for a criteria pollutant under the CAA.

Best Management Practices (BMPs) – Regulatory compliance methods, measures, or practices to minimize adverse effects.

Coastal Zone – The coastal waters of a State and adjacent shorelands which have a direct impact on coastal waters. The area is designated by the State, which establishes special management priorities to restore and protect ecologically important habitats and natural resources.

Contaminants – Any physical, chemical, biological or radiological substances that have an adverse effect on air, water or soil.

Council on Environmental Quality (CEQ) – An Executive Office of the President composed of three members appointed by the President, subject to approval by the Senate. Each member shall be exceptionally qualified to analyze and interpret environmental trends; to appraise programs and activities of the federal government. Members are to be conscious of and responsive to the scientific, economic, social, aesthetic, and cultural needs of the Nation; and to formulate and recommend national policies to promote the improvement of the quality of the environment.

Criteria Pollutants – The CAA of 1970 required the EPA to set air quality standards for common and widespread pollutants in order to protect human health and welfare. There are six "criteria pollutants": ozone (O₃), carbon monoxide (CO), sulfur dioxide (SO₂), lead (Pb), nitrogen dioxide (NO₂), and particulate matter.

Cultural Resources – Historic properties as defined by the NHPA; cultural items as defined by NAGPRA; archaeological resources as defined by ARPA; sites and sacred objects to which access is afforded under AIRFA; and collections and associated records as defined in 36 CFR Part 79. Included are: traditional cultural properties and objects; archaeological sites; historic buildings, structures, and districts; and localities with social significance to the human community.

dBA – "A-weighted" non-impulse noise measurement in decibels, weighted to match human hearing frequency response.

Decibel (dB) – A unit of measurement of sound pressure level.

Elevation – Raising a building and placing it on a higher foundation so the first or lowest floor is above flood levels.

Emission – A release of a pollutant.



Endangered Species – Any species which is in danger of extinction throughout all or a significant portion of its range.

Environmental Assessment (EA) – An EA is a publication that provides sufficient evidence and analysis to show whether a proposed system would adversely affect the environment or be environmentally controversial.

Erosion – The wearing away of the land surface by detachment and movement of soil and rock fragments through the action of moving water and other geological agents.

Essential Fish Habitat (EFH) – Waters necessary to fish for spawning, breeding, feeding, or growth to maturity.

Floodplain – The relatively flat area or lowlands adjoining a river, stream, ocean, lake, or other body of water that is susceptible to being inundated by floodwaters.

FONSI – Finding of No Significant Impact, a NEPA document.

Fugitive Dust – Particles light enough to be suspended in air, which are not caught in a capture or filtering system. For this document, this refers to particles put in the air by moving vehicles and air movement over disturbed soils at construction sites.

Habitat – The natural home or environment of any animal, plant, or other organism.

Hazardous Substance – Hazardous materials are defined within several laws and regulations to have certain meanings. For this document, a hazardous material is any one of the following:

- Any substance designated pursuant to section 311 (b)(2) (A) of the Clean Water Act.
- Any element, compound, mixture, solution or substance designated pursuant to Section 102 of Comprehensive

Environmental Response, Compensation and Liability Act (CERCLA).

- Any hazardous as defined under the Resource Conservation and Recovery Act (RCRA).
- Any toxic pollutant listed under Toxic Substances Control Act.
- Any hazardous air pollutant listed under Section 112 of CAA.
- Any imminently hazardous chemical substance or mixture with respect to which the EPA Administrator has taken action pursuant to Subsection 7 of Toxic Substances Control Act.

The term does not include: 1) Petroleum, including crude oil or any thereof, which is not otherwise specifically listed or designated as a hazardous substance in a above. 2) Natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas). c. A list of hazardous substances is found in 40 CFR Part 302.4.

Hazardous Waste – A solid waste, which when improperly treated, stored, transported or disposed of poses a substantial hazard to human health or the environment. Hazardous wastes are identified in 40 CFR Part 261.3 or applicable foreign law, rule, or regulation (see also solid waste).

Hazardous Waste Storage – As defined in 40 CFR Part 260.10, ". . . the holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere."

Historic Property – Any material or human life or activities that is at least 50 years of age and is of cultural interest.

Historic resources – Any real or personal property, record, or lifeway. Includes: historic real property such as archaeological and architectural places, monuments, designed landscapes, works of



engineering or other property that may meet the criteria for inclusion in the NRHP; historic personal property such as any artifact or relic; historic records to include any historical, oral-historical, ethnographic, architectural, or other document that provides a record of the past; and community resources/lifeways to include any resource that a community or interested group ascribes cultural value (references to historic real or personal property such as natural landscapes and cemeteries; references to real property such as vistas or viewsheds; or, references to the nonmaterial such as certain aspects of folk life, cultural or religious practices, languages, or traditions).

Listed Species – Any plant or animal designated as a State or federal threatened, endangered, special concern, or candidate species.

Mitigation – Measures taken to reduce adverse impacts on the environment.

Mobile Sources – Vehicles, aircraft, watercraft, construction equipment, and other equipment that use internal combustion engines for energy sources.

Monitoring – A process of inspecting and recording the progress of mitigation measures implemented.

National Ambient Air Quality Standards (NAAQS) – Nationwide standards set up by the EPA for widespread air pollutants, as required by Section 109 of the Clean Air Act (CAA). Currently, six pollutants are regulated by primary and secondary NAAQS: carbon monoxide (CO), lead, (Pb), nitrogen dioxide (NO₂), ozone (O₃), particulate matter, and sulfur dioxide (SO₂).

National Environmental Policy Act (NEPA) – United States statute that requires all federal agencies to consider the potential effects of Proposed Actions on the human and natural environment.

Nonattainment Area – An area that has been designated by the EPA or the appropriate State air quality agency as exceeding one or more national or State ambient air quality standards.

Particulates or Particulate Matter – Fine liquid or solid particles such as dust, smoke, mist, fumes or smog found in air.

Pollutant – A substance introduced into the environment that adversely affects the usefulness of a resource.

Sensitive Receptors – Include, but are not limited to, asthmatics, children, and the elderly, as well as specific facilities, such as long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, and childcare centers.

Soil – The mixture of altered mineral and organic material at the earth's surface that supports plant life.

Threatened species – Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Toxic Substance – A harmful substance which includes elements, compounds, mixtures, and materials of complex composition.

Undertaking – “An undertaking is a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including those carried out by or on behalf of a Federal agency; those carried out with Federal financial assistance; those requiring a Federal permit, license, or approval; and those subject to State or local regulation administered pursuant to a delegation or approval by a Federal agency” (36 CFR Part 800.16{y}).

Wildlife Habitat – Set of living communities in which a wildlife population lives.



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8.0 List of Preparers

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9.0 Agencies and Individuals Consulted

Copies of all correspondence, including a sample of data request letters sent and responses received to date are included in **Appendix A**.

Federal Agencies

U.S. Environmental Protection Agency

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NOAA National Marine Fisheries Service

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POC: David Dale, Southeast Regional Office Fish
Biologist

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Autonomous Municipality of San Juan
(Municipio Autónomo de San Juan)

Honorable Miguel Romero
Mayor
Municipality of San Juan
PO Box 70179
San Juan, PR 00936

CZMP Contacts

**Department of Natural and Environmental
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Ambientales*)**

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Appendix A – Agency Consultation and Coordination

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13 May 2021

Ms. Carmen Guerrero, Director
US Environmental Protection Agency
Caribbean Environmental Protection Division
City View Plaza II, Suite 7000
#48 Rd. 165 km 1.2
Guaynabo, PR 00968

Greetings Ms. Guerrero,

In accordance with the National Environmental Policy Act, the United States Coast Guard (USCG) is completing an environmental assessment for a proposed project to repair and replace facilities damaged by Hurricanes Irma and Maria in 2017 at USCG Base San Juan. The Base is located in La Puntilla, Old San Juan, Puerto Rico.

The damage caused by the hurricanes severely affected the USCG's mission readiness and the ability to conduct operations. This proposed action will increase the resiliency of facilities and infrastructure. The scope of work for this proposed project includes the construction of new Station and Health Services buildings, including supporting utilities and infrastructure. Additionally, the project will repair or renovate existing facilities that sustained extensive damage. Other facilities that cannot be repaired, are beyond their service life, and no longer effectively serve their intended purpose, will be demolished.

This resiliency and reconstitution project is essential to support personnel, enable mission readiness, and enhance operations in the event of hurricanes or similar large-scale disasters in the future.

Enclosed for your review is a project scope description. We respectfully request that you provide any questions or comments you may have on our project within **thirty (30) days** of receipt of this letter. Please direct your correspondence to:

Email - rick.d.hylton@uscg.mil

Mail - U.S. Coast Guard FDCC, Attn: Richard Hylton
5505 Robin Hood Rd, Suite K, Norfolk, VA 23513

If you have any questions or need further information, please contact Mr. Richard Hylton at (757) 852-3404 or rick.d.hylton@uscg.mil.

Sincerely,

A handwritten signature in blue ink, appearing to read "John F. Barresi".

Digitally signed by
BARRESI.JOHN.F.JRIL.1187016629
Date: 2021.05.13 09:08:31 -04'00'

J. F. BARRESI
Captain, U. S. Coast Guard

USCG BASE SAN JUAN HURRICANE REBUILD PROJECT

Project Scope Description

Base San Juan, herein referred to as the Base, is located on La Puntilla in Old San Juan, in San Juan Municipality (18°27'38.862"N, -66°7'1.2282"W). It is surrounded by the San Juan Bay to the east, south, and west, and by Old San Juan to the north (**Figure 1**). The Base encompasses approximately 20 acres and contains a unified command which includes Command staff and an Aids to Navigation Team (ANT), primarily engaged in logistics, operations, and response activities in the Eastern Caribbean. On 20 September 2017, Hurricane Maria made landfall in Puerto Rico and caused extensive damage to existing facilities and infrastructure at the Base. The existing facilities at the Base, including electrical and water utility systems, are not storm resilient and are unable to remain functional during major storm events. Failure to update damaged infrastructure to meet storm resiliency requirements will lead to increased vulnerability to weather and natural disasters at the Base and hinder the operational readiness and response of the USCG.

The Proposed Action consists of construction and demolition of various facilities in both the eastern and western sections of the Base (i.e., the Proposed Action area). The Proposed Action on the eastern section of the Base includes construction of a two-story combined Station (STA) Building/ANT/Command Center Building, herein referred to as the Station Building, near the eastern waterfront. The new Station Building would contain space for Shipping & Receiving, Facility Support, Shop and Maintenance operations, and drive-through boat bays on the first floor. A new Central Utility Plant (CUP) would be located on the second floor to achieve electrical resiliency. An existing historic building (Building 100) would be retrofitted to include space for STA/ANT, Response & Support, and Command Center operations in the eastern portion of the building; and office space for the Prevention & Planning sector in the western half of the building (i.e., the Building 100 Annex). The building housing Maintenance Assistance Team/Electronics System Support Detachment (MAT/ESD) (Building 101) would be renovated as well and continue to be used for these functions. Five buildings (Buildings 103, 104, 108, 110 and 111) would be demolished to accommodate the new construction. The eastern waterfront would remain as-is, with the exception of a proposed new travel lift between existing Piers Alpha and Bravo. Some in-water work would occur to support this construction, but no dredging activities would be required.

Proposed activities on the western portion of the Base include the construction of a new Health Services Building, construction of a new Guard House and access control area, and renovations to Buildings 124, 125, and 126. The interior of Building 124 would be renovated and repurposed as a Satellite Exchange Building. Building 125 would largely remain as-is aside from updates to the USCG Investigative Service (CGIS) wing and the demolition of a separate addition. Building 126 would undergo minimal interior renovations and would be repurposed as deemed appropriate by the USCG. The two-story Health Services Building

would comprise parking space, Central Mail & Distribution, and the Barber on the first level, and health services on the second level. The new Guard House and access control location would be designed to provide specific lanes for entry to and exit from the Base, providing better security and Anti-Terrorism/Force Protection. A new primary roadway would be constructed to provide direct access from the western section of the Base to the eastern section and the piers. In addition, the USCG proposes to demolish four buildings (Buildings 120, 121 122, and 123) and relocate those services into the new buildings.

Under the Proposed Action, critical systems such as electrical, mechanical, and communications would be updated for flood resiliency. Two 256,000-gallon water tanks would be constructed in between Building 100 and the new Guard House to provide for water resiliency on the Base. All construction activities would occur in previously developed areas away from the waterfront.

The USCG is considering two alternatives to the Proposed Action:

1. **Preferred Action Alternative** – This alternative would implement the Proposed Action as described above.
2. **Build Alternative** – This alternative would be similar to the Proposed Action as described above except that the Building 100 Annex would be demolished, and the two 256,000-gallon water tanks would be placed within the demolished footprint. Construction of the water tanks in this location would allow for construction of a larger parking area between the water tanks and the proposed Guard House. In addition, the Build Alternative would construct a three-level Health Services Building with a third level for the Prevention & Planning sector.

Figure 1: Site Location





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13 May 2021

Major Jesus D. Soto Melendez
Deputy District Commander, Antilles Area
US Army Corps of Engineers Jacksonville District, Antilles Office
383 Franklin Delano Roosevelt Ave.
Fundación Ángel Ramos Annex Building, Suite 202
San Juan, PR 00918

Greetings Major Soto,

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Sincerely,

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Digitally signed by
BARRESI JOHN.F.JR.1187016629
Date: 2021.05.13 09:09:01 -04'00'

J. F. BARRESI
Captain, U. S. Coast Guard

Enclosure: (1) USCG Base San Juan Hurricane Rebuild Project - Project Scope Description

USCG BASE SAN JUAN HURRICANE REBUILD PROJECT

Project Scope Description

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Figure 1: Site Location





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13 May 2021

David Dale
Habitat Conservation Division
263 13th Avenue South
St. Petersburg, FL 33701

Greetings Mr. Dale,

In accordance with the Endangered Species Act, the United States Coast Guard (USCG) is evaluating the impact on essential fish habitat for a proposed project to repair and replace facilities damaged by Hurricanes Irma and Maria in 2017 at USCG Base San Juan. The Base is located in La Puntilla, Old San Juan, Puerto Rico.

The damage caused by the hurricanes severely affected the USCG's mission readiness and the ability to conduct operations. This proposed action will fortify and increase the resiliency of facilities and infrastructure. The scope of work for this proposed project includes the construction of new Station and Health Services buildings, including supporting utilities and infrastructure. Additionally, the project will repair or renovate existing facilities that sustained extensive damage. Other facilities that cannot be repaired, are beyond their service life, and no longer effectively serve their intended purpose, will be demolished.

This resiliency and reconstitution project is essential to support personnel, enable mission readiness, and enhance operations in the event of hurricanes or similar large-scale disasters in the future.

Enclosed for your review and concurrence is our evaluation of project effects on federally listed species and critical habitats. Our evaluation concludes that the project may affect, but is not likely to adversely affect the Hawksbill Sea Turtle and Leatherback Sea Turtle; and the project would have no effect on the West Indian Manatee or Puerto Rican Boa. We respectfully request your concurrence with this evaluation. If you have any questions or need further information, please contact Mr. Richard Hylton at (757) 852-3404 or rick.d.hylton@uscg.mil.

Sincerely,

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Digitally signed by
BARRESI,JOHN.F.JRIL.1187016629
Date: 2021.05.13 08:59:32 -04'00'

J. F. BARRESI
Captain, U. S. Coast Guard

Enclosure: (1) USCG base San Juan Hurricane Rebuild Project – Evaluation of Effects on Federally Listed Marine Species and Critical Habitats

USCG BASE SAN JUAN HURRICANE REBUILD PROJECT

Evaluation of Effects on Essential Fish Habitat (EFH)

Base San Juan, herein referred to as the Base, is located on La Puntilla in Old San Juan, in San Juan Municipality (18°27'38.862"N, -66°7'1.2282"W). It is surrounded by the San Juan Bay to the east, south, and west, and by Old San Juan to the north (**Figure 1**). The Base encompasses approximately 20 acres and contains a unified command which includes Command staff and an Aids to Navigation Team (ANT), primarily engaged in logistics, operations, and response activities in the Eastern Caribbean. On 20 September 2017, Hurricane Maria made landfall in Puerto Rico and caused extensive damage to existing facilities and infrastructure at the Base. The existing facilities at the Base, including electrical and water utility systems, are not storm resilient and are unable to remain functional during major storm events. Failure to update damaged infrastructure to meet storm resiliency requirements will lead to increased vulnerability to weather and natural disasters at the Base and hinder the operational readiness and response of the USCG.

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Essential Fish Habitat

A query of the NOAA EFH Mapper for the Bay of San Juan identified EFH for 52 species (**Table 1**). No Habitat Areas of Particular Concern (HAPCs) were identified in the Proposed Action area; however, all Caribbean waters surrounding Puerto Rico are considered EFH Areas Protected from Fishing and are subject to Caribbean Economic Exclusion Zone (EEZ) gear restrictions.

Table 1. EFH Species and Life Stages Potentially Found in the Proposed Action area

Species	Egg	Larvae	Juvenile	Adult
Almaco Jack	✓	✓		
Anchor Tilefish	✓	✓		
Banded Rudderfish	✓	✓		
Black Grouper	✓	✓		
Blackfin Snapper	✓	✓		
Blackline Tilefish	✓	✓		
Blue Marlin				✓
Blueline Tilefish	✓	✓		

Table 1. EFH Species and Life Stages Potentially Found in the Proposed Action area

Species	Action area			
	Egg	Larvae	Juvenile	Adult
Caribbean Reef Shark	✓	✓	✓	✓
Corals	✓	✓		
Cubera Snapper	✓	✓		
Dog Snapper	✓	✓		
Dwarf Sand Perch	✓	✓		
Hogfish	✓	✓		
Gag	✓	✓		
Golden Tilefish	✓	✓		
Goldface Tilefish	✓	✓		
Goliath Grouper	✓	✓		
Gray Snapper	✓	✓		
Gray Triggerfish	✓	✓		
Greater Amberjack	✓	✓		
Lane Snapper	✓	✓		
Lesser Amberjack	✓	✓		
Mahogany Snapper	✓	✓		
Marbled Grouper	✓	✓		
Misty Grouper	✓	✓		
Mutton Snapper	✓	✓		
Nassau Grouper	✓	✓		
Oceanic Whitetip Shark	✓	✓	✓	✓
Queen Conch	✓	✓		
Queen Snapper	✓	✓		
Red Grouper	✓	✓		
Red Hind	✓	✓		
Red Snapper	✓	✓		
Rock Hind	✓	✓		
Sailfish			✓	✓
Sand Perch	✓	✓		
Scamp	✓	✓		
Schoolmaster	✓	✓		
Silk Snapper	✓	✓		
Slipper Lobster	✓	✓		
Snowy Grouper	✓	✓		
Speckled Hind	✓	✓		
Spiny Lobster	✓	✓		
Vermilion Snapper	✓	✓		
Warsaw Grouper	✓	✓		
Wenchman	✓	✓		
White Marlin			✓	✓
Yellowedge Grouper	✓	✓		
Yellowfin Grouper	✓	✓		
Yellowmouth Grouper	✓	✓		
Yellowtail Snapper	✓	✓		

Potential Impacts

Proposed activities would require limited in-water work in a small area between the existing piers Alpha and Bravo immediately adjacent to the developed eastern waterfront. No dredging activities would be required. Limited aquatic habitat exists along the eastern portion of the Base, as the waterfront area is already hardened, and vessel traffic and operations are common. Potential construction of a new travel lift would not significantly alter aquatic habitat or result in the

permanent loss of aquatic habitat. Any temporary increase in turbidity from sediment plumes would be small and settle out of the water column within a few hours. No in-water work is proposed along the western portion of the Base.

Existing topography at the Base is mostly level, and the land is primarily hardened throughout, including along the waterfront areas. Proposed construction and demolition activities could result in some minor increased runoff and sedimentation or the potential for an inadvertent release or spill during land disturbing activities. However, these disturbances would be temporary, localized, and minimized to the extent practicable through compliance with applicable Federal and Commonwealth regulations and standard construction best management practices (BMPs).

In addition, the Base is situated in a previously disturbed marine area that is heavily used for industrial and docking activities. Regular human activity and vessel traffic are not conducive toward suitable EFH. As such, EFH species are not expected to occur or would occur in low densities around the Base. Any present adult and juvenile individuals would be highly mobile and capable of moving out of affected areas, occupying more favorable habitats nearby. No adverse effects on EFH are anticipated.

Conclusion

Since EFH species are likely to be limited in the Proposed Action area and only minor in-water work is proposed, the USCG anticipates that the Proposed Action *may affect, but is not likely to adversely affect* EFH, particularly with the implementation of BMPs and proper permitting during construction.

Figure 1: Site Location



U.S. Department of
Homeland Security

**United States
Coast Guard**



Commanding Officer
United States Coast Guard
Facilities Design and Construction Center

5505 Robin Hood Road, Suite K
Norfolk, VA 23513-2431
Phone: 757-852-3404
Fax: 757-852-3495

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13 May 2021

Ms. Nicole Bonine
Biologist
NOAA Fisheries
Southeast Regional Office
263 13th Avenue South
St. Petersburg, FL 33701

Greetings Ms. Bonine,

In accordance with the Endangered Species Act, the United States Coast Guard (USCG) is evaluating the impact on endangered species and critical habitat for a proposed project to repair and replace facilities damaged by Hurricanes Irma and Maria in 2017 at USCG Base San Juan. The Base is located in La Puntilla, Old San Juan, Puerto Rico.

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Enclosure: (1) USCG base San Juan Hurricane Rebuild Project – Evaluation of Effects on Federally Listed Marine Species and Critical Habitats

USCG BASE SAN JUAN HURRICANE REBUILD PROJECT

Evaluation of Effects on Federally Listed Marine Species and Critical Habitats

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repurposed as deemed appropriate by the USCG. The two-story Health Services Building would comprise parking space, Central Mail & Distribution, and the Barber on the first level, and health services on the second level. The new Guard House and access control location would be designed to provide specific lanes for entry to and exit from the Base, providing better security and Anti-Terrorism/Force Protection. A new primary roadway would be constructed to provide direct access from the western section of the Base to the eastern section and the piers. In addition, the USCG proposes to demolish four buildings (Buildings 120, 121 122, and 123) and relocate those services into the new buildings.

Under the Proposed Action, critical systems such as electrical, mechanical, and communications would be updated for flood resiliency. Two 256,000-gallon water tanks would be constructed in between Building 100 and the new Guard House to provide for water resiliency on the Base. All construction activities would occur in previously developed areas away from the waterfront.

The USCG is considering two alternatives to the Proposed Action:

1. **Preferred Action Alternative** – This alternative would implement the Proposed Action as described above.
2. **Build Alternative** – This alternative would be similar to the Proposed Action as described above except that the Building 100 Annex would be demolished, and the two 256,000-gallon water tanks would be placed within the demolished footprint. Construction of the water tanks in this location would allow for construction of a larger parking area between the water tanks and the proposed Guard House. In addition, the Build Alternative would construct a three-level Health Services Building with a third level for the Prevention & Planning sector.

NMFS Listed Species and Critical Habitats

Based on a query of the US Fish and Wildlife Service's (USFWS) Information for Planning and Consultation tool, two federally listed marine species have potential occurrence in the Proposed Action area (**Table 1**). All federally listed species under the jurisdiction of the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) that have the potential to occur in Puerto Rico are listed online at: <https://www.fisheries.noaa.gov/southeast/consultations/puerto-rico>. Of these species, only three have the potential to occur in the Proposed Action area (**Table 1**). Pelagic and deep water species, such as whales and most sharks, would not be present within the Proposed Action area. While the waters surrounding the base are within the scalloped hammerhead shark's (*Sphyrna lewini*) range, these waters have been found to be unoccupied by the species (*Endangered and Threatened Species; Determination on the Designation of Critical Habitat for Three Scalloped Hammerhead Shark Distinct Population Segments*, 80 Fed. Reg. 71774 [November 17, 2015]). In addition, no coral reefs, coral species, or reef fish are anticipated to occur in the immediate vicinity of the Base.

Table 1: Federally listed species with the potential to occur in the Proposed Action area

Species Common Name	Species Scientific Name	Federal Status	Recovery Plan	Critical Habitat Designation
Giant Manta Ray	<i>Manta birostris</i>	T (83 FR 2916; January 22, 2018)	December 2019	None
Hawksbill Sea Turtle	<i>Eretmochelys imbricata</i>	E (35 FR 8491; June 2, 1970)	December 1993	63 FR 46693; September 2, 1998
Leatherback Sea Turtle	<i>Demochelys coriacea</i>	E (35 FR 8491; June 2, 1970)	April 1992	44 FR 17710; March 23, 1979

E= Federally listed Endangered

T= Federally listed Threatened

No federally designated critical habitat occurs within or near Base San Juan. The USCG is consulting separately with the USFWS regarding potential impacts from the Proposed Action on species and resources under its jurisdiction. Descriptions of each species' preferred habitat and potential presence in the Proposed Action area are provided below.

Giant Manta Ray. This species is found in both offshore and nearshore waters. It typically inhabits oceanic, deep water habitats, but is also commonly found in shallow, productive, coastal waters, at depths of less than 10 meters. Further, this species may use estuarine waters near oceanic inlets as nursery grounds (Miller & Kilmovitch, 2017). This species will aggregate and feed in the shallower coastal waters, typically near reefs, seagrass beds, or sandy bottoms (Defenders of Wildlife, 2015). It is widely distributed throughout the Caribbean, and although it is not commonly observed in the waters surrounding Puerto Rico, the island is located within the species' known area of occupancy (Miller & Kilmovitch, 2017).

No observations of this species surrounding the Base have been recorded, and there are limited occurrences of this species throughout Puerto Rico (Miller & Kilmovitch, 2017). However, suitable habitat for the giant manta ray may be present surrounding the Proposed Action area. The San Juan Bay comprises estuarine waters with a direct connection to the Atlantic Ocean, and the waters along both the western and eastern waterfronts of the Base are shallow and comprised of sandy bottoms. Therefore, due to the presence of suitable habitat, the giant manta ray may have potential presence in the Proposed Action area vicinity.

Hawksbill Sea Turtle. Suitable habitat for hawksbill sea turtles includes coral reef habitat and open sea. Juvenile hawksbill sea turtles typically occupy the pelagic zone, migrating to shallower coastal feeding grounds and coral reef habitats after a few years. Hawksbills are also known to live in mangroves in bays and estuaries, particularly along the eastern shore of continents where coral reefs are absent. Nesting occurs throughout the Caribbean, and

Puerto Rico has been identified as the most significant nesting area in the US Atlantic (NOAA Fisheries, 2021a). In Puerto Rico, this species has not been observed along the northeastern coastline (USFWS, 2018a).

Suitable habitat for the hawksbill sea turtle is not expected to be present at or surrounding the Proposed Action area, with the exception of a small beach area in the western portion of the Base for nesting. The San Juan Bay comprises regularly flooded estuarine waters that do not support coral reef habitats or mangroves. Further, the Base is situated in a previously disturbed marine area that is heavily used for mooring and docking activities. Occasional, individual hawksbill nests have been observed along the western beach area; however, this area is not commonly used as a nesting site. Therefore, the USCG expects that hawksbill sea turtles may have potential presence in the Proposed Action area vicinity.

Leatherback Sea Turtle. Leatherback sea turtles are a pelagic species, and typically live in open, deep ocean waters. This species typically nests on wide sandy beaches with strong waves and access to deep water in tropical regions (USFWS, 2018b). Puerto Rico contains a majority of nesting colonies in the US (NOAA Fisheries, 2021b).

Leatherback sea turtles are known to occur across the entire northern coast of Puerto Rico, but are not likely to occur in the Proposed Action area. A small beach area is present on the eastern side of the Base, but is limited in size and the surrounding water is relatively shallow. Although no individuals have been observed in the area and the presence of human and vessel activity would act as a deterrent, the species has potential to utilize the western beachfront area for nesting. Therefore, leatherback sea turtles may have potential presence in the Proposed Action area vicinity.

Potential Impacts

Proposed activities in the east would require limited in-water work in the small area between existing piers Alpha and Bravo, immediately adjacent to the developed eastern waterfront. No dredging activities nor beach disturbance would be required. Limited aquatic habitat exists along the eastern portion of the Base, as the waterfront area is already hardened, and vessel traffic and operations are common. Potential construction of a new travel lift would not significantly alter aquatic habitat or result in the permanent loss of aquatic habitat. Any temporary increase in turbidity from sediment plumes would be small and settle out of the water column within a few hours. Disturbance to potential giant manta ray habitat and individuals, if any, would be minimal, and the Proposed Action would not include new maritime activities which could entangle or strike individuals.

No in-water work is proposed along the western portion of the Base. Further, the beach area in the west is excluded from the Proposed Action area, and would not be disturbed by construction or demolition activities. Nighttime lighting conditions during construction and operation of the Proposed Action would comply with Puerto Rico Law 218 of 2008, as amended, *Control and Prevention of the Lighting Pollution of Puerto Rico*, to the maximum

extent practicable, and the USFWS Caribbean Ecological Services Field Office's *General Project Design Guidelines* in order to minimize potential impacts to nesting and sea turtle hatchlings.

Existing topography at the Base is mostly level, and the land is primarily hardened throughout, including along the waterfront areas. Proposed construction and demolition activities could result in some minor increased runoff and sedimentation or the potential for an inadvertent release or spill during land disturbing activities. However, these disturbances would be temporary, localized, and minimized to the extent practicable through compliance with applicable Federal and Commonwealth regulations and standard construction best management practices (BMPs).

Conclusion

The federally listed giant manta ray, hawksbill sea turtle, and loggerhead sea turtle may potentially occur in vicinity of the Proposed Action area due to the presence of suitable habitat. Any occurring individuals would be limited, however, and unlikely to be affected by any stormwater runoff or increased sedimentation, as these disturbances would be temporary and rapidly settle out of the water column. Stray individuals would also likely quickly relocate to more suitable areas in the San Juan Bay. Nighttime construction activities and associated lighting would adhere to local regulations and USFWS design guidelines. Overall, in-water work under the Proposed Action would be minimal and occur in a small area along the developed waterfront. Therefore, the USCG concludes that the Proposed Action ***may affect, but is not likely to adversely affect*** the giant manta ray, hawksbill sea turtle, or loggerhead sea turtle.

References

- Defenders of Wildlife. (2015). *A Petition to List the Giant Manta Ray (Manta birostris), Reef Manta Ray (Manta alfredi), and Caribbean Manta Ray (Manta c.f. birostris) as Endangered, or Alternatively as Threatened, Species Pursuant to the Endangered Species Act and for the Concurrent Designation of Critical Habitat*. 143 pp. Retrieved March 2021 from <https://defenders.org/sites/default/files/defenders-of-wildlife-manta-ray-esa-listing-petition.pdf>
- Miller, M.H., and C. Kilmovitch. (2017). *Endangered Species Act Status Review Report: Giant Manta Ray (Manta birostris) and Reef Manta Ray (Manta alfredi)*. Report to National Marine Fisheries Service, Office of Protected Resources, Silver Spring, MD. 128 pp. Retrieved March 2021 from https://repository.library.noaa.gov/pdfjs/web/viewer.html?file=https://repository.library.noaa.gov/view/noaa/17096/noaa_17096_DS1.pdf
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- USFWS. (2018b). *Leatherback Sea Turtle*. Retrieved March 2021, from <https://www.fws.gov/southeast/pdf/fact-sheet/leatherback-sea-turtle-english.pdf>
- USFWS. (2021). *Information for Planning and Consultation*. Retrieved March 2021, from <https://ecos.fws.gov/ipac/>

Figure 1: Site Location





11000
13 May 2021

Mr. Luis Cruz-Arroyo
State Conservationist
USDA Natural Resources Conservation Service
Caribbean Area State Office
654 Muñoz Rivera Ave., Suite 604
Hato Rey, PR 00918

Greetings Mr. Cruz-Arroyo,

In accordance with the National Environmental Policy Act, the United States Coast Guard (USCG) is completing an environmental assessment for a proposed project to repair and replace facilities damaged by Hurricanes Irma and Maria in 2017 at USCG Base San Juan. The Base is located in La Puntilla, Old San Juan, Puerto Rico.

The damage caused by the hurricanes severely affected the USCG's mission readiness and the ability to conduct operations. This proposed action will increase the resiliency of facilities and infrastructure. The scope of work for this proposed project includes the construction of new Station and Health Services buildings, including supporting utilities and infrastructure. Additionally, the project will repair or renovate existing facilities that sustained extensive damage. Other facilities that cannot be repaired, are beyond their service life, and no longer effectively serve their intended purpose, will be demolished.

This resiliency and reconstitution project is essential to support personnel, enable mission readiness, and enhance operations in the event of hurricanes or similar large-scale disasters in the future.

Enclosed for your review is a project scope description. We respectfully request that you provide any questions or comments you may have on our project within **thirty (30) days** of receipt of this letter. Please direct your correspondence to:

Email - rick.d.hylton@uscg.mil

Mail - U.S. Coast Guard FDCC, Attn: Richard Hylton
5505 Robin Hood Rd, Suite K, Norfolk, VA 23513

If you have any questions or need further information, please contact Mr. Richard Hylton at (757) 852-3404 or rick.d.hylton@uscg.mil.

Sincerely,

A handwritten signature in blue ink, appearing to read "John F. Barresi".

Digitally signed by
BARRESIJOHN.F.JR.1.1187016629
Date: 2021.05.13 09:07:54 -04'00'

J. F. BARRESI
Captain, U. S. Coast Guard

Enclosure: (1) USCG Base San Juan Hurricane Rebuild Project - Project Scope Description

USCG BASE SAN JUAN HURRICANE REBUILD PROJECT

Project Scope Description

Base San Juan, herein referred to as the Base, is located on La Puntilla in Old San Juan, in San Juan Municipality (18°27'38.862"N, -66°7'1.2282"W). It is surrounded by the San Juan Bay to the east, south, and west, and by Old San Juan to the north (**Figure 1**). The Base encompasses approximately 20 acres and contains a unified command which includes Command staff and an Aids to Navigation Team (ANT), primarily engaged in logistics, operations, and response activities in the Eastern Caribbean. On 20 September 2017, Hurricane Maria made landfall in Puerto Rico and caused extensive damage to existing facilities and infrastructure at the Base. The existing facilities at the Base, including electrical and water utility systems, are not storm resilient and are unable to remain functional during major storm events. Failure to update damaged infrastructure to meet storm resiliency requirements will lead to increased vulnerability to weather and natural disasters at the Base and hinder the operational readiness and response of the USCG.

The Proposed Action consists of construction and demolition of various facilities in both the eastern and western sections of the Base (i.e., the Proposed Action area). The Proposed Action on the eastern section of the Base includes construction of a two-story combined Station (STA) Building/ANT/Command Center Building, herein referred to as the Station Building, near the eastern waterfront. The new Station Building would contain space for Shipping & Receiving, Facility Support, Shop and Maintenance operations, and drive-through boat bays on the first floor. A new Central Utility Plant (CUP) would be located on the second floor to achieve electrical resiliency. An existing historic building (Building 100) would be retrofitted to include space for STA/ANT, Response & Support, and Command Center operations in the eastern portion of the building; and office space for the Prevention & Planning sector in the western half of the building (i.e., the Building 100 Annex). The building housing Maintenance Assistance Team/Electronics System Support Detachment (MAT/ESD) (Building 101) would be renovated as well and continue to be used for these functions. Five buildings (Buildings 103, 104, 108, 110 and 111) would be demolished to accommodate the new construction. The eastern waterfront would remain as-is, with the exception of a proposed new travel lift between existing Piers Alpha and Bravo. Some in-water work would occur to support this construction, but no dredging activities would be required.

Proposed activities on the western portion of the Base include the construction of a new Health Services Building, construction of a new Guard House and access control area, and renovations to Buildings 124, 125, and 126. The interior of Building 124 would be renovated and repurposed as a Satellite Exchange Building. Building 125 would largely remain as-is aside from updates to the USCG Investigative Service (CGIS) wing and the demolition of a separate addition. Building 126 would undergo minimal interior renovations and would be repurposed as deemed appropriate by the USCG. The two-story Health Services Building

would comprise parking space, Central Mail & Distribution, and the Barber on the first level, and health services on the second level. The new Guard House and access control location would be designed to provide specific lanes for entry to and exit from the Base, providing better security and Anti-Terrorism/Force Protection. A new primary roadway would be constructed to provide direct access from the western section of the Base to the eastern section and the piers. In addition, the USCG proposes to demolish four buildings (Buildings 120, 121 122, and 123) and relocate those services into the new buildings.

Under the Proposed Action, critical systems such as electrical, mechanical, and communications would be updated for flood resiliency. Two 256,000-gallon water tanks would be constructed in between Building 100 and the new Guard House to provide for water resiliency on the Base. All construction activities would occur in previously developed areas away from the waterfront.

The USCG is considering two alternatives to the Proposed Action:

1. **Preferred Action Alternative** – This alternative would implement the Proposed Action as described above.
2. **Build Alternative** – This alternative would be similar to the Proposed Action as described above except that the Building 100 Annex would be demolished, and the two 256,000-gallon water tanks would be placed within the demolished footprint. Construction of the water tanks in this location would allow for construction of a larger parking area between the water tanks and the proposed Guard House. In addition, the Build Alternative would construct a three-level Health Services Building with a third level for the Prevention & Planning sector.

Figure 1: Site Location





11000
13 May 2021

Ms. Marelisa Rivera
Deputy Field Supervisor
U.S. Fish and Wildlife Service
Caribbean Ecological Services Field Office
P.O. Box 491 / Road 301, km 5.1
Boquerón, PR 00622

Greetings Ms. Rivera,

In accordance with the Endangered Species Act, the United States Coast Guard (USCG) is evaluating the impact on endangered species and critical habitat for a proposed project to repair and replace facilities damaged by Hurricanes Irma and Maria in 2017 at USCG Base San Juan. The Base is located in La Puntilla, Old San Juan, Puerto Rico.

The damage caused by the hurricanes severely affected the USCG's mission readiness and the ability to conduct operations. This proposed action will fortify and increase the resiliency of facilities and infrastructure. The scope of work for this proposed project includes the construction of new Station and Health Services buildings, including supporting utilities and infrastructure. Additionally, the project will repair or renovate existing facilities that sustained extensive damage. Other facilities that cannot be repaired, are beyond their service life, and no longer effectively serve their intended purpose, will be demolished.

This resiliency and reconstitution project is essential to support personnel, enable mission readiness, and enhance operations in the event of hurricanes or similar large-scale disasters in the future.

Enclosed for your review and concurrence is our evaluation of project effects on federally listed species and critical habitats. Our evaluation concludes that the project may affect, but is not likely to adversely affect the Hawksbill Sea Turtle and Leatherback Sea Turtle; and the project would have no effect on the West Indian Manatee or Puerto Rican Boa. We respectfully request your concurrence with this evaluation. If you have any questions or need further information, please contact Mr. Richard Hylton at (757) 852-3404 or rick.d.hylton@uscg.mil.

Sincerely,

A handwritten signature in blue ink, appearing to read "John F. Barresi".

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Date: 2021.05.13 08:56:35 -04'00'

J. F. BARRESI
Captain, U. S. Coast Guard

Enclosure: (1) USCG base San Juan Hurricane Rebuild Project – Evaluation of Effects on Federally Listed Species and Critical Habitats

USCG BASE SAN JUAN HURRICANE REBUILD PROJECT

Evaluation of Effects on Federally Listed Species and Critical Habitats

Base San Juan, herein referred to as the Base, is located on La Puntilla in Old San Juan, in San Juan Municipality (18°27'38.862"N, -66°7'1.2282"W). It is surrounded by the San Juan Bay to the east, south, and west, and by Old San Juan to the north (**Figure 1**). The Base encompasses approximately 20 acres and contains a unified command which includes Command staff and an Aids to Navigation Team (ANT), primarily engaged in logistics, operations, and response activities in the Eastern Caribbean. On 20 September 2017, Hurricane Maria made landfall in Puerto Rico and caused extensive damage to existing facilities and infrastructure at the Base. The existing facilities at the Base, including electrical and water utility systems, are not storm resilient and are unable to remain functional during major storm events. Failure to update damaged infrastructure to meet storm resiliency requirements will lead to increased vulnerability to weather and natural disasters at the Base and hinder the operational readiness and response of the USCG.

Proposed Action

The Proposed Action consists of construction and demolition of various facilities in both the eastern and western sections of the Base (i.e., the Proposed Action area). The Proposed Action on the eastern section of the Base includes construction of a two-story combined Station (STA) Building/ANT/Command Center Building, herein referred to as the Station Building, near the eastern waterfront. The new Station Building would contain space for Shipping & Receiving, Facility Support, Shop and Maintenance operations, and drive-through boat bays on the first floor. A new Central Utility Plant (CUP) would be located on the second floor to achieve electrical resiliency. An existing historic building (Building 100) would be retrofitted to include space for STA/ANT, Response & Support, and Command Center operations in the eastern portion of the building; and office space for the Prevention & Planning sector in the western half of the building (i.e., the Building 100 Annex). The building housing Maintenance Assistance Team/Electronics System Support Detachment (MAT/ESD) (Building 101) would be renovated as well and continue to be used for these functions. Five buildings (Buildings 103, 104, 108, 110 and 111) would be demolished to accommodate the new construction. The eastern waterfront would remain as-is, with the exception of a proposed new travel lift between existing Piers Alpha and Bravo. Some in-water work would occur to support this construction, but no dredging activities would be required.

Proposed activities on the western portion of the Base include the construction of a new Health Services Building, construction of a new Guard House and access control area, and renovations to Buildings 124, 125, and 126. The interior of Building 124 would be renovated and repurposed as a Satellite Exchange Building. Building 125 would largely remain as-is aside from updates to the USCG Investigative Service (CGIS) wing and the demolition of a

separate addition. Building 126 would undergo minimal interior renovations and would be repurposed as deemed appropriate by the USCG. The two-story Health Services Building would comprise parking space, Central Mail & Distribution, and the Barber on the first level, and health services on the second level. The new Guard House and access control location would be designed to provide specific lanes for entry to and exit from the Base, providing better security and Anti-Terrorism/Force Protection. A new primary roadway would be constructed to provide direct access from the western section of the Base to the eastern section and the piers. In addition, the USCG proposes to demolish four buildings (Buildings 120, 121 122, and 123) and relocate those services into the new buildings.

Under the Proposed Action, critical systems such as electrical, mechanical, and communications would be updated for flood resiliency. Two 256,000-gallon water tanks would be constructed in between Building 100 and the new Guard House to provide for water resiliency on the Base. All construction activities would occur in previously developed areas away from the waterfront.

The USCG is considering two alternatives to the Proposed Action:

1. **Preferred Action Alternative** – This alternative would implement the Proposed Action as described above.
2. **Build Alternative** – This alternative would be similar to the Proposed Action as described above except that the Building 100 Annex would be demolished, and the two 256,000-gallon water tanks would be placed within the demolished footprint. Construction of the water tanks in this location would allow for construction of a larger parking area between the water tanks and the proposed Guard House. In addition, the Build Alternative would construct a three-level Health Services Building with a third level for the Prevention & Planning sector.

Federally Listed Species

In accordance with the US Fish & Wildlife Service (USFWS) Caribbean Field Office's project review process, the USFWS Information for Planning and Consultation (IPaC) database was queried to identify federally listed species with the potential to occur in the Proposed Action area. The resulting table (**Table 1**) provides a list of four federally listed species with the potential to occur in the Proposed Action area. The USCG is corresponding separately with the Puerto Rico Department of Natural and Environmental Resources (DRNA) to determine the presence of Commonwealth-listed species, and with the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) to determine the presence of federally listed species under its jurisdiction.

Table 1: Federally listed species with the potential to occur in the Proposed Action area

Category	Species Common Name	Species Scientific Name	Federal Status
Mammals	West Indian manatee	<i>Trichechus manatus</i>	T
Reptiles	Hawksbill sea turtle	<i>Eretmochelys imbricata</i>	E
	Leatherback sea turtle	<i>Dermochelys coriacea</i>	E
	Puerto Rican boa	<i>Chilabothrus inornatus</i>	E

Federal Status Key:

E = Endangered

T = Threatened

No federally designated critical habitat occurs on Base San Juan. An assessment of the federally listed species with the potential to occur in the Proposed Action area is provided below, and summarized in **Table 2**.

MAY AFFECT

The USCG has determined that implementation of the Proposed Action *may affect, but is not likely to adversely affect* the hawksbill sea turtle and leatherback sea turtle. The following rationale is provided in support of these determinations.

- **Hawksbill Sea Turtle** – Occasional and limited occurrences of individual nests of hawksbill sea turtles have been observed along a beach area in the western portion of the Base, as noted in correspondence from USFWS on 19 March 2021 (**Attachment 1**). This area is excluded from the Proposed Action area. Any in-water activities would be limited to a small area between piers Alpha and Bravo along the developed eastern waterfront and would not involve dredging or beach disturbance. Further, nighttime lighting conditions during construction and operation of the Proposed Action would comply with Puerto Rico Law 218 of 2008, as amended (*Control and Prevention of the Lighting Pollution of Puerto Rico*) to the maximum extent practicable, and the USFWS Caribbean Ecological Services Field Office's *General Project Design Guidelines* (included in **Attachment 1**) in order to minimize impacts to nesting and sea turtle hatchlings. In addition, this species is not common in the waters surrounding the Base as they prefer coral reef and mangrove habitats, which are not supported in the San Juan Bay (USFWS, 2018b; NOAA Fisheries, 2021). High levels of human activity and vessel traffic at and surrounding the Base would likely deter sea turtles from frequenting waters surrounding the piers. Therefore, the Proposed Action *may affect, but is not likely to adversely affect* the hawksbill sea turtle.
- **Leatherback Sea Turtle** – This species has limited potential to occur near Base San Juan. Typical aquatic habitat for this species consists of open, deep ocean waters, while nesting habitat includes wide, sandy beaches with access to deep water (USFWS, 2018c). While the beach along the western portion of the Base has the potential to be used for nesting, this beach is limited in size, the surrounding water is

relatively shallow, and this turtle species has not been previously documented in this area.(USFWS, 2018c). Furthermore, in-water activities would be limited to only a small area between piers Alpha and Bravo along the developed eastern waterfront. Nighttime lighting conditions during construction and operation of the Proposed Action would adhere to Puerto Rico Law 218 of 2008 to the maximum extent practicable, and the USFWS Caribbean Ecological Services Field Office’s *General Project Design Guidelines* in order to minimize impacts to nesting and sea turtle hatchlings. Further, high levels of human activity and vessel traffic at and surrounding the Base would likely deter sea turtles from frequenting the surrounding waters. Therefore, the Proposed *may affect, but is not likely to adversely affect* the leatherback sea turtle.

NO EFFECT

The USCG has determined that implementation of the Proposed Action would have *no effect* on West Indian manatee or Puerto Rican boa. The following rationale is provided in support of these determinations.

- **West Indian Manatee** – Manatees in Puerto Rico are typically found along the eastern and southern coastlines, although they have been known to occur in the San Juan Bay, which surrounds Base San Juan (USFWS, 2018a). Suitable habitat, however, is not likely to be present in the water on the eastern side of the Base. Manatees prefer shallow-water habitats, and feed on seagrass species that also grow in shallow waters; however, the water depths in this area range between approximately 18 to 31 feet, and no seagrass beds have been documented surrounding the Base (Miller & Lugo, 2009; USCG, 2011). No in-water work would occur on the western side of the Base. Therefore, the Proposed Action would have *no effect* on the West Indian manatee.
- **Puerto Rican Boa** – This species is found throughout Puerto Rico, and primarily occurs in forested areas and in the karst region in the north (DRNA, 2016; USFWS 2018d). Suitable habitat for this species is therefore not likely to be present; the Base does not exhibit typical karst topography, and does not contain forested areas due to its developed nature. As a result, this species is not anticipated to be present at Base San Juan, and the Proposed Action would have *no effect* on the Puerto Rican boa.

Table 2: Effect determinations for federally listed species with the potential to occur

Species Name	Effect Determination	Conservation Measures
West Indian manatee (<i>Trichechus manatus</i>)	No effect	No conservation measures
Hawksbill sea turtle (<i>Eretmochelys imbricata</i>)	Not likely to adversely affect	USFWS Caribbean Ecological Services Field Office's <i>General Project Design Guidelines</i>
Leatherback sea turtle (<i>Dermochelys coriacea</i>)	Not likely to adversely affect	USFWS Caribbean Ecological Services Field Office's <i>General Project Design Guidelines</i>
Puerto Rican boa (<i>Chilobothrus inornatus</i>)	No effect	No conservation measures

Conclusion

The USCG has determined that implementation of the Proposed Action ***may affect, but is not likely to adversely affect*** the hawksbill sea turtle and leatherback sea turtle, given that only minor in-water work is proposed and these species are likely to be limited in the Proposed Action area. Nighttime construction activities and associated lighting would adhere to local regulations and USFWS design guidelines. The USCG has determined that implementation of the Proposed Action would have ***no effect*** on West Indian manatee or Puerto Rican boa as these species are not expected to occur in the Proposed Action area.

References

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Figure 1: Site Location



Site Photos



Site of proposed Health Services Building



Site of proposed Health Services Building



Eastern waterfront area



Developments along the eastern waterfront area



Eastern waterfront piers



Eastern waterfront pier



Western waterfront area



Western beachfront



Western beachfront



Paved surfaces in the western area



Developments in the western area

USFWS IPaC Species List



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Caribbean Ecological Services Field Office
Post Office Box 491
Boqueron, PR 00622-0491
Phone: (787) 851-7297 Fax: (787) 851-7440
<http://www.fws.gov/caribbean/es>

In Reply Refer To:

March 19, 2021

Consultation Code: 04EC1000-2021-SLI-0506

Event Code: 04EC1000-2021-E-00844

Project Name: USCG Hurricane Rebuild at Base San Juan

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

THE FOLLOWING SPECIES LIST IS NOT A SECTION 7 CONSULTATION. PLEASE CONTACT OUR OFFICE TO COMPLETE THE CONSULTATION PROCESS

The purpose of the Endangered Species Act (Act) is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect those species and/or their designated critical habitat.

Federal agencies are required to "request of the Secretary of Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

The enclosed species list provides information to assist with the consultation process with the U.S. Fish and Wildlife Service (Service) under section 7 of the Act. However, the enclosed species list **does not complete the required consultation process**. The species list identifies threatened, endangered, proposed and candidate species, as well as proposed and designated critical habitats, that may occur within the boundary of your proposed project and/or may be affected by your proposed project.

A discussion between the Federal agency and the Service should include what types of listed species may occur in the proposed action area, and what effect the proposed action may have on those species. This process initiates informal consultation.

When a Federal agency, after discussions with the Service, determines that the proposed action is not likely to adversely affect any listed species, or adversely modify any designated critical habitat, and the Service concurs, the informal consultation is complete and the proposed project

moves ahead. If the proposed action is suspected to affect a listed species or modify designated critical habitat, the Federal agency may then prepare a Biological Assessment (BA) to assist in its determination of the project's effects on species and their habitat.

However, a BA is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a BA where the agency provides the Service with an evaluation on the likely effects of the action to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a BA are described at 50 CFR 402.12.

If a Federal agency determines, based on its BA or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to further consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species, and proposed critical habitat be addressed within the consultation process.

More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at:

<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in

the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

For more information:

U.S. Fish and Wildlife Service
Caribbean Ecological Services Field Office
Road 301, Km. 5.1 / Bo. Corozo
Boquerón, PR 00622
Telephone: (787) 851-7297
Fax: (787) 851-7440
Email: caribbean_es@fws.gov
<http://www.fws.gov/caribbean/es>

Send all documents to:

U.S. Fish and Wildlife Service
P.O. Box 491
Boquerón, Puerto Rico 00622

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Marine Mammals
- Wetlands

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Caribbean Ecological Services Field Office

Post Office Box 491

Boqueron, PR 00622-0491

(787) 851-7297

Project Summary

Consultation Code: 04EC1000-2021-SLI-0506

Event Code: 04EC1000-2021-E-00844

Project Name: USCG Hurricane Rebuild at Base San Juan

Project Type: ** OTHER **

Project Description: On September 20, 2017, Hurricane Maria made landfall in Puerto Rico and caused extensive damage to the US Coast Guard's Base San Juan. The storm caused extensive damage to infrastructure and facilities at the Base. Existing facilities are not storm resilient and are unable to remain functional during major storm events. The Proposed Action for this project includes multiple construction, demolition, and renovation activities to rebuild damaged facilities at Base San Juan, and update critical systems for storm resiliency. Some in-water work may also be occur in the east, if a new travel lift pier is constructed. There are two action alternatives under the Proposed Action: the Preferred Action Alternative and the Build Alternative. The majority of proposed activities under these two alternatives would remain the same.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@18.460194899999998,-66.1165263710117,14z>



Counties: San Juan County, Puerto Rico

Endangered Species Act Species

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
West Indian Manatee <i>Trichechus manatus</i> There is final critical habitat for this species. The location of the critical habitat is not available. <i>This species is also protected by the Marine Mammal Protection Act, and may have additional consultation requirements.</i> Species profile: https://ecos.fws.gov/ecp/species/4469	Threatened

Reptiles

NAME	STATUS
Hawksbill Sea Turtle <i>Eretmochelys imbricata</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3656 General project design guidelines: https://ecos.fws.gov/docs/tess/ipac_project_design_guidelines/doc4769.pdf	Endangered
Leatherback Sea Turtle <i>Dermochelys coriacea</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1493 General project design guidelines: https://ecos.fws.gov/docs/tess/ipac_project_design_guidelines/doc4769.pdf	Endangered
Puerto Rican Boa <i>Epicrates inornatus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6628 General project design guidelines: https://ecos.fws.gov/docs/tess/ipac_project_design_guidelines/doc6757.pdf	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

THERE ARE NO FWS MIGRATORY BIRDS OF CONCERN WITHIN THE VICINITY OF YOUR PROJECT AREA.

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical](#)

[Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Marine Mammals

Marine mammals are protected under the [Marine Mammal Protection Act](#). Some are also protected under the Endangered Species Act¹ and the Convention on International Trade in Endangered Species of Wild Fauna and Flora².

The responsibilities for the protection, conservation, and management of marine mammals are shared by the U.S. Fish and Wildlife Service [responsible for otters, walruses, polar bears, manatees, and dugongs] and NOAA Fisheries³ [responsible for seals, sea lions, whales, dolphins, and porpoises]. Marine mammals under the responsibility of NOAA Fisheries are **not** shown on this list; for additional information on those species please visit the [Marine Mammals](#) page of the NOAA Fisheries website.

The Marine Mammal Protection Act prohibits the take of marine mammals and further coordination may be necessary for project evaluation. Please contact the U.S. Fish and Wildlife Service Field Office shown.

-
1. The [Endangered Species Act](#) (ESA) of 1973.
 2. The [Convention on International Trade in Endangered Species of Wild Fauna and Flora](#) (CITES) is a treaty to ensure that international trade in plants and animals does not threaten their survival in the wild.
 3. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

NAME

West Indian Manatee *Trichechus manatus*

Species profile: <https://ecos.fws.gov/ecp/species/4469>

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

ESTUARINE AND MARINE DEEPWATER

- [E1UBL](#)

USFWS Correspondence, 19 March 2021

Kisak, Natalie

From: Lopez, Felix <felix_lopez@fws.gov>
Sent: Friday, March 19, 2021 1:05 PM
To: Kisak, Natalie
Subject: [EXTERNAL] USCG Hurricane Rebuild at Base San Juan

Hi, we just got the IPaC notice for the US Coast Guard project. I would not worry about the PR boa since its not found in old San Juan, however the CG base does have a few pocket beaches that get a sea turtle nest every now and then, mostly hawksbill sea turtles.

Also PR has a local dark sky regulation for all new construction. So if the new rebuild can minimize extraneous night lighting as much as possible using full cut off lighting that would not interfere with base security it would be great.

Any questions please feel free to call.

Felix Lopez
US Fish and Wildlife Service
Caribbean Ecological Services FO
787 510 5208 Cell

No one knows what we do, but we are the only ones that can do it and we do it well.....

**USFWS Caribbean Ecological Services Field
Office
General Project Design Guidelines**

General Project Design Guidelines (3 Species)

Generated March 19, 2021 11:57 AM MDT, IPaC v5.56.2



IPaC - Information for Planning and Consultation (<https://ecos.fws.gov/ipac/>): A project planning tool to help streamline the U.S. Fish and Wildlife Service environmental review process.

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Species Document Availability	<u>1</u>
Hawksbill Sea Turtle and 1 more species - Caribbean Ecological Services Field Office	<u>2</u>
Puerto Rican Boa - Caribbean Ecological Services Field Office	<u>4</u>

Species Document Availability

Species with general design guidelines

Hawksbill Sea Turtle *Eretmochelys imbricata*

Leatherback Sea Turtle *Dermochelys coriacea*

Puerto Rican Boa *Epicrates inornatus*

Species without general design guidelines available

West Indian Manatee *Trichechus manatus*

General Project Design Guidelines - West Indian Manatee and 3 more species

Published by Caribbean Ecological Services Field Office for the following species included in your project

West Indian Manatee *Trichechus manatus*

Hawksbill Sea Turtle *Eretmochelys imbricata*

Leatherback Sea Turtle *Dermochelys coriacea*

Puerto Rican Boa *Epicrates inornatus*

Sea turtle lighting

The proposed project falls within the range of the endangered hawksbill sea turtle (*Eretmochelys imbricata*) and the endangered leatherback sea turtle (*Dermochelys coriacea*). Based on the information provided we have the following comments and recommendations:

- 1) The nearby sand beach supports nesting habitat for the above mentioned sea turtles. The project should be designed to assure that no lights are visible from the beach.
- 2) The project should also comply with Puerto Rico Law 218 of 2008, Control and Prevention of the Lighting Pollution of Puerto Rico and the PR EQB 2014 Regulation to Control and Prevent Light Contamination. These laws and regulations clearly establish public policy that acceptable illumination fixtures are those that shield the light source to minimize glare impact on habitats. This applies to existing and new construction and for private lighting systems and will be used to develop new strategies to eliminate excessive lighting in all areas but in particular in beach zones.
- 3) Given the advances in technology, we recommend LED lighting for the luminaries. We recommend that all lights facing the beach and parking area also have LED lighting. The LED lighting and luminaries should be sea turtle friendly.
- 4) The concept of sea turtle friendly lighting is to use specific types of light sources that emit a wavelength of 450 nanometers or longer. This wavelength is virtually invisible to sea turtles if viewed indirectly. If the lights can be directly view from the beach, then the light source is paired with a lighting fixture that directly controls the direction and beam spread of the lighting. This means that light is effectively and accurately directed at the areas of concern without wasteful light.
- 5) LEDs should be of the proper wavelength (true red, orange or amber colored diode) and should not consist of white or blue LEDs with filter material. The following websites have information regarding the latest in sea turtle friendly lighting:

<http://seaturtlelighting.net>
http://www.superiorlighting.com/Turtle_Friendly_Lights_s/864.htm
<http://www.ledsource.com/blog/leds-provide-turtle-friendly-lighting>
- 6) The project should be landscaped with plants such as sea grape, button wood, and other coastal salt tolerant vegetation that can also be used to screen the night time lighting from the beach.
- 7) The project construction plans should include a lighting plan indicating the placement of lights, type of bulb and light orientation. The planting of vegetation, can also be included as part of the lighting plan. This plan should be submitted to our office.

For more information please contact us at (787)851-7297 or by email at caribbean_es@fws.gov

General Project Design Guidelines - West Indian Manatee and 3 more species

Published by Caribbean Ecological Services Field Office - Publication Date: November 3, 2020 for the following species included in your project

West Indian Manatee *Trichechus manatus*

Hawksbill Sea Turtle *Eretmochelys imbricata*

Leatherback Sea Turtle *Dermochelys coriacea*

Puerto Rican Boa *Epicrates inornatus*



U.S. FISH AND WILDLIFE SERVICE CARIBBEAN ECOLOGICAL SERVICES FIELD OFFICE

Conservation Measures for the Puerto Rican boa (*Chilabothrus inornatus*)

Section 7 (a)(1) of the Endangered Species Act (ESA) charges Federal agencies to aid in the conservation of listed species, and section 7 (a)(2) requires the agencies, through consultation with the U.S. Fish and Wildlife Service (Service), to ensure their activities are not likely to jeopardize the continued existence of listed species or adversely modify designated critical habitats. Section 7 applies to the management of Federal lands as well as Federal actions that may affect listed species, such as Federal approval of private activities through the issuance of Federal funding, permits, licenses, or other actions. Any person that injures, captures, or kills a Puerto Rico boa is subject to penalties under the ESA. If Federal funds or permits are needed, the funding or permitting agency should initiate Section 7 consultation with the Service. To initiate a consultation under the Section 7 of the ESA, you must submit a project package with the established minimum requirements. These conservation measures should be incorporated into the project plans to minimize possible impacts to the species.

The endangered Puerto Rican (PR) boa (*Chilabothrus inornatus*, formerly *Epicrates inornatus*) is the largest endemic snake species that inhabits Puerto Rico. The PR boa is non-venomous and does not pose any life threatening danger to humans, but some individuals may try to bite if disturbed or during capture or handling. Its body color ranges from tan to dark brown with irregular diffuse marking on the dorsum, but some individuals lack marking and are uniformly dark. Juveniles may have a reddish color with more pronounced markings. In general, as they mature, their body color tends to darken.



The Puerto Rican boa was federally listed in 1970. Currently, the species has an island-wide distribution and occurs in a wide variety of habitat types ranging from wet montane to subtropical dry forest, and can be found from mature forest to areas with different degrees of human disturbance like roadsides or houses, especially if near their habitat in rural areas. This boa is considered mostly nocturnal, remaining less active, concealed or basking under the sun during the day.

The Service has developed the following conservation measures with the purpose of assisting others to avoid or minimize adverse effects to the PR boa and its habitat. These recommendations may be incorporated into new project plans and under certain circumstances into existing projects. Depending on the project, additional conservation measures can be implemented besides the ones presented in this document.

Conservation Measures:

1. Inform all project personnel about the potential presence of the PR boa in areas where the proposed work will be conducted. A pre-construction meeting should be conducted to inform all project personnel about the need to avoid harming the species as well as penalties for harassing or harming PR boas. An educational poster or sign with photo or illustration of the species should be displayed at the project site.
2. Prior to any construction activity, including removal of vegetation and earth movements, the boundaries of the project and areas to be excluded and protected should be clearly marked in the project plan and in the field in order to avoid further habitat degradation into forested and conservation areas.
3. Once areas are clearly marked, and prior to the use of heavy machinery and any construction activity (including removal of vegetation and earth movement), a biologist or personnel with experience on this species should survey the areas to be cleared to verify the presence of any PR boa within the work area.
4. The PR boa is considered more active at night. Thus, in order to maximize its detection, the species should be searched at nights prior to habitat disturbance.
5. Once the area has been searched for PR boas, vegetation should first be cleared by hand to the maximum extent possible. Vegetation should be cut about one meter above ground prior to the use of heavy machinery for land clearing. Cutting vegetation by hand will allow boas present on site to move away on their own to adjacent available habitat. Any stone walls or naturally occurring rock piles must be carefully dismantled by hand as these are refuges for the snake. This will allow any boas present to vacate the site without injury.
6. For all boa sightings (dead or alive), record the time and date of the sighting and the specific location where it was found. PR boa data should also include a photo of the animal (dead or alive), site GPS coordinates, the time and date, and comments on how the animal was detected and its behavior.

7. If a PR boa is found within any of the working or construction areas, activities should stop at that area and information recorded (see #6). **Do not capture the boa.** If boas need to be moved out of harm's way, designated personnel shall immediately contact the Puerto Rico Department of Natural and Environmental Resources (PRDNER) Rangers for safe capture and relocation of the animal (PRDNER phone #: 787-724-5700, 787-230-5550, 787-771-1124). If immediate relocation is not an option, project-related activities at this area must stop until the boa moves out of harm's way on its own. Activities at other work sites, where no boas have been found after surveying the area, may continue.
8. If a PR boa is captured by the PRDNER, record the name of the PRDNER staff and information on where the PR boa will be taken. This information should be reported to the Service.
9. Measures should be taken to avoid and minimize PR boa casualties by heavy machinery or motor vehicles being used on site. Any heavy machinery left on site (staging) or near potential PR boa habitat (within 50 meters of potential boa habitat), needs to be thoroughly inspected each morning before work starts to ensure that no boas have sheltered within engine compartments or other areas of the equipment. If PR boas are found within vehicles or equipment, do not capture the animal and let it move on its own or call PRDNER Rangers for safe capture and relocation of the animal (see #7). If not possible, the animal should be left alone until it leaves the vehicle on its own.
10. PR boas may seek shelter in debris piles. Measures should be taken to avoid and minimize boa casualties associated with sheltering in debris piles as a result of project activities. Debris piles should be placed far away from forested areas. Prior to moving, disposing or shredding, debris piles should be carefully inspected for the presence of boas. If debris piles will be left on site, we recommend they be placed in areas that will not be disturbed in the future.
11. If a dead PR boa is found, immediately cease all work in that area and record the information accordingly (see #6). If the PR boa was accidentally? killed as part of the project actions, please include information on what conservation measures had been implemented and what actions that will be taken to avoid further killings. A dead boa report should be sent by email (see contacts below) to the Service within 48 hours of the event.
12. Projects must comply with all state laws and regulations. Please contact the PRDNER for further guidance.

If you have any questions regarding the above conservation measures, please contact the Service:

- Marelisa Rivera, Deputy Field Supervisor
 - Email: maRELISA_rivera@fws.gov
 - Office phone 787-851-7297 ext. 206 or mobile 787-510-5219
- José Cruz-Burgos, Endangered Species Coordinator
 - Email: jose_cruz-burgos@fws.gov
 - Office phone 787-851-7297 ext. 218 or mobile 787-510-5206



11000
13 May 2021

Dr. Nilda M. Jiménez
Coordinator
Endangered Species Program
Department of Natural and Environmental Resources
PO Box 366147
San Juan, PR 00936

Greetings Dr. Jiménez,

In accordance with the National Environmental Policy Act, the United States Coast Guard (USCG) is completing an environmental assessment for a proposed project to repair and replace facilities damaged by Hurricanes Irma and Maria in 2017 at USCG Base San Juan. The Base is located in La Puntilla, Old San Juan, Puerto Rico.

The damage caused by the hurricanes severely affected the USCG's mission readiness and the ability to conduct operations. This proposed action will increase the resiliency of facilities and infrastructure. The scope of work for this proposed project includes the construction of new Station and Health Services buildings, including supporting utilities and infrastructure. Additionally, the project will repair or renovate existing facilities that sustained extensive damage. Other facilities that cannot be repaired, are beyond their service life, and no longer effectively serve their intended purpose, will be demolished.

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Enclosed for your review is a project scope description. We respectfully request that you provide any questions or comments you may have on our project within **thirty (30) days** of receipt of this letter. Please direct your correspondence to:

Email - rick.d.hylton@uscg.mil

Mail - U.S. Coast Guard FDCC, Attn: Richard Hylton
5505 Robin Hood Rd, Suite K, Norfolk, VA 23513

If you have any questions or need further information, please contact Mr. Richard Hylton at (757) 852-3404 or rick.d.hylton@uscg.mil.

Sincerely,

A handwritten signature in blue ink, appearing to read "John F. Barresi".

Digitally signed by
BARRESI.JOHN.F.JR.II.1187016629
Date: 2021.05.13 09:09:28 -04'00'

J. F. BARRESI
Captain, U. S. Coast Guard

Enclosure: (1) USCG Base San Juan Hurricane Rebuild Project - Project Scope Description

USCG BASE SAN JUAN HURRICANE REBUILD PROJECT

Project Scope Description

Base San Juan, herein referred to as the Base, is located on La Puntilla in Old San Juan, in San Juan Municipality (18°27'38.862"N, -66°7'1.2282"W). It is surrounded by the San Juan Bay to the east, south, and west, and by Old San Juan to the north (**Figure 1**). The Base encompasses approximately 20 acres and contains a unified command which includes Command staff and an Aids to Navigation Team (ANT), primarily engaged in logistics, operations, and response activities in the Eastern Caribbean. On 20 September 2017, Hurricane Maria made landfall in Puerto Rico and caused extensive damage to existing facilities and infrastructure at the Base. The existing facilities at the Base, including electrical and water utility systems, are not storm resilient and are unable to remain functional during major storm events. Failure to update damaged infrastructure to meet storm resiliency requirements will lead to increased vulnerability to weather and natural disasters at the Base and hinder the operational readiness and response of the USCG.

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Proposed activities on the western portion of the Base include the construction of a new Health Services Building, construction of a new Guard House and access control area, and renovations to Buildings 124, 125, and 126. The interior of Building 124 would be renovated and repurposed as a Satellite Exchange Building. Building 125 would largely remain as-is aside from updates to the USCG Investigative Service (CGIS) wing and the demolition of a separate addition. Building 126 would undergo minimal interior renovations and would be repurposed as deemed appropriate by the USCG. The two-story Health Services Building

would comprise parking space, Central Mail & Distribution, and the Barber on the first level, and health services on the second level. The new Guard House and access control location would be designed to provide specific lanes for entry to and exit from the Base, providing better security and Anti-Terrorism/Force Protection. A new primary roadway would be constructed to provide direct access from the western section of the Base to the eastern section and the piers. In addition, the USCG proposes to demolish four buildings (Buildings 120, 121 122, and 123) and relocate those services into the new buildings.

Under the Proposed Action, critical systems such as electrical, mechanical, and communications would be updated for flood resiliency. Two 256,000-gallon water tanks would be constructed in between Building 100 and the new Guard House to provide for water resiliency on the Base. All construction activities would occur in previously developed areas away from the waterfront.

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Figure 1: Site Location





11000
13 May 2021

Mr. Gabriel Hernández Rodríguez
Assistant Secretary
Permit Management Office
PO Box 41179
Minillas Station, San Juan, PR 00940

Greetings Mr. Hernández,

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Mail - U.S. Coast Guard FDCC, Attn: Richard Hylton
5505 Robin Hood Rd, Suite K, Norfolk, VA 23513

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Digitally signed by
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Date: 2021.05.13 09:11:05 -04'00'

J. F. BARRESI
Captain, U. S. Coast Guard

USCG BASE SAN JUAN HURRICANE REBUILD PROJECT

Project Scope Description

Base San Juan, herein referred to as the Base, is located on La Puntilla in Old San Juan, in San Juan Municipality (18°27'38.862"N, -66°7'1.2282"W). It is surrounded by the San Juan Bay to the east, south, and west, and by Old San Juan to the north (**Figure 1**). The Base encompasses approximately 20 acres and contains a unified command which includes Command staff and an Aids to Navigation Team (ANT), primarily engaged in logistics, operations, and response activities in the Eastern Caribbean. On 20 September 2017, Hurricane Maria made landfall in Puerto Rico and caused extensive damage to existing facilities and infrastructure at the Base. The existing facilities at the Base, including electrical and water utility systems, are not storm resilient and are unable to remain functional during major storm events. Failure to update damaged infrastructure to meet storm resiliency requirements will lead to increased vulnerability to weather and natural disasters at the Base and hinder the operational readiness and response of the USCG.

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Figure 1: Site Location





11000
13 May 2021

Mr. Joel A. Pizá Batiz
Executive Director
Puerto Rico Ports Authority
PO Box 362829
San Juan, PR 00936

Greetings Mr. Pizá,

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Figure 1: Site Location



U.S. Department of
Homeland Security

**United States
Coast Guard**



Commanding Officer
United States Coast Guard
Facilities Design and Construction Center

5505 Robin Hood Road, Suite K
Norfolk, VA 23513-2431
Phone: 757-852-3404
Fax: 757-852-3495

11000
13 May 2021

Mr. Manuel A.G. Hidalgo Rivera
Acting President
Puerto Rico Planning Board
PO Box 41119
San Juan, PR 00940

Greetings Mr. Hidalgo,

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11000
13 May 2021

Honorable Miguel Romero
Mayor
Municipality of San Juan
PO Box 70179
San Juan, PR 00936

Greetings Mr. Romero,

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Base San Juan, herein referred to as the Base, is located on La Puntilla in Old San Juan, in San Juan Municipality (18°27'38.862"N, -66°7'1.2282"W). It is surrounded by the San Juan Bay to the east, south, and west, and by Old San Juan to the north (**Figure 1**). The Base encompasses approximately 20 acres and contains a unified command which includes Command staff and an Aids to Navigation Team (ANT), primarily engaged in logistics, operations, and response activities in the Eastern Caribbean. On 20 September 2017, Hurricane Maria made landfall in Puerto Rico and caused extensive damage to existing facilities and infrastructure at the Base. The existing facilities at the Base, including electrical and water utility systems, are not storm resilient and are unable to remain functional during major storm events. Failure to update damaged infrastructure to meet storm resiliency requirements will lead to increased vulnerability to weather and natural disasters at the Base and hinder the operational readiness and response of the USCG.

The Proposed Action consists of construction and demolition of various facilities in both the eastern and western sections of the Base (i.e., the Proposed Action area). The Proposed Action on the eastern section of the Base includes construction of a two-story combined Station (STA) Building/ANT/Command Center Building, herein referred to as the Station Building, near the eastern waterfront. The new Station Building would contain space for Shipping & Receiving, Facility Support, Shop and Maintenance operations, and drive-through boat bays on the first floor. A new Central Utility Plant (CUP) would be located on the second floor to achieve electrical resiliency. An existing historic building (Building 100) would be retrofitted to include space for STA/ANT, Response & Support, and Command Center operations in the eastern portion of the building; and office space for the Prevention & Planning sector in the western half of the building (i.e., the Building 100 Annex). The building housing Maintenance Assistance Team/Electronics System Support Detachment (MAT/ESD) (Building 101) would be renovated as well and continue to be used for these functions. Five buildings (Buildings 103, 104, 108, 110 and 111) would be demolished to accommodate the new construction. The eastern waterfront would remain as-is, with the exception of a proposed new travel lift between existing Piers Alpha and Bravo. Some in-water work would occur to support this construction, but no dredging activities would be required.

Proposed activities on the western portion of the Base include the construction of a new Health Services Building, construction of a new Guard House and access control area, and renovations to Buildings 124, 125, and 126. The interior of Building 124 would be renovated and repurposed as a Satellite Exchange Building. Building 125 would largely remain as-is aside from updates to the USCG Investigative Service (CGIS) wing and the demolition of a separate addition. Building 126 would undergo minimal interior renovations and would be repurposed as deemed appropriate by the USCG. The two-story Health Services Building

would comprise parking space, Central Mail & Distribution, and the Barber on the first level, and health services on the second level. The new Guard House and access control location would be designed to provide specific lanes for entry to and exit from the Base, providing better security and Anti-Terrorism/Force Protection. A new primary roadway would be constructed to provide direct access from the western section of the Base to the eastern section and the piers. In addition, the USCG proposes to demolish four buildings (Buildings 120, 121 122, and 123) and relocate those services into the new buildings.

Under the Proposed Action, critical systems such as electrical, mechanical, and communications would be updated for flood resiliency. Two 256,000-gallon water tanks would be constructed in between Building 100 and the new Guard House to provide for water resiliency on the Base. All construction activities would occur in previously developed areas away from the waterfront.

The USCG is considering two alternatives to the Proposed Action:

1. **Preferred Action Alternative** – This alternative would implement the Proposed Action as described above.
2. **Build Alternative** – This alternative would be similar to the Proposed Action as described above except that the Building 100 Annex would be demolished, and the two 256,000-gallon water tanks would be placed within the demolished footprint. Construction of the water tanks in this location would allow for construction of a larger parking area between the water tanks and the proposed Guard House. In addition, the Build Alternative would construct a three-level Health Services Building with a third level for the Prevention & Planning sector.

Figure 1: Site Location



From: Pace Wilber - NOAA Federal [REDACTED]
Sent: Friday, May 21, 2021 9:42 AM
To: Wu, Charlene [REDACTED]
Cc: Jose Rivera [REDACTED]
Subject: [EXTERNAL] NMFS response Re: Project Review Request - NOAA EFH

Hello Charlene.

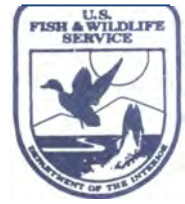
NOAA's National Marine Fisheries Service (NMFS) reviewed the rehabilitation of USCG San Juan facilities described in the letter dated 13 May 2012¹. Based on the information in the letter, we confirm the USCG's determination that the proposed work would occur within or near essential fish habitat (EFH) designated by the Caribbean Fishery Management Council or the NMFS. The NMFS anticipates any adverse effects occurring from the work to NOAA-trust resources would be minimal. This determination is due to the minimal amount of work proposed for tidal waters and to USCG's commitment to use industry-standard BMPs to limit the effects of upland work from affecting tidal areas. Consequently, the NMFS offers no EFH conservation recommendations pursuant to the Magnuson-Stevens Fishery Conservation and Management Act and no recommendations under the Fish and Wildlife Coordination Act. If further coordination on this action is needed, please let us know.

Pace



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Caribbean Ecological Services Field Office
PO Box 491
Boquerón, PR 00622



In Reply Refer to:
FWS/R4/CESFO/72127-104

Captain John F. Barresi
U.S. Coast Guard
5505 Robin Hood Road, Suite K
Norfolk, VA 23513-2431

Re: USCG Base
San Juan, Puerto Rico

Dear Captain Barresi:

Thank you for your letter of May 13, 2021 requesting comments on the above referenced project. As per your request, our comments are provided under the Endangered Species Act (Act) (87 Stat. 884, as amended; 16 United States Code 1531 et seq.), and the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.).

The United States Coast Guard (USCG) is proposing to repair and replace the facilities damaged by Hurricanes Irma and María in 2017 at USCG Base San Juan, located in La Puntilla, Old San Juan, Puerto Rico. The proposed actions for this project include:

- Construction of new Station and Health Services buildings, including supporting utilities and infrastructure.
- Repair or renovate existing facilities that sustained extensive damage.
- Demolition of other facilities that cannot be repaired, are beyond their service life, and no longer effectively serve their intended purpose.

The USCG has determined that the proposed actions have no effect on West Indian manatee (*Trichechus manatus*) and the Puerto Rican boa (*Epicrates inornatus* now known as *Chilabothrus inornatus*), but has determined that the proposed actions may affect, but is not likely to adversely affect hawksbill sea turtle (*Eretmochelys imbricata*) and leatherback sea turtle (*Dermochelys coriacea*).

We have reviewed the information provided in your letter and our files, and concur with your determination that the proposed actions may affect, but is not likely to adversely affect the above mentioned species. No adverse impacts to designated critical habitat are anticipated.

In view of this, we believe that requirements of section 7 of the Endangered Species Act (Act) have been satisfied. However, obligations under section 7 of the Act must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner that was not previously considered; (2) this action is subsequently modified in a manner not previously considered in this assessment; or, (3) a new species is listed or critical habitat determined that may be affected by the identified action.

Thank you for the opportunity to comment on this project. If you have any questions or require additional information, please contact Marelisa Rivera at marelisa_rivera@fws.gov.

Sincerely yours,

Edwin E. Muñiz
Field Supervisor

drr

From: Nilda M. Jimenez Marrero [REDACTED]
Sent: Thursday, June 3, 2021 3:13 PM
To: Wu, Charlene
Cc: [REDACTED] Warf, Jennifer; Grady, Brendan; Kalapos, Beth; Kisak, Natalie
Subject: [EXTERNAL] RE: Project Review Request - DRNA

Hello Mr. Charlene Wu

I don't have particular questions regarding the project. I understand you will be preparing an environmental assessment that will be an integral part of the proposed project.

Some of the things you should considered for your environmental assessment are possible impacts to the Brown pelican (*Pelecanus occidentalis*), the West Indian manatee (*Trichechus manatus manatus*), the green turtle (*Chelonia mydas*) and the Peregrine Falcon (*Falco peregrinus*). These are protected species that have been reported in the area. The assessment should provide information on the actions that will be implemented to prevent disturbing these species. We will gladly provide comments and review the proposed actions to prevent harming these species.

Best regards,

Nilda M. Jiménez Marrero, PhD
Coordinator
Endangered Species Program
Department of Natural and Environmental Resources
[REDACTED]

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Appendix B – Section 106 Consultation

Contents

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Submission of Electronic Section 106 Form and Supporting Documents (25 May 2021).....	B-128



GOBIERNO DE PUERTO RICO
Oficina Estatal de Conservación Histórica

March 15, 2021

Capt. John F. Barresi

US Coast Guard
US Department of Homeland Security
5505 Robin Hood Rd.
Suite K
Norfolk, VA 23513

SHPO: 07-31-20-01 U.S. COAST GUARD HURRICANE RECONSTITUTION PROJECT EXECUTION PLAN, OLD SAN JUAN, PUERTO RICO

Dear Captain Barresi,

We have reviewed the work plan (dated February 2021) for Phase I archaeological investigations within the U.S. Coast Guard Base San Juan. It is unknown when your consultants carried out archival research in our Office and no table of PR SHPO sources was included in the plan. We also did not see cited in the plan Marisol Meléndez' 2002 archaeological survey report prepared for the renovation and expansion of building 100 and the construction of a (then) new vessel support building. This report is a significant archival resource that should not be overlooked.

The project subsurface testing strategy should be developed taking into account the various fill episodes within La Puntilla, including their depths, and the depths of the new construction. Manual shovel testing may not be sufficient to reach a reasonable testing depth. Mechanical means may also be necessary.

Based on the revised view shed and street view studies, site plans, map of the Area of Potential Effects (APE) and the topics discussed in our March 5, 2021 on-site visit and meeting, we are providing the following comments:

1. We do not agree with the proposed above ground APE (Enclosure 1) for it should bound, at a minimum, the NRHP Base San Juan Historic District boundaries as illustrated in the considerations map (Enclosure 2).
2. In addition to Building 116 (Lighthouse Superintendent's Dwelling), which has been listed in the National Register of Historic Places (NRHP) since October 28, 1981, we believe that buildings number 100 (office building, east portion), 103 (shop), and 117 (insular garage) still retain sufficient integrity to convey their significance as contributing resources to the NRHP Base San Juan Historic District as previously notified by the NRHP Keeper on February 1998. Building 120 (insular garage) was then determined to be a contributing resource as well.



Capt. John F. Barresi
March 15, 2021

SHPO: 07-31-20-01 U.S. COAST GUARD HURRICANE RECONSTITUTION PROJECT EXECUTION PLAN, OLD SAN JUAN, PUERTO RICO

It is important to emphasize that, though not considered in the Keeper's 1998 opinion, buildings number 124 (Insular Bureau of Tuberculosis Dispensary), 125 (Insular Division of Roentgenology X-Ray Building and Laboratory, east portion) and 126 (Insular Quarantine Hospital Administration Building) are eligible for inclusion in the NRHP under a historic context and period of significance other than those directly associated with the district's U.S. Coast Guard Base San Juan's historic function and operation.

3. In order to execute the reconstitution project, buildings number 103 and 104 will be demolished to give way for a combined, two-story Command Center building. Therefore, the SHPO agrees that the proposed undertaking meets the criteria of **adverse effect** per 36 CFR § 800.5 (a) (2) (i), which entails the physical destruction of historic properties. The agency official will need to consult further with the SHPO to develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize or mitigate adverse effects on historic properties, per § 800.6 (a) (1). Said official is also required to notify the Advisory Council on Historic Preservation of the adverse effect finding as per § 800.6 (a)(1) and include a copy of this letter with the required background documentation, as specified in 36 CFR § 800.11 (e).
4. Upon review of the submitted view shed studies, we believe the proposed health building and Command Center buildings' overall mass, volume and scale does not have the potential to adversely affect the district, the adjacent buildings number 100, 124, 125 and 126 or the nearby Spanish colonial Arsenal and the U. S. Customs House buildings. However, as discussed in our meeting, the hip-type rooflines must be reconsidered. In designing the new buildings, we recommend compliance with the Secretary of the Interior's *Standards for Rehabilitation*, specifically Standard 9. Once completed, their preliminary phase must be submitted to the SHPO for review and comments.

If you have any questions concerning our comments, do not hesitate to contact our Office.

Sincerely,



Carlos A. Rubio-Cancela
State Historic Preservation Officer

CARC/GMO/SGA/MB

U.S. Department of
Homeland Security

**United States
Coast Guard**



Commanding Officer
United States Coast Guard
Facilities Design and Construction Center

5505 Robin Hood Rd.
Suite K
Norfolk, VA 23513
Phone: (757) 852-3400

11000
February 19, 2021

Mr. Carlos Rubio Cancela
Office of the Governor, Commonwealth of Puerto Rico
State Historic Preservation Officer
PO Box 9023935
San Juan, Puerto Rico 00902-3935

Greetings Mr. Rubio Cancela:

I'm pleased to provide additional information and documentation in reference to the United States Coast Guard's (USCG's) Proposed Undertaking to repair or replace certain facilities damaged by the 2017 hurricanes at USCG Base San Juan (La Puntilla), San Juan, Puerto Rico (SHPO reference number 07-30-20-01). Our package initiating consultation under Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations (36 Code of Federal Regulations [CFR] Part 800) was provided to your office on 29 July 2020.

On 2 October 2020, I received a request for additional photographic documentation of buildings to be partially or totally demolished in conjunction with the Proposed Undertaking. Subsequently, on 15 October 2020, our respective staffs and experts met onsite to review conceptual site plans, discuss potential impacts to historic properties in association with the Proposed Undertaking, and to discuss potential mitigations to offset the likely impacts. Most recently on 11 February 2021, I sent an electronic copy of revised viewshed and streetview studies, revised site plans for the preferred alternative which addressed our onsite discussions, a revised map of the area of potential effect, and a revised NHPA considerations map including the requested additional photos – refer to Enclosure (1).

At this time, I present to you a draft work plan for a Phase I Archaeologic Investigation of areas within the project site previously determined to have high potential for significant archaeology – refer to Enclosure (2). Once we receive any comments you may have on the plan, we will work to address those quickly so that we can begin the associated field work at the earliest possible time.

In order to ensure that this project continues moving forward, I respectfully request your review and comment on this work plan within 30 days of its receipt. While the archaeological studies are occurring, I plan for my staff to solicit comments on the project in local newspapers, invite consulting parties to participate in the process, and arrange for the first consulting party meeting. If you have any questions, need more information about the Proposed Undertaking, or would like to discuss USCG's rigorous internal schedule for this project, please

feel free to call on me directly or reach out to my point of contact, Ms. Lesley Dobbins-Noble at lesley.c.dobbinsnoble@uscg.mil or by phone at (757) 852-3410. We are at your disposal to assist in any way needed.

Very sincerely,



Digitally signed by
BARRESI.JOHN.F.JRIL.1187016629
Date: 2021.02.19 13:10:45 -05'00'

J. F. BARRESI
Captain
U. S. Coast Guard

Encl: (1) Viewshed and Streetview Studies (revised)
(2) Work Plan, Phase I Archaeological Investigation, United States Coast Guard Base
San Juan, San Juan, Puerto Rico (dated February 2021)

Enclosure (1)

From: [Barresi, John F CAPT](#)
To: [Gloria Ortiz](#)
Cc: [Marel Del Toro Cabrera](#); [Santiago Gala](#); [Carlos A. Rubio Cancela Director Ejecutivo](#); [Dobbins-Noble, Lesley C CIV](#); [Amendolara, Joel R LT](#)
Subject: Saludos!
Date: Thursday, February 11, 2021 4:33:00 PM
Attachments: [All Attachments SanJuanSHPOLtr \(rev 12-16-20\)-compressed.pdf](#)

Saludos Gloria,

I hope you are doing well and staying healthy. On the heels of Lesley's recent e-mail, I wanted to provide you some additional information to let you and your team know that we have been busy working on both the Air Station Borinquen and Base San Juan projects since we met onsite in October of last year. You'll be pleased to know we've made good progress on both.

For the Borinquen project, we acquired the original La Plaza drawings, had them scanned by the University of Puerto Rico, and sent digital copies of them on to you for review. Additionally, we published a public notice in local papers to solicit comments on the project and invited consulting parties to participate in the consultation process. Two of those groups, the Ramey Air Force Base Historical Association and the Town of Aguadilla, accepted our invitations and are awaiting our first consulting party meeting. We plan to soon begin preparation of a draft Memorandum of Agreement (MOA) and we welcome the input received at the first consulting party meeting to help round out that MOA. We would like to schedule that meeting at your earliest convenience.

For the Base San Juan project, we have been working with our consultant to modify project plans to address some of the ideas regarding architectural features expressed by you and your staff during our site visit, including repurposing Building 100 to use as the central utility plant building, elimination of the "L" shape of the proposed new multi-mission building, etc. The attached document shows our revised site plan, new viewshed studies, and new photographs as requested by Santiago. Additionally, we are currently working on a draft archaeological work plan to address the areas of high archaeologic and cultural resources sensitivity. We hope to be able to provide that to you by the end of this month for comment. From there, we would initiate the archaeological field work, invite consulting parties to participate, and publish requests for comments in local newspapers like we did on Borinquen. Ultimately, we would expect to be able to meet with you and other consulting parties to continue our dialogue and to develop mitigations to offset any unavoidable impacts.

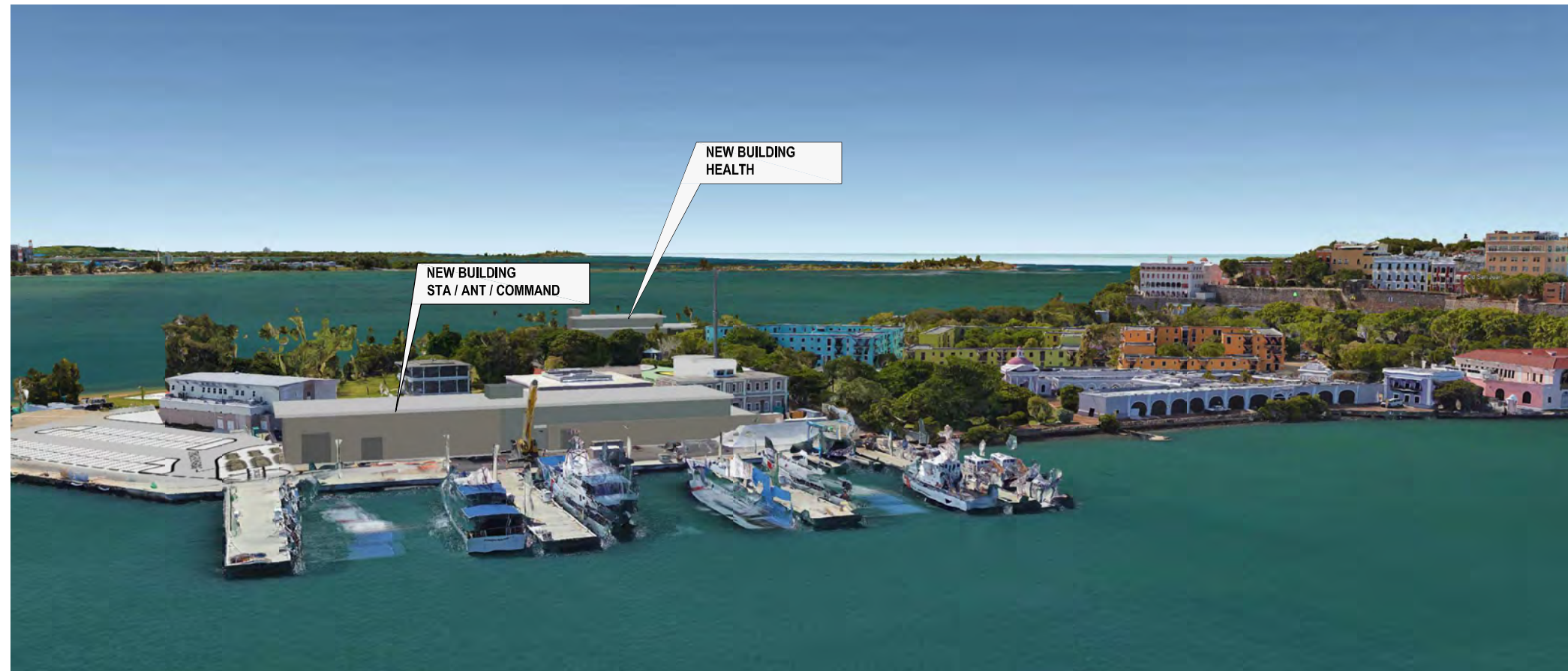
I think that you will be able to see that we are trying very hard to keep both of these projects moving forward. In order to keep this momentum, and to ensure that our projects stay on schedule and critical funding is not jeopardized, we really need your input. Please let me know what we can do on our end to facilitate this process – we want to make things as easy for you as possible.

Lastly, we have awarded the task orders for the development of the design-build contract specifications at both sites – these are progressing nicely and I look forward to our discussions to help us produce better results. As always, please feel free to reach out to me directly if there's anything I can do to help.

Cordialmente,
John

CAPT J. F. Barresi, PE
Commanding Officer
U. S. Coast Guard Facilities Design and Construction Center
5505 Robin Hood Road, Suite K
Norfolk, VA 23513
757.852.3400 (o)
757.359.8891 (c)

Attachment 1 – Viewshed and Streetview Studies



VIEW 1 MASSING



VIEW 1 EXISTING

**BASE SAN JUAN
NEW BUILDING VIEW SHED STUDIES
WEST 1.1 AND EAST 4.1 ALTERNATIVE
VIEWPOINT AT 150 FT**



VIEW 2 MASSING



VIEW 2 EXISTING

**BASE SAN JUAN
NEW BUILDING VIEW SHED STUDIES
WEST 1.1 AND EAST 4.1 ALTERNATIVE
VIEWPOINT AT 150 FT**



VIEW 3 MASSING

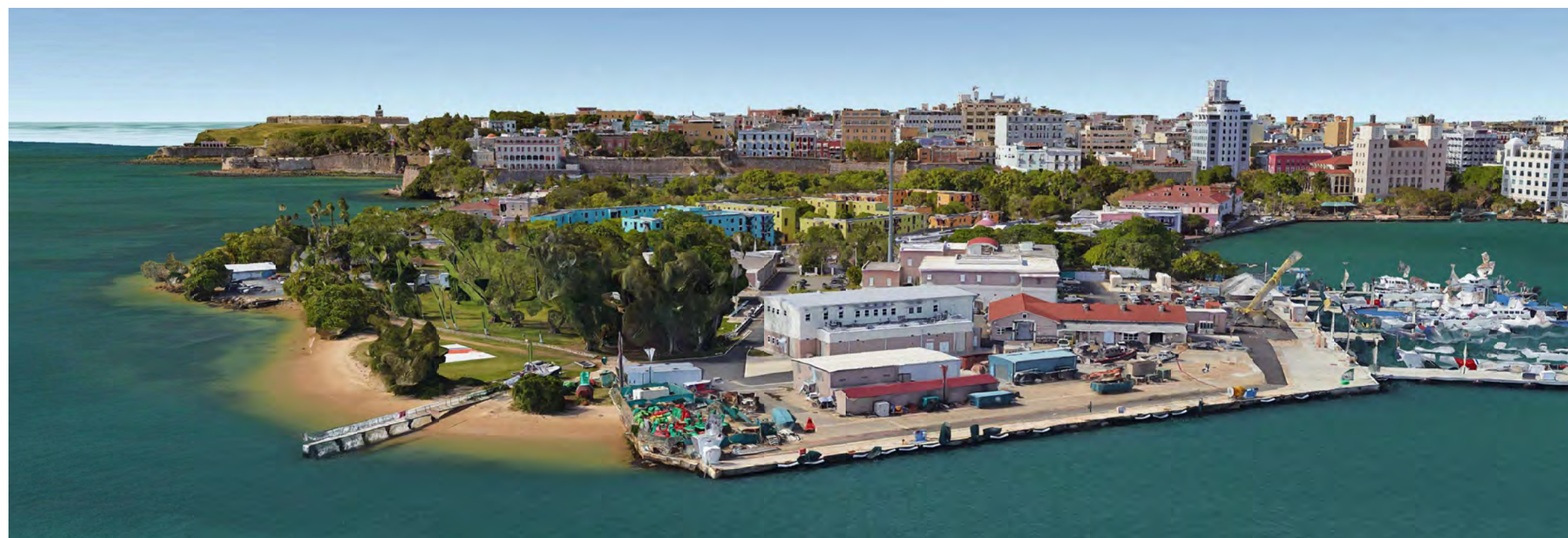


VIEW 3 EXISTING

**BASE SAN JUAN
NEW BUILDING VIEW SHED STUDIES
WEST 1.1 AND EAST 4.1 ALTERNATIVE
VIEWPOINT AT 150 FT**



VIEW 4 MASSING



VIEW 4 EXISTING

**BASE SAN JUAN
NEW BUILDING VIEW SHED STUDIES
WEST 1.1 AND EAST 4.1 ALTERNATIVE
VIEWPOINT AT 150 FT**



VIEW 5 MASSING



VIEW 5 EXISTING

**BASE SAN JUAN
NEW BUILDING VIEW SHED STUDIES
WEST 1.1 AND EAST 4.1 ALTERNATIVE
VIEWPOINT AT 150 FT**



VIEW 6 MASSING



VIEW 6 EXISTING

**BASE SAN JUAN
NEW BUILDING VIEW SHED STUDIES
WEST 1.1 AND EAST 4.1 ALTERNATIVE
VIEWPOINT AT 150 FT**



VIEW 7 MASSING



VIEW 7 EXISTING

**BASE SAN JUAN
NEW BUILDING VIEW SHED STUDIES
WEST 1.1 AND EAST 4.1 ALTERNATIVE
VIEWPOINT AT 150 FT**



CALLE LA PUNTILLA STREET VIEW - PROPOSED



CALLE LA PUNTILLA STREET VIEW - EXISTING



**BASE SAN JUAN
NEW BUILDING STREET VIEW STUDIES
WEST 1.1 AND EAST 4.1 ALTERNATIVE**



CALLE ARTURO SHOMBERG STREET VIEW - PROPOSED



CALLE ARTURO SHOMBERG STREET VIEW - EXISTING



**BASE SAN JUAN
NEW BUILDING STREET VIEW STUDIES
WEST 1.1 AND EAST 4.1 ALTERNATIVE**

Attachment 2 – Preferred Alternative West 1.1/East 4.1 Plans

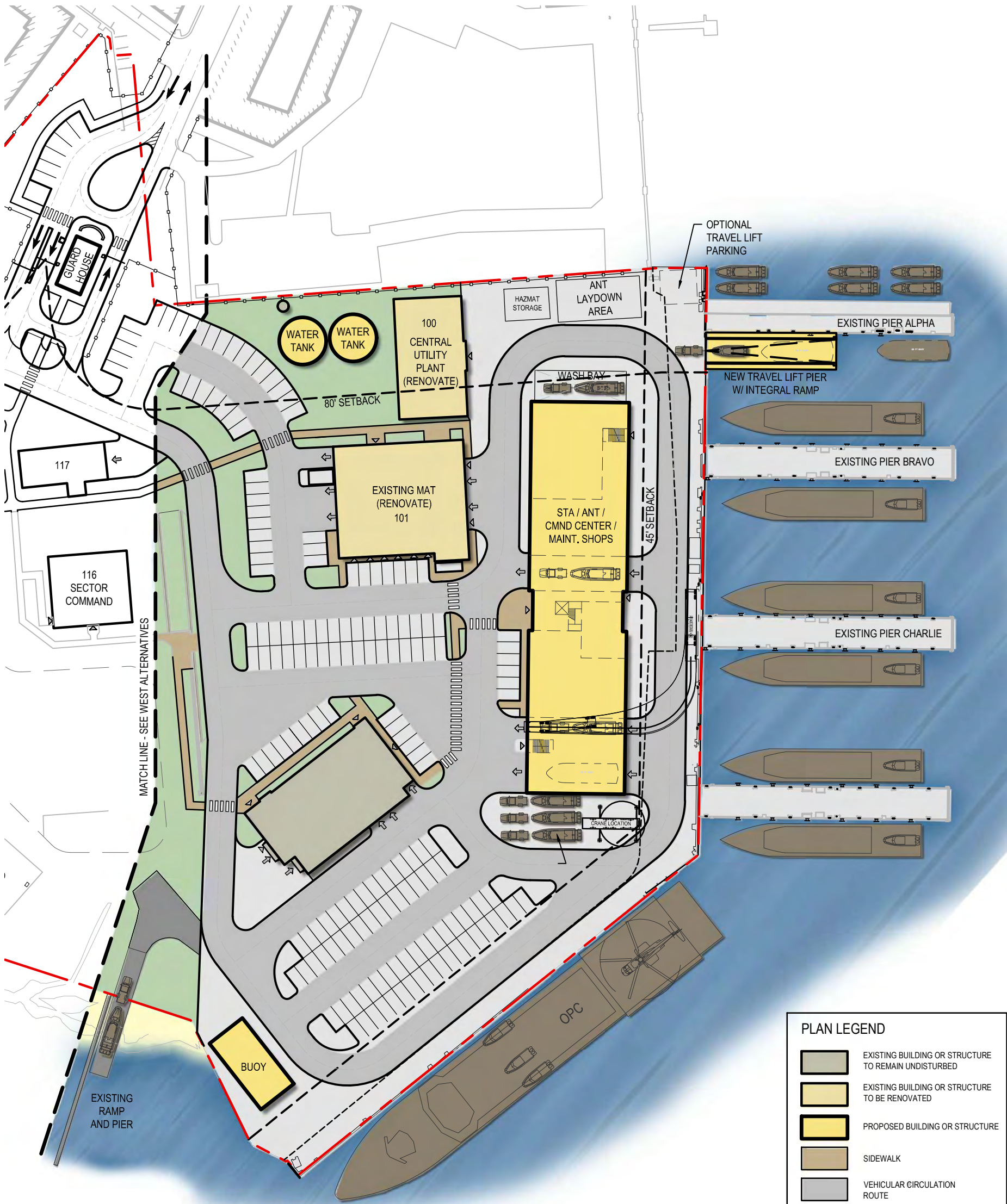
BASE SAN JUAN

SHPO ALTERNATIVES

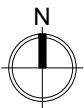


BASE SAN JUAN

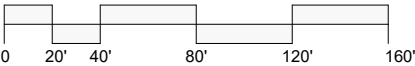
SHPO ALTERNATIVES



PLAN LEGEND	
	EXISTING BUILDING OR STRUCTURE TO REMAIN UNDISTURBED
	EXISTING BUILDING OR STRUCTURE TO BE RENOVATED
	PROPOSED BUILDING OR STRUCTURE
	SIDEWALK
	VEHICULAR CIRCULATION ROUTE
	PARKING / LAYDOWN AREA
	LANDSCAPING / GREEN SPACE
	BUILDING ENTRANCE LOCATION
	GARAGE DOOR LOCATION



EAST - ALTERNATIVE 4.1





Attachment 3 – Area of Potential Effects Map



0 340 680
Feet

DigitalGlobe World Imagery 2016

CLIENT USCG			
PROJ Hurricane Execution Plan - Shore at U.S. Coast Guard Sector San Juan			
SCALE 1:2,000	DR BY		
REVISION NO 0	CHK BY		
PM			

	TITLE Area of Potential Effects Map	
	 12420 Milestone Center Dr. Germantown, MD 20876	
	PROJ NO 60588321 FIGURE 1	

Attachment 4 – National Historic Preservation Act Section 106 Considerations Map

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Table 1: Base San Juan: Surveyed Resources - Historic-Age Buildings and NRHP Eligibility (Michael Baker Inter., Inc. 2016)					
Photos	Current Name	Historic Name	Historic Use (and map year)	Date	Eligibility
	Building 100	Office Building	New Office Building (1935); Office Bldg. & Storehouse (1939, 1940, 1943, 1944); Command Center (2016)	1934, 1944, 2001	- <i>Contributes to the NRHP Eligible Base San Juan Historic District (Keeper of the NRHP 1998 Feb. 19)</i> - <i>Not Individually Eligible</i>
	Building 103	Shop	No label (1944); Station San Juan, ANT San Juan (2016)	1943-1944	- <i>Contributes to the NRHP Eligible Base San Juan Historic District (Keeper of the NRHP 1998 Feb. 19)</i> - <i>Not Individually Eligible</i>
	Building 104	Blacksmith Shop	Blacksmith Shop (1935, 1939, 1940, 1943); No label (1944); Small Boat Op. Shop (1983)	Ca. 1921-1935	- <i>Potentially contributes to the NRHP Eligible Base San Juan Historic District</i> - <i>Not Individually Eligible</i>
	Building 111	Storage	Cylinder Storage; Storage Area (1983)	1942	- <i>Not Individually Eligible</i>
	Building 112	Compressor Building	Paint House (1940); No label (1943, 1944); Compressor building (1983, 1995 survey)	ca. 1940, or 1950-1960	- <i>Not Individually Eligible</i>
	Building 113A	N/A	N/A	N/A	- <i>Not Individually Eligible</i>
	Building 116	Lighthouse Superintendent's Dwelling	Superintendent's Dwelling (1921, 1935); Quarters "A" (1939, 1940, 1943); Quarters 1 (1963, 2016)	Ca. 1912	- <i>NRHP-LISTED</i> - <i>"El Sistema de Faros de Puerto Rico, 1846-1979."</i> - <i>NRHP-LISTED</i> - <i>"Superintendent of Lighthouses' Dwelling."</i> - <i>Contributes to the NRHP Eligible Base San Juan Historic District (Keeper of the NRHP 1998 Feb. 19)</i>
	Building 117	Insular Garage	Garage Building #30 (1921, 1935, 1939, 1940, 1943, 1944); addition placed on the south elevation (1948); supply building (1983, 1995); gym (1983); Shipping and Receiving (2016)	Ca. 1903-1908	- <i>Contributes to the NRHP Eligible Base San Juan Historic District (Keeper of the NRHP 1998 Feb. 19) and the Superintendent of Lighthouses' Dwelling</i> - <i>Not Individually Eligible</i>
	Building 118	Laundry House	Laundry House (1921, 1935, 1939, 1940, 1943, 1944); photographic laboratory (1983, 1995 survey)	Ca. 1912	- <i>Not Individually Eligible</i>
	Building 119	Storage	Building #17 (1921); Storehouse (1935, 1939); Service Quarters (1940, 1943, 1944); Boat Crew Quarters (1983); LEDET building (1995); MWR/Barber (2016)	Ca. 1965	- <i>Not Individually Eligible</i>
	Building 120	Insular Garage	Insular Gov't Garage (1921, 1935, 1939); "To be transferred, US War Department Reservation" (1940); Mess Hall and Galley (1943, 1944); NAFA Storage Building (1983, 1995); Exchange (2016)	1890, 1913, ca. 1935, 1940	- <i>Contributes to the NRHP Eligible Base San Juan Historic District (Keeper of the NRHP 1998 Feb. 19)</i> - <i>Not Individually Eligible</i>
	Building 123	Generator Building	Generator Building; Emergency Generator (1983)	Ca. 1956-1968	- <i>Not Individually Eligible</i>
	Building 124	Insular Bureau of Tuberculosis Dispensary	"To be transferred from the Insular Government" (1940); Quarters (1943, 1944); Facilities Engineering Offices (1983); Dental Clinic (2016)	Ca. 1913-1920	- <i>Potentially contributes to the NRHP Eligible Base San Juan Historic District</i> - <i>Not Individually Eligible</i>
	Building 125	Insular Division of Roentgenology X-Ray Building and Laboratory	"To be transferred from the Insular Government" (1940); Quarters (1943, 1944); Alterations to BOQ "George" (1965); Reserve Class Room Area (1983); Medical Clinic/CGIS (2016)	Ca. 1924	- <i>Potentially contributes to the NRHP Eligible Base San Juan Historic District</i> - <i>Not Individually Eligible</i>
	Building 126	Insular Quarantine Hospital Administration Building	"To be transferred from the Insular Government" (1940); Quarters (1943, 1944); Quarters 243 (1966); Marine Safety Offices (1983); Administration (2016)	Ca. 1912	- <i>Potentially contributes to the NRHP Eligible Base San Juan Historic District</i> - <i>Not Individually Eligible</i>
	Echo Wharf	Wharf		Ca. 1921-1935	- <i>Not Individually Eligible</i>
	Landscape Features	N/A	Landscape Features: Fencing, Light Standards, Rip-Rap (1935, 1939, 1940); Roadways; Sewall (1958); Trees/Vegetation, Anchors	N/A	- <i>Not Individually Eligible</i>

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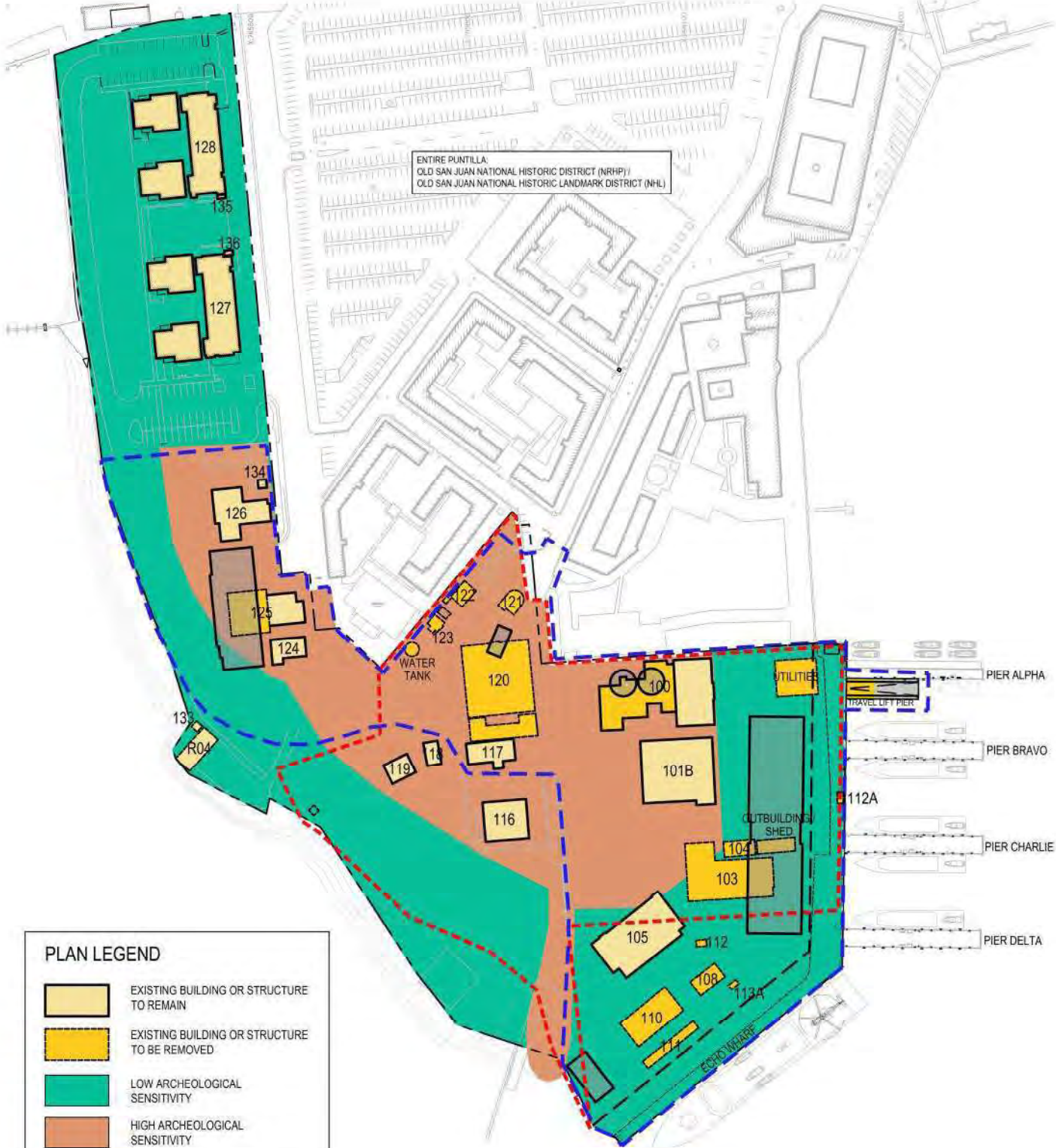
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Table 2: Base San Juan: Modern Buildings and NRHP Eligibility (Michael Baker Inter., Inc. 2016)				
Photos	Current Name	Current/ Recent Use	Date	Eligibility
	Building 105	Office and Engineering Building	2014	<i>Not Eligible</i>
	Outbuilding/Shed	Outbuilding/Shed	2014	<i>Not Eligible</i>
	Building 101B	Vessel and Electronics Support Building (1999); ESO/MAT (2016)	Ca. 1999-2000	<i>Not Eligible</i>
	Building 108	Weld Shop (1983)	Ca. 1983-1991	<i>Not Eligible</i>
	Building 110	Welding	Ca. 1983-1988	<i>Not Eligible</i>
	Building 112A		Ca. 2015	<i>Not Eligible</i>
	Building 121	Guard House (2016)	Ca. 1999	<i>Not Eligible</i>
	Water Tank	Water Tank	Ca. 1999	<i>Not Eligible</i>
	Building 122	Pumphouse	Ca. 1999	<i>Not Eligible</i>
	Building 127	UPH / Galley / Fitness Center (2016)	Ca. 2001-2002	<i>Not Eligible</i>
	Building 128	UPH (2016)	Ca. 2001-2002	<i>Not Eligible</i>
	Building 133	Pavilion	Ca. 2004-2005	<i>Not Eligible</i>
	Building 134	Utility Awning	Ca. 2004-2006	<i>Not Eligible</i>
	Building 135	Storage	Ca. 2001-2002	<i>Not Eligible</i>
	Building 136	Storage	Ca. 2001-2002	<i>Not Eligible</i>
	R04	Canteen	Ca. 2004-2005	<i>Not Eligible</i>
	Utilities	Utilities	Ca. 2014-2015	<i>Not Eligible</i>
	Pier Alpha	Pier Alpha	2014	<i>Not Eligible</i>
N/A	Pier Bravo	Pier Bravo	2014	<i>Not Eligible</i>
N/A	Pier Charlie	Pier Charlie	2014	<i>Not Eligible</i>
N/A	Pier Delta	Pier Delta	2014	<i>Not Eligible</i>

TABLE LEGEND

- NATIONAL REGISTER OF HISTORIC PLACES (NRHP) LISTED
- CONTRIBUTES TO NRHP-ELIGIBLE SAN JUAN HISTORIC DISTRICT
- POTENTIALLY CONTRIBUTES TO NRHP-ELIGIBLE SAN JUAN HISTORIC DISTRICT
- NOT INDIVIDUALLY ELIGIBLE



PLAN LEGEND

- EXISTING BUILDING OR STRUCTURE TO REMAIN
- EXISTING BUILDING OR STRUCTURE TO BE REMOVED
- LOW ARCHEOLOGICAL SENSITIVITY
- HIGH ARCHEOLOGICAL SENSITIVITY
- NRHP-ELIGIBLE BASE SAN JUAN HISTORIC DISTRICT
- ANTICIPATED LIMITS OF DISTURBANCE
- PROPOSED NEW BUILDING OR STRUCTURE

BASE SAN JUAN
NATIONAL HISTORIC PRESERVATION ACT SECTION 106
CONSIDERATIONS MAP

Enclosure (2)

WORK PLAN

PHASE I ARCHAEOLOGICAL INVESTIGATION UNITED STATES COAST GUARD BASE SAN JUAN

SAN JUAN, PUERTO RICO

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GERMANTOWN, MD 20876

FEBRUARY 2021



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1.0 INTRODUCTION

The United States Coast Guard (USCG) is preparing an Environmental Assessment (EA) to evaluate potential physical, environmental, cultural, and socioeconomic effects associated with a proposed Hurricane Recovery Plan designed to repair or replace certain facilities at U.S. Coast Guard Base San Juan (Base) in San Juan, Puerto Rico (Figure 1-1). The USCG is proposing to upgrade and fortify Base facilities and infrastructure to support USCG missions and improve storm resiliency to enhance disaster responses. Several design alternatives are under consideration to address the reorganization of the Base's westerly Access Control/Green Space and Logistics/Health Administration component and its easterly Operational/Waterfront component. Pursuant to site selection criteria discussions, which included input from the Puerto Rico State Historic Preservation Office (PR SHPO), the USCG selected alternatives West 1.1 and East 4.1 as the preferred alternatives. Alternative West 1.1 would improve health and logistical services via new building construction, the demolition of Buildings 117 and 120 through 123, and the repurposing of Buildings 116, 118, 119, and 124 through 126. Alternative East 4.1 would separate industrial functions from operational/administrative functions in two separate buildings and relocate the Central Utility Building. This alternative will repurpose Buildings 101, 124, 125, and 126, while Buildings 117, 120, and 121 will be demolished. Traffic reconfiguration, including a new Guardhouse and Gate, will be included as part of this alternative.

Under contract to USCG and pursuant to a Scope of Work received October 24, 2019, AECOM will conduct a Phase I archaeological survey for the preferred alternatives to aid the USCG in meeting regulatory compliance with Section 106 of the *National Historic Preservation Act* of 1966, as amended, the *Archaeological Resources Protection Act* (U.S. Department of the Interior [USDI] 1979), and the Advisory Council on Historic Preservation's (ACHP) "Protection of Historic and Cultural Properties" (36 CFR 800; USDI 2004). The work will also conform with Regulation 8932 and Law 112 (*El Consejo para la Protección del Patrimonio Arqueológico Terrestre de Puerto Rico* [Council for the Protection of the Land Archaeological Patrimony of Puerto Rico]). The archaeological Area of Potential Effects (APE) corresponds to the anticipated maximum Limits of Disturbance and encompasses approximately 10.11 acres (ac; Figure 1-2).

This work plan outlines the context and methods for the Phase I archaeological survey, which will conform to the *Secretary of the Interior's Standards and Guidelines* for archaeology and historic preservation, as amended (48FR44716; USDI 1983). Specific survey and reporting guidelines were not available from the PR SHPO. All supervisory personnel will meet the Secretary of the Interior's Professional Qualification Standards for Archaeology, and the Principal Investigator will be on the Instituto de Cultura Puertorriqueña (ICP) *Lista Oficial de Personas Cualificadas para Efectuar Fases de Investigación Arqueológica* for Phase IA-IB. Osvaldo García, Ph.D., of Arqueo Consulting Group will serve as the Principal Investigator, and Scott Seibel of AECOM will serve as the Principal Archaeologist.

Following this Introduction, the work plan contains six sections of text: Project Location and Description; Cultural Context; Previous Investigations; Methods; Summary; and References Cited. Appendix A presents the qualifications of the investigators.



CLIENT	United States Coast Guard
PROJ	Sector San Juan Phase I Work Plan
SCALE	1:9,000
SOURCE	ESRI 2020, DigitalGlobe 2019
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	TITLE Project Location	
	AECOM 12420 Milestone Center Dr. Germantown, MD 20876	
	PROJ NO	60588321
	FIGURE	1-1



CLIENT	United States Coast Guard
PROJ	Sector San Juan Phase I Work Plan
SCALE	1:2,500
SOURCE	ESRI 2020, DigitalGlobe 2019
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TITLE	
Archaeological Area of Potential Effects	
AECOM	12420 Milestone Center Dr. Germantown, MD 20876
PROJ NO	60588321
FIGURE	1-2

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2.0 PROJECT LOCATION AND DESCRIPTION

2.1 GEOGRAPHY

The APE is located within the municipality of San Juan, which is the capital of the Commonwealth of Puerto Rico and encompasses a territorial area of 30,406.4 ac. It is located in the northern region of Puerto Rico, with the Atlantic Ocean as its northern boundary. Jose A. Toro Sugrañes describes its territorial boundaries in his *Historia de los Pueblos de Puerto Rico* (History of the Towns of Puerto Rico):

...on the west side, it borders the municipalities of Carolina, they meet in the sector known as Punta las Marías; it follows its dividing line through the waters of the Los Corozos and San José lagoons, up to the San Antón creek, continuing along it until it reaches the border with the municipality of Trujillo Alto. To the southeast it briefly adjoins the municipality of Caguas, and Aguas Buenas to the south. To the west is the municipality of Guaynabo, this borderline runs to the north reaching the bay of San Juan, in the sector of Puerto Nuevo. (Toro 1998:351. Translation by Anthony Smith Rodriguez [Transl. ASR])

The APE is more specifically located toward the southern extent of the Islet of San Juan, which itself is located within Puerto Rico's Northern Coastal Plain. Rafael Picó provides the following description of this geographical area:

The Northern Coastal Plain is the region with the highest socio-economic activity in the country, although, by its size, it occupies the fourth position. Its importance is mainly due to certain physical conditions distinguishable from those of the rest of the island, and to the historical development of the region. The Northern Coastal Plain extends from Aguadilla in the West to beyond the town of Luquillo in the East. It comprises 292,714 acres or 13.37 percent of the total area of the island. Although it is about 100 miles long, its width does not exceed five miles...Two subregions are distinguished in the region: the Sub-Humid Section of the West, and the Humid Alluvial Section. The first extends from the city of Aguadilla to Arecibo, and the second from Arecibo to Luquillo. This division is justified by differences in certain physical and economic conditions...The East section is an extensive alluvial plain that extends from Arecibo to near the Cape of San Juan. (Picó 1969:389-391)

The APE is located on the southern tip of a peninsula, La Puntilla, that extends into the San Juan Bay from the southern coast of the Islet of San Juan. Separated from the main island of Puerto Rico, the Islet of San Juan exhibits several natural advantages that made it ideally suited for use as a port (e.g., deep water, wind and wave protection) and which were fundamental in selecting this location as Puerto Rico's capital. In the past, a large expanse of mangrove forest covered much of the southern area of the islet and surrounding areas of the bay, forming part of an estuary system that still interconnects an extensive section of the metropolitan area.

The land on which the APE is located, as well as the entire port area of the Islet of San Juan, is classified as "urban". Generally, these lands were reclaimed through the process of infilling coastal areas, as has been widely documented in various investigations of the general area. This infilling has altered local geography by expanding and elevating nearshore landforms to accommodate historic and modern uses.

2.2 GEOLOGY

Regarding the broader geological context of Puerto Rico, geomorphologist Watson Monroe, in his Article *Las Divisiones Geomórficas de Puerto Rico* (The Geomorphic Divisions of Puerto Rico), states:

There are three large geomorphic regions in Puerto Rico: the Province of the Central Mountainous Interior, the Province of the Northern Karst, and the Province of the Coastal Plains. Each of these provinces has its own characteristics both in terms of relief and form. The Central Mountainous Inland Province shows, predominantly, the effects of erosion of a structurally complex succession of many kinds of igneous and sedimentary rocks. The Karst Province shows the effects of solution processes on limestone. For its part, the Province of the Coastal Plains presents areas of deposition. (Monroe 1977:3. Transl. ASR)

The APE falls within a physiographic portion of Puerto Rico that the United States Department of Agriculture (USDA) has described as Playa Plains (also known as Coastal Plains; Roberts 1942). The Playa Plains consist of recent and old alluvial deposits and occur as a discontinuous patchwork of floodplains, lagoon deposits, and elevated beaches surrounded by rocky coastal plains, complex mountain ranges, and dissected plateaus. Alluvial floodplains comprise the largest part of the Playa Plains, occurring along streams and at large river mouths. These soils exhibit a wide range of variability since they are composed of transported sediments that may be as fine as clay or as coarse as sand. The Playa Plains exhibit very low topographic relief and generally range from 0 to 10 feet (ft) above mean sea level, though sand dunes along the coastal beaches may range up to 20 ft high. Coastal sediments are somewhat more consistent than the alluvial deposits along streams and rivers and typically consist of “shells, coral, lime carbonate, and sand” (Roberts 1942:14). Lagoons are common to the Playa Plains region, many of which exhibit adjacent clay or silty clay deposits from old estuaries.

2.3 TOPOGRAPHY

A succinct description of the general topography of Puerto Rico can be found in Rafael Picó’s *Nueva Geografía de Puerto Rico, Física, Económica y Social* (New Physical, Economic, and Social Geography of Puerto Rico):

Topographically, Puerto Rico is a rugged island, with surface covered mostly by hills and mountains. It has been estimated that no more than a third of Puerto Rico can be classified as flat or undulating...In terms of slopes, nearly a quarter of Puerto Rico consists of very steep slopes, with 45 degrees or more of inclination over the horizontal. In terms of height, almost half of the total area is more than 500 meters above sea level...From the point of view of the forms of relief themselves, it can be estimated that 40% of the island is covered by mountains, 35% by hills and 25% by plains. (Picó 1969:16. Transl. ASR)

Topographically, the APE is a generally level stretch of land, much of which has been reclaimed via infilling. Prior to these activities, historic maps and primary descriptions indicate it was a much narrower landform covered in mangrove forests and likely subjected to repeated flooding. While this may not have made the landform suitable for habitation prior to historic land reclamation and development, it does suggest it may have been a favorable area for fishing and mollusk harvesting during the prehistoric and early historic periods.

2.4 CLIMATE

The region in which the APE is located is tropical, though climate in general is not a significant input when considering areas of archaeological sensitivity on Puerto Rico; the island experiences relatively few climatic fluctuations that might otherwise influence site selection parameters. Precipitation, however, is more variable across the island and is among the few climatic factors that may impact a given location's archaeological sensitivity. Where rainfall is more abundant, there are greater opportunities for resource-intensive activities like farming and irrigation, which in turn may influence past settlement practices or specific site uses. In the case of the APE, it is located in the general vicinity of the region of San Juan where "the climate can be considered humid, with a minimum annual rainfall of 80 inches... In addition, rainfall is distributed fairly evenly during the year. There are generally no dry periods, as in no month's precipitation is less than 5 inches" (Picó 1969:405. Transl. ASR). Predictable, moderate rainfall throughout the year would help sustain intensive use of the APE and surrounding area during the prehistoric and historic periods.

2.5 HYDROLOGY

Puerto Rico's topographic relief creates four broad watersheds across the island. These include the Northern or Atlantic; Southern or Caribbean; Eastern or Vieques Sound and Passage; and Western or Mona Pass watersheds. The municipality of San Juan is located within the Atlantic Watershed and incorporates several bodies of water that have been central to prehistoric and historic use and occupation. The most significant are San Juan Bay, which surrounds most of the APE, as well as the Condado, Corozo, and San José lagoons. The Corozo and Condado lagoons, along with the San Juan Bay (including *Caño Martin Peña*), are part of the interconnected San Juan Bay Estuary system (Toro 1998). These bodies of water, as well as the large mangrove forest system that once covered them, once were utilized for hunting, fishing, and marine mollusk collection. Additionally, the system of channels piercing the lagoons' mangrove forests would have served as important avenues for waterborne transportation, with small crafts (e.g., canoes) able to navigate among the passageways. San Juan Bay, while fringed in the same mangrove forests, offered a considerably broader expanse of open water that was well protected from winds and rough Atlantic seas. These factors would have facilitated the area's use for resource procurement and transportation during the prehistoric period and served as the driving forces behind the historic-era commercial, residential, industrial, and military developments characterizing the Islet of San Juan.

Interconnected systems of lagoons, lakes, and bays are characteristic of Playa Plain hydrology, which originates in the rivers and streams descending from the higher coastal plains/mountains. Where the watercourses discharge directly into the ocean, large sandbars often form and in turn create adjacent marshlands (Roberts 1942). The Curias and Piedras rivers cross through the municipality of San Juan within the broader vicinity of the APE, though the Islet of San Juan has no permanent waterways (Toro 1998). Rather, water was historically drawn from at least two wells, including one in the Puerta de Tierra area on the east side of the islet and one on La Puntilla known as Fuente de Tejar.

2.6 PROJECT AREA SOILS

In considering the geographical factors that affect a given area's archaeological sensitivity, it is necessary to address soil composition. A particular soil type's fertility, compaction, drainage, and adjacency to water may, among other factors, influence the presence and nature of past human use

or occupation. In Roberto E. Gierbolini's work *Soil Survey of Mayaguez Area of Western Puerto Rico*, he describes the following regarding soils in general:

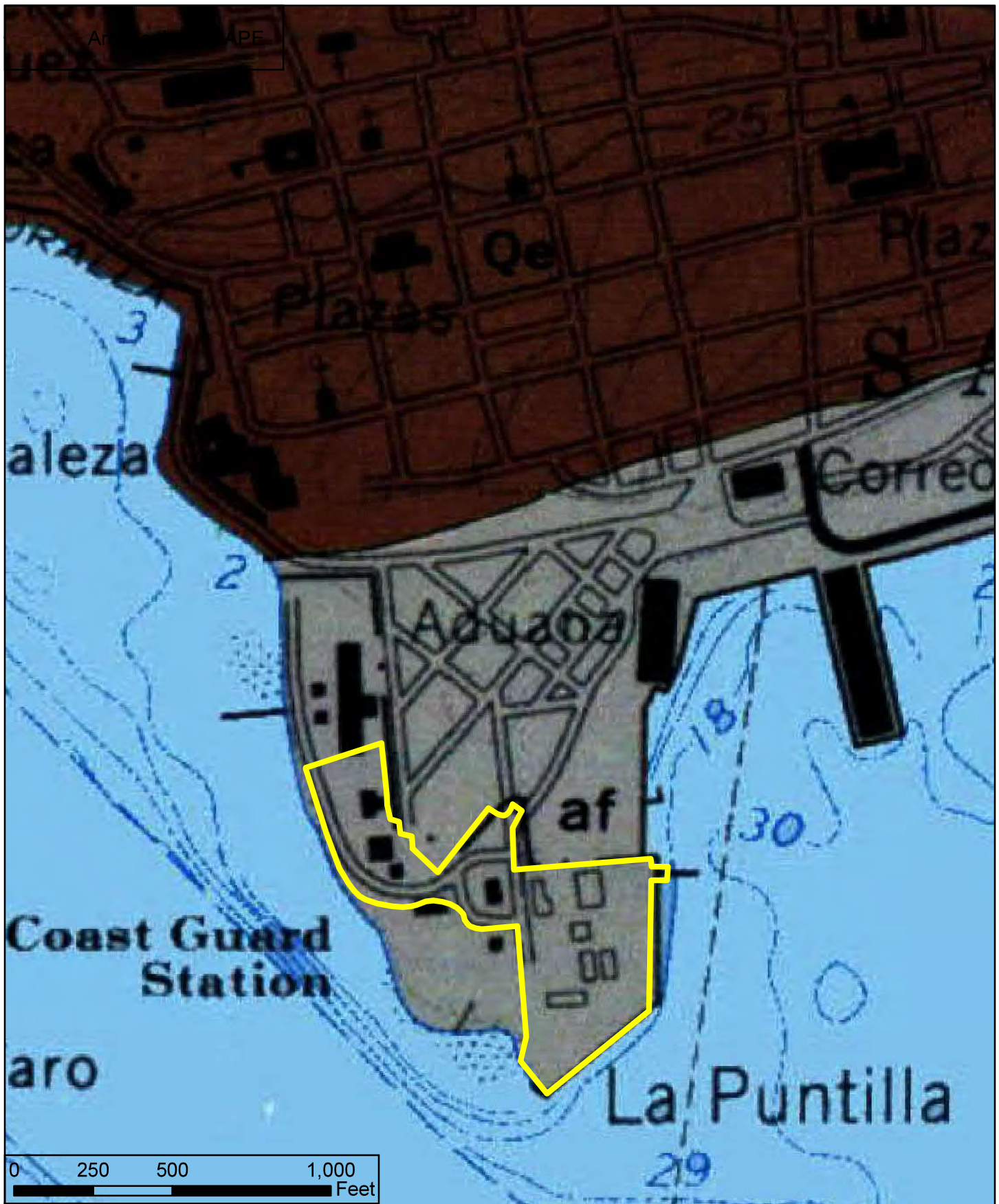
The factors that determine the type of soil that forms at any given point are the plants and animals on and in the ground; the climate under which soil materials were accumulated and meteorized; the composition of the parent materials; the relief, or topography; and the length of time over which soil development forces have acted upon the soil material. The relative importance of each of these factors varies from site to site, and each modifies the effects that the other four have. In some places one factor predominates in the soil formation. (Gierbolini 1975:253. Transl. ASR)

The USDA's Natural Resources Conservation Service (NRCS) has no digital data available for APE soils, which were not surveyed with the rest of the San Juan area in 1978 (Boccheciamp 1978; USDA NRCS 2020). According to the 1977 *Geologic Map of the San Juan Quadrangle*, the APE consists of Artificial Fill (map symbol "af"), described as "sand, limestone, and volcanic rocks" in deposits "generally less than 5 [meters] thick" and often occurring in areas that have "been altered by bulldozing" (Pease and Monroe 1977:n.p.; Figure 2-1). More recent Environmental Assessment documentation of the Base indicates that waterfront areas and a substantial portion of the Base's operational support area were reclaimed over the last hundred years or so (Belfast et al. 2016). Soil borings conducted throughout the Base in 1960, 1993, and 2012 revealed a consistent soil profile of approximately 7 ft of fill overlying 20 to 40 ft of poorly consolidated sand and shells, atop marine clay (Puerto Rico Testing Services 1960; Geotechnica y Cimentos Geotechnical Testing Services 1993, 2012).

Additional archaeological and geological studies conducted in other areas of La Puntilla corroborate the above information. In his 1992 Phase Ia archaeological report on the terrestrial archaeological resources of the La Puntilla parking lot north of the APE, Jorge Carbonell included an assessment of local stratigraphy based on a 1976 geotechnical soil study conducted in advance of a La Puntilla housing project. Carbonell (1992:8) observes that "although this type of evaluation has different purposes than those of archaeological exploration, its results contribute to the knowledge of the composition of the subsoil." What Carbonell (1992:8) referred to as "the typical result of the perforations performed [in 1976]" has been adapted from his 1992 report in Table 2-1.

Table 2-1. Typical 1976 La Puntilla Soil Boring (adapted from Carbonell 1992:8)

Approximate Depth (feet)	Soil Description
0-5	Modern Fill
5-8	Historic Fill
8-13	Mud
13-22	Fine Sand and Mud
22-26	Sandy Clay with Mud
26-35	Fine, Medium, and Thick Sand with Trace Mud
35-45	Clay, Limestone, Mud, and Stone Fragments



CLIENT	United States Coast Guard
PROJ	Sector San Juan Phase I Work Plan
SCALE	1:5,000
SOURCE	Pease and Monroe 1977
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TITLE 1977 Geologic Map	
AECOM	12420 Milestone Center Dr. Germantown, MD 20876
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FIGURE	2-1

Carbonell goes on to note that “this profile...confirm[s] the history of the sector under study. The profile illustrated...indicates a watery area under the filling that could confirm the lagoon indicated in the first graphic representations of the sector” (Carbonell 1992:8).

Carbonell also references a 1991 archaeological investigation that broadly corroborates the infilling processes documented in 1976 but provides an essential archaeological perspective. The 1991 investigation, conducted in the northern sector of La Puntilla, notes that “the stratigraphy of the area revealed several layers of filling with cultural material on a subsoil of sand or clay sand in the western part and sandstone in the eastern part” (Meléndez 1991:105). While the fill layers undoubtedly contained incidental artifact inclusions, this study confirms that intact historic deposits are also present within the fill. Meléndez (1991:105) notes that the excavations exposed structural remains of brick, mortar, lime, and stone, corresponding “to structures such as walls, footings, floors, drainage canals, and cisterns.” This indicates that while much of the La Puntilla landform has been reclaimed and elevated through a series of infilling events conducted over an extended period of time, intact historic archaeological deposits have formed within the artificial soil layers.

2.7 CURRENT CONDITIONS AND LAND USE

The APE is part of USCG Base San Juan, which is responsible for all missions in the Eastern Caribbean area of operations, including the enforcement of U.S. laws and regulations, search and rescue operations, marine safety, port security, law enforcement, and general duties in military readiness. The Base supports many functions and units, including Sector San Juan, Station San Juan, Aids to Navigation Team Puerto Rico, Investigative Services, Rio Bayamon Housing, exchange and morale functions, and is a homeport to seven vessels. Additionally, the Base provides maintenance support to the homeported cutters and the small boats assigned to the Station and Aids to Navigation team.

3.0 CULTURAL CONTEXT

The following context provides an overview of cultural developments related to the APE and can be used as a framework for the interpretation and evaluation of potentially significant archaeological resources within the APE. This information is discussed chronologically and thematically, primarily drawing on material presented in Belfast et al. (2016) and Carbonell (1992) with supplemental information included as appropriate.

This context primarily focuses on historic-era developments and land uses. While Puerto Rico in general possesses a rich body of archaeological and ethnographic data attesting to thousands of years of prehistoric occupation, deposits associated with pre-contact occupations are not anticipated within the APE. This expectation is predicated on the nature of La Puntilla, the landform on which the Base is located. This peninsula “is generally understood...[to have been] uninhabitable swampy marsh prior to its development by the Spanish during the latter half of the sixteenth century” (Belfast et al. 2016:105-106). Historic maps corroborate this assertion, showing that most of the current landform has been reclaimed.

However, prehistoric archaeological resources have been documented in the general San Juan inlet area. La Puntilla, while likely unsuitable for intensive habitation during the prehistoric era, nonetheless may have afforded indigenous populations opportunities for occasional resource procurement activities, including fishing, mollusk gathering, and timber collection. While intact archaeological deposits associated with such extraction activities likely have been compromised by centuries of subsequent use and development, there is some potential for their presence on La Puntilla; layers of fill used to enlarge and elevate the peninsula could have sealed prehistoric surfaces and resources. Given this possibility, a brief discussion of Puerto Rican prehistory is included for reference.

3.1 PREHISTORIC CONTEXT

The word prehistory literally means “before history”, a concept that has been intrinsically associated with the invention of writing (Gomez de Silva 2001). In the case of Puerto Rico’s indigenous people, they had not yet developed any kind of writing by the time the Spaniards arrived in the late fifteenth century. However, the island’s inhabitants, called Tainos by the Spanish conquistadors, preserved and reproduced their historical memories, customs, and traditions through storytelling. Another way in which they transmitted their knowledge from generation to generation was through ceremonies known as Areytos, which were tribal rituals in which their histories were represented through song and dance. Some scholars have regarded these as epic narrative dances, by means of which their collective cultural memories were conserved and passed on (Rivera de Alvarez 1983). Various chroniclers such as Fernández de Oviedo and Fray Bartolomé de las Casas documented some of these ceremonies.

Knowledge of Puerto Rico’s occupation prior to European contact is largely derived from ethnographic and archaeological data, the latter of which indicates initial settlement occurred approximately 5,000 years ago. The earliest inhabitants exhibited a culture complex that has been referred to as the Archaic culture or pre-agroceramist culture. This is further subdivided into two groups known as the older Lithic age/culture and the more recent Archaic age/culture.

Indigenous people of the Archaic culture may have arrived on the island in migrations from southeastern North America, Central America, or South America. They are primarily characterized as being hunter-gatherers. Their economy and subsistence were mainly based on coastal harvesting

with some fishing and small game hunting. They worked extensively with stone as a raw material for artifact production and are considered to have been generally unaware of ceramic technology (though recent research has shown the presence of incipient ceramic production in the later stages of Archaic occupations). There is evidence that they made simple ornaments in stone, shell, bone, and other materials and appear to have practiced human burial (Rodríguez 2004).

Another documented migration consisted of the so-called Igneri or Saladoide Culture. They are considered to have arrived in Puerto Rico via South America around 250 BCE. They have been identified as three distinct groups: the Huecoide Culture; the Saladoide Culture, Hacienda Grande phase; and the Saladoide Culture, Cuevas phase.

Among the most distinctive features of Igneri culture is the refined quality of its pottery workmanship. Igneri ceramics are characterized by geometric and figurative designs created using incisions and painting. Painting techniques consist mostly of polychrome elements largely using white on a red background, but occasionally incorporating black, yellow, pink, and other color combinations. Igneri people practiced agriculture, mainly the cultivation of cassava. Their social organization and ceremonialism have been described as tribal. Ceremonial behaviors included the use of tobacco and cohoba, as well as funerary burial rituals that included offerings (Rodríguez 2004).

Following the Igneri culture, another indigenous group has been identified, known as Ostiones culture or pre-Taino, among other names. It has been proposed that this culture may be the product of another migration originating in South America (Alegría 1978), or it could represent the result of local cultural changes among the preexisting population (Rouse 1992). The emergence of this culture in Puerto Rico dates to approximately 700 CE.

This culture is characterized by a marked population increase relative to previous groups, as well as a settlement pattern stretching from the coast to the island's interior. Ostiones/pre-Taino people also fabricated ornaments and tools using a variety of materials and styles. They developed more complex religious beliefs, and this period marks the appearance of elaborate ceremonial squares delimited by stone monoliths and the development of ritual ball games. Some have suggested it is possible that their sociopolitical structure was organized into chieftainships (Rodríguez 2004).

The next culture group identified on Puerto Rico is the Taino, who were the inhabitants of the island at the time of Spanish contact in 1493. It has been proposed that this group emerged either as a result of another migration or the further elaboration of local cultural complexes. Recent work, particularly that conducted by archaeologist Reniel Rodríguez, has suggested that cultural interactions between Archaic and Igneri groups cohabitating on the island gave rise to the Taino culture. This group first appeared on Puerto Rico around 1200 CE (Siegel 2005).

The Taino culture is characterized by an advanced degree of ceremonialism and religiosity. They held ritual ball games and Areytos and cohoba ceremonies, among other practices. They built monumental ceremonial centers decorated with elaborate petroglyphs. Craftsmanship in Taino culture achieved a high degree of refinement (e.g., sculptural representation of deities, lithic hoops) and expanded to include simple metallurgy work. Agriculture reached its highest expression with the Taino culture and included the construction of stone terraces, irrigation systems, and drainage canals. Taino political structures were more complex as well, expressed via the emergence of the Cacicazgo chieftainship consisting of a regional political center with power over a set of small villages (Moscoso 1999). It is considered the culture with the highest degree of political-cultural development to have existed in precolonial Puerto Rico and the Antilles (Rodríguez 2004).

While no intact prehistoric archaeological resources have been documented within the APE, previous archaeological investigations have identified evidence for prehistoric occupation within the municipality of San Juan. As will be discussed in section 4, four sites with prehistoric components have been recorded within a 1-mile radius of the APE.

3.2 SPANISH OCCUPANCY (1493-1898)

3.2.1 Early Land Uses

The period of Spanish occupation began in 1493 with the arrival of Christopher Columbus, though it was another 15 years until Juan Ponce de León founded Caparra as one of Puerto Rico's first colonial settlements. The establishment of Caparra followed two failed settlement attempts elsewhere on the island, though it enjoyed only limited success. As early as 1511, settlers were contemplating relocating to a more ideal area closer to the bay. The Islet of San Juan was selected as a superior location and the process of relocating from Caparra occurred between 1519 and 1521 (Sepúlveda 1989). This new setting offered a number of advantages, including easier access to raw materials such as timber, food resources such as fish and terrestrial game, and the navigable, protected waterways of the San Juan Bay Estuary system. It also provided ideal positions for the territory's strategic military defenses, increasing the long-term viability of settlement and trade opportunities.

These factors allowed San Juan to flourish, initiating an intensifying program of colonization and the development of military infrastructure in a matter of decades, including the 1532 construction of La Fortaleza and the 1539 inception of the large-scale defenses that would come to circumscribe San Juan. As the value of Caribbean trade swelled over the next century, with European powers constantly vying for economic and military dominance, the need for well-defended harbors became increasingly central to the maintenance of a viable geopolitical strategy. During this period, San Juan's military defenses were enlarged via the construction of six fortresses and, by 1634, the city was enclosed within a series of protective stone walls (Belfast et al. 2016).

La Puntilla, however, was excluded from the city walls, and its uses from the sixteenth through eighteenth centuries remain somewhat poorly characterized. La Puntilla was originally a lowlying, wet, and often flooded spit of land that likely contributed to its exclusion from the intensively occupied walled city of San Juan with its diverse suite of military and urban activities. By virtue of its geography, La Puntilla was not significantly developed until the nineteenth century when land reclamation projects elevated and broadened the landform. Nonetheless, this isolation did not preclude all historic activities, it simply limited them. Indeed, La Puntilla was utilized for the needs of San Juan residents since at least the mid-sixteenth century, albeit in a somewhat humble capacity. One of its earliest known uses was as the site of a well referred to as Fuente de Tejar, which the island's Military Governor Francisco Bahamón de Lugo developed sometime around 1564. Though brackish, the water drawn from this early well was crucial to the San Juan drinking supplies. It appears likely, however, that the well remained in service for only a few years (URS Group, Inc. [URS] 2001).

This description of the relatively late development of the area under study is corroborated by various researchers, including Carbonell, whose study of La Puntilla notes:

Research into the urban development of La Puntilla tells us that this sector of the city remained practically vacated until the end of the eighteenth century (Sepúlveda, 1989). All the cartographic documentation of the islet of San Juan in

which this peninsula is represented demonstrates this. These lands could be considered marginal to the development of the city in its first centuries of existence due to its wetland conditions and did not take on importance until the city-port and its growth required its expansion outside the walls. (Carbonell 1992:6. Transl. ASR)

One of the oldest maps available for the area of San Juan and La Puntilla is Rodrigo de Figueroa's 1519 pre-foundational plan of San Juan (Figure 3-1). While La Puntilla was entirely undeveloped at this time, notations included on the map provide a cursory environmental characterization at the dawn of the historic era. In his discussion of how de Figueroa rendered La Puntilla, Carbonell notes that:

...there appears in the area of La Puntilla a feature called a 'lagoon' [laguna] and in the western sector of the peninsula a 'beach' [playa]. These characteristics of low land kept this sector as a marginal area of the city for the first centuries of its development. Throughout its history, they were filled and stabilized for occupation and development, development that was related to the growth of port activity. (Carbonell 1992:9. Transl. ASR)

Additional maps produced later in the sixteenth century were available for review, but show no significant changes to La Puntilla. Juan Escalante de Mendoza's 1575 map of San Juan is the earliest known illustration of the settlement and is among the first to specifically name what is now La Puntilla as Puntilla del Tejar (Sepúlveda 1989). Inclusion of the word Tejar has some bearing on La Puntilla's earliest historic uses as the site of a well of the same name, as noted above. Successive sixteenth century maps by Baltazar Vellerino de Villalobos (1592) and Samuel de Champlain (1599) were reviewed as well; though both show increasingly dense settlement within San Juan, no cultural features are illustrated within La Puntilla (Sepúlveda 2004, vol. 1).

While historic maps did not illustrate any improvements within La Puntilla during the sixteenth century, it is likely that the landform was at least intermittently utilized. In addition to the Fuente de Tejar, La Puntilla probably featured impermanent military defenses. By 1595, it is likely that several cannons were emplaced on La Puntilla to serve as a battery, marking what may be the beginning of a long tradition of military uses. La Puntilla, despite its unsuitability for most forms of development during the sixteenth century, offered a commanding view of the mouth of San Juan Bay. A small battery located here would have provided the Spanish with an excellent position for defense of the harbor and, by extension, San Juan itself. In the final years of the sixteenth century, these guns may have fired upon two separate English incursions against Spain's interests in San Juan, once during Sir Francis Drake's failed assault in 1595 and again in 1598 when Sir George Clifford, Earl of Cumberland, seized the city (URS 2001). There are no direct indications, however, that the battery on La Puntilla aided in the defense of San Juan during either event.

The earliest confirmed use of a battery on La Puntilla occurred during the Dutch attack on San Juan in 1625. It is not known if the battery used in 1625 is the same as that which may have defended against the English attacks three decades prior or if it represents a second defensive iteration. In either case, the battery as it existed in 1625 clearly demonstrated the utility of a gun emplacement on La Puntilla.

The Dutch squadron had little trouble entering San Juan Bay and anchored windward of La Puntilla, where troops disembarked and quickly captured San Juan. However, the city was a dangerous prize to hold, particularly in the event that a Spanish fleet should come to Puerto Rico's



Approximate Archaeological APE



CLIENT	United States Coast Guard
PROJ	Sector San Juan Phase I Work Plan
SCALE	Not To Scale
SOURCE	Sepúlveda 2004, vol. 1:132
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TITLE	
1519 de Figueroa Map	
AECOM 12420 Milestone Center Dr. Germantown, MD 20876	PROJ NO 60588321
	FIGURE 3-1

aid, block the Dutch ships from exiting the harbor, and annihilate or imprison the invading enemy. Fearing this prospect, the Dutch withdrew and hastily made way for the mouth of San Juan Bay and the unconfined waters of the Atlantic Ocean beyond.

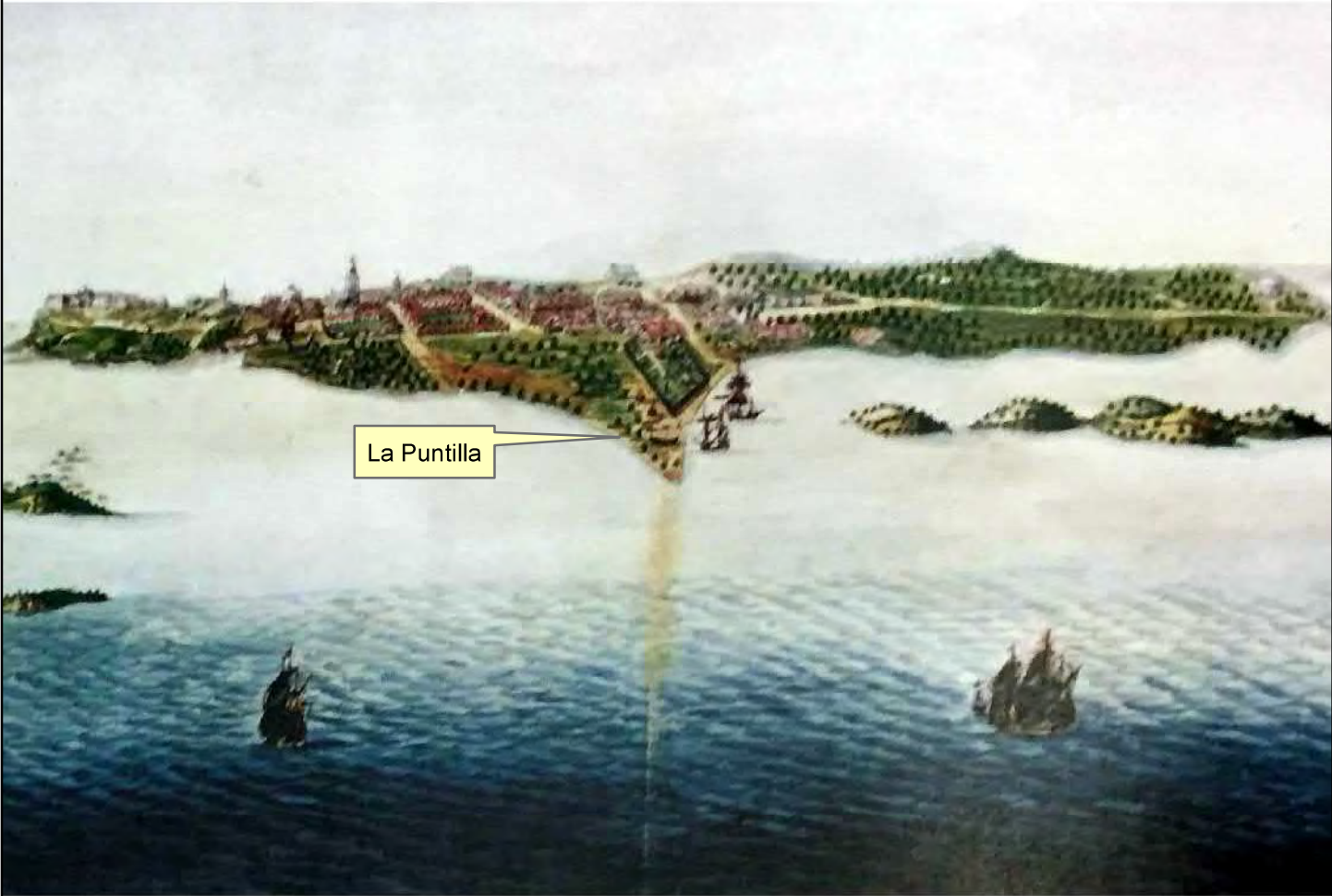
However, the people of San Juan would not allow the Dutch to leave their harbor as easily as they entered it, sending cannons from the Castillo San Felipe del Morro south to La Puntilla to harass their enemy's retreat. Opening fire, the guns proved effective enough to sink one of the vessels before it could clear the harbor. Though the other ships successfully reached the ocean, and no lasting damage was done to the Dutch naval forces, this engagement underscored La Puntilla's value as a defensive battery (URS 2001).

During the 1625 attack, a Dutch artist sketched a portion of the harbor that included La Puntilla (Figure 3-2). This rendering shows what may be shipbuilding/ship repair activities along the eastern, protected side of the peninsula. While no official documentation for shipbuilding in this area was identified during background research, the Dutch sketch attests to the possibility that such activities could have occurred on La Puntilla since early in San Juan's history (URS 2001). Another 1625 Dutch illustration provides an aerial depiction of La Puntilla but shows no structures or evidence of shipbuilding on the eastern shore (Sepúlveda 2004, vol. 1). However, Carbonell (1992:9-10. Transl. ASR) notes that various copies of this latter map show "a path on [La Puntilla's] eastern edge to the southern tip, some wooded areas, and two to four structures in its central area. A ship at the southern end of the peninsula also appears in a couple of these copies, perhaps as a precedent for the arsenal shipyard that was subsequently built in that area." The possibility that La Puntilla was used early in San Juan's history for boat repairs and/or as a rudimentary shipyard remains to be investigated.

Though the English and Dutch attacks on San Juan during the late sixteenth and early seventeenth centuries made La Puntilla's usefulness as a battery clear, it is not known to what extent, if any, it was further developed for military use during the remainder of the seventeenth century. Available maps from this period, including one produced in 1638 by Nicolás de Cardona and an unattributed example dating to 1660, show a lack of significant infrastructure development. No built features or evidence for land use are included on either map (Sepúlveda 2004, vol. 1).


During the early to mid-eighteenth century, there is limited information regarding the use of La Puntilla for military or other purposes. Numerous maps dating to the second and third quarters of the eighteenth century were available for review, a sample of which is presented below (Figures 3-3 through 3-6). Each map provides slightly different details on the peninsula's built environment, which may reflect changes to its appearance and/or the level of detail in which a given cartographer chose to render La Puntilla. For example, Jacques Nicolas Bellin's largely schematic 1745 map, and his much more detailed 1764 plan of San Juan, show no improvements at all (Figures 3-3 and 3-5). An unattributed circa 1750 map, however, shows what appears to be a building at the tip of the peninsula, while a 1768 Thomas Jeffreys map depicts a road extending along the length of La Puntilla (Figures 3-4 and 3-6).

The building shown at the end of the peninsula on the circa 1750 map appears to be associated with La Puntilla's temporary use during the eighteenth century as an asylum for those suffering from leprosy (and similar infectious diseases misidentified as leprosy). Leprosy was also known as "San Lazaro's ailment", a reference to the medieval order of Saint Lazarus of Jerusalem which operated leper hospitals. Those suffering the effects of the disease were called "lazarinos", and isolation houses called "lazarettos" were built to isolate lazarinis from the general population.



CLIENT	United States Coast Guard
PROJ	Sector San Juan Phase I Work Plan
SCALE	Not To Scale
SOURCE	Sepúlveda 2004, vol. 1:136
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TITLE	
1625 Dutch View of San Juan	
 12420 Milestone Center Dr. Germantown, MD 20876	PROJ NO 60588321
	FIGURE 3-2

Approximate Archaeological APE



CLIENT	United States Coast Guard
PROJ	Sector San Juan Phase I Work Plan
SCALE	Not To Scale
SOURCE	Bellin 1745
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TITLE
1745 Bellin Map

AECOM

12420 Milestone Center Dr.
Germantown, MD 20876

PROJ NO 60588321

FIGURE 3-3



Approximate Archaeological APE



CLIENT	United States Coast Guard
PROJ	Sector San Juan Phase I Work Plan
SCALE	Not To Scale
SOURCE	Sepúlveda 1989:134
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TITLE	
Circa 1750 Unattributed Map	
AECOM 12420 Milestone Center Dr. Germantown, MD 20876	PROJ NO 60588321
	FIGURE 3-4

Approximate Archaeological APE



CLIENT	United States Coast Guard
PROJ	Sector San Juan Phase I Work Plan
SCALE	1:5,000
SOURCE	Bellin 1764
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N	TITLE	1764 Bellin Map
	AECOM	12420 Milestone Center Dr. Germantown, MD 20876
	PROJ NO	60588321
	FIGURE	3-5

Approximate Archaeological APE



0 250 500 1000
Feet

CLIENT	United States Coast Guard
PROJ	Sector San Juan Phase I Work Plan
SCALE	1:5,000
SOURCE	Jeffreys 1768
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TITLE 1768 Jeffreys Map	
AECOM	12420 Milestone Center Dr. Germantown, MD 20876
PROJ NO	60588321
FIGURE	3-6

It is known that a lazaretto for San Juan was extant by the early eighteenth century, as a 1732 San Juan Town Council act specifically referenced a house that had been designated for quarantining lazarinos. While it does not identify the lazaretto's location, La Puntilla would have been a good candidate. Located adjacent to San Juan but, importantly, beyond the city walls, this area was isolated from the general population but close enough to the city to offer some convenience to those who needed to place loved ones in quarantine.

Several late eighteenth century maps identify La Puntilla as “Punta de Lazarinos” or “La Puntilla de San Lazaro”, referencing its apparent use as a place sequester those who suffered “San Lazaro’s ailment”. The circa 1750 map noted above, however, is the only map available for review to depict a building in this location. Furthermore, the building is labeled with the number 37, corresponding to an entry in the map’s legend identifying it as the House of the Lazarinos. This is the only direct documentary evidence for a lazaretto on La Puntilla identified during background research for this study.

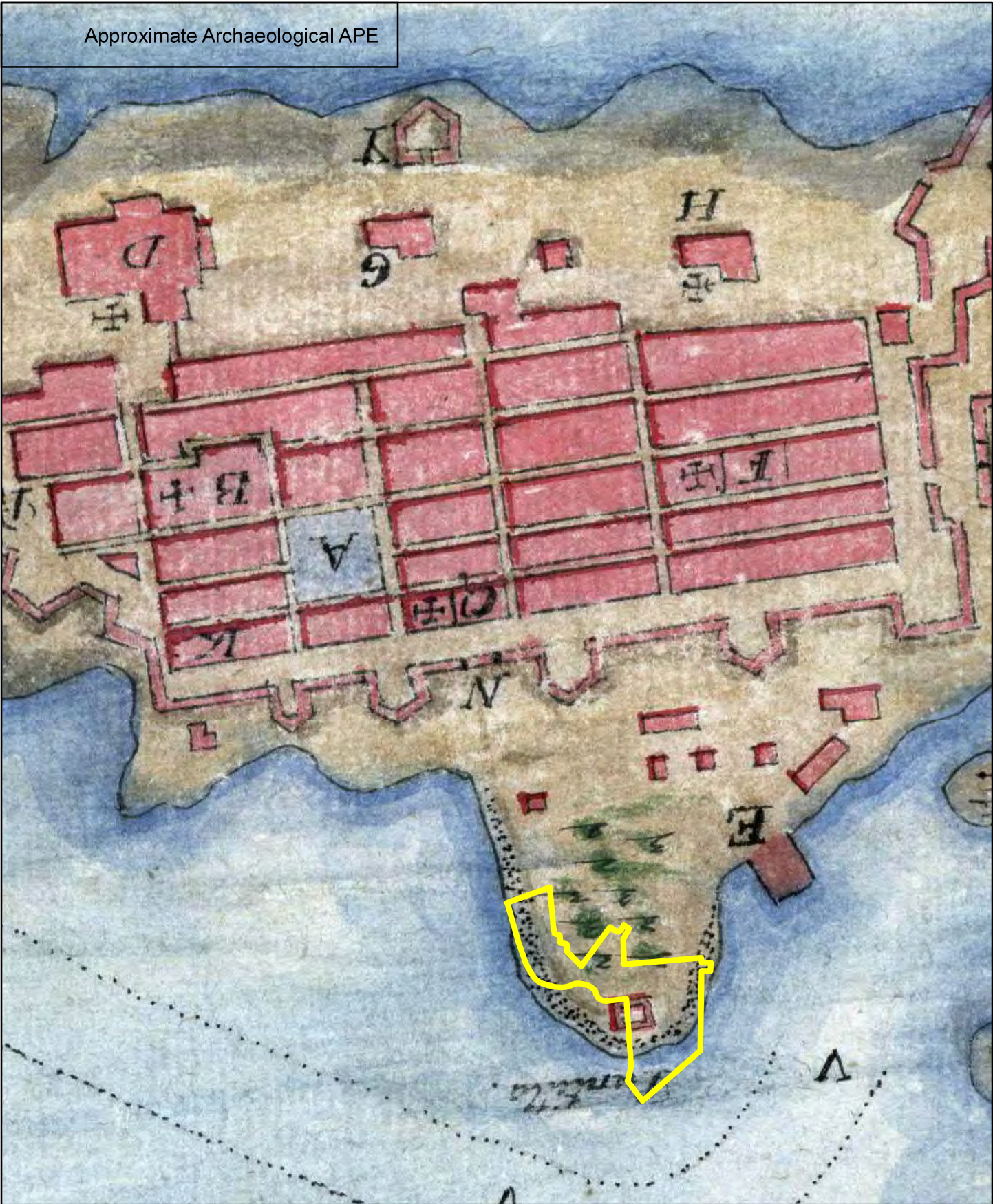
By the mid-eighteenth century, some portion of La Puntilla may have been developed for military housing. Following a 1765 visit from Don Alejandro O’Reilly, special envoy for King Carlos III, recommendations for reorganizing accommodations for the army and militia were issued. O’Reilly advised that a barracks for a veteran group of servicemen be constructed outside of San Juan, where there would be space for the men to establish and tend to their own vegetable gardens. It is likely that at least some barracks and garden plots were developed on La Puntilla in the eighteenth century, and barracks were certainly present by 1835 for acclimatizing new troops arriving from Spain (URS 2011).

While no buildings are apparent on Bellin’s 1768 map of San Juan, a circa 1770 plan shows several buildings clustered on the north end of La Puntilla, immediately south of the walls of San Juan and adjacent to a large dock (map symbol “E”; Figure 3-7). At the southern end of La Puntilla, an unidentified building is illustrated as an open square; this could represent a military building, or it may be the lazaretto shown on the circa 1750 map discussed above. Other defensive structures shown on the map are illustrated as open polygons as well, suggesting that the building at the tip of La Puntilla may have been a battery or similar defensive installation.

San Juan engineer Tomás O’Daly’s 1772 plan of San Juan depicts a very different environment on La Puntilla than that which was illustrated on the circa 1770 plan (Figure 3-8). Whereas the latter shows several built improvements on the north side of La Puntilla and an unidentified building at the southern tip, the 1772 plan shows no buildings at all. Instead, the landscape is rendered as a broad swath of wetlands with surrounding vegetation. A road trace approaches La Puntilla from the northeast, forking west across the head of the peninsula and south along its eastern shore, in both cases terminating in vacant areas. The only nearby improvements are located to the northeast, including a large garden plot, a dock (“muelle”), a customs house (number 20 on the map), and adjacent buildings.

It therefore appears likely that the circa 1770 plan was actually produced sometime after 1772, as it would seem very unlikely that all of the improvements noted circa 1770 would have been demolished or omitted from illustration on the much more detailed 1772 engineering plan. Indeed, the circa 1770 map may postdate 1776, as a map produced that year by Juan and Ramón de Villalonga shows La Puntilla as an agricultural area with little to no infrastructure (Sepúlveda 1989).

Approximate Archaeological APE



CLIENT	United States Coast Guard
PROJ	Sector San Juan Phase I Work Plan
SCALE	Not To Scale
SOURCE	No Author Circa 1770
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TITLE		Circa 1770 Map of San Juan	
AECOM		12420 Milestone Center Dr. Germantown, MD 20876	PROJ NO 60588321
			FIGURE 3-7

Approximate Archaeological APE



CLIENT	United States Coast Guard
PROJ	Sector San Juan Phase I Work Plan
SCALE	1:5,000
SOURCE	O'Daly 1772
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TITLE
1772 O'Daly Map

AECOM

12420 Milestone Center Dr.
Germantown, MD 20876

PROJ NO	60588321
FIGURE	3-8

The use of La Puntilla for the remainder of the eighteenth century is somewhat vague and structural improvements dating to this period are minimal, particularly within the APE. An unattributed map dating to 1780 shows an unidentified series of improvements in the center of La Puntilla, as well as an inlet cut into the western shoreline (Figure 3-9). However, this is the only map of the period to render La Puntilla in this way. A 1785 plan of San Juan, which depicted only some of the area's built improvements, shows a scatter of small square buildings at the northern end of La Puntilla, with nothing but marshes and vacant land to the south (Figure 3-10). Other maps produced in the 1780s, including those of Josef de Pereda (1782) and Ramón Mendoza (1783), depict La Puntilla as marginal land (Sepúlveda 1989). Perhaps as a testament to the limited utilization of La Puntilla, its most generalized late eighteenth century use may have simply been as livestock pasture. In 1783, animals were no longer permitted to roam freely throughout San Juan, and the governor suggested La Puntilla as a place where those who could not afford to board their animals could allow them to graze (Belfast et al. 2016).

During the late eighteenth century, San Juan's defensive network was enhanced through several projects designed by engineer O'Daly and executed between 1773 and 1779. As part of this, a building known as the Espaldón was constructed at the southern end of La Puntilla according to a 1792 map produced by San Juan engineer Don Juan Francisco Mestre (Figure 3-11). Additionally, if Figure 3-7 actually postdates 1772/1776, the building it shows as an open square at the tip of La Puntilla may be the Espaldón. Unfortunately, no additional information on this building was uncovered during background research, but it signifies a renewed interest in La Puntilla's military value.

In addition to the Espaldón, Mestre's 1792 map shows a long and narrow unidentified building to the northwest at the head of La Puntilla, while what appear to be gardens were shown far to the northeast. The intervening space, accounting for the vast majority of La Puntilla, was an undeveloped expanse of wetlands and vegetation bisected by a few roads leading to the Espaldón. Carbonell (1992) suggests that the unidentified building may be the Practical Artillery School where La Princesa (former prison) is currently located.

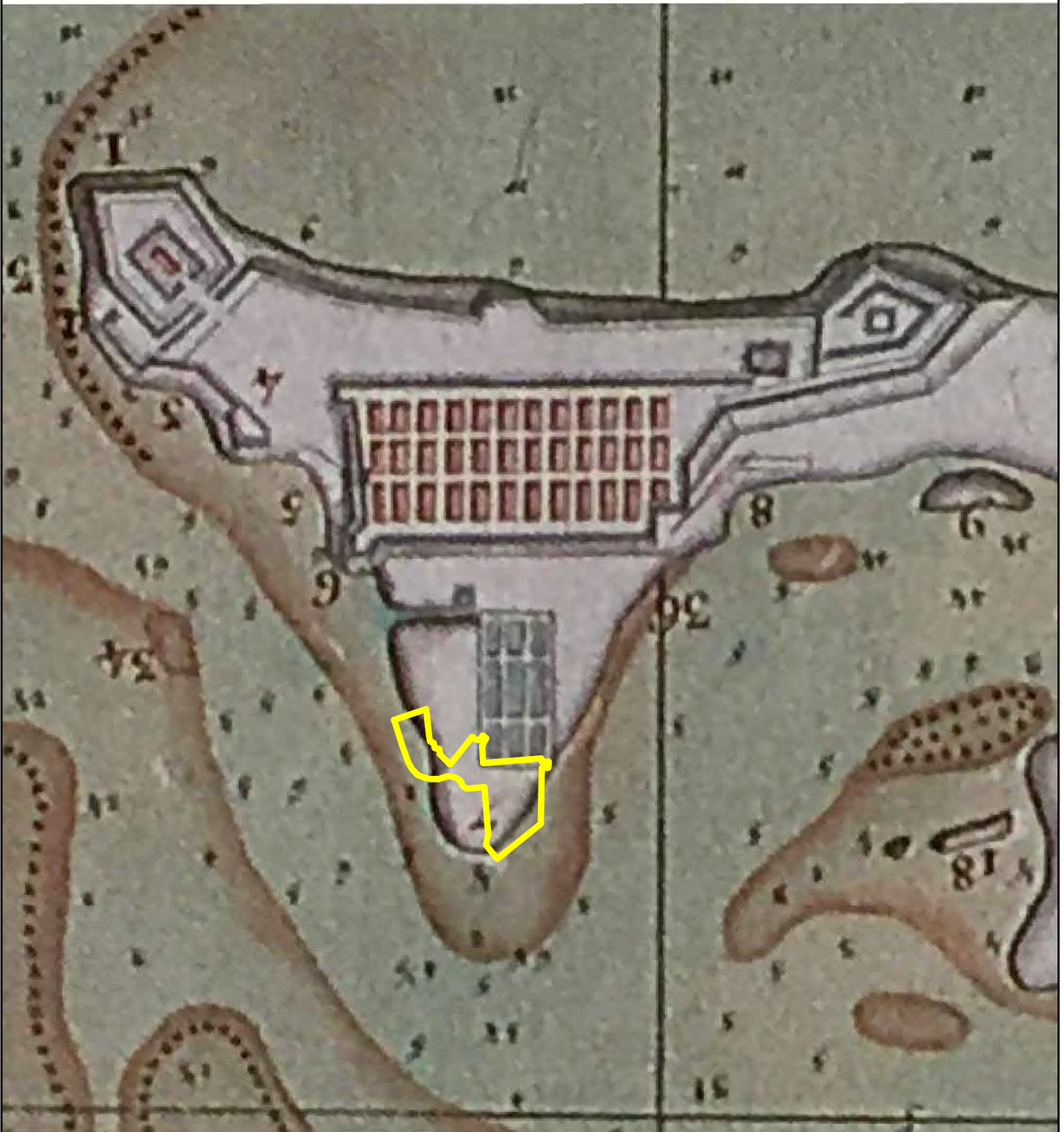
An 1805 republication of Don Cosme Damián de Churruca y Elorza's 1794 plan of the San Juan Harbor illustrates some additional improvements on La Puntilla (Figure 3-12). Several rectangular buildings are shown in a neat linear arrangement, leading south from the vicinity of the custom house (map symbol "M") along the peninsula's eastern shore and down to its southern tip. The southernmost building in this line may be the Espaldón, but it is not labeled. With the exception of the custom house, most of the buildings that de Churruca y Elorza chose to illustrate and label outside of San Juan's walls appear to be of a military nature, suggesting he may have given preference to such improvements. This could be an indication that the buildings on La Puntilla, while not specifically described, were nonetheless associated with military activities. If so, they could represent the barracks originally proposed following royal envoy Don Alejandro O'Reilly's visit in 1765.

3.2.2 Nineteenth Century Residential and Industrial Development

During the nineteenth century, development of La Puntilla began in earnest. As early as 1804, portions of its swamplands were gradually reclaimed with refuse from San Juan. Governor Don Toribio Montes (1804-1809) is credited with making the area more usable, infilling the swamps and transforming it into "a lovely walk, useful for garrison exercises as well as a recreation place, eliminating the unhealthiest spot the City had in its surroundings" (Pedro Tomás de Córdova,



Approximate Archaeological APE

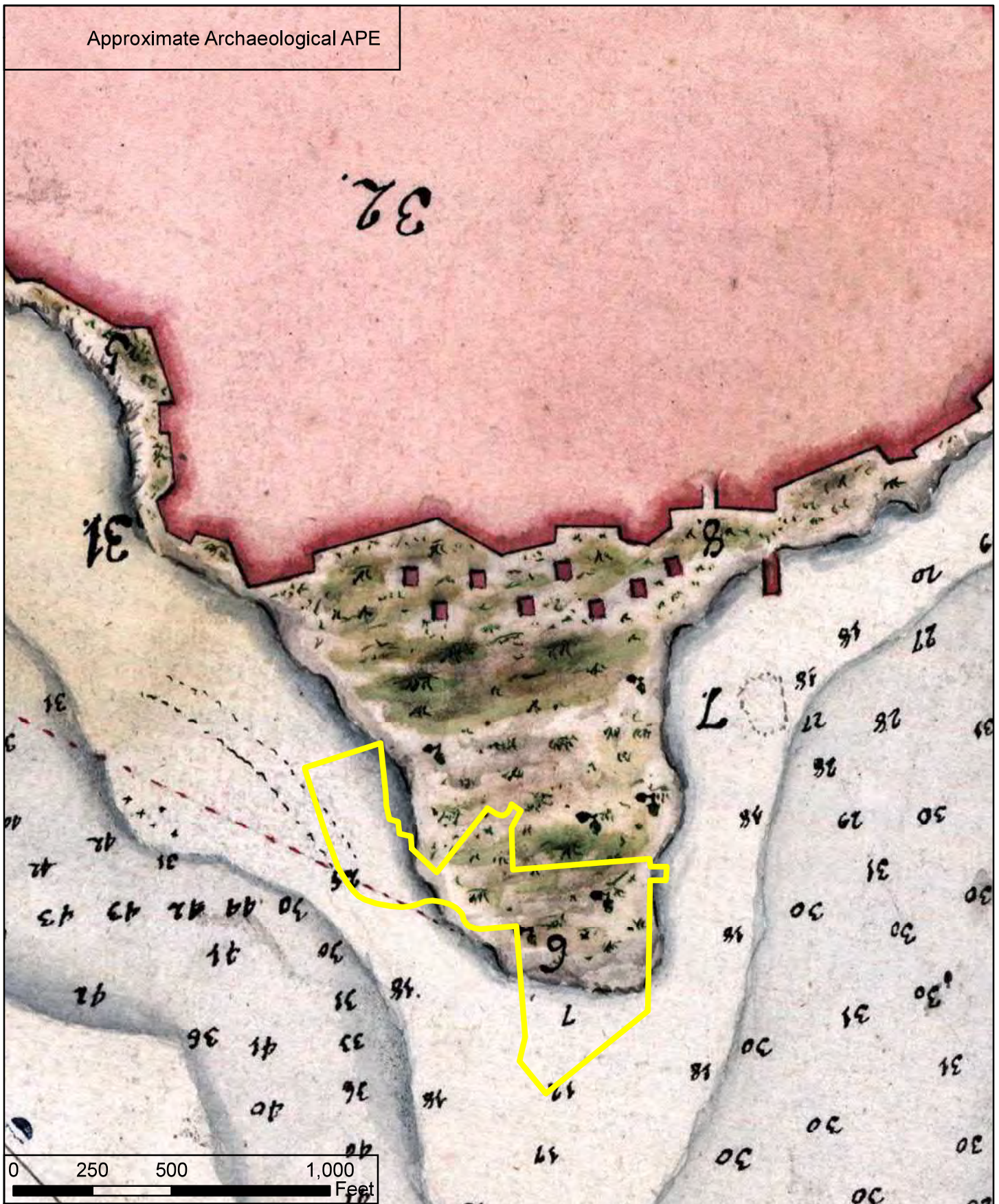


CLIENT	United States Coast Guard
PROJ	Sector San Juan Phase I Work Plan
SCALE	Not To Scale
SOURCE	Sepúlveda 1989:155
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TITLE	
Unattributed 1780 Map	
AECOM 12420 Milestone Center Dr. Germantown, MD 20876	PROJ NO 60588321
	FIGURE 3-9

Approximate Archaeological APE



CLIENT	United States Coast Guard
PROJ	Sector San Juan Phase I Work Plan
SCALE	1:5,000
SOURCE	Montero de Espinosa 1785
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	TITLE 1785 Montero de Espinosa Map	
	 12420 Milestone Center Dr. Germantown, MD 20876	PROJ NO 60588321 <hr/> FIGURE 3-10



Approximate Archaeological APE

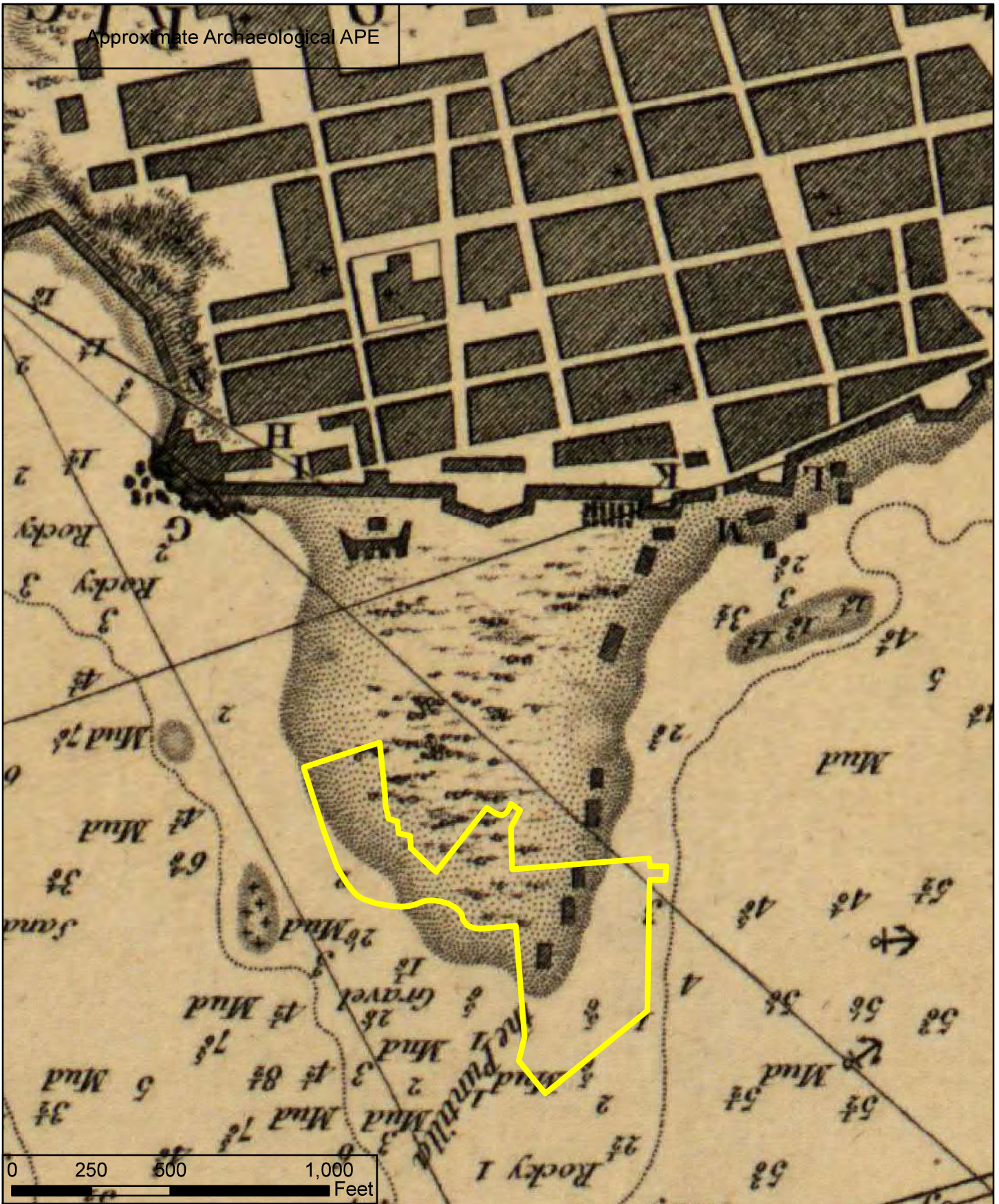


CLIENT	United States Coast Guard
PROJ	Sector San Juan Phase I Work Plan
SCALE	Not To Scale
SOURCE	Sepúlveda 2004, vol. 1:136
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TITLE	
1792 Mestre Map	
AECOM 12420 Milestone Center Dr. Germantown, MD 20876	PROJ NO 60588321
	FIGURE 3-11


Approximate Archaeological APE



0 250 500 1,000
Feet

CLIENT	United States Coast Guard
PROJ	Sector San Juan Phase I Work Plan
SCALE	1:5,000
SOURCE	de Churruca y Elorza 1805 [1794]
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TITLE	1805 Reprint of the 1794 de Churruca y Elorza Map		
	12420 Milestone Center Dr.		PROJ NO 60588321
	Germantown, MD 20876		FIGURE 3-12

quoted in URS 2001:3-3). In June 1812, Governor Salvador Meléndez Bruna, members of the Town Council, the military garrison, and members of the public gathered on La Puntilla for the celebration of the Jura de la Constitución (taking the Spanish constitutional oath), something that likely would not have occurred had La Puntilla remained largely marshland.

The need to transform La Puntilla into an area that could support intense urban development was perhaps encouraged by trends in Puerto Rico's own growth rate. In 1815, a royal order known as the Cédula de Gracia was issued, spurring immigration by offering foreigners commercial and financial incentives to settle on Puerto Rico. This helped reverse four decades of population decline that resulted in San Juan's population falling to 3,907 by 1816; by 1827 the city boasted 11,484 inhabitants (URS 2011). Such a dramatic increase required urban development outside of the city walls, since the near tripling of San Juan's population between 1816 and 1827 left little affordable real estate within the city proper. La Puntilla's immediate adjacency made it a prime candidate for expansion, though progress was very slow and the area remained "a mix of slum, mangrove, palm grove and campsite" during the first half of the nineteenth century (URS 2001:3-3).

An 1835 plan of La Puntilla produced by Manuel Sicardó includes several new cultural landscape features, signaling the peninsula's transformation from marginal lands into an extension of urban growth (Figure 3-13). Three rows of wooden houses can be seen running along the length of La Puntilla's west coast, with two blocks of wooden houses south of what is now the Paseo de la Princesa. Additional residential/commercial features include two large community garden plots in the center of the peninsula, the Harbor Captain's house to the northeast, and a warehouse or what was the Mercantile Depot to the south (Sepúlveda 1989). Several military buildings, described in section 3.2.3, are also visible and include those of the Arsenal, the Battery of San Toribio, and its Guard Corps. To the north of the peninsula, next to the base of the wall, where the Artillery School had been located, it shows a planned building described as "barracks of inmates that must be built" (this prison would later be referred to as La Princesa). As Carbonell (1992:13) observes, "the structures represented here in some way determined the morphology of the later urban layout of La Puntilla".

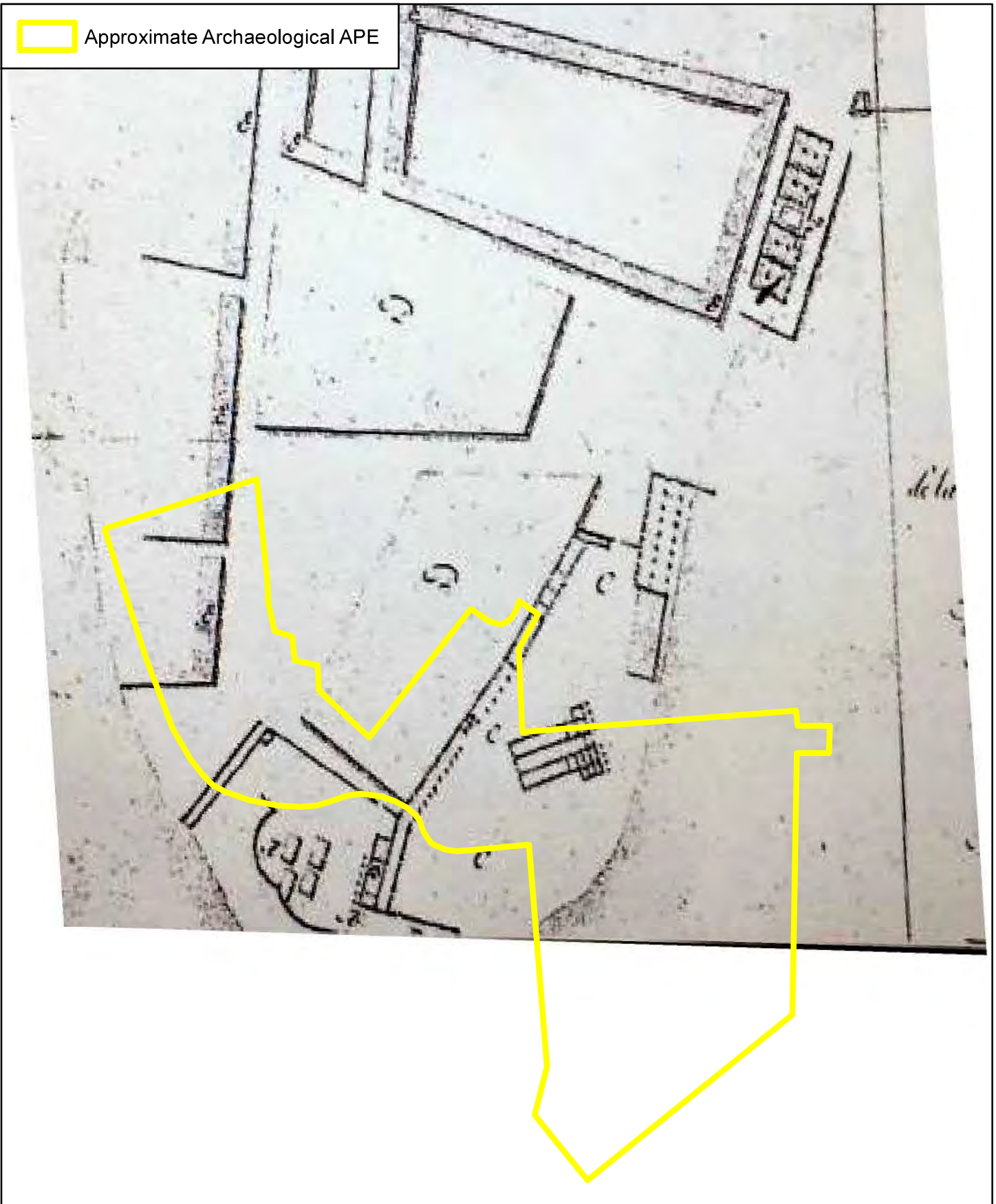
The north-central part of La Puntilla had been laid off into a network of urban blocks by 1849, as seen on Manuel Soriano's contemporaneous plan of La Puntilla (Figure 3-14). This provided a basis for the mid-nineteenth century growth and development of La Puntilla's early neighborhoods. While this plan incorporated several important buildings previously illustrated on the peninsula, it proposed an additional 36 regular blocks for urban expansion. It is important to note that these blocks were arranged along a diagonal grid that marked a sharp departure from the more cardinally oriented grid of San Juan. This became a defining feature of La Puntilla's layout, even once most of the preexisting structures were demolished by the 1960s (Carbonell 1992).

An 1862 drawing of La Puntilla by Manuel J. Castro and José López Bagó creates a useful visual contrast between the 1849 plan and the actual growth of the area as determined by competing industrial and residential demands of the time (Figure 3-15). As Carbonell (1992) observes:

This plan illustrates the status of the situation in the sector of La Puntilla by 1862, superimposed on the plan of 1849. As one can see, only a few blocks had been built, the rows of wooden houses remained northwest of the peninsula, the Promenade was already built and a gas factory was located north of the Battery of Santo Toribio. The other buildings that appear are those described in the map of 1835. (Carbonell 1992:14. Transl. ASR)



Approximate Archaeological APE



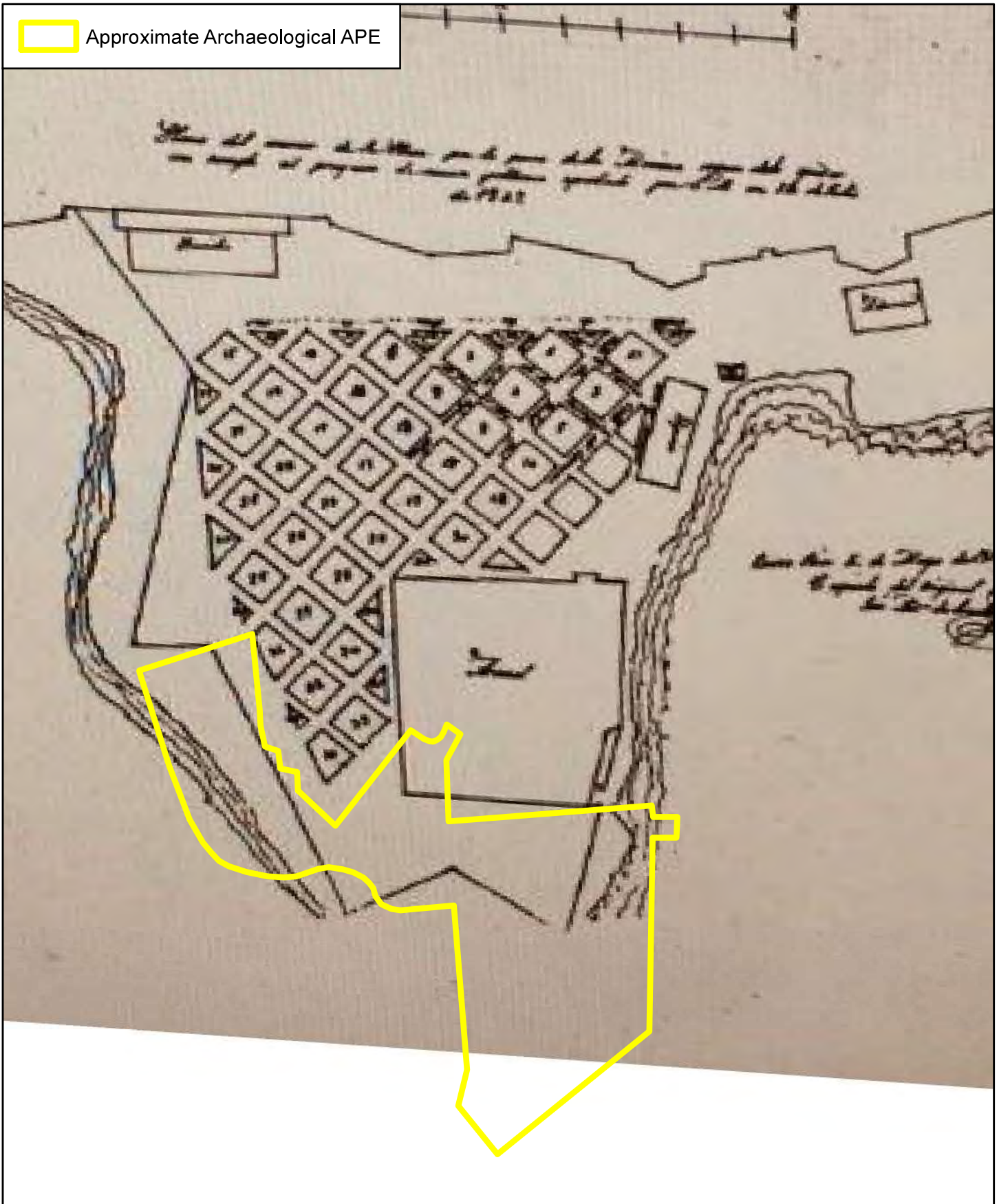
CLIENT	United States Coast Guard
PROJ	Sector San Juan Phase I Work Plan
SCALE	Not To Scale
SOURCE	Carbonell 1992, Fig. 18
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TITLE	
1835 Sicardó Map	
AECOM 12420 Milestone Center Dr. Germantown, MD 20876	PROJ NO 60588321
	FIGURE 3-13



Approximate Archaeological APE



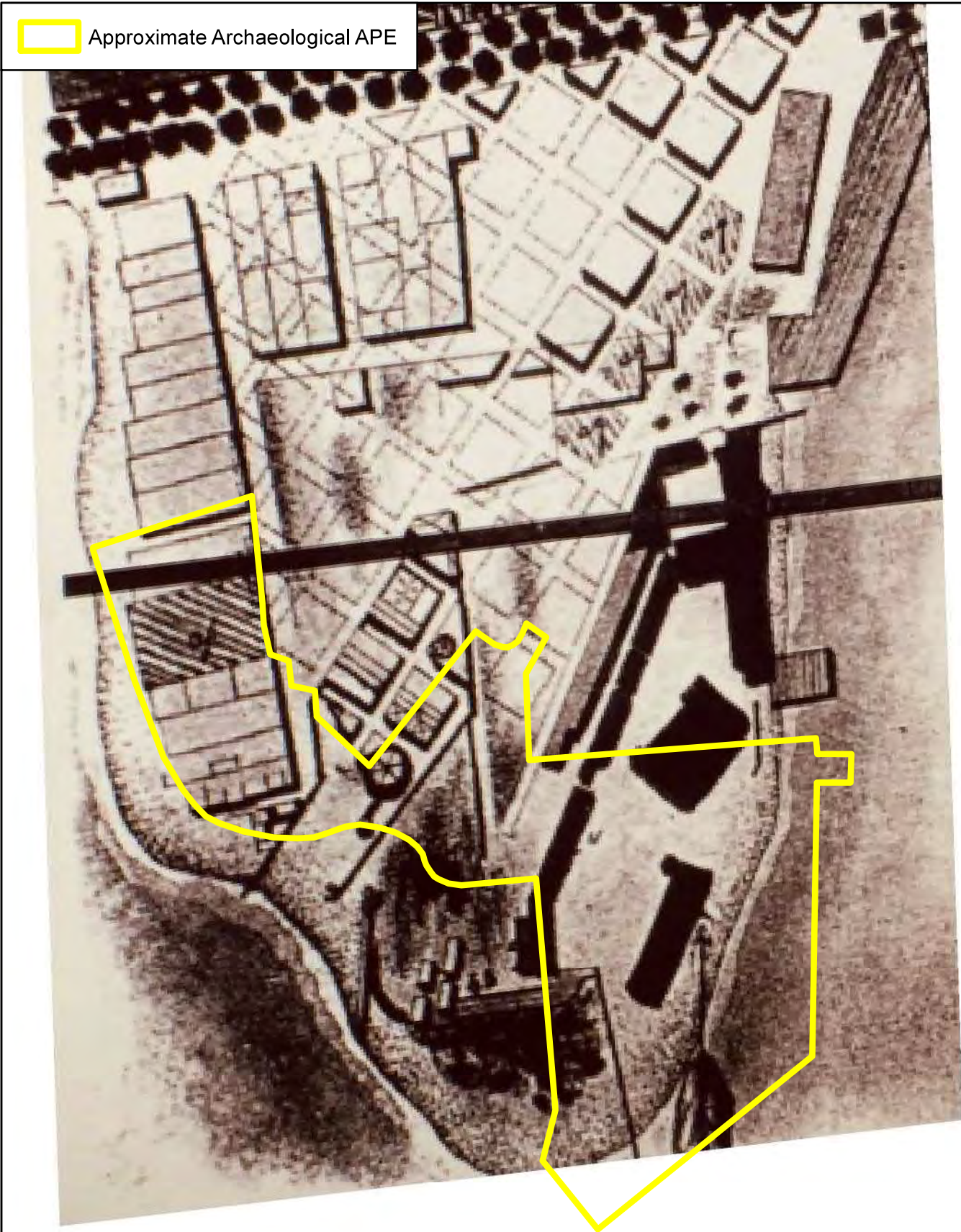
CLIENT	United States Coast Guard
PROJ	Sector San Juan Phase I Work Plan
SCALE	Not To Scale
SOURCE	Carbonell 1992, Fig. 19
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TITLE	
1849 Soriano Map	
AECOM 12420 Milestone Center Dr. Germantown, MD 20876	PROJ NO 60588321
	FIGURE 3-14



Approximate Archaeological APE



CLIENT	United States Coast Guard
PROJ	Sector San Juan Phase I Work Plan
SCALE	Not To Scale
SOURCE	Carbonell 1992, Fig. 20
\\na.aecomnet.com\lfs\AMER\Germantown-USGRM2\DCS\Projects\ENV\IAP\CRM\USCG - Sector San Juan\900-GIS and	



TITLE	
1862 Castro and Bagó Map	
AECOM 12420 Milestone Center Dr. Germantown, MD 20876	PROJ NO 60588321
	FIGURE 3-15

This area underwent an expansion in 1865 to accommodate new industrial and residential developments (Belfast et al. 2016). These developments were enabled by improvements to Puerto Rico's customs collections in 1849, which enlarged revenues and allowed for credit and banking to become established after 1865. It is not a coincidence that these institutional milestones corresponded with the first major phases of La Puntilla's development, as the increased collections and availability of credit provided the right financial environment for growth (URS 2001).

While much of La Puntilla's early development was industrially driven, residential areas such as the La Marina and La Carbonera neighborhoods emerged to the north of what is now USCG Base San Juan. While small wooden shelters and bohíos were built in the area, by 1878 La Marina featured a number of masonry dwellings along with 98 wooden houses accommodating a population of nearly 2,000 people (URS 2001). Nevertheless, the neighborhood was generally poor, its inhabitants primarily dependent upon the harbor to make a living.

The earliest major industrial enterprise on La Puntilla was a hydrogen gas plant that Gustavo Steinacher opened in 1853. The sprawling facility grew to encompass seven plots of land by 1856 and by 1857 provided lighting to the marketplace, jail, and municipal theater. Sometime between 1880 and 1890, the plant was transferred to the Mullenhoff & Korber company. By 1888, the fuel needed to fire the plant was acquired from La Puntilla's coal industry, located in the southeastern part of the peninsula; a service road delivering car loads of coal physically linked La Puntilla's gas and coal enterprises. The plant continued to supply gas lighting until 1903, at which time it could no longer compete with electric lighting that the Valdéz, Sifre & Cueto company first provided to San Juan in 1894 (URS 2001).

In 1891, La Providencia Baths opened on La Puntilla, the recreational and therapeutic aspects of the business sharply contrasting the heavy industry and excessive pollution for which the nearby gas plant was infamous. Located at the end of Isabel II Street, the baths were developed by Don Jose Cánovas y Martínez to provide residents an opportunity to soak in seawater. The facility originally included one bathroom for men and four for families (Belfast et al. 2016). By 1893, however, Cánovas y Martínez was forced to relocate La Providencia Baths to the southern end of La Puntilla to avoid ships that anchored at the end of Isabel II Street (URS 2001).

Another recreational endeavor was launched on La Puntilla in 1892 as members of the Club Neptuno sailing group petitioned the government for land for the construction of a boathouse. The building was extant by 1893, located along the west side of La Puntilla, and the club petitioned for outright ownership of the property in 1899; this was not permitted, as the land by that time was under U.S. control as part of its naval reserve (Belfast et al. 2016).

The late nineteenth century not only witnessed La Puntilla's functional expansion, the landform's physical expansion accelerated as well. Following an April 28, 1877 Royal Order, development of La Puntilla's waterfront for commercial or other purposes required approved dredging plans and encouraged the reclamation of land off of the peninsula's low western shore. This more measured approach to urban development included a number of stipulations regarding the location and construction materials of certain maritime features (e.g., docks, quays). Permits were issued for the occasional wooden pier, both on the west and east sides of La Puntilla. Since the west side was already in the process of being reclaimed, piers could be constructed so as to avoid becoming enveloped in fill. On the east side, however, later dredge disposal operations would expand the La Puntilla coastline and bury some of the late nineteenth century waterfront features (URS 2001).

It is worth noting that the land reclamation processes used to expand La Puntilla were not unique to the peninsula, but instead were a part of a broader program that initially arose out of a need to dispose of material dredged from the harbor channel. Plans for this work were initially put forth by the Spanish government in the early nineteenth century, but nothing materialized for several decades. By 1876, the Spanish army had authorized the dredging process in the bay and subsequent infilling of surrounding mangrove areas south of the islet (Meléndez 2010). Sharon Meléndez notes:

The filling of mangrove areas was initially related to the dredging works taking place in the San Juan Bay. Studies to dredge the port were ordered from 1869, but it was not until 1877 that a budget was approved to clean and dredge the bay. However, the project continued to undergo constant amendments, causing the cost of dredging to continue to increase, so the awarding of the contract took nearly a decade. The project envisaged not only the cleaning of the port bottom, but the construction of new docks, the construction of warehouses and the establishment of loading and unloading equipment. (Meléndez 2010:60)

By the last two decades of the nineteenth century, the municipality of San Juan was directly pressuring the Spanish Crown to allow the final widening of the islet (Sepúlveda 1989:39). Dredging and subsequent works would begin in 1885. According to Walter Bonilla, the Board of Ports and Docks announced at the height of 1892 that "the filling taken from the dredging, had been poured into the embankments of the east of the islet, between the La Puertorriqueña pier, and the entrance of the Caño de San Antonio, gaining to the sea a new area of 38,684 square meters (quoted in López 2003:17).

3.2.3 Nineteenth Century Military Development

During the nineteenth century, the military presence on La Puntilla dramatically expanded. Construction was underway on the Navy's Royal Arsenal by 1800, which was to provide munitions and supplies to the Spanish Navy as well as maintenance services to the light force (a fleet of small ships intended for the immediate defense of San Juan). As originally built, the arsenal was neither an expansive nor imposing facility, consisting solely of a shed, dock, and water tank under the supervision of a small contingency of guards. However, the establishment of the arsenal "defined the form of subsequent development of La Puntilla" (URS 2001:3-6).

In 1813, the Presidio de Vagos (vagrants jail) was added to the arsenal grounds, but within a matter of years the complex had fallen into a state of disrepair. Under the administration of Military Governor Don Miguel de la Torre, the arsenal was reconstructed by 1826. Existing buildings were rehabilitated, and new facilities were added to the complex, including a warehouse, a naval cartography room, dry storage for vessels, a pier, and a shed for falúas (small boats). Expansion of the arsenal's functional and physical capacities continued for the next two decades, and by 1845 it included annexes, warehouses, workshops, staff housing, military barracks, sheds, and kitchens. More than 300 military and civilian personnel staffed the arsenal by 1897 (Belfast et al. 2016; URS 2001).

An 1894 plan of San Juan's port shows the expansive arsenal complex along the eastern shore of La Puntilla, with several piers projecting east toward the main channel (Figure 3-16). To the southwest, a large complex of workshops can be seen on land that the War Branch had transferred to the San Juan Port's Board of Public Works.

Approximate Archaeological APE

Map of San Juan, Puerto Rico, showing the city's layout, streets, and topography. A yellow outline highlights a specific area in the center of the city, likely the archaeological site of interest. The map includes labels for streets, landmarks, and elevation contours. A scale bar at the bottom indicates distances in feet (0, 250, 500, 1,000).

CLIENT	United States Coast Guard
PROJ	Sector San Juan Phase I Work Plan
SCALE	1:5,000
SOURCE	No Author 1894
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**AECOM**

PROJ NO	60588321
FIGURE	3-16

The arsenal was not, however, the only military facility to have taken form during the nineteenth century. In 1805 the Battery of Santo Toribio was constructed under Governor Don Toribio Montes, sited in the same location as earlier sixteenth and seventeenth century batteries. Reconstructed in 1826 and 1849, the Battery of Santo Toribio consisted of a semicircular, short parapet wall behind which cannons were mounted; other support buildings were constructed in the vicinity (Belfast et al. 2016). Toward the end of the nineteenth century, the battery was in ruins, and its location had lost all of its military strategic value. Dredging and land reclamation programs that expanded La Puntilla resulted in the battery being located farther from the coastline. Deteriorating and obsolete, it was transferred to the Board of Public Works which, in 1890, constructed a warehouse atop the battery site (URS 2001). Archaeological remnants of the battery are located beneath the asphalt paving between Buildings 100, 101B, 116, and 120 on USCG Base San Juan (Belfast et al. 2001).

3.2.4 San Juan Port's Board of Public Works (1890-1899)

The San Juan Port's Board of Public Works, which took over ownership of the former battery grounds, was a state corporation responsible for the maintenance of the San Juan Harbor. The Board was in charge of dock and warehouse construction, the maintenance and emplacement of buoys, and harbor dredging. The warehouse constructed in 1890 on the site of the Battery of Santo Toribio was expressly to aid the Board in its dredging program. Additional buildings were quickly added to the Board's grounds during the 1890s, including offices, workshops (including those for mechanics, a blacksmith, and woodworking), storerooms, warehouses. Even a small dry dock was constructed as a provisional facility for the maintenance of small ships, with the expectation that a larger dry dock would eventually be built (this never materialized). Many of these features, including the dry dock ("varadero") are illustrated on Figure 3-16.

3.3 UNITED STATES OCCUPANCY (1898-PRESENT)

In the wake of the 1898 Spanish-American War, spurred by the U.S.'s intervention in Cuba's war of independence from Spain, the victorious U.S. took possession of Puerto Rico, Guam, and the Philippines by virtue of the Treaty of Paris. Many Spanish soldiers were temporarily lodged on La Puntilla as they awaited their departure from Puerto Rico, defiantly flying the Spanish flag after four centuries of rule (Belfast et al. 2016).

President William McKinley signed the Foraker Act in 1900, allowing Puerto Ricans the opportunity to form their own government. In 1902, Puerto Rico officially became a U.S. territory. The following year, Puerto Rico's Legislative Assembly authorized the island's governor to transfer certain lands to the U.S. for military and other purposes. La Puntilla was specifically included in the act, which transferred not only most of the land but all of its public buildings, streets, and other property south of the Paseo de la Princesa. As described in a Presidential Proclamation issued by Theodore Roosevelt on June 26, 1903, the property that would be conveyed for naval purposes included:

All public lands and structures thereon, situated on the peninsula extending into the harbor on the south side of the city of San Juan, Porto Rico, known as the Barrio de la Puntilla, or Puntilla Point, bounded on the north by the south boundary of the Paseo de la Princesa, and on the east, south and west, by the navigable waters of the harbor of San Juan, at such port warden's line as may be established by competent authority. (Roosevelt 1903a)

Four days later, Roosevelt issued another Presidential Proclamation reserving some of La Puntilla for other purposes, including the use and occupation of the custom house and related authorities. However, the transfer of the other La Puntilla property for use as a naval reserve was problematic, as competing interests forced the acquisition into litigation. The U.S. government intended to use reclaimed land on the west side of La Puntilla, since the aforementioned Presidential Proclamation provided for a naval reserve that extended east, west, and south to the peninsula's navigable water line. However, this land, which the Board of Public Works reclaimed in the late nineteenth century, had been granted to several individuals prior to the U.S. acquisition of Puerto Rico. Provided that these citizens did not interfere with the Board's harbor activities, they were allowed to develop their own improvements, such as La Providencia Baths and Club Neptuno as noted above (URS 2001). Litigation was not settled until 1908, thereby completing the U.S. annexation of La Puntilla a decade after Puerto Rico became a U.S. territory (Belfast et al. 2016).

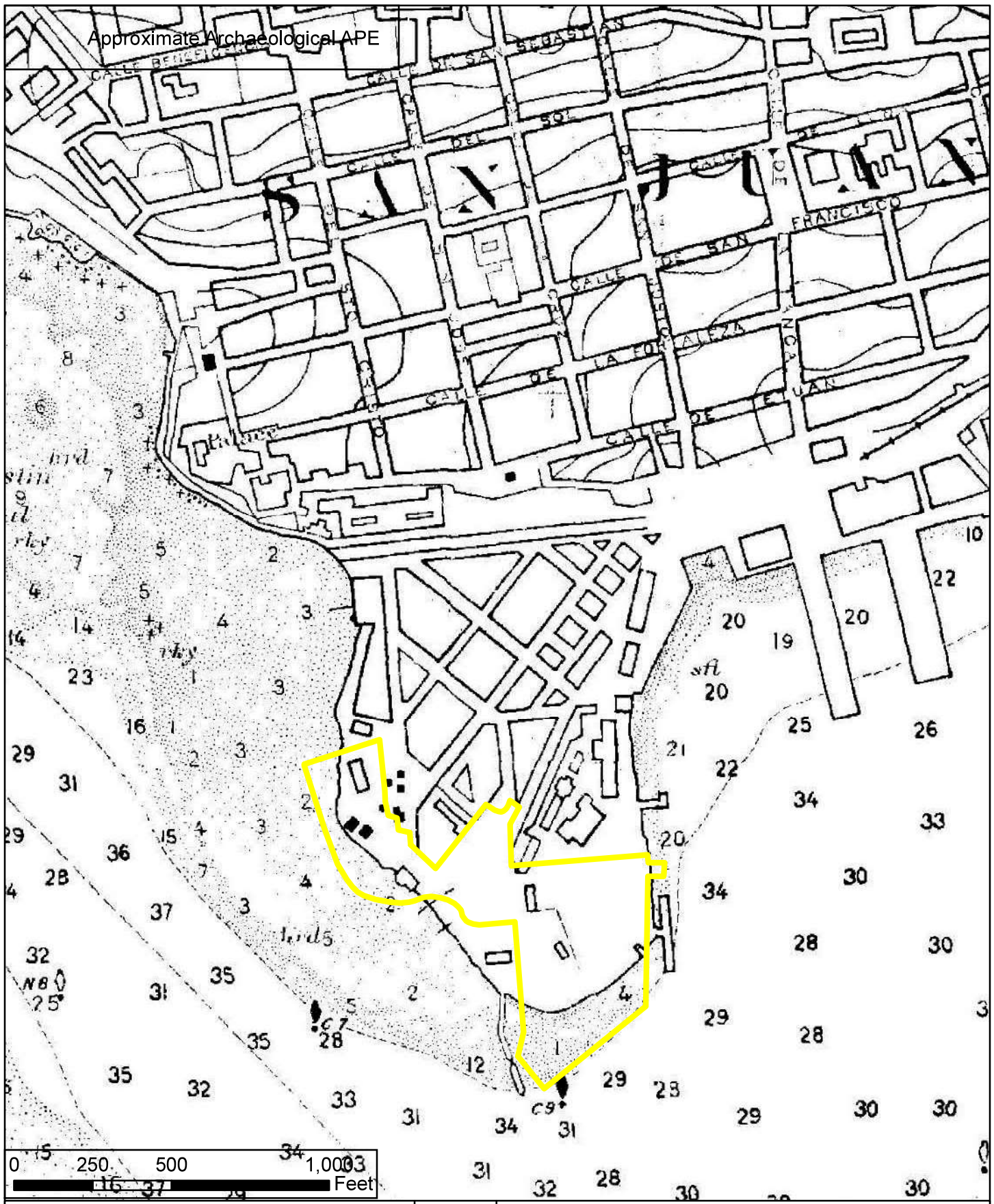
Prior to the U.S. government presence on La Puntilla, it has been noted that the peninsula served industrial, military, commercial, and residential purposes. The former buildings of the Board of Public Works, arsenal, and the gas and coal plants would have been dominant aspects of the contemporaneous built environment, but the fate of any given structure eventually fell to the discretion of the U.S. Navy Department. Between 1899 and 1906, buildings were demolished and constructed as needed.

A 1912 United States Coast and Geodetic Survey (USCGS) chart of San Juan harbor shows La Puntilla in its second decade of U.S. occupation (Figure 3-17). While none of the buildings are labeled, the built environment clearly had changed since the 1894 plan of San Juan's port (Figure 3-16) was issued. Many of the former Royal Arsenal buildings remained standing, but the majority of those previously belonging to the Board of Public Works were no longer extant. Three buildings illustrated on the Board's former grounds could correspond to some of its workshops, but it is unclear. To the northwest and along the west coast, a small cluster of buildings are shown; these presumably belonged to the U.S. Navy at the time, but they may be associated with former industrial activities or the Insular Health Department. The contours of the coastline changed little, if any, since 1894, though some shoreline features were removed or replaced. The docks shown along the eastern shore of La Puntilla in 1894 appear to have been removed, with two new docks serving the federal government's property constructed instead.


Throughout the early twentieth century, various institutions and building programs came to characterize the use of La Puntilla. These included the Insular Quarantine Hospital, the Lighthouse Service, and the Naval Station. Eventually, the USCG would come to occupy the property and has defined the U.S. government presence on La Puntilla since 1939. Given the multifaceted nature of La Puntilla's use following U.S. acquisition, each of these institutional occupations are addressed separately below.

3.3.1 Insular Quarantine Hospital (1912-1940)

With the ability of the U.S. to acquire property in Puerto Rico as needed, it likewise had the authority to return the lands and buildings to the people of Puerto Rico in the event such real estate was no longer required by the U.S. In 1912, President Taft issued a proclamation returning certain property to Puerto Rican ownership, including 4.5 ac on La Puntilla lately used as part of the naval reservation. This property was located within what is now the western strip of land on USCG Base San Juan (Taft 1912a).



CLIENT	United States Coast Guard
PROJ	Sector San Juan Phase I Work Plan
SCALE	1:5,000
SOURCE	USCGS 1912
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	TITLE 1912 USCGS Chart	
	 12420 Milestone Center Dr. Germantown, MD 20876	PROJ NO 60588321 FIGURE 3-17

The 4.5 ac Taft returned to Puerto Rico were transferred to the Insular Sanitation Service, established in 1911 and comprised of a Director of Sanitation and the Insular Board of Health. The latter, which included four physicians, a lawyer, an engineer, and a chemist, was charged with developing public health regulations and ordinances. This board also provided instructions for preventing the spread of infectious disease and for maintaining hygienic conditions in domestic, commercial, industrial, recreational, and institutional settings. The Director was responsible for enforcing this guidance (United States Congress [Congress] 1911).

The way in which the Insular Sanitation Service developed the 4.5-ac tract is vague, though portions of it were utilized by the Bureau of Tuberculosis (Building 124, a dispensary) and the Division of Roentgenology (Building 125, a laboratory and x-ray facility). It also included all or part of the Insular Quarantine Hospital, which was built in 1912-1913. It is somewhat unclear, but the hospital may not have referred to a single building, but rather a complex of buildings that would have included the dispensary, laboratory, an administration building (Building 126), a kitchen, wards, and other facilities. If, however, a single hospital building was constructed, its location remains unknown (Belfast et al. 2016).

In 1913, a portion of the hospital's administration building was transferred to the newly founded Institute of Tropical medicine, which provided instruction, field studies, and laboratory research on tropical disease pathology. This augmented the hospital's services, allowing the complex to function as a place of medical research as well as care. Ten concrete isolation wards were added along the waterfront by the early 1920s, and by 1923 the Quarantine Hospital had a capacity for 60 patients (United States War Department [War Department] 1923).

A principal concern of the Insular Sanitation Service, and a primary objective of the Quarantine Hospital, was to help control the spread of tuberculosis. The hospital's dispensary was one of several established on Puerto Rico to evaluate and help treat patients, 6,018 of whom visited the island's dispensaries in 1924-1925 alone (Porto Rico Department of Health 1925). Dispensaries proved so critical to the fight against tuberculosis propagation that the U.S. War Department's Bureau of Insular Affairs credited them as the only variable that could lead to a rapid decrease in mortality rates and, ultimately, the eradication of the disease itself (War Department 1917).

La Puntilla remained a focal point of infectious disease research and management in San Juan until 1940, when the property was transferred to the USCG for installation expansion. Thirty-five buildings conveyed, including two dispensaries, offices, quarters, and quarantine wards, though only 25 buildings were listed on a 1941 assessment (Belfast et al. 2016).

3.3.2 Lighthouse Service (1903-1939)

Puerto Rico's lighthouse service was officially transferred to the U.S. Lighthouse Board's administration on May 1, 1900, placing it within the third district along with other nearby islands the U.S. received via the Treaty of Paris. Puerto Rico at the time included 41 buoys and 15 lighthouses/lighted beacons (Belfast et al. 2016). Part of the grounds of the former Battery of Santo Toribio and the Board of Public Works initially were set aside for the Lighthouse Board's use, but the space was evidently inadequate. A 1902 annual report cited the need for a dwelling and office for an assistant lighthouse inspector, as well as additional storage space beyond the single 10-by-15-ft warehouse then at the Lighthouse Board's disposal. The following year, the assistant inspector was given an office in the custom house north of the Naval Station, and all lighthouse equipment was moved to a War Department building to allow the Navy use of the storage space it previously provided to the Lighthouse Board (Office of Light-House Board 1902, 1903).

The 1903 Presidential Proclamation issued by Theodore Roosevelt that reserved certain public lands on Puerto Rico for non-naval purposes specifically set aside property for lighthouses and a lamp shop/buoy depot (Roosevelt 1903a, 1903b). On La Puntilla, 2.28 ac were reserved for the lamp shop/buoy depot, but the property's location and built improvements are unclear (Roosevelt 1903b). It is known to have been irregularly shaped, stretching from somewhere on the west side of La Puntilla toward the peninsula's interior. No descriptions of contemporaneous buildings could be located, but it seems likely that some improvements were developed early in the lighthouse reserve's history, since additional property was requested for the Lighthouse Board's use from the adjacent Naval Station in 1904 (Belfast et al. 2016).

The Navy granted the Lighthouse Board's request, and improvements were soon underway. Plans were developed for a pile pier and buoy shed, with work commencing in 1905. A new storehouse was improved in 1908 with a dedicated \$15,000 appropriation but was suspended while awaiting the property's transfer from the government of Puerto Rico. This appears to be related to the aforementioned legal actions that delayed the official transfer of La Puntilla lands for use as a naval reserve until 1908 (Office of the Light-House Board 1909).

The Lighthouse Board officially became the U.S. Lighthouse Service on June 17, 1910, with Puerto Rico falling under the ninth lighthouse district. In 1912, President William Taft transferred part of the naval reserve to the Lighthouse Service for use as a headquarters and depot for the ninth district. The southern tip of La Puntilla thus transferred for use of the Lighthouse Service, while 1.16 ac previously set aside for the lighthouse depot reverted to the War Department (Bureau of Lighthouses 1912; Taft 1912b). The original property set aside for the lamp shop/buoy depot returned to the Insular Government and was subsequently used as part of the Insular Quarantine Hospital (Taft 1912a).

In 1915, funding was requested for a new office building for the lighthouse depot, as the offices at that time were still housed in a War Department building. A new wharf was also needed, as the existing had fallen into disrepair, though it is unclear when the wharf might have been replaced (Commissioner of Lighthouses 1915). Two maps available for review but not for reproduction show the lighthouse depot grounds in 1921 and again in 1931. In 1921, the property encompassed the tip of La Puntilla and included the superintendent's dwelling, a keeper's house, quarters for captains and assistant superintendents, a carpenter and lamp shop, a storehouse, a garage, and a laundry house. Garden areas surrounded the residential units, while the remainder of the depot was paved in concrete. A wharf extended off of the eastern shore, and two barges that the Board of Public Works scuttled off the southern shore were still shown in place (URS 2001).

By 1931, minor additions to the built environment are evident in the form of several small to moderately sized storehouses, the removal of the former wharf, and the construction of a new wharf and bulkhead on the southeastern shore (URS 2001). By the 1930s, the depot was known as the Lighthouse Reservation at Puntilla, serving in this capacity until 1939 when it was merged with the USCG (Belfast et al. 2016).

3.3.3 San Juan Naval Station (1898-1940)

The U.S. Navy assumed control over former Spanish Royal Arsenal along with other government property in 1898. With the establishment of the North Atlantic Fleet's Caribbean Division on December 10, 1902, San Juan was selected as its base. Pursuant to a 1902 presidential Executive Order, and a 1903 act of Puerto Rico's Legislative Assembly, most of the lands on La Puntilla south of the Paseo de la Princesa were conveyed to the U.S. government (Roosevelt 1903a). This

included infilled portions of the shoreline which until 1908, as noted, were contested by several private citizens who had been granted rights to that land by its former proprietor, the Board of Public Works (Belfast et al. 2016).

By 1908, the Naval Station's built environment was more robustly developed than may be expected, given the legal difficulties the U.S. government faced in establishing ownership of La Puntilla up to that time. The dominant features of its historic cultural landscape were six massive coal deposits collectively encompassing nearly one quarter of the property. Paved in cement, these stockpiles were used for vessel supply, testifying to the immense fueling needs in the age of coal-fired steamships. A large wooden dock southeast of the piles was in the process of being reconstructed at this time and would have been used for loading and unloading coal; a small carenage for beaching ships was located nearby. Building 117 and part of Building 120 were present by this time, as were outhouses, storehouses, quarters, and other facilities along the eastern and southern coasts of La Puntilla. At the southern end of La Puntilla, two barges that the Board of Public Works abandoned in the late nineteenth century still sat along the shoreline (Belfast et al. 2016; URS 2001).

The Naval Reservation on La Puntilla remained fully under the U.S. War Department's administration until President Taft transferred the southern portion to the U.S. Department of Commerce and Labor in a January 26, 1912 Presidential Proclamation (Taft 1912b). It was then transferred to the U.S. Treasury Department for the use of the USCG in 1940, though Belfast et al. (2016:58) note that "the northern portion of the La Puntilla Military Reservation remained in control of the U.S. War Department until 1956, when it was conveyed to the Commonwealth of Puerto Rico. The U.S. Naval presence in San Juan ceased by December 1973".

3.3.4 Coast Guard (1939-Present)

On January 28, 1915, the USCG was created after President Woodrow Wilson merged the U.S. Life Saving Service and the U.S. Revenue Cutter Service; on July 1, 1939, the U.S. Lighthouse Service was made part of the USCG (Congress 1915; Roosevelt 1939). With this administrative reorganization, and given its history as a naval and lighthouse reserve, La Puntilla was a well-appointed location to support the USCG's responsibilities for maintaining port security as well as navigational aids. This became particularly important as the USCG assumed control of La Puntilla on the eve of World War II, during which time "USCG Base San Juan became a 'strategic center for shipping and port security – the protection against sabotage and fire'" (quoted in Belfast et al. 2016:62).

With the approaching war and the USCG's new responsibilities at Base San Juan, property expanded in 1940 and 1941. At the time, the Insular Quarantine Hospital occupied a large parcel of land stretching between the western shore of La Puntilla east to Calle Presidio (now Calle Arturo Shomberg), north of the former naval reserve. This property, which as noted above belonged to the Insular Government, was transferred to the USCG around 1940, including Buildings 124, 125, and 126. Additional property was again requested from the Insular Government in August 1941, when what was at the time an Insular Government garage (Building 120) was transferred to the USCG for \$8,719.66 under President Franklin D. Roosevelt's Executive Order No. 8867 (Roosevelt 1941).

Needing additional space, the USCG leased a barracks and warehouse from the War Department by 1943, to which were added Buildings 4 and 6, the marine railway, and warehouses. This expansion was no doubt in response to the increased wartime demands placed on USCG Base San

Juan as the headquarters for the Tenth Coast Guard District. The installation was critical to protecting the Allied Forces' Caribbean interests and was given more vessels than any other bases in the district, including five cutters and 26 other crafts. With these resources, the Base was charged with providing emergency defense, submarine spotting, minesweeping, and patrolling the region. Additionally, the Base was responsible for Caribbean radio equipment maintenance, with the Marine Radio Office probably housed in Building 102 (Belfast et al. 2016).


Following World War II, the Base's role in the ensuing Cold War is not well defined, though it almost certainly contributed to the U.S.'s Caribbean defense interests (particularly as the threat of missile attacks escalated in the 1960s). In this capacity, it may have launched submarine patrols and conducted other operations to protect the U.S. from a nuclear assault (Belfast et al. 2016). In 1967 and while the U.S. maintained its defensive war footing, the USCG was transferred to the Department of Transportation, where it assumed responsibilities related to merchant vessel registrational and licensure (National Archives at New York City 2013). A 1969 United States Geological Survey (USGS) map provides a broad overview of the Base, demarcating its boundaries and showing the locations of its larger buildings (Figure 3-18). The contours of La Puntilla had been altered from their appearance on the 1912 USCGS chart, predominantly along the southern tip which was likely enlarged when this area served as the lighthouse depot.

By the end of the twentieth century, considerations for a large reconstruction project at USCG Base San Juan were put forth, in which all but Buildings 100, 116, and 121 would be demolished. In 1998, the Keeper of the National Register of Historic Places (NRHP) determined the Base to be eligible for listing in the NRHP, with Buildings 100, 101, 103, 117, 120, 121, and 122 as contributing resources; Building 116 had already been listed in the NRHP by that time. Pursuant to a Programmatic Agreement among the USCG, PR SHPO, and the ACHP, special cultural resources management stipulations were enacted, allowing the demolition/construction projects to proceed accordingly. New support, administrative, and residential facilities were built in the late twentieth and early twenty-first centuries, as were the Alpha, Bravo, Charlie, and Delta piers.

Currently, USCG Base San Juan is responsible for all Coast Guard missions in the Eastern Caribbean area of operations, including the enforcement of U.S. laws and regulations, search and rescue operations, marine safety, port security, law enforcement, and general duties in military readiness. The Base supports a number of functions and units, including Sector San Juan, Station San Juan, Aids to Navigation Team Puerto Rico, Investigative services, Rio Bayamon Housing, exchange and morale functions, and is a homeport to seven vessels. Additionally, the Base provides maintenance support to the homeported cutters and the small boats assigned the Station and Aids to Navigation team.



CLIENT	United States Coast Guard
PROJ	Sector San Juan Phase I Work Plan
SCALE	1:5,000
SOURCE	USGS 1969
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	TITLE 1969 USGS Map	
	AECOM 12420 Milestone Center Dr. Germantown, MD 20876	PROJ NO 60588321 FIGURE 3-18

4.0 PREVIOUS INVESTIGATIONS

To better contextualize potential archaeological resources within the APE, if any, it is necessary to identify the archaeological sites and reports within the APE and its vicinity. This research was conducted using materials available from the archives of the Council of Terrestrial Archaeology and in the archives of the PR SHPO, both located in the municipality of San Juan. Materials consulted include inventories of relevant archaeological deposits, topographic site plans, and archaeological investigation reports.

Previous archaeological research has been conducted for the port docks development area, located northeast of the APE and directly east of La Puntilla. While not part of the APE landform, this area was subjected to similar infilling processes and subsequent cycles of historic construction and demolition episodes. The infilling is a result of land reclamation efforts and has buried a wide variety of cultural materials (e.g., remnants of buildings, vessels, maritime features/artifacts). Additionally, the extent of previous archaeological investigations has made this area one of the most extensively studied on Puerto Rico. Therefore, archaeological sites and investigations associated with the port docks area are included in the discussion below to provide additional contextual information germane to the APE's land reclamation and archaeological site formation processes.

4.1 PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS

Fourteen archaeological reports for investigations conducted within the APE and its immediate vicinity were identified in the ICP archives (Table 4-1). Six other off- and on-base investigations were identified during this study's background research that do not appear in the ICP archives. Additional off-base studies include Aguilu's 1981 investigation of the Edificio de Aduana and Principe's 1983 investigations on La Puntilla, while additional on-base studies include Woodward-Clyde's 1998 Phase I archaeological survey; URS' 2001 Phase II and III excavations; García-Goyco's 2001 archaeological monitoring; and Michael Baker International, Inc.'s 2016 resource assessment. All on-base archaeological investigations are described in greater detail below.

Table 4-1. Previous Archaeological Investigations, ICP Archives

ICP No.	Title	Year	Author	Result
CAT-SJ-A-89-02-06	<i>Phase IA Desarrollo del Frente Portuario</i>	1989	Edgar Maíz	Positive, historic resources
CAT-SJ-A-90-03-06	<i>Phase IA-IB Paseo Portuario</i>	1990	Agamemnon Pantel	Positive, historic resources
CAT-SJ-A-91-03-07	<i>Monitory Restitución Paseo de la Princesa</i>	1991	Marisol Meléndez	Positive, historic resources
CAT-SJ-A-91-03-08	<i>Phase IA Paseo de la Princesa</i>	1991	Marisol Meléndez	Negative
CAT-SJ-A-92-04-02	<i>Phase IA Puntilla de San Lázaro del Viejo San Juan</i>	1992	Jorge Carbonell	Positive, historic resources
CAT-SJ-A-92-05-01	<i>Phase III Parcela M-4 Paseo Portuario</i>	1992	Agamemnon Pantel	Positive, historic resources
CAT-SJ-A-94-14-01	<i>Phase IA-IB Final Archaeological Report USGS Base San Juan</i>	1994	Greenhorne and O'Mara	Positive, historic resources
CAT-SJ-A-95-06-02	<i>Phase IA Estacionamiento La Puntilla</i>	1995	Ethel Schlafer	Positive, historic resources
CAT-SJ-A-95-06-03	<i>Phase IB Estacionamiento La Puntilla</i>	1995	Ethel Schlafer	Positive, historic resources

ICP No.	Title	Year	Author	Result
CAT-SJ-A-95-07-01	<i>Phase III Mitigación del Paseo Portuario Parcela M-4, Volume 1</i>	1995	Agamemnon Pantel	Positive, historic resources
CAT-SJ-A-95-07-02	<i>Phase III Mitigación del Paseo Portuario Parcela M-4, Volume 2</i>	1995	Agamemnon Pantel	Positive, historic resources
CAT-SJ-A-95-28-02	<i>Phase IA-IB Historic Resources Survey and Eligibility Report for U.S. Coast Guard Base San Juan</i>	1995	Greenhorne and O'Mara	Positive, historic resources
CAT-SJ-A-97-09-06	<i>Phase IA-IB Desarrollo Frente Portuario Segunda Fase</i>	1997	Marisol Meléndez	Positive, historic resources
CAT-SJ-99-07-10	<i>Phase IA Improvements to Acuaexpreso Intermodal Terminal</i>	1999	Aramis Font	Negative

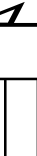
Archaeological investigations on-base began in 1992, during which consultants Greenhorne & O'Mara, Inc. (G&O 1994) identified six locations (Areas A through F) that retained archaeological potential. A formal archaeological survey followed, focusing on Area F and a small component of Area C. No significant archaeological deposits were identified in Area F, which the researchers determined to be largely comprised of mid-/late nineteenth to mid-twentieth century refuse associated with land reclamation activities. In Area C, a portion of a wall potentially associated with an early to mid-nineteenth century Royal Arsenal outbuilding was documented within Building 115. While no additional work was recommended in Area F, subsurface testing within the vicinity of the wall in Area C was recommended prior to future ground disturbance (G&O 1994).

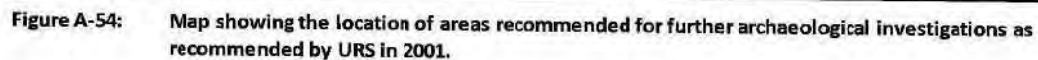
Woodward-Clyde (1998) conducted a Phase I archaeological survey within parts of Areas B and E, excavating eight trenches. No intact, potentially significant archaeological resources were identified. Instead, most of what was tested revealed dredge spoil and urban refuse, similar to what G&O (1994) identified in Area F. No additional work was recommended.

The most extensive on-base archaeological investigations were conducted by URS (2001). In 1999, URS provided archaeological monitoring of utility trench excavations, but quickly initiated Phase II and III archaeological investigations to address the large quantity of archaeological features encountered. The combined monitoring, Phase II, and Phase III efforts resulted in the excavation of more than 1,650 square meters, inclusive of the utility trenches. As a result, more than 125 archaeological features were identified in Areas A, B, and D that can be attributed to both the Spanish and U.S. occupations of La Puntilla (Figure 4-1). Artifacts recovered during the URS investigations span the sixteenth through mid-twentieth centuries, representing the full range of expected historic activities within this part of San Juan. URS recommended archaeological resources identified in Areas A and B eligible for listing in the NRHP for their potential to contribute "information important to an understanding of the social and cultural development of Puerto Rico, prior to and during the U.S. occupation of the island" (URS 2001:viii). URS further recommended that additional archaeological evaluation or data recovery should be conducted within untested/undisturbed portions of Areas A and B prior to any future ground disturbance, given the potential for additional archaeological features related to La Puntilla's sociocultural development during the nineteenth and early twentieth century (Figure 4-2).

García-Goyco (2001) conducted archaeological monitoring on-base in 2001 for the construction of a replacement for Building 127 in Area E. No potentially significant archaeological resources were identified, and no additional work associated with the construction was recommended.



Figure A-55: Location of features uncovered during Phase II and	CLIENT		United States Coast Guard		TITLE	URS 2001 Excavation Results Map		
	PROJ		Sector San Juan Phase I Work Plan			PROJ NO		60588321
	SCALE		1:1,763			FIGURE		4-1
	SOURCE		Belfast et al. 2016:109; URS 2001			AECOM		12420 Milestone Center Dr. Germantown, MD 20876
	Q:\Projects\ENVIAP\CRM\USCG - Sector San Juan\900-GIS and Graphics\920 GIS\923							
								



Michael Baker International, Inc. conducted historical, cultural, and natural resources assessments for the Base in 2016 (Belfast et al. 2016). This work included the development of detailed cultural contexts, an assessment of above-ground cultural resources, and an assessment of the Base's archaeological sensitivity using desktop resources and pedestrian reconnaissance. Regarding the potential for intact terrestrial archaeological resources, Belfast et al. (2016) concurred with URS's 2001 sensitivity model and recommendations. Regarding the potential for submerged cultural resources, the investigators noted that along the Base's western shore, several "relict shore protection structures" are present and require additional research to determine their nature, age, and potential NRHP significance. Along the Base's eastern shore, which serves as the USCG boat basin, extensive dredging and modern construction have likely disturbed potentially submerged cultural resources. However, an EA associated with the 2011 construction of four concrete piers noted that there was nonetheless some potential for encountering submerged resources and recommended that in the event of their discovery, construction should be halted to evaluate the discovery and consult with the ICP and the PR SHPO. Belfast et al. (2016) concurred with these recommendations, expanding them to all future activities that may disturb sediments within the boat basin.

4.2 PREVIOUSLY RECORDED ARCHAEOLOGICAL RESOURCES

Forty-eight previously recorded archaeological sites have been registered within 1 mile of the APE, including 22 that are uniquely registered with PR SHPO, 10 that are uniquely registered with the ICP, and 16 that have been registered with both (Table 4-2). These include one prehistoric, three multicomponent, and 41 historic sites, along with three that lack cultural affiliation data. The NRHP eligibility status of 27 resources could not be determined, while 20 are listed in the NRHP and one has been determined eligible. Two archaeological sites have been recorded within the APE, including the Residencia del Superintendente de Faros (Superintendent of Lighthouses' Dwelling, ICP ID SJ-12A/PR SHPO ID SJ0200030) and the U.S Coast Guard Base (PR SHPO ID SJ0100017). The URS (2001) investigation recorded numerous intact archaeological deposits on-base, but these do not appear to have been registered as either part of SJ0100017 or a separate archaeological site/district.

Table 4-2. Previously Recorded Archaeological Sites within 1 Mile of the APE

ICP ID	PR SHPO ID	Site Name	Cultural Affiliation	NRHP Status
SJ-1	SJ0100001	Los Dominicos	Multicomponent	Unknown
SJ-2	-	Paseo Muñoz Rivera	Prehistoric	Unknown
SJ-11	SJ0100011	Tercera línea de Defensa/Batería de San Francisco de Paula	Historic	Listed
SJ-12	SJ0100012	Paseo Portuario, La Puntilla	Historic	Unknown
SJ-12A	SJ0200030	Residencia del Superintendente de Faros	Historic	Listed
SJ-12B	SJ0200044	Aduana de San Juan	Historic	Listed
SJ-13	-	La Marina	Historic	Unknown
SJ-15A	-	Recinto Norte	Historic	Unknown
SJ-15B	-	Recinto Sur	Historic	Unknown
SJ-15C	SJ0100015	Recinto Este/Residuario Gámbara	Historic	Listed
SJ-15D	-	Recinto Oeste	Historic	Unknown
SJ-16	SJ0100029	Castillo San Felipe del Morro	Historic	Listed

SECTION FOUR

Previous Investigations

ICP ID	PR SHPO ID	Site Name	Cultural Affiliation	NRHP Status
SJ-17	SJ0200023/25	Castillo San Cristóbal	Historic	Listed
SJ-18	SJ0100031	La Fortaleza	Historic	Listed
SJ-19	-	Fortín de la Perla	Historic	Unknown
SJ-20F	SJ0100037	Alcaldía de San Juan	Historic	Unknown
SJ-20G	-	Comunidad Mercado	No Data	Unknown
SJ-20H	-	Comunidad Ballajá	No Data	Unknown
SJ-23	SJ0200027	Antiguo Casino	Historic	Listed
SJ-26	SJ0200028	Capitolio de Puerto Rico	Historic	Listed
SJ-27	SJ0200031	Casa de España	Historic	Listed
SJ-28	SJ0200032	Escuela de Medicina Tropical	Historic	Listed
SJ-29	SJ0200033	Biblioteca Carnegie	Historic	Listed
SJ-31	-	El Falansterio	Historic	Unknown
SJ-40	SJ0200055	Antiguo Correo de San Juan	Historic	Listed
SJ-78	-	No Data	No Data	Listed
-	SJ0100008	Rafael Cordero	Historic	Unknown
-	SJ0100009	Asilo de Puerto Rico	Historic	Listed
-	SJ0100010	Plazoleta de las Monjas	Historic	Unknown
-	SJ0100014	Batería de Santo Toribio	Historic	Unknown
-	SJ0100016	Frente Portuario	Historic	Unknown
-	SJ0100017	U.S. Coast Guard Base	Historic	Unknown
-	SJ0100018	Parque de Beneficiencia	Historic	Listed
-	SJ0100019	Residuario Teatro Alejandro Tapia	Historic	Listed
-	SJ0100021	Bastión de San Justo	Historic	Listed
-	SJ0100027	Cuartel Ballajá	Multicomponent	Unknown
-	SJ0100028	Plaza del Quinto Centenario	Multicomponent	Unknown
-	SJ0100030	Cementerio de San Calixto	Historic	Unknown
-	SJ0100032	Hospital de Nuestra Señora de la Concepción	Historic	Unknown
-	SJ0100033	Casa Rosa	Historic	Unknown
-	SJ0100034	Casas de la Comandancia de Policía	Historic	Unknown
-	SJ0100035	Navíos Manuela y Cristóbal Colón	Historic	Eligible
-	SJ0100038	Muelle 6	Historic	Unknown
-	SJ0100039	San Cristóbal Apartments	Historic	Unknown
-	SJ0200003	Faro de San Juan	Historic	Unknown
-	SJ0200022	Cámaras Abovedadas	Historic	Unknown
-	SJ0200045	Edificio El Mundo	Historic	Listed
-	SJ0200051	Edificio Patio Español	Historic	Listed

4.3 EXPECTED RESULTS

Based on a review of historical documentation and previous archaeological investigations, archaeological resources associated with the Spanish and subsequent U.S. occupation of La Puntilla are anticipated within the APE. The area is particularly archaeologically sensitive due to centuries of intensive development as well as the land reclamation episodes that have the potential to contain intact archaeological resources. Spanish resources could include military deposits potentially dating to the late sixteenth century, though nineteenth century military deposits (e.g., Royal Arsenal, Battery of Santo Toribio) are more likely given the greater degree of defensive investment from the late eighteenth century onward. Other Spanish-era resources may include industrial deposits (e.g., Board of Public Works, coal industry), general infrastructural remains (e.g., roads, drains) and refuse, and potential remnants of scuttled ships buried beneath reclaimed land. Resources attributable to the period of U.S. occupation could include remnants of the lighthouse depot, early iterations of the Naval Station, the Insular Quarantine Hospital, and the early USCG use of the property.

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5.0 METHODS

5.1 OBJECTIVES

The objectives of the Phase I archaeological survey are to identify the presence, extent, cultural affiliation, and potential significance of archaeological resources, if any, within the APE.

5.2 BACKGROUND RESEARCH

General background information was gathered from a variety of electronic and published resources in order to provide a broad cultural context. Historic cartographic data were drawn primarily from the Library of Congress; the National Oceanic and Atmospheric Administration's Office of Coast Survey historical map and chart collection; the USGS topoView map server; and other sources as needed. Historic maps were georeferenced to display the APE relative to historic features and landform contours. It should be noted that the spatial accuracy of historic source material can vary widely, often making it impossible to perfectly reconcile historic maps with modern geospatial data. Therefore, overlaying the APE on such images represents an approximated "best fit" based on the alignments of particular reference points (e.g., built or natural features). Research used to develop the cultural context and previous investigations was primarily drawn from Belfast et al. (2016), with supplemental information from URS (2001) and other sources. Additional research may be necessary for the Draft Phase I Archaeological Report and will potentially include additional desktop research and review/collection of materials available from the PR SHPO, ICP, USCG Base San Juan, and other repositories. No chain-of-title or exhaustive archival research will be undertaken.

5.3 PERMITTING

As the project is being conducted for USCG and will occur on USCG property, no Archaeological Resources Protection Act (ARPA) permit is required per 43 CFR 7.5(c), and AECOM meets the requirements outlined under 43 CFR 7.8 (Issuance of Permits). The Principal Investigator, Osvaldo García, Ph.D., meets the requirements of 7.8(a)(1) and the Secretary of the Interior's Professional Qualifications Standards for archaeology (see Appendix A). Per 7.8(a)(2), 7.8(a)(3), and 7.8(a)(4), the proposed work is being undertaken to further archaeological knowledge in the public interest and pursuant to Section 106 of the NHPA. Sections 7.8(a)(4) and 7.8(a)(5) do not apply. Per 7.8(a)(6), as the project is being undertaken for USCG, USCG is responsible for the ultimate curation of project materials pursuant to 36 CFR 79, and per 7.8(a)(7) and the project schedule, materials are scheduled for curation 30 days following acceptance of the final report. AECOM will perform the work pursuant to 43 CFR 7.9 (Terms and Conditions of Permits) as detailed in the Scope of Work and this Work Plan.

Additionally, a *Solicitud de Servicios Arqueológicos* from the ICP for Fase IA y/o IB is not required for this project as it will occur on USCG property. However, the Principal Investigator for the project, Osvaldo García, Ph.D., of Arqueo Consulting Group, is approved by the ICP and on the *Lista Oficial de Personas Cualificadas para Efectuar Fases de Investigación Arqueológica* for Fase IA-IB.

5.4 FIELD INVESTIGATIONS

Field investigations will include a pedestrian survey, shovel test pit (STP) excavation, and a geophysical survey using ground penetrating radar (GPR). The pedestrian survey will provide

coverage of the entirety of the APE. The STP and GPR surveys will occur within target locations confined to the URS 2001 high sensitivity area where it intersects the broader APE (Figures 5-1 and 5-2). This will ensure that excavation and remote sensing efforts sample those areas previously determined to have a high probability of containing intact archaeological deposits. Newly identified sites, if any, will be recorded on Puerto Rico Archaeological Site forms for the PR SHPO and include written description of the finding/site and its setting, sketch maps, location on USGS 7.5-minute maps using global positioning system (GPS) locational data, and digital photographs.

5.4.1 Pedestrian Survey

AECOM will conduct a pedestrian survey of the entire APE to identify archaeological features and artifacts visible on the ground surface, identify areas of disturbance, etc. The pedestrian survey will be systematic and conducted at close intervals (e.g., 15 ft).

5.4.2 Shovel Testing

AECOM will conduct close-interval and judgmental shovel testing in areas of high archaeological sensitivity with no impervious cover to identify the presence, nature, extent, and potential significance of archaeological resources, if any, within the APE. STPs will be approximately 12 inches in diameter and excavated to culturally sterile soil or a maximum of 3 ft in depth, whichever is reached first. It is assumed that a maximum of 50 STPs will be excavated. Excavated soil will be screened through 0.25-inch mesh. Artifacts recovered during the investigation will be collected and bagged according to provenience. STPs and project area conditions will be documented through photographs, field notes, and on standard field forms. Following recordation, test excavations will be immediately backfilled. All STPs will be mapped using GPS units (i.e., Trimble, Arrow). Shovel testing will be conducted concurrent with the geophysical survey (see below), as soil profiles will be used, as feasible, to help confirm geophysical signal returns and test potential geophysical anomalies.

5.4.3 Geophysical Survey



AECOM will conduct a geophysical survey of a maximum of 2.2 ac using GPR to help identify potential subsurface cultural features, previous archaeological investigations (e.g., trenches), and guide the placement of mechanically excavated test trenches or other forms of excavation during future phases of work, as necessary. GPR uses an approach that can map soil disturbances associated with cultural features such as builder's trenches, foundations, walls, utilities, voids, pits, burned soils, and previous archaeological excavations.

GPR provides cross-sectional images of the subsurface by transmitting high frequency electromagnetic energy into the ground and measuring variations in the reflected energy detected by a receiving antenna. The transmitted energy is reflected when it hits a buried object or a boundary with different dielectric constants. The principals involved are similar to reflection seismology, except that electromagnetic energy is used instead of acoustic energy, and reflections appear at boundaries with different dielectric constants instead of acoustic impedances.

AECOM will use a GPR array consisting of a Sensor & Software Noggin Smart Cart GPR or similar system utilizing a 500 MHz antenna with an integrated GPS using a transect spacing of 6.5 ft. Survey data will be processed in Echo-View Software to identify potential cultural features. All survey blocks will be mapped using GPS for accurate referencing on project maps.





CLIENT	United States Coast Guard
PROJ	Sector San Juan Phase I Work Plan
SCALE	1:2,500
SOURCE	ESRI 2020, DigitalGlobe 2019, AECOM
C:\Users\christina.sabol\Desktop\AECOM\GIS\KMZ_Maps.mxd	

	TITLE	
	Areas Proposed for STP Excavation	
		
12420 Milestone Center Dr. Germantown, MD 20876		PROJ NO 60588321 FIGURE 5-1



CLIENT	United States Coast Guard
PROJ	Sector San Juan Phase I Work Plan
SCALE	1:2,500
SOURCE	ESRI 2020, DigitalGlobe 2019, AECOM
C:\Users\christina.sabol\Desktop\AECOM\GIS\KMZ_Maps.mxd	

	TITLE	
	Areas Proposed for GPR Survey	
	 12420 Milestone Center Dr. Germantown, MD 20876	
	PROJ NO	60588321
	FIGURE	5-2

5.5 ARTIFACT ANALYSIS AND CURATION

AECOM will supply laboratory support, including processing of artifacts (e.g., washing), cataloging, and accessioning and curation. The main goal of the cataloging and analysis is to determine the nature, date, and preliminary significance of any sites identified. Bulk artifacts (e.g., brick, mortar, concrete, window, glass, unidentifiable nails) will be counted and/or weighed and discarded in the field; only a representative sample of each will be collected. It is assumed that no items requiring specialized analyses will be collected during the field investigations.

Most artifacts will be gently washed using plain water and a soft toothbrush. Delicate and/or unstable materials, such as decayed metal and organic material, will be carefully dry-brushed with a soft toothbrush. Stable metal artifacts will be washed and then dried using an acetone solution. After they have dried, the artifacts will be cataloged, analyzed, labeled, and bagged and boxed in preparation for transport to the curation facility. AECOM will coordinate with the PR SHPO to identify a curatorial facility that meets federal curatorial standards per 36 CFR 79. Curation of all artifacts and project materials will be conducted at the final conclusion of the project.

5.6 ASSESSING ARCHAEOLOGICAL SIGNIFICANCE

The significance of any archaeological resources encountered within the APE will be assessed in accordance with the NRHP criteria for evaluation and criteria considerations set forth in 36 CFR 60.4, consistent with additional guidance presented in the National Register Bulletin *How to Apply the National Register Criteria for Evaluation* (National Park Service 1997). As stated in 36 CFR 60.4, cultural properties may be eligible for listing in the NRHP if they “possess integrity of location, design, setting, materials, workmanship, feeling, and association and

- (Criterion A) are associated with events that have made a significant contribution to the broad patterns of our history; or
- (Criterion B) are associated with the lives of persons significant in our past; or
- (Criterion C) embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- (Criterion D) have yielded, or may be likely to yield, information important in prehistory or history.”

Resources will be evaluated in light of the historic context with which they are associated and the significance of that context’s themes for local, regional, and/or national history. Resource integrity will be evaluated as well, as this is an essential component of the resource’s ability to adequately represent historically significant themes. For archaeological resources, integrity generally refers to whether a given resource exhibits an undisturbed depositional context.

5.7 REPORTING

Following the field investigation and laboratory analysis, AECOM will prepare a technical report that presents the research and field results, showing the locations of all testing and any resources discovered. Recommendations for the treatment of identified cultural resources, as well as measures to determine their NRHP eligibility, will be provided as well. A draft version of the report will be submitted to the USCG for review, followed by submission of a draft final version to the PR SHPO for review. Copies of the final report will be distributed to USCG, PR SHPO, and the ICP.

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6.0 SUMMARY

The USCG contracted AECOM to conduct Phase I archaeological investigations on USCG Base San Juan in support of an EA evaluating potential physical, environmental, cultural, and socioeconomic effects associated with a proposed Hurricane Recovery Plan that will repair or replace certain on-base facilities. The USCG has selected design alternatives West 1.1 and East 4.1 as the preferred alternatives to address reconfiguring the functionally distinct west and east components of the Base. This Work Plan provides the framework for archaeological investigations associated with these preferred alternatives and supports the USCG in meeting regulatory obligations set forth in Section 106 of the *National Historic Preservation Act* of 1966, as amended, the *Archaeological Resources Protection Act* (USDI 1979), and the ACHP's "Protection of Historic and Cultural Properties" (36 CFR 800; USDI 2004). The work will also conform with Regulation 8932 and Law 112 (*El Consejo para la Protección del Patrimonio Arqueológico Terrestre de Puerto Rico* [Council for the Protection of the Land Archaeological Patrimony of Puerto Rico]). The archaeological APE corresponds to the anticipated maximum Limits of Disturbance and encompasses approximately 10.11 ac.

This work plan outlines the justification for the Phase I archaeological survey, the proposed methods for investigation and analysis, and expected results. It additionally provides a preliminary context for the archaeological setting, including discussions of environmental data, historical developments that may have impacted the APE's archaeological record, and the results of previous investigations conducted within USCG Base San Juan.

Collectively, this background information strongly suggests that intact deposits associated with nineteenth to mid-twentieth century military, industrial, institutional, and/or commercial operations may be present within the APE. Such deposits may include, but are not limited to, remnants of Spanish batteries, barracks, and the Royal Arsenal; San Juan Port's Board of Public Works; U.S. Navy, Lighthouse Service, and Coast Guard operations; the Insular Quarantine Hospital; the coaling industry; maritime trade; and others. While there is some potential for intact deposits dating from the sixteenth through eighteenth centuries, the APE was not intensively occupied during this period, and subsequent developments likely disturbed associated archaeological resources. No prehistoric archaeological resources are anticipated given that the APE likely was uninhabitable prior to European contact, after which it was heavily disturbed by historic and modern developments. Furthermore, extensive previous archaeological investigations on USCG Base San Juan revealed no intact prehistoric deposits, and no such deposits have been identified within at least 1 mile of the base.

AECOM will conduct additional background research, field investigations, laboratory cataloging, accessioning and curation, and reporting for this investigation, which will conform to the *Secretary of the Interior's Standards and Guidelines* for archaeology and historic preservation, as amended (48FR44716; USDI 1983). All supervisory personnel will meet the Secretary of the Interior's Professional Qualification Standards for Archaeology, and the Principal Investigator will be approved by the ICP and on the *Lista Oficial de Personas Cualificadas para Efectuar Fases de Investigación Arqueológica* for Fase IA-IB. Osvaldo García, Ph.D. of Arqueo Consulting Group will serve as the Principal Investigator and Scott Seibel of AECOM will serve as the Principal Archaeologist.

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Appendix A: Qualifications of Investigators

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Osvaldo García, PhD, is a Registered Professional Archaeologist (RPA) with over 40 years of experience in archaeological excavations, research, and compliance studies who exceeds the *Secretary of the Interior's Professional Qualification Standards* (36 CFR Part 61). He has a Doctorate Degree in American Anthropology, with concentrations in Ethnology, Archaeology, and Museums, from the Universidad Complutense de Madrid, Spain (2001), where he graduated Summa Cum Laude. He is one of the most prolific archaeologists in Puerto Rico, having participated in hundreds of excavations and archaeological surveys throughout the island. Also having served as a university professor, Mr. García has an extensive list of published articles and papers and is one of the foremost experts in Caribbean archaeology.

Scott Seibel, MSc, is a Registered Professional Archaeologist (RPA) with over 23 years of experience in archaeological excavations, research, and compliance studies who exceeds the *Secretary of the Interior's Professional Qualification Standards* (36 CFR Part 61). Mr. Seibel has extensive cultural resource management experience, having served as Principal Investigator or Field Director for tens of thousands of acres of Phase I archaeological survey, dozens of Phase II evaluations, and 12 Phase III data recovery excavations across the United States. He received his BA in Archaeological Studies at the University of Texas at Austin in 1996 and his MSc in Archaeomaterials at the University of Sheffield in England in 1997.

Peter Regan, MA, is a Registered Professional Archaeologist (RPA) with 13 years of experience in cultural resources management and exceeds the *Secretary of the Interior's Professional Qualification Standards* (36 CFR Part 61). He specializes in historic site analyses, research, and developing public outreach platforms for archaeological sites and other places of cultural interest. Mr. Regan has worked throughout the United States for numerous federal, state, municipal, and private clients on a wide variety of sites under all phases of excavation. In addition to extensive compliance-driven experience, Mr. Regan has served as a volunteer research consultant for archaeology and cultural outreach projects and is Vice Chair of Frederick, Maryland's Historic Preservation Commission.

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U.S. Department of
Homeland Security

**United States
Coast Guard**



Commanding Officer
United States Coast Guard
Facilities Design and Construction Center

5505 Robin Hood Rd.
Suite K
Norfolk, VA 23513
Phone: (757) 852-3400

11000

July 29, 2020

Mr. Carlos Rubio Cancela
Office of the Governor, Commonwealth of Puerto Rico
State Historic Preservation Officer
PO Box 9023935
San Juan, Puerto Rico 00902-3935

Greetings Mr. Rubio Cancela:

The United States Coast Guard (USCG) is proposing a reconstitution and resiliency project to repair or replace certain facilities damaged by the 2017 hurricanes at USCG Base San Juan, San Juan, Puerto Rico – i.e., the Proposed Undertaking.

The existing facilities and infrastructure covered under the Proposed Undertaking are not adequately sized to support the Base's missions. Furthermore, the facilities are not adequately fortified for resiliency to support personnel and critical missions in the event of hurricanes or similar large-scale disasters. For example, the existing facilities and infrastructure were severely damaged during Hurricane Maria, which hampered the USCG's mission readiness to conduct and sustain operations and perform critical missions after the storm. As a result, the USCG is proposing to upgrade and fortify the Base San Juan facilities and is initiating consultation with your office for the Proposed Undertaking pursuant to Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations (36 Code of Federal Regulations [CFR] Part 800) "Protection of Historic Properties" (Section 106).

The USCG is also preparing an Environmental Assessment (EA) to evaluate the potential physical, environmental, cultural, and socioeconomic effects associated with the Proposed Action pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 U.S. Code §4321 et seq.), the Council on Environmental Quality Regulations (40 CFR Parts 1500-1508), and USCG Commandant Instruction 5090.1 (Environmental Planning Policy).

Enclosure (1) provides details regarding the Proposed Undertaking, a location map of Base San Juan, details regarding the historic character of Base San Juan and surrounding areas, description of the Area of Potential Effect (APE), Proposed Undertaking site plans, and the basis for the USCG effect determination. Enclosure (2) contains viewshed and streetview studies and a National Historic Preservation Act, Section 106 considerations map.

The USCG seeks concurrence from your office on the delineated APE, plan for consulting party coordination, determination of effects, and the USCG's intent to continue consultation with the expectation to develop and implement a Memorandum of Agreement (MOA) or Programmatic Agreement (PA) to resolve any potential adverse effects.

Your prompt response to the request for concurrence at the earliest possible opportunity will be greatly appreciated. Normally, we would request a 30-day turn-around period for the initial review and response. That said, we fully recognize that the current circumstances and uncertainty associated with the COVID-19 pandemic may prevent that and delay your response. If so, please let us know what would be a reasonable timeframe so we can plan and proceed accordingly with the many other interconnected elements associated with the Proposed Undertaking.

The USCG is available to meet with you or your staff to discuss the project, virtually or in person. If you would like to schedule a meeting, have any questions, or need more information about the Proposed Undertaking, please feel free to call on me directly or reach out to my point of contact, Ms. Lesley Dobbins-Noble at Lesley.C.DobbinsNoble@uscg.mil or by phone at (757) 852-3410.

Very sincerely,

J. F. BARRESI
Captain
U. S. Coast Guard

Encl: (1) Hurricane Reconstitution Project Execution Plan – U. S. Coast Guard Base San Juan
(2) Hurricane Reconstitution Project Execution Plan – U. S. Coast Guard Base San Juan, Appendices

Hurricane Reconstitution Project Execution Plan

United States Coast Guard Base San Juan

Executive Summary

The United States Coast Guard (USCG) is proposing to restore hurricane damaged facilities, bring buildings and infrastructure up to current standards adequate to support current and foreseen future missions, and increase the resiliency of facilities to withstand future storm events at USCG Base San Juan¹ (BSJ) in San Juan, Puerto Rico. The proposed work would be conducted in both the easterly Operational/Waterfront and the westerly Access Control/Green Space and Logistics/Health Administration components of the base. All new construction and renovation would include increased resiliency to ensure the USCG's ability to remain operational during a storm event or other unscheduled electrical outage, independent of the local utility, for extended periods of time or until the outage is over.

The proposed work (the "Proposed Undertaking") takes into account previous coordination with the Puerto Rico State Historic Preservation Officer (SHPO) and studies designed to consider viewsheds and street views of the base from different nearby vantage points. The Proposed Undertaking features a mixture of retention of existing facility buildings, renovation of buildings, demolition of buildings, and construction of new buildings and infrastructure. Some of the buildings to be demolished or renovated are known to be historic in nature. Additionally, portions of the Proposed Undertaking are located in areas believed to have high potential for significant archaeological deposits. As such, the USCG has determined that the Proposed Undertaking would adversely affect historic properties eligible for listing in the National Register of Historic Places (NRHP).

Background

USCG BSJ is located in the La Puntilla sector of the Old San Juan district of San Juan, Puerto Rico (Figure 1). BSJ is responsible for all USCG missions in the Eastern Caribbean area of operations, including the enforcement of U.S. laws and regulations, search and rescue operations, marine safety, port security, law enforcement, and general duties related to military readiness. BSJ supports a number of functions and units, including Sector San Juan, Station (STA) San Juan, Aids to Navigation Team (ANT) Puerto Rico, USCG Investigative Service (CGIS), Río Bayamón Housing, exchange and morale functions, and is a homeport to eight vessels. Additionally, BSJ provides maintenance support to homeported cutters and small boats assigned to both the STA and ANT.

The existing BSJ facilities are inadequately sized to support the increased scale and number of mission functions, and lack adequate resiliency to remain operational during severe storm events. For example, the existing facilities are not built to the required base flood elevations to prevent water intrusion during storm events; the electrical distribution system lacks storm resiliency and redundancy; the existing generators do not support their respective facilities; and the water reserve volume is not sufficient to meet water supply requirements during an emergency event where the normal water supply is interrupted.

¹ Base San Juan was formerly known as Sector San Juan. Sector San Juan became a tenant command of Base San Juan on 30 April 2019.

As part of the 2018 Hurricane Reconstruction Projects, USCG is proposing to fortify and increase the existing storm resiliency of facilities and infrastructure at BSJ. All new construction, major renovations, and critical utilities (including electrical and water distribution systems) must ensure that BSJ can remain operational during future storm events and unscheduled utility outages. Once improvements are completed, BSJ would have the ability to remain operational with a sustained duration of no less than 10 days during an emergency or outage event, and have the ability to return to full operation, independent of the local utility, for extended periods of time or until the outage is over.

Additional resiliency would be applied to select facilities that indirectly support recovery with their focus on life, health and safety, energy, communication, water, and sanitary systems. The proposed BSJ reconfiguration, along with new construction and infrastructure, would be achieved by incorporating resiliency and redundancy into the design of all components of the Proposed Undertaking. Facilities would be built above the base flood elevations and facilities and infrastructure would be designed with a functional flexibility to meet current and potential future requirements.

Figure 1: BSJ Location Map



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Esri, HERE, DeLorme, TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS user community

Legend

 Base San Juan



0 250 500
Feet

0 75 150
Meters

Alternatives Considered

A USCG planning charrette was held 24-25 October 2018 to identify potential alternatives to address hurricane recovery requirements. Stakeholder engagement and hands-on development were utilized to address site planning, facility needs, and access control. The charrette resulted in a series of prioritized alternatives that embodied a holistic approach to site access, maneuverability, facility adjacencies, fuel farm positioning, waterfront adjacencies and arrangement, environmental impacts, impacts to historic properties, and resiliency.

BSJ is organized into two site components: the easterly Operational/Waterfront and the westerly Access Control/Green Space and Logistics/Health Administration. Three west alternatives (West 1, 2, and 3) and five east alternatives (East 1, 2a, 2b, 3, and 4) were initially developed; however, East Alternatives 1, 2a, and 2b were later determined not to be viable for multiple reasons, including the strong negative impact that they would have on cultural resources.

A site selection criteria matrix was developed that identified 15 unique site selection criteria and ranked and compared the advantages and disadvantages of each remaining alternative (West 1, 2, and 3 along with East 3 and 4). Criteria included cost, environmental cleanup requirements, site/building/water access, basic facilities requirements (BFR) for space, operational/functional needs, impacts to resiliency, impacts to site, operational adjacencies, impacts to waterfront operations, impacts to utilities, impacts to base operations, impacts to traffic patterns/parking, risk of flooding, and impacts to coastal/biological resources. In addition, one criterion dealt with impacts to cultural resources.

On 24 April 2019, USCG staff (CAPT John Barresi, Commanding Officer, Facilities Design and Construction Center, Norfolk, VA; Mr. Jim Lewis, Chief, Environmental Management Division, Shore Infrastructure Logistics Center (SILC), Norfolk, VA; Mr. Andrew Bobick, Chief, Environmental Management Branch, Civil Engineering Unit Miami, Miami, FL; Mr. Dean Amundson, Environmental Planning Program Manager, Environmental Management Division, SILC, Oakland, CA; Mr. Yamil Hernandez, Shore Energy Program Manager, Engineering Services Division (ESD), SILC, Norfolk, VA; and Mr. Mike Jackson, Lead Planner, ESD, SILC, Miami, FL) met with you, Deputy SHPO Ms. Gloria Ortiz-Lugo, and your staff at the Puerto Rico State Historic Preservation Office to briefly introduce the project. You and your staff noted the potential for adverse effects from the Proposed Undertaking on above-ground and archaeological resources.

In response to SHPO concerns regarding effects on the viewshed of the historic walls of the Old San Juan Historic District/Old San Juan Historic Landmark District from ships entering the harbor, USCG undertook a building viewshed study to assess multiple views from the harbor toward BSJ at several waterfront locations, all approximately 150 feet (ft.) above the water (Appendix A). In addition, USCG undertook a streetview study to assess views toward BSJ from points north of BSJ and within the two historic districts (Appendix A).

Based on the outcome of analysis of the site selection criteria matrix, SHPO input, and the viewshed and streetview studies, the USCG selected West 1 and East 4 as the preferred alternatives that comprise the Proposed Undertaking. Of the west alternatives, West 1 would have the least effect on cultural resources

and the most minimal negative, or positive impacts, in other criteria areas compared to the other west alternatives. East 4 would have a negative effect on cultural resources, but would avoid negative impacts in other criteria areas that would occur under the other east alternatives if chosen and included buildings that were shorter and of lower massing than those in the other east alternatives. The USCG further revised the Proposed Undertaking to avoid or reduce potential adverse effects in response to SHPO concerns including designing to avoid certain listed/eligible/contributing buildings (e.g., Buildings 116, 124, 125, and 126), incorporating building design features that complement the setting, reducing the size and height of the proposed buildings, and re-siting the proposed facilities to avoid or minimize disruptions to the setting.

Description of Proposed Undertaking – Preferred Alternative West 1/East 4

The USCG's Proposed Undertaking is the West 1/East 4 alternative, which is described in detail below and illustrated in Figures 2 and 3. New occupied facilities under this alternative would be elevated above the 100-year base flood elevation at 2.1 meters (m) (6 ft.-10 inches [in.]) with surge at 2.7 m (8 ft.-10 in.) from Mean Sea Level (MSL). This would align with the planning factor requirement of an elevation of 2 ft. minimum above the Federal Emergency Management Agency (FEMA) 100-year base flood elevation. All critical systems (e.g., electrical, mechanical, and communications) would be elevated at least 3 ft. above the FEMA 100-year base flood elevation to avoid damage during a weather event. Utilities would be routed underground through ducts via manholes, connecting new and existing buildings. BSJ would have the ability to remain operational for no less than 10 days during an emergency or outage event and have the ability to return to full operation independent of the local utility for extended periods of time, or until the outage is over.

New buildings would be no more than two stories high, of similar scale and volume as those in the vicinity, and designed to complement the historic design features of the historic districts, specifically using stucco cladding, terracotta roof tiles, arches, balustrades, terraces, and awnings. The new areas for fuel storage and the parking below new buildings would be screened with decorative metal screens and landscaping. USCG would place all stormwater collection and photovoltaic arrays on roofs (rather than on purpose-built structures over parking areas, for instance) to avoid the introduction of any unnecessary new structures.

West Alternative 1

West Alternative 1 is for the Access Control/Green Space and Health (Figure 2). A two-story Health/Dental building would be constructed in the area of the current facilities. The first level would be for parking and facility support and the second level would be for health and dental functions. The non-historic addition of Building 125 would be demolished. The green space and the helipad would remain but with temporary trailers and construction staging in this area during construction (the extent of use of the area used would vary depending on construction phasing).

The Exchange/Storage (Building 120) and Supply/Depot (Building 117) buildings, both contributing resources within the NRHP-eligible Base San Juan Historic District, would be demolished. The removal of

these two structures would allow the USCG to rebuild the entry in a more resilient location not prone to flooding and to make improvements to the roadways and access gate to provide better, safer access and egress to BSJ, improving Anti-Terrorism/Force Protection (ATFP) at this critical point of entry. Building 117 includes Central Mail and Distribution along with Shipping and Receiving. The Central Mail and Distribution complex and the Barber building would be relocated to the first level of Health/Dental and Shipping and Receiving would be moved to the east Command Center Building.

Buildings 116, 118, 119, 124, 125, and 126 would be retained and repurposed (Building 116 is listed individually in the NRHP and Buildings 116, 124, 125, and 126 are contributing resources within the NRHP-eligible Base San Juan Historic District). Building 116 would be renovated (interior spaces) and would continue to be utilized for its current function as Base Command. Building 126 would undergo minimal to no renovation, but would still be repurposed as deemed appropriate by the USCG. Building 124 would be repurposed as a Satellite Exchange. The CGIS addition to Building 125, which is a non-historic addition to the building that floods frequently, was damaged during Hurricane Maria and would be demolished. The portion of Building 125 that is potentially NRHP-eligible as a contributing resource within the Base San Juan Historic District would remain to support CGIS functions once renovation is complete. Any renovation of these contributing resources would be addressed in consultation with the SHPO to meet the Secretary of the Interior's Standards for Rehabilitation.

Buildings 121, 122, 123, and the water tank would be demolished to create an entry configuration that provides better security and ATFP and improved access to BSJ (none of these buildings are considered to be historic or contributing resources to the NRHP-eligible Base San Juan Historic District). A new Guard House and Access Control Area would be constructed in a location that would allow for clear sight lines, a dedicated pass-holder lane, a visitor entrance lane, a dedicated exit lane, and a turn-around for small vehicles that are denied entry. Access to the easterly Industrial/Administrative (Admin) Waterfront would be via a new primary roadway which would enhance wayfinding, safety, and navigability. Overall, site access, parking, and walkways at BSJ would be configured for better efficiency.

Figure 2: Plan View, West Alternative 1



Figure 3: Plan View, East Alternative 4



East Alternative 4

East Alternative 4 is for the Industrial/Admin/Waterfront component of BSJ. It would include a new Command Center Building and a Central Utility Plant (CUP). Building 100, a contributing resource within the Base San Juan Historic District, would partly remain; the historic portion of the building would be removed due to its damaged and unusable state, but the newer addition to Building 100 would be maintained and the interior spaces renovated. Building 100 would be used for administrative functions, including Contingency Planning, Intelligence, and Prevention. Building 101b, which contains space for the Electronics Support Division (ESD) and Maintenance Augmentation Team (MAT), would be renovated and would continue to be used for these functions. A new CUP and new domestic and fire suppression water tanks would be constructed in the northeast portion of BSJ along the northern property line, across from Pier Alpha, and would replace the existing utilities building. The CUP for BSJ service and resiliency includes new and upgraded components of the water and electrical distribution systems (i.e., water tank, pump, and generators) and fuel tanks. The wash bay, hazardous materials (HAZMAT) storage, and ANT would be in open laydown areas with a canopy installed over the ANT laydown area to protect the buoys.

Buildings 103, 104, Outbuilding/Shed, 112, 112A, 113a, and Utilities Building would be demolished to accommodate the new construction. Buildings 103 and 104 are contributing resources within the Base San Juan Historic District; the others are not historic or contributing resources within the historic district. As noted above, the historic portion of Building 100, a contributing resource within the Base San Juan Historic District, would be removed due to its damaged and unusable state. A new combined two-story STA/ANT/Command Center Building would be constructed along the eastern waterfront in the location previously occupied by Buildings 103 and 104. While this building would only have two stories, it would be taller in height than an average two-story building to accommodate high clearances for the boat bays below. The new Command Center would contain space for Shipping and Receiving and operational offices for STA/ANT on the first floor, and the second floor would contain space for Response and Support, the Command Center, the Armory, and a single berth for the watchstander. Buildings 112 and 113a would no longer be needed due to the proposed upgrades to site infrastructure in order to meet USCG resiliency standards. The existing Vessel and Electronics Support (Building 101B), Facility Engineering/Supply (Building 105), Weld Shop (Building 108), Welding (Building 110), and Storage (Building 111) would remain as-is (none are historic or a contributing resource within the Base San Juan Historic District). The design would address engineering techniques that limit adverse effects to archaeological resources.

At the waterfront, the damaged floating dock would be removed and reconstructed and a new travel lift pier with an integral boat ramp would be constructed at the south side of Pier Alpha. The configuration of Piers Alpha, Bravo, Charlie, Delta, and Echo would remain the same but the piers would receive infrastructure upgrades such as air, water, and electrical shore ties. The proposed waterfront configuration would provide mooring for six cutters and one visiting vessel at Pier Echo.

Area of Potential Effect

The "Area of Potential Effect" (APE), as defined at 36 CFR 800.16(d), is "the geographic area or areas within which an undertaking may directly or indirectly cause alteration in the character or use of historic

properties, if such properties exist. The APE is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.”

The above-ground APE has been delineated as the area where the proposed project has the potential to cause both direct and indirect effects on historic properties; therefore, it is inclusive of the entire limits of BSJ. Viewshed and streetview studies (Appendix A) and site visit observations in October 2018 indicate that, due to intervening buildings and trees, there are minimal views of BSJ beyond the delineated APE. The large two- and three-story apartment complex at the center of La Puntilla, other buildings, the non-historic Buildings 126 and 127, and trees effectively block any views from the north of the Proposed Undertaking.

The archaeological APE consists of the area of direct impact resulting from proposed construction activities. Refer to Figure 4 for the APE map.

Identification of Historic Properties

To identify historic properties in the APE, USCG’s Secretary of the Interior-qualified consultants conducted a records search at the SHPO offices on 23 October 2018 and reviewed data provided by USCG, the NRHP listings, historic maps and images (e.g., Sanborn Fire Insurance Maps, historic aerials, historic topographic quadrangles, plat maps, etc.), and information derived from online research at various agencies, historical societies, and other sources. Information concerning known historic properties is included in Appendix B.

Old San Juan Historic District/Old San Juan National Historic Landmark (NHL) District

On 10 October 1972, the Old San Juan Historic District (then called the San Juan Historic Zone) was listed in the NRHP as a district under multiple areas of significance, including architecture, art, commerce, conservation, military, political, religion/philosophy, theater, and urban planning. The district included all of Old San Juan, including BSJ. The NRHP nomination form was updated for the district in June 2012 and included more detailed context and lists of contributing and non-contributing buildings. It updated the Criteria of Significance to Criterion C, and the Period of Significance to 1519, 1625-1700, 1812, and 1898. The district was renamed “Old San Juan Historic District.”²

On 27 February 2013, the Old San Juan Historic District was listed as a NHL district. While a discussion about military history, including the USCG’s, was present in the documentation, mapping shows the majority of La Puntilla (and all of the APE for this project) to be non-contributing to the NHL.³

² Michael Baker International, Inc. 2016. *Historical, Cultural, and Natural Resources Assessment, USCG Sector San Juan, Puerto Rico & St. Thomas*. Prepared for USCG Civil Engineering Unit Miami, Florida.

³ *Ibid.*

Figure 4: APE Map



Base San Juan Historic District

In 1998, as a result of coordination with the SHPO, Advisory Council on Historic Preservation (ACHP), and Keeper of the National Register, the Keeper determined that BSJ was eligible for listing as a NRHP district. The Base San Juan Historic District was determined eligible under Criterion A, “for its association with the Bureau of Lighthouses (documented in the multiple property submission for the lighthouses of Puerto Rico) and the Coast Guard.” The period of significance for the district is 1904-1945 (representing the then-

understood construction date for Building 116 through the end of World War II). The determination listed Buildings 100, 101 (since demolished; building currently named 101b dates to ca. 1999-2000 and is not historic), 102 (since demolished), 103, 116, 117, 120, 121 (since demolished; building currently named 121 was built in 1999 and is not historic), and 122 (since demolished; building currently named 122 dates to ca. 1999 and is not historic) as contributing to the district. Buildings 113, 115 (since demolished), 118, 119, and 123 were considered noncontributing.⁴ In 2016, the SHPO wrote that it considered Buildings 124, 125, and 126 contributing resources to the district.⁵ Building 104 was recommended as a contributing resource within the district in 2016.⁶

Superintendent of Lighthouses' Dwelling (Building 116)

In 1981, the Superintendent of Lighthouses' Dwelling (Building 116) was individually-listed in the NRHP, under Criterion C for architectural significance. At the same time, the building was listed as part of a multi-property documentation form for the Lighthouse System of Puerto Rico, 1846-1979.⁷

Santo Toribio Battery

The remains of the Santo Toribio Battery, an archaeological resource, were determined eligible for the NHRP on 20 July 2001 under Criteria A, C, and D. Today, archaeological remnants of the battery are located under the pavement between USCG Buildings 120, 100, 101B, and 116.⁸

In addition, much of the APE has high potential to contain significant archaeological deposits.⁹ Appendix B includes a graphic depicting the resources within the APE and archaeological sensitivity overlaid with the Proposed Undertaking plans.

Assessment of Effects

Based on the scope of work, the USCG has determined that the Proposed Undertaking has the potential to affect historic properties. After applying the criteria for adverse effect as found in 36 CFR Part 800.5(a)(1), the USCG has further determined that it would have an adverse effect on the NRHP-eligible Base San Juan Historic District due to the loss of the district's integrity of design, setting, materials, and feeling resulting from demolition of contributing Buildings 100 (historic portion), 103, 104, 117, and 120 and introduction of new construction. The Proposed Undertaking avoids direct effects to the contributing Superintendent of Lighthouses' Dwelling (Building 116, also individually listed in the NRHP) and Buildings 124 and 126, which would all be retained and repurposed, and minimizes direct effects on Building 125 by only removing the more recent rear addition to Building 125. Renovations for repurposing contributing

⁴ *Ibid.*

⁵ Moraza, Cariangeli León. 2016. Letter to David Sands, USCG, regarding SHPO 10-14-16-02 Historical, Cultural, and Natural Resources Assessment, U.S. Coast Guard Sector San Juan, Islandwide, Puerto Rico/HSCG82-15-R-PMV170, PNUM 6775095.

⁶ *Ibid.*

⁷ *Ibid.*

⁸ *Ibid.*

⁹ URS Group, Inc. 2001. *Phase II and III Archaeological Investigations of Base San Juan, Puerto Rico*. Prepared for USCG Facilities Design and Construction Center, Norfolk, Virginia. As cited in Michael Baker International, Inc. 2016.

Buildings 116, 124, 125, and 126 would be completed in consultation with the SHPO to meet the Secretary of the Interior's Standards for Rehabilitation.

The USCG assumes that the Proposed Undertaking would result in an adverse effect on significant archaeological resources; however, archaeological investigations are necessary to determine the level and geographic extent of these significant archaeological resources to assist with designing measures to avoid, minimize, and mitigate the adverse effect. The USCG intends to conduct surveys as part of the pre-construction phase of work when more detailed site plans are available, the limits of ground disturbance can be clearly established, and work can be conducted more closely in conjunction with construction to avoid or minimize impacts to USCG mission execution. Much of the work would take place in areas considered to have a high potential to contain significant archaeological deposits, including the NRHP-eligible Santo Toribio Battery, the remains of which are located under the pavement between Buildings 120, 100, 101B, and 116.¹⁰ Buildings 117, 120, and a portion of Building 100 would be demolished as part of the project and at least a portion of the pavement between the buildings would be disturbed.

The USCG has further determined that the Proposed Undertaking would have the potential for visual effects on the Old San Juan Historic District/Old San Juan NHL District; however, these effects appear to be minor and would not constitute an adverse effect to the districts. The APE is fully within the boundaries of both districts; however, none of the buildings or structures in the APE are contributing to either district. As noted in the APE justification, viewshed and streetview studies (Appendix A) and site visit observations in October 2018, indicate that, due to intervening buildings and trees, there are minimal views of the APE from elsewhere within the districts. The streetview study (Appendix A) shows that there are no views of BSJ from key points north in the district. Further, a large two- and three-story apartment complex at the center of La Puntilla, other buildings, the non-historic Buildings 127 and 128, and trees block views to and from BSJ within the districts and outside the APE from the north. To avoid and minimize visual effects on the Old San Juan Historic District/Old San Juan NHL District as a whole, new buildings will be no more than two stories high, of similar scale and volume as those in the vicinity, and designed to complement the historic design features of the districts, specifically using stucco cladding, terracotta roof tiles, arches, balustrades, terraces, and awnings. The viewshed study (Appendix A) with views from cruise ships entering the harbor to BSJ from several waterfront locations demonstrates that within the larger built environment around BSJ, these potential visual effects appear to be minor and would not constitute an adverse effect.

The USCG has considered the potential for effects on the NRHP-listed Superintendent of Lighthouses' Dwelling (Building 116) and determined that these effects appear to be minor and would not constitute an adverse effect. Renovations for repurposing the building would be completed in consultation with the SHPO to meet the Secretary of the Interior's Standards for Rehabilitation. The property's integrity of setting has been previously compromised due to the demolition and replacement of many of BSJ's buildings over time, particularly within the past 20 years.¹¹ Nonetheless, the design of the Proposed

¹⁰ *Ibid.*

¹¹ Michael Baker International, Inc. 2016. *Historical, Cultural, and Natural Resources Assessment, USCG Sector San Juan, Puerto Rico & St. Thomas*. Prepared for USCG Civil Engineering Unit Miami, Florida.

Undertaking deliberately retains the viewshed between the harbor and Building 116 and, as noted above, new construction would be no more than two stories high, of similar scale and volume as those in the vicinity, and designed to complement the historic design features of the districts, specifically using stucco cladding, terracotta roof tiles, arches, balustrades, terraces, and awnings. The new areas for fuel storage and the parking below the buildings would be screened with decorative metal screens and landscaping. The USCG would place all stormwater collection and solar arrays on roofs rather than on purpose-built structures over parking areas in order to avoid the introduction of any unnecessary new structures. The viewshed study with views from the harbor to the property from several waterfront locations demonstrates that within the larger built environment around BSJ, these potential visual effects appear to be minor and would not constitute an adverse effect (Appendix A).

Consulting Party Outreach

In accordance with 36 CFR Part 800.4(d)(1), the USCG identified parties that may be interested in reviewing and commenting on the Proposed Undertaking, its potential to affect historic properties, and the USCG's determination of adverse effect on historic properties from this undertaking. The following individuals will be invited to participate as consulting parties: Autonomous Municipality of San Juan and Sociedad Puertorriqueña de Arquitectura Histórica.

While the Proposed Undertaking would occur within a non-contributing portion Old San Juan NHL District, there is the potential for minor, visual effects on the NHL and, as such, the USCG will notify the Secretary of the Interior of this consultation involving an NHL as required by 36 CFR Part 800.10.

Should any invited consulting parties express concerns in writing about the project, its potential to affect historic properties, and the USCG's determination of adverse effect on historic properties from this undertaking, the USCG will consult with the party(ies) and the SHPO to resolve those concerns prior to implementation of the project.

Intent to Develop Memorandum of Agreement or Programmatic Agreement

The USCG intends to continue to consult with the SHPO and other interested parties and anticipates that, due to the determination of finding of adverse effect and the potential for discovery of and impacts to significant archaeological deposits, execution and implementation of a project-specific Memorandum of Agreement (MOA) or Programmatic Agreement (PA), pursuant to 36 CFR Parts 800.6(c) and 800.14(b)(1), will be necessary. Such an agreement would be implemented in accordance with stipulations that take into account the effect of the undertaking on historic properties including measures negotiated between the signatories to avoid, minimize, or mitigate the adverse effects on historic properties throughout the design and construction processes. Pursuant to CFR Part 800.6(a)(1), the USCG would invite the ACHP to participate in the development of the MOA or PA.

Hurricane Reconstitution Project Execution Plan United States Coast Guard Base San Juan

APPENDICES

Appendix A – Viewshed and Streetview Studies



VIEW 1 MASSING



VIEW 1 EXISTING

Encl. (2)

BASE SAN JUAN
NEW BUILDING VIEWSHED STUDIES
WEST 1 / EAST 4 ALTERNATIVE
VIEWPOINT AT 150 FT.



VIEW 2 MASSING



VIEW 2 EXISTING

Encl. (2)

BASE SAN JUAN
NEW BUILDING VIEWSHED STUDIES
WEST 1 / EAST 4 ALTERNATIVE
VIEWPOINT AT 150 FT.



VIEW 3 MASSING



VIEW 3 EXISTING



VIEW 4 MASSING



VIEW 4 EXISTING



VIEW 5 MASSING



VIEW 5 EXISTING

Encl. (2)

BASE SAN JUAN
NEW BUILDING VIEWSHED STUDIES
WEST 1 / EAST 4 ALTERNATIVE
VIEWPOINT AT 150 FT.



VIEW 6 MASSING



VIEW 6 EXISTING

Encl. (2)

BASE SAN JUAN
NEW BUILDING VIEWSHED STUDIES
WEST 1 / EAST 4 ALTERNATIVE
VIEWPOINT AT 150 FT.



CALLE LA PUNTILLA STREET VIEW - PROPOSED



CALLE LA PUNTILLA STREET VIEW - EXISTING



Encl. (2)

**BASE SAN JUAN
NEW BUILDING STREETVIEW STUDIES
WEST 1 / EAST 4 ALTERNATIVE**



CALLE ARTURO SHOMBERG STREET VIEW - PROPOSED



CALLE ARTURO SHOMBERG STREET VIEW - EXISTING



Encl. (2)

BASE SAN JUAN
NEW BUILDING STREETVIEW STUDIES
WEST 1 / EAST 4 ALTERNATIVE

Appendix B – National Historic Preservation Act, Section 106 Considerations Map

From: Hylton, Rick D CIV
Sent: Monday, May 24, 2021 4:29 PM
To: e106@achp.gov
Cc: cwilson@achp.gov; submissions@prshpo.pr.gov
Subject: FW: ACHP Notification for U.S. Coast Guard San Juan Project

Good Afternoon;

Please find attached an electronic Section 106 submission form and supporting documents for the proposed U.S. Coast Guard (USCG) Base San Juan Hurricane Rebuild Project. This project is located in San Juan, PR. Over the past two years we have coordinated our NEPA and our initial Section 106 consultation efforts with PR SHPO, and have determined that our project will have an "adverse effect". We look forward to working with PR SHPO to develop an effective MOA to address and minimize the identified "adverse effects."

Please let me know if you require any additional information or have any questions.

Rick Hylton

Richard D. Hylton, PE
U.S. Coast Guard
Facilities Design and Construction Center
5505 Robin Hood Rd, Suite K
Norfolk, VA 23513

(757) 852 - 3404
rick.d.hylton@uscg.mil



**Advisory Council on Historic Preservation
Electronic Section 106 Documentation Submittal System (e106) Form
*MS Word format***

Send to: e106@achp.gov

Please review the instructions at www.achp.gov/e106-email-form prior to completing this form. Questions about whether to use the e106 form should be directed to the assigned ACHP staff member in the Office of Federal Agency Programs.

I. Basic information

1. **Purpose of notification.** Indicate whether this documentation is to:
 - a. ☒ Notify the ACHP of a finding that an undertaking may adversely affect historic properties
 - b. ☒ Invite the ACHP to participate in a Section 106 consultation
 - c. ☐ Propose to develop a project Programmatic Agreement (project PA) for complex or multiple undertakings in accordance with 36 C.F.R. 800.14(b)(3)
 - d. ☐ Supply additional documentation for a case already entered into the ACHP record system
 - e. ☐ File an executed MOA or PA with the ACHP in accordance with 800.6(b)(iv) (where the ACHP did not participate in consultation)
 - f. ☐ Other, please describe
 - i. [Click here to enter text.](#)
2. **ACHP Project Number** (If the ACHP was previously notified of the undertaking and an ACHP Project Number has been provided, enter project number here and skip to Item 7 below): ***No ACHP Project number has been issued.***
3. **Name of federal agency** (If multiple agencies, list them all and indicate whether one is the lead agency): ***The U. S. Coast Guard (USCG) is the lead federal agent.***
4. **Name of undertaking/project** (Include project/permit/application number if applicable): ***Hurricane Rebuild at U.S. Coast Guard Base San Juan***
5. **Location of undertaking** (Indicate city(s), county(s), state(s), land ownership, and whether it would occur on or affect historic properties located on tribal lands): ***San Juan, Puerto Rico – U.S. Coast Guard Base San Juan. The USCG Base San Juan is part of Old San Juan, which has a rich history. Parts of the project are likely to impact architectural and archeological resources. There are no known THPO issues associated with this project.***
6. **Name and title of federal agency official and contact person for this undertaking**, including email address and phone number: ***Captain John F. Barresi, Commanding Officer of U.S. Coast Guard Facilities Design and Construction Center. Email Address– john.f.barresi@uscg.mil. Phone Number (757) 852 – 3400, mailing address 5505 Robin Hood Road, Suite K, Norfolk, VA 23513***

II. Information on the Undertaking*

7. **Describe the undertaking and nature of federal involvement** (if multiple federal agencies are involved, specify involvement of each): *The USCG proposes to repair or replace certain facilities damaged by the 2017 hurricanes at USCG Base San Juan, San Juan, Puerto Rico. See attached correspondence between the USCG and the PR SHPO for additional project details.*
8. **Describe the Area of Potential Effects (APE):** *The entirety of the USCG Base San Juan. See attached correspondence between the USCG and the PR SHPO for a description of the Area of Potential Effects.*
9. **Describe steps taken to identify historic properties:** *The USCG has contracted with AECOM to develop a NEPA Environmental Assessment. Part of this assessment includes evaluating cultural and natural resources and assisting us with executing the Section 106 process. For example, AECOM has evaluated viewsheds and will soon execute a Phase I Archeological Investigation. . See attached correspondence between the USCG and the PR SHPO for additional details on efforts to identify historic properties.*
10. **Describe the historic property** (or properties) and any National Historic Landmarks within the APE (or attach documentation or provide specific link to this information): *See attached correspondence between the USCG and the PR SHPO for additional project details for descriptions of historic properties.*
11. **Describe the undertaking's effects on historic properties:** *See attached correspondence between the USCG and the PR SHPO for additional details on the effects on historic properties.*
12. **Explain how this undertaking would adversely affect historic properties** (include information on any conditions or future actions known to date to avoid, minimize, or mitigate adverse effects): *There are old structures that must be demolished as part of the project, there are potential viewshed issues associated with proposed new facilities that may impact the Historic District, and there is the potential to encounter archeological artifacts associated with Old San Juan's historic past during excavation work. See attached correspondence for additional details.*
13. **Provide copies or summaries of the views provided to date by any consulting parties, Indian tribes or Native Hawai'ian organizations, or the public,** including any correspondence from the SHPO and/or THPO. *There are no federally recognized Tribes or Native Hawaiian organizations. The USCG is working with PRSHPO to identify consulting parties, and plans to run legal notices in a local newspaper to seek out public interest and potential consulting parties.*

* see *Instructions for Completing the ACHP e106 Form*

III. Additional Information

14. **Please indicate the status of any consultation that has occurred to date, including whether there are any unresolved concerns or issues the ACHP should know about in deciding whether to participate in consultation.** Providing a list of consulting parties, including email addresses and phone numbers if known, can facilitate the ACHP's review response. *The USCG has initiated consultation with the PR SHPO. See attached documents, which includes an initial consultation package and additional information provided to the PR SHPO. The USCG is confident that a beneficial Memorandum of Agreement (MOA) will be developed between the USCG and the PRSHPO to mitigate the adverse effects identified in the planning of this project. Contact*

information for the USCG and PR SHPO is as follows:

<i>Agency</i>	<i>Point of Contact</i>	<i>Position</i>	<i>Email Address</i>	<i>Phone Number</i>
<i>USCG</i>	<i>Richard Hylton</i>	<i>Env. Engineer</i>	<i>rick.d.hylton@uscg.mil</i>	<i>(757) 852-3404</i>
<i>PR SHPO</i>	<i>Carlos A. Rubio-Cancela – PR SHPO</i>			<i>(787) 721-3737</i>
<i>PR SHPO</i>	<i>Santiago G. Aguilera – Senior Historic Specialist</i>			<i>(787) 721-3773</i>

- 15. Does your agency have a website or website link where the interested public can find out about this project and/or provide comments? Please provide relevant links: *Once completed, the Draft NEPA EA that will include Section 106 documents will be posted at:***

<https://www.dcms.uscg.mil/Our-Organization/Assistant-Commandant-for-Engineering-Logistics-CG-4-/Program-Offices/Environmental-Management/Environmental-Planning-and-Historic-Preservation/>

- 16. Is this undertaking considered a “major” or “covered” project listed on the Federal Infrastructure Projects Permitting Dashboard? If so, please provide the link: *Not Applicable.***

The following are attached to this form (check all that apply):

- ☒ Section 106 consultation correspondence
- ☒ Maps, photographs, drawings, and/or plans
- ☒ Additional historic property information
- ☒ Consulting party list with known contact information
- ☐ Other: Click here to enter text.



Appendix C – Coastal Zone Management Act Federal Consistency Determination

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U.S. Department of
Homeland Security

**United States
Coast Guard**



Commanding Officer
United States Coast Guard
Facilities Design and Construction Center

5505 Robin Hood Road, Suite K
Norfolk, VA 23513-2431
Phone: 757-852-3404
Fax: 757-852-3495

11000
13 May 2021

Ms. Rose A. Ortiz Díaz
Planning Analyst
Puerto Rico Planning Board
P.O. Box 41119
San Juan, PR 00940

Greetings Ms. Ortiz Díaz,

In accordance with the Coastal Zone Management Act and Puerto Rico's Coastal Zone Program, the United States Coast Guard (USCG) is submitting this Federal Consistency Determination for a proposed project to repair and replace facilities damaged by Hurricanes Irma and Maria in 2017 at USCG Base San Juan. The Base is located in La Puntilla, Old San Juan, Puerto Rico.

The damage caused by the hurricanes severely affected the USCG's mission readiness and the ability to conduct operations. This proposed action will increase the resiliency of facilities and infrastructure. The scope of work for this proposed project includes the construction of new Station and Health Services buildings, including supporting utilities and infrastructure. Additionally, the project will repair or renovate existing facilities that sustained extensive damage. Other facilities that cannot be repaired, are beyond their service life, and no longer effectively serve their intended purpose, will be demolished.

This resiliency and reconstitution project is essential to support personnel, enable mission readiness, and enhance operations in the event of hurricanes or similar large-scale disasters in the future.

Enclosed for your review and concurrence is the USCG's consistency determination that this project is consistent with Puerto Rico's coastal program policies to the maximum extent practicable. If you have any questions or need further information, please contact Mr. Richard Hylton at (757) 852-3404 or rick.d.hylton@uscg.mil.

Sincerely,

A handwritten signature in blue ink, appearing to read "J. F. Barresi".

Digitally signed by
BARRESIJOHN.F.JRIL.1187016629
Date: 2021.05.13 08:45:13 -04'00'

J. F. BARRESI
Captain, U. S. Coast Guard

Enclosure: (1) Federal Consistency Determination – Hurricane Rebuild of Base San Juan

**FEDERAL CONSISTENCY DETERMINATION
HURRICANE REBUILD OF BASE SAN JUAN AT
UNITED STATES COAST GUARD BASE SAN JUAN
SAN JUAN MUNICIPALITY, PUERTO RICO**

Introduction

The United States Coast Guard (USCG) is proposing to repair and replace hurricane damaged facilities at USCG Base San Juan (the Base) in San Juan, Puerto Rico (Proposed Action). San Juan is within the Commonwealth of Puerto Rico's designated coastal zone. Although Base San Juan, as a federally owned property, is statutorily exempt from the Commonwealth's coastal zone, the Proposed Action could have reasonably foreseeable effects on coastal zone resources and enforceable policies of Puerto Rico's federally approved Coastal Zone Management Program (CZMP). Therefore, the USCG has prepared this Federal Consistency Determination in accordance with Section 307(d) of the Coastal Zone Management Act (CZMA) of 1972 and 15 Code of Federal Regulations (CFR) Part 930, Subpart C to evaluate the Proposed Action's effects on those resources and enforceable policies. The USCG has determined that the Proposed Action would be consistent to the maximum extent practicable with the enforceable policies of the Puerto Rico CZMP.

The analysis presented here is drawn from the more detailed analyses presented in the Environmental Assessment (EA) that the USCG has prepared to analyze the Proposed Action's potential impacts in accordance with the National Environmental Policy Act of 1969 (NEPA) (42 United States Code [USC] §§ 4321 et seq.); the President's Council on Environmental Quality (CEQ) *Regulations Implementing the Procedural Provisions of NEPA* (40 CFR Parts 1500-1508); Department of Homeland Security (DHS) Management Directive 023-01, *Implementation of NEPA*; and Coast Guard Commandant Instruction (COMDTINST) M16475.1D, *National Environmental Policy Act Implementing Procedures and Policy for Considering Environmental Impacts*.

Project Background

Base San Juan is located on approximately 20 acres of land on La Puntilla in Old San Juan, and is surrounded by the San Juan Bay to the east, south, and west, and by Old San Juan to the north (**Figure 1**). The Base is a unified command, consisting of Command staff, patrol boats, and an Aids to Navigation Team (ANT), and is primarily engaged in logistics, operations, and response activities in the Eastern Caribbean. The Base is operated under direction of USCG Sector San Juan, which oversees USCG operations and missions in the Eastern Caribbean.

In September 2017, Hurricanes Irma and Maria caused extensive damage to facilities and infrastructure throughout Base San Juan. Damaged facilities currently face structural issues and water damage that interfere with building use, and in many cases, demolition and/or rebuild is required to address structural deficiencies and to ensure that infrastructure meets storm resiliency standards. Further, the damaged facilities do not meet functional space or staffing requirements prescribed in the USCG Shore Facilities Standards Manual (SFSM; COMDINST M11012.9) or USCG hurricane resistance and resiliency requirements. Failure to update damaged infrastructure will lead to increased vulnerability to weather and natural disasters at the Base and hinder the operational readiness and response of the USCG.

Purpose and Need

The *purpose* of the Proposed Action is to comply with the basic requirements necessary to ensure Base facilities remain functional and operational during an emergency event. Currently, the Base facilities are not fortified or adequately sized to support the Base missions and lack adequate resiliency to remain operational during severe storm events. Facilities and infrastructure at the Base are required to support the Base's ability to remain operational during an event or unscheduled outage through increased storm resiliency capacity.

The Proposed Action is *needed* to address resiliency, redundancy, and operational deficiencies at the Base resulting from Hurricanes Irma and Maria. The Proposed Action would fortify and increase the storm resiliency of facilities and infrastructure at the Base.

Proposed Action

The Proposed Action consists of construction and demolition of various facilities in both the eastern and western sections of the Base (i.e., the Proposed Action area) (**Figure 2**). The Proposed Action on the eastern section of the Base includes construction of a two-story combined Station (STA) Building/ANT/Command Center Building, herein referred to as the Station Building, near the eastern waterfront (**Figure 3a**). The new Station Building would contain space for Shipping & Receiving, Facility Support, and Shop and Maintenance operations, and drive-through boat bays on the first floor. A new Central Utility Plant (CUP) would be located on the second floor to achieve electrical resiliency. An existing historic building (Building 100) would be retrofitted to include space for STA/ANT, Response & Support, and Command Center operations in the eastern portion of the building; and office space for the Prevention & Planning sector in the western half of the building (i.e., the Building 100 Annex). The building housing Maintenance Assistance Team/Electronics System Support Detachment (MAT/ESD) (Building 101), would be renovated as well and continue to be used for these functions. Five buildings (Buildings 103, 104, 108, 110 and 111) would be demolished to accommodate the new construction. The eastern waterfront would remain as-is, with the exception of a proposed new travel lift between existing Piers Alpha and Bravo. Some in-water work would occur to support this construction, but no dredging activities would be required.

Proposed activities on the western portion of the Base include the construction of a new Health Services Building, construction of a new Guard House and access control area, and renovations to Buildings 124, 125, and 126 (**Figure 3b**). The interior of Building 124 would be renovated and repurposed as a Satellite Exchange. Building 125 would largely remain as-is aside from updates to the USCG Investigative Service (CGIS) wing and the demolition of a separate addition. Building 126 would undergo minimal interior renovations and would be repurposed as deemed appropriate by the USCG. The two-story Health Services Building would comprise parking space, Central Mail & Distribution, and the Barber on the first level, and health services on the second level. The new Guard House and access control location would be designed to provide specific lanes for entry to and exit from the Base, providing better security and Anti-Terrorism/Force Protection. A new primary roadway would be constructed to provide direct access from the western section of the Base to the eastern section and the piers. In addition, the USCG proposes to demolish four buildings (Buildings 120, 121, 122, and 123) and relocate those services into the new buildings.

Under the Proposed Action, critical systems such as electrical, mechanical, and communications would be updated for flood resiliency. Two 256,000-gallon water tanks would be constructed in between Building 100 and the new Guard House to provide for water resiliency on the Base. All construction activities would occur in previously developed areas away from the waterfront.

Alternatives

The USCG is considering two alternatives to implement the Proposed Action:

- 1) **Preferred Action Alternative** – This alternative would implement the Proposed Action as described above.
- 2) **Build Alternative** – This alternative would be similar to the Proposed Action as described above except that the Building 100 Annex would be demolished, and the two 256,000-gallon water tanks would be placed within the demolished footprint (**Figure 4a**). Construction of the water tanks in this location would allow for construction of a larger parking area between the water tanks and the proposed Guard House. In addition, the Build Alternative would construct a three-story Health Services Building with a third level for the Prevention & Planning sector (**Figure 4b**).

Enforceable Policies

The Commonwealth of Puerto Rico's federally approved CZMP is administered by the Puerto Rico Department of Natural and Environmental Resources (DRNA) through the Coastal Zone Program and Climate Change Office. The DRNA manages and implements the CZMP, and works with the Puerto Rico Planning Board (PRPB) to administer Federal Consistency Determinations as required under the CZMA. Federal agency actions that may impact coastal zone resources must be consistent to the maximum extent practicable with the enforceable policies of the Puerto Rico CZMP. These policies are located within the Commonwealth's Coastal Management Program (CMP) and associated Environmental Impact Statement (EIS), which were published and approved in 1978. An analysis of the Proposed Action's consistency with applicable policies and review of potential impacts to other coastal resources is presented below. A summary of applicable and non-applicable enforceable policies and coastal resources is provided in **Table 1**.

The completed form JP-833, *Application for Certification of Consistency with the Puerto Rico Coastal Management Program* is provided as **Attachment 1**.

B. Industrial Development

Public Policy 4.00: *To concentrate industries on land most appropriate for this use and to promote at the same time the most intensive possible use of such lands.* Base San Juan is already extensively developed with facilities and infrastructure to support the USCG and its mission. Its location on La Puntilla provides the USCG with sufficient waterfront space to support its vessels and operations, as well as easy access to coastal and open waters to meet mission requirements. The USCG activities conducted at Base San Juan are coastal-dependent, and constitute an appropriate use of the land. Due to the secure nature of the Base, other coastal-dependent industries would be excluded from using undeveloped land within the Base. However, the USCG's activities are concentrated within the Base, and the Proposed Action would occur within its existing secure boundaries and would not require the acquisition of additional coastal area. Proposed activities at the Base would occur on previously developed land and would enable the continuation of the USCG's activities and ensure the USCG is able to achieve its mission. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

D. Floodable Areas

Public Policy 10.00: *To protect the population actually residing in floodable areas or in areas affected by the action of wave surge.* The Proposed Action would occur entirely within the 100-year floodplain designated by the Federal Emergency Management Agency (FEMA). Proposed hurricane repair and rebuild activities at the Base would incorporate planning factor requirements, developed in accordance with the USCG SFSM, to ensure that critical systems and new construction would be flood resilient. New facilities and resiliency components associated with the CUP would be elevated by a minimum of 2 feet above the FEMA base flood elevation. Critical systems, including electrical, mechanical, and communications, would be elevated by a minimum of 3 feet above the FEMA base flood elevation. Compliance with this planning factor requirement would reduce the potential for damage to federal property and utilities at the Base, and for impacts to USCG personnel at the Base. The Proposed Action would not contribute to increased floodwater displacement on the Base because new facilities would be elevated above the 100-year floodplain. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

Public Policy 11.00: *To prohibit land development and construction of structures for urban expansion and other activities which are expressly excluded by current regulation in areas affected by floods and wave surge, except when flood control works or protection against wave surge already exist, are under construction, or can be provided at a reasonable cost; to protect the property and guarantee the safety of all the people affected in those lands which are not agricultural productive, do not have important natural resources, and are not environmentally critical.* New construction would occur at the Base, which is located within a 100-year floodplain, under the Proposed Action. Such construction, however, would occur in previously developed areas and would not constitute urban expansion nor require new land development. The Proposed Action would provide necessary facilities and infrastructure to support the USCG's mission, which is inherently water-dependent and must be located adjacent to coastal areas that are potentially prone to flooding. The Proposed Action would be implemented in accordance with USCG planning factors developed to ensure flood resiliency and minimize damage from potential flooding. Thus, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

F. Natural Areas

Public Policy 17.04: *To avoid the unnecessary loss of options for future use of these resources resulting from the establishment of new activities and from authorizing subdivision. The following criteria, among others, must be considered: Avoid the construction of buildings in beach areas and discourage activities or land subdivision in neighboring areas which would impede free physical access to those areas, prohibit the appreciation or panoramic view, and prevent free access to and enjoyment of the sun by the citizenry.* A small beach is located in the western portion of the Base; this beach is located outside of the Proposed Action area, and no activities associated with the Proposed Action would occur there. Although public access to this beach is prohibited due to its location within the secure perimeter of Base San Juan, the beach would remain accessible for continued and future use by USCG personnel and authorized visitors. The Proposed Action would not require the acquisition of or restrict public access to beaches outside Base San Juan. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

Public Policy 18.02: *To control those activities and land subdivisions which may adversely affect water quality, particularly in areas for aquifer recharge, and in watersheds contiguous to lakes and reservoirs*

– *activities such as elimination of the vegetative layer, soil movement causing erosion, the excessive use of paving resulting in increased runoff, and the indiscriminate use of fertilizers and pesticides causing water quality to deteriorate.* Proposed construction and demolition activities at Base San Juan would lead to an increased potential for erosion and sedimentation in the surrounding San Juan Bay. Applicable best management practices (BMPs) would be incorporated into the Proposed Action in accordance with Puerto Rico's 2004 *Erosion and Sediment Control Handbook for Developing Areas*, which would prevent or minimize the erosion of soils exposed during construction and demolition activities and manage the quantity and quality of stormwater runoff discharged from the project site. Additionally, the USCG would obtain a construction permit issued in accordance with the 1998 Erosion Control and Sedimentation Prevention Regulation. Sites proposed for demolition with no replacement construction would be replanted or otherwise maintained in a permeable condition as applicable to facilitate the infiltration of precipitation and minimize stormwater runoff in the long term. Proposed new construction would not occur in previously undeveloped areas, thereby resulting in no or minimal net increase in the amount of impervious surface within the Base, and having no effect on the corresponding volume of runoff. With implementation of BMPs and compliance with applicable erosion and sedimentation regulations to maintain water quality, the Proposed Action would be consistent to the maximum extent practicable with this enforceable policy.

Public Policy 18.03: *To avoid activities and land subdivision which could cause the deterioration or destruction of those natural systems essential for preserving the environment, such as mangroves, forests, reefs, dunes, ecological systems, and habitats of endangered species.* Construction and demolition activities under the Proposed Action would have the potential to impact ecological systems and endangered species habitat. Impacts on aquatic systems, including water quality, would be minimized through the use of BMPs and compliance with applicable water quality and erosion and sedimentation regulations. Limited terrestrial resources and habitat are present at the Base, and temporarily disturbed areas would be revegetated as applicable. Three federally listed threatened and endangered species are potentially present at or surrounding the Base: giant manta ray (*Manta birostris*), hawksbill sea turtle (*Eretmochelys imbricata*), and leatherback sea turtle (*Demochelys coriacea*). However, the Proposed Action is not likely to adversely affect these species or their habitat. The USCG is consulting with the US Fish and Wildlife Service and the National Marine Fisheries Service regarding these species, and would implement appropriate BMPs as applicable to minimize potential impacts to these species and their habitats resulting from the Proposed Action. The Proposed Action would have no potential to affect mangroves, forests, reefs, or dunes because none of these resources are present at or near the Base. Therefore, the Proposed Action is consistent to the maximum extent practicable with this enforceable policy.

Public Policy 18.04: *To avoid the destruction, mutilation, deterioration or demolition of important cultural resources such as archaeological deposits, historic sites, and /or buildings and others which have been so declared by the Institute of Puerto Rican Culture.* Base San Juan is located within the Old San Juan Historic District, which is listed in the National Register of Historic Places (NRHP). Base San Juan is also individually eligible for listing as an NRHP district and contains multiple buildings listed or recommended as contributing resources. Building 116 on the Base is individually listed in the NRHP. Remains of the Santo Toribio Battery, which were determined eligible for listing on the NRHP in 2001, are present under several buildings on the Base. Forty-eight (48) previously recorded archaeological sites have been documented within 1 mile of Base San Juan, indicating that there is a high potential to encounter known or currently unknown archaeological deposits during ground-disturbing activities associated with the Proposed Action.

Due to the presence of these resources, it is likely that the Proposed Action would have an adverse effect on historic properties and/or archaeological resources at Base San Juan. The USCG is consulting with the Puerto Rico State Historic Preservation Office (SHPO) in accordance with Section 106 of the National Historic Preservation Act to identify appropriate minimization and mitigation measures to address this potential adverse effect. It is anticipated that archaeological investigations would be performed to determine the potential presence and extent of existing deposits prior to beginning the proposed demolition and construction activities. In the event archaeological materials are inadvertently discovered during the Proposed Action, ground-disturbing activities would stop immediately and the USCG would notify the Puerto Rico SHPO. In consultation with the SHPO and other interested parties, the USCG anticipates the development and execution of a project-specific Memorandum of Agreement (MOA) pursuant to 36 CFR Parts 800.6(c) and 800.14(b)(1) to address the effects of the Proposed Action on historic properties at the Base. The MOA would also include measures to avoid, minimize, or mitigate the adverse effects on historic properties. With the implementation of an MOA and appropriate mitigation measures, the Proposed Action would be consistent to the maximum extent practicable with this enforceable policy.

Conclusion

Table 1 summarizes the Proposed Action's consistency with or applicability to the enforceable policies of the Puerto Rico CZMP. The USCG has determined that the Proposed Action, which would be implemented in accordance with applicable BMPs and minimization measures, would be consistent to the maximum extent practicable with the enforceable policies and coastal resources of Puerto Rico's federally approved CMP, pursuant to the Coastal Zone Management Act of 1972, as amended, and in accordance with 15 CFR Part 930, Subpart C.

**Table 1. Consistency or Applicability of the Proposed Action to Puerto Rico CZMP
Enforceable Policies**

Policy	Applicability or Consistency¹
A. Urban Development	
Public Policy 1.00: To organize and coordinate the physical growth of urban areas.	Not Applicable (N/A)
Public Policy 2.00: To intensify the use of land in urban areas.	N/A
Public Policy 3.00: To improve the design of communities, towns and cities and their various components, such as traditional urban cores, other commercial and institutional centers and residential neighborhoods, in order to achieve a better quality of life in urban areas so that they may become attractive places in which to live and work.	N/A
B. Industrial Development	
Public Policy 4.00: To concentrate industries on land most appropriate for this use and to promote at the same time the most intensive possible use of such lands.	Consistent
Public Policy 5.00: To decentralize industrial development, providing as far as possible, a light-industry industrial park in each municipality; regional parks in the different sectors of the country; and permitting in rural areas, small-scale industries which are related to their socio-economic development of the countryside.	N/A
C. Agricultural Development	
Public Policy 6.00: To encourage agriculture as a principal activity in the use of available lands which have potential for such use, promoting those programs and measures necessary to make this activity feasible.	N/A
Public Policy 7.00: To provide the necessary infrastructure in order to stimulate and promote the cultivation of land with agricultural potential not being fully utilized due to the lack of such services as irrigation, access roads, marketing systems, and others.	N/A
Public Policy 8.00: To retain, as much as possible, in agricultural use, those agricultural lands suited to the production of crops and animal products, protecting them from those practices and activities which unnecessarily diminish the potential for the development of agriculture.	N/A
Public Policy 9.00: To encourage the adoption of measures and programs leading to soil preservation in order to avoid erosion, protect land productivity, and minimize the adverse impact on the quality of our water supplies and deterioration of other natural resources as a consequence of the agricultural activity.	N/A
D. Floodable Areas	
Public Policy 10.00: To protect the population actually residing in floodable areas or in areas affected by the action of wave surge.	Consistent
Public Policy 11.00: To prohibit land development and construction of structures for urban expansion and other activities which are expressly excluded by current regulation in areas affected by floods and wave surge, except when flood control works or protection against wave surge already exist, are under construction, or can be provided at a reasonable cost; to protect the property and guarantee the safety of	Consistent

**Table 1. Consistency or Applicability of the Proposed Action to Puerto Rico CZMP
Enforceable Policies**

Policy	Applicability or Consistency¹
all the people affected in those lands which are not agricultural productive, do not have important natural resources, and are not environmentally critical	
Public Policy 12.00: To stimulate agricultural development in floodable areas which have such potential.	N/A
Public Policy 13.00: To construct flood control works with an agricultural approach in areas where it is appropriate, and which will result in an increase in agricultural production.	N/A
E. Infrastructure	
Public Policy 14.00: To assure optimum coordination among the public agencies responsible for providing infrastructure so that it may be available in the most adequate place and time in order to achieve the full and judicious utilization of land in urban and rural areas.	N/A
Public Policy 15.00: To assure the intensive use of infrastructure in urban and rural areas and direct the future development of lands to sites where the necessary infrastructure is already available, but is not being used to full capacity without adversely affecting other land use objectives and policies.	N/A
Public Policy 16.00: To identify and reserve lands for the location of infrastructure projects which, by virtue of their size and complexity; possible adverse impact on the environment; or special requirement need very particular or scarce sites, following specific criteria.	N/A
F. Natural Areas	
Public Policy 17.00: To manage and judiciously use, natural, environmental, and cultural resources.	Consistent
Public Policy 17.01: To identify the location and potential of our natural resources and their susceptibility to damage or exhaustion, completing the inventory of natural, environmental, and cultural resources already begun.	N/A
Public Policy 17.02: To promote the appropriate use of the resources identified in this inventory, in a manner consistent with the conservation of renewable resources, and at the appropriate time in the case of those which are subject to depletion.	N/A
Public Policy 17.03: To promote full knowledge on the part of the citizenry about the existence of these resources in Puerto Rico and to encourage a continuing awareness of their importance for our comprehensive development.	N/A
Public Policy 17.04: To avoid unnecessary loss of options for future use of these resources resulting from the establishment of new activities or from the authorization of new subdivisions, considering among others specific criteria.	Consistent
Public Policy 18.00: To protect natural, environmental, and cultural resources from destruction or irreparable damage caused by misuse or by failing to consider the adverse impact of activities upon them.	Consistent
Public Policy 18.01: To reduce the adverse impact of pollution on resources, by identifying and controlling the causes and sources of such pollution.	N/A

**Table 1. Consistency or Applicability of the Proposed Action to Puerto Rico CZMP
Enforceable Policies**

Policy	Applicability or Consistency ¹
Public Policy 18.02: To control those activities and land subdivisions which may adversely affect water quality, particularly in areas for aquifer recharge, and in watersheds contiguous to lakes and reservoirs – activities such as elimination of the vegetative layer, soil movement causing erosion, the excessive use of paving resulting in increased runoff, and the indiscriminate use of fertilizers and pesticides causing water quality to deteriorate	Consistent
Public Policy 18.03: To avoid activities and land subdivision which could cause the deterioration or destruction of those natural systems essential for preserving the environment, such as mangroves, forests, reefs, dunes, ecological systems, and habitats of endangered species.	Consistent
Public Policy 18.04: To avoid the destruction, mutilation, deterioration or demolition of important cultural resources such as archaeological deposits, historic sites, and/or buildings and others which have been so declared by the Institute of Puerto Rican Culture.	Consistent

Note:

1. Consistent, to the maximum extent practicable.

Source: *Final Environmental Impact Statement: Coastal Management Program for the Commonwealth of Puerto Rico*, 1978.

FIGURES



Figure 1: Regional Location of Base San Juan



Figure 2: Base San Juan

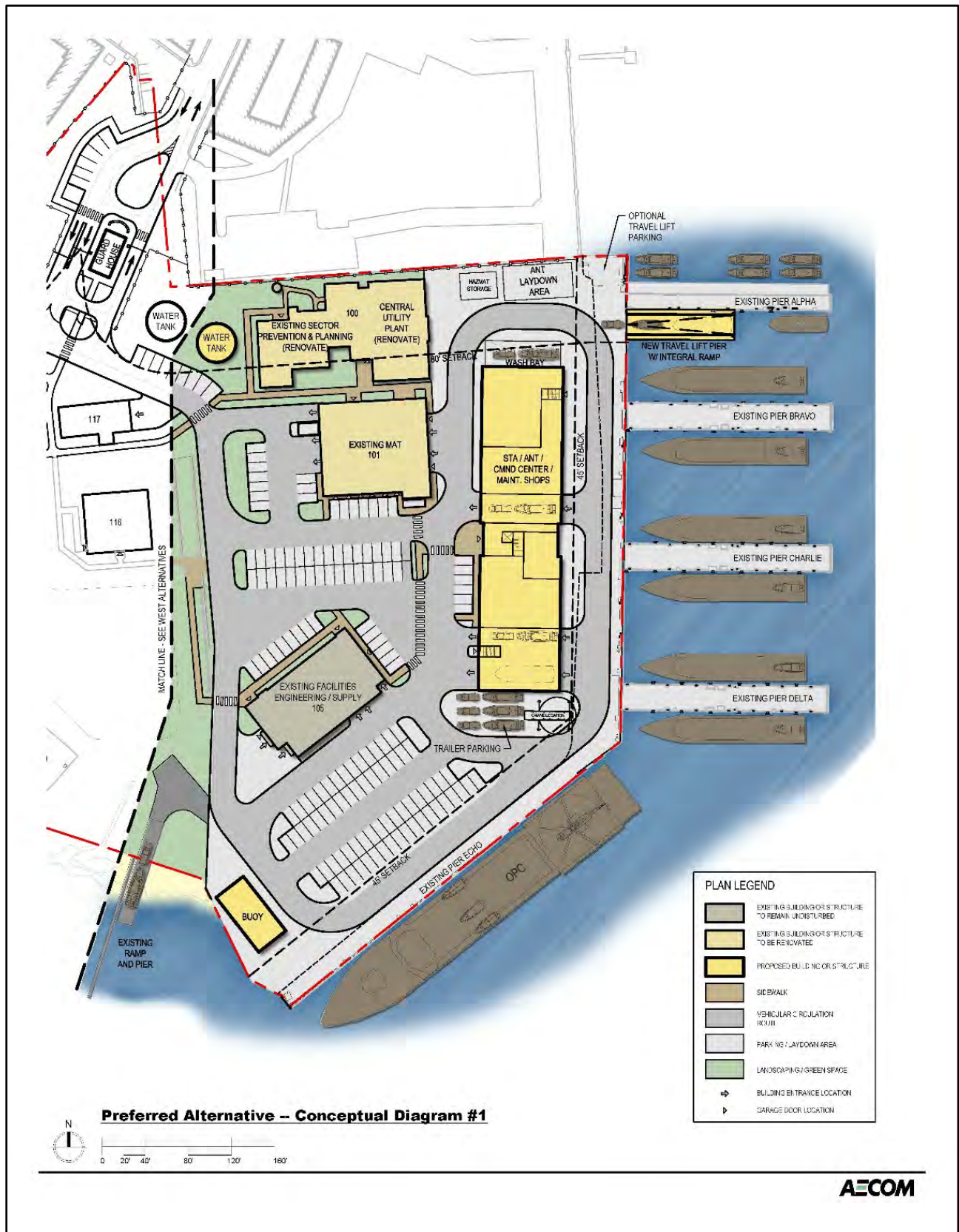


Figure 3a: Preferred Alternative – Conceptual Diagram #1 (Eastern Section)



Figure 3b: Preferred Alternative – Conceptual Diagram #2 (Western Section)

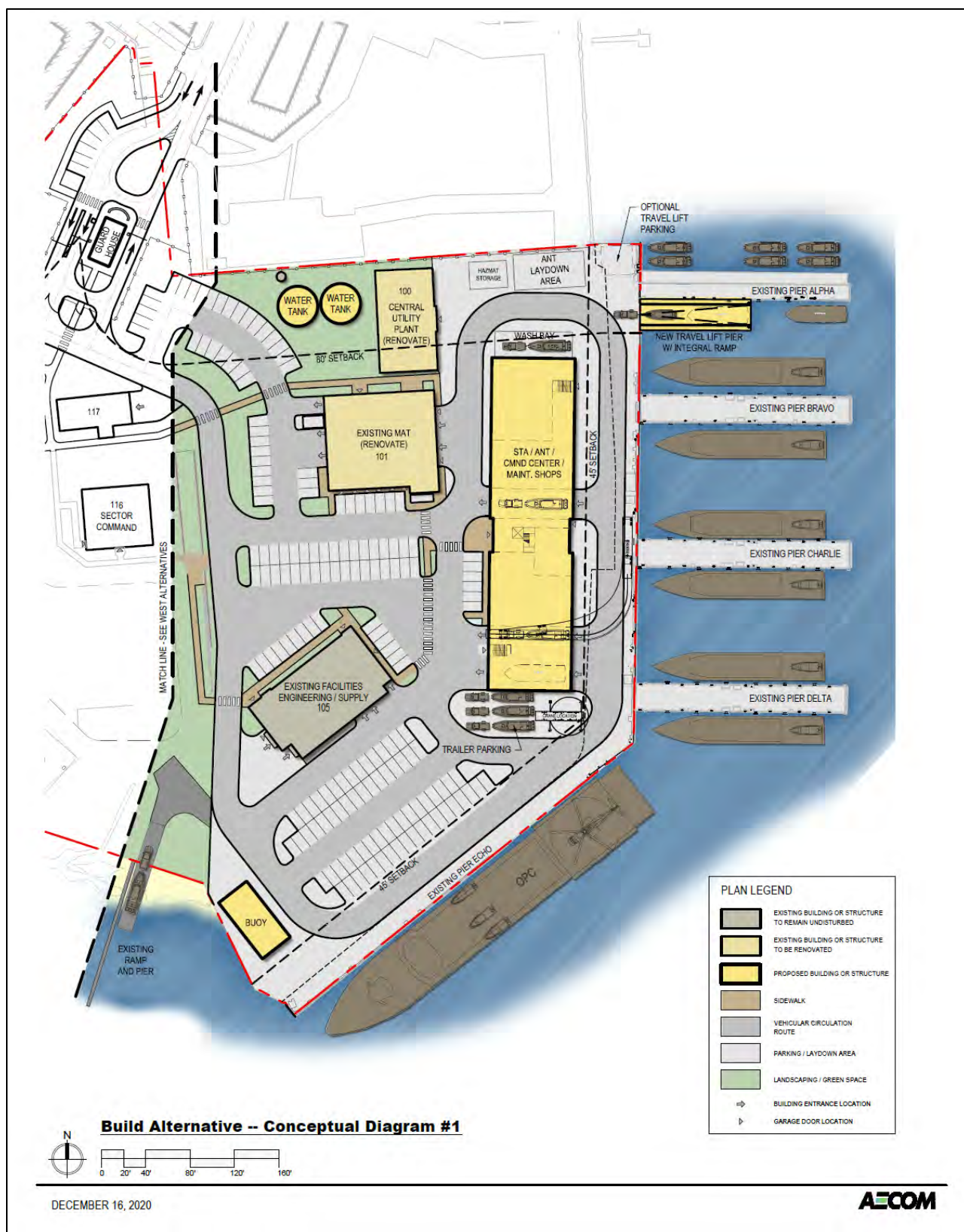




Figure 4b: Build Alternative – Conceptual Diagram #2 (Western Section)

**Attachment 1. Form JP-833 and Supporting
Documents**

Commonwealth of Puerto Rico
Office of the Governor
Puerto Rico Planning Board
Physical Planning Area
Land Use Planning Bureau

Application for Certification of Consistency with the
Puerto Rico Coastal Management Program

General Instructions:

- A. Attach a 1:20,000 scale, U.S. Geological Survey topographic quadrangular base map of the site.
- B. Attach a reasonably scaled plan or schematic design of the proposed object, indicating the following:
 - 1. Peripheral areas
 - 2. Bodies of water, tidal limit and natural systems.
- C. You may attach any further information you consider necessary for proper evaluation of the proposal.
- D. If any information requested in the questionnaire does not apply in your case, indicate by writing "N/A"(not applicable).
- E. Submit a minimum of seven (7) copies of this application.

DO NOT WRITE IN THIS BOX

Type of application: _____

Application Number: _____

Date received: _____

Date of Certification: _____

Evaluation result:

☐ Objection

☐ Acceptance

☐ Negotiation

Technician: _____

Supervisor: _____

Comments: _____

- 1. Name of Federal Agency: _____
- 2. Federal Program Catalog Number: _____
- 3. Type of Action:
 - ☐ Federal Activity
 - ☐ License or permit
 - ☐ Federal Assistance
- 4. Name of Applicant: _____

Postal Address: _____

Telephone: _____ Fax: _____
- 5. Project name: _____
- 6. Physical Description of Project Location (area, facilities such as vehicular access, drainage, storm and sanitary sewer placement, etc.): _____

Lambert Coordinates: X = _____ Y = _____

7. Type of construction or other work proposed:

- ☐ drainage
- ☐ channeling
- ☐ landfill
- ☐ sand extraction
- ☐ pier
- ☐ bridge
- ☐ residential
- ☐ tourist

others (specify and explain) _____

Description of proposed work: _____

8. Natural, artificial, historic or cultural systems likely to be affected by the project

Place an X opposite any of the systems indicated below that are in the project area or its surroundings, which are likely to be affected by that activity. Indicate the distance from the project to any outside system that would likely be affected.

System	Within Project	Outside Project	Distance (meters)	Local name of affected system
beach, dunes				
marshes				
coral, reefs				
river, estuary				
bird sanctuary				
pond, lake, lagoon				
agricultural unit				
forest, wood				
cliff, breakwater				
cultural or tourist area				
other (explain)				

Describe the likely impact of the project on the identified system (s).

Positive ☐

Negative ☐

Explain:

9. Indicate permits, approvals and endorsements of the proposal by Federal and Puerto Rican government agencies. Evidence of such support should be attached to the proposal.

	Yes	No	Pending	Application Number
a. Planning Board	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b. Regulation and Permits Administration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c. Environmental Quality Board	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d. Department of Natural Resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
e. State Historic Preservation Office	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
f. U.S. Army Corps of Engineers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
g. U.S. Coast Guard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
h. Other (s) (specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

CERTIFICATION

I CERTIFY THAT (project name) _____ is consistent with the Puerto Rico Coastal Zone Management Program, and that to the best of my knowledge the above information is true.

Name (legible)

Signature

Position

Date



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Caribbean Ecological Services Field Office
Post Office Box 491
Boqueron, PR 00622-0491
Phone: (787) 851-7297 Fax: (787) 851-7440
<http://www.fws.gov/caribbean/es>

In Reply Refer To:

March 19, 2021

Consultation Code: 04EC1000-2021-SLI-0506

Event Code: 04EC1000-2021-E-00844

Project Name: USCG Hurricane Rebuild at Base San Juan

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

THE FOLLOWING SPECIES LIST IS NOT A SECTION 7 CONSULTATION. PLEASE CONTACT OUR OFFICE TO COMPLETE THE CONSULTATION PROCESS

The purpose of the Endangered Species Act (Act) is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect those species and/or their designated critical habitat.

Federal agencies are required to "request of the Secretary of Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

The enclosed species list provides information to assist with the consultation process with the U.S. Fish and Wildlife Service (Service) under section 7 of the Act. However, the enclosed species list **does not complete the required consultation process**. The species list identifies threatened, endangered, proposed and candidate species, as well as proposed and designated critical habitats, that may occur within the boundary of your proposed project and/or may be affected by your proposed project.

A discussion between the Federal agency and the Service should include what types of listed species may occur in the proposed action area, and what effect the proposed action may have on those species. This process initiates informal consultation.

When a Federal agency, after discussions with the Service, determines that the proposed action is not likely to adversely affect any listed species, or adversely modify any designated critical habitat, and the Service concurs, the informal consultation is complete and the proposed project

moves ahead. If the proposed action is suspected to affect a listed species or modify designated critical habitat, the Federal agency may then prepare a Biological Assessment (BA) to assist in its determination of the project's effects on species and their habitat.

However, a BA is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a BA where the agency provides the Service with an evaluation on the likely effects of the action to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a BA are described at 50 CFR 402.12.

If a Federal agency determines, based on its BA or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to further consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species, and proposed critical habitat be addressed within the consultation process.

More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at:

<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in

the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

For more information:

U.S. Fish and Wildlife Service
Caribbean Ecological Services Field Office
Road 301, Km. 5.1 / Bo. Corozo
Boquerón, PR 00622
Telephone: (787) 851-7297
Fax: (787) 851-7440
Email: caribbean_es@fws.gov
<http://www.fws.gov/caribbean/es>

Send all documents to:

U.S. Fish and Wildlife Service
P.O. Box 491
Boquerón, Puerto Rico 00622

Attachment(s):

- Official Species List
 - USFWS National Wildlife Refuges and Fish Hatcheries
 - Migratory Birds
 - Marine Mammals
 - Wetlands
-

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Caribbean Ecological Services Field Office

Post Office Box 491

Boqueron, PR 00622-0491

(787) 851-7297

Project Summary

Consultation Code: 04EC1000-2021-SLI-0506

Event Code: 04EC1000-2021-E-00844

Project Name: USCG Hurricane Rebuild at Base San Juan

Project Type: ** OTHER **

Project Description: On September 20, 2017, Hurricane Maria made landfall in Puerto Rico and caused extensive damage to the US Coast Guard's Base San Juan. The storm caused extensive damage to infrastructure and facilities at the Base. Existing facilities are not storm resilient and are unable to remain functional during major storm events. The Proposed Action for this project includes multiple construction, demolition, and renovation activities to rebuild damaged facilities at Base San Juan, and update critical systems for storm resiliency. Some in-water work may also be occur in the east, if a new travel lift pier is constructed. There are two action alternatives under the Proposed Action: the Preferred Action Alternative and the Build Alternative. The majority of proposed activities under these two alternatives would remain the same.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@18.460194899999998,-66.1165263710117,14z>



Counties: San Juan County, Puerto Rico

Endangered Species Act Species

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
West Indian Manatee <i>Trichechus manatus</i> There is final critical habitat for this species. The location of the critical habitat is not available. <i>This species is also protected by the Marine Mammal Protection Act, and may have additional consultation requirements.</i> Species profile: https://ecos.fws.gov/ecp/species/4469	Threatened

Reptiles

NAME	STATUS
Hawksbill Sea Turtle <i>Eretmochelys imbricata</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3656 General project design guidelines: https://ecos.fws.gov/docs/tess/ipac_project_design_guidelines/doc4769.pdf	Endangered
Leatherback Sea Turtle <i>Dermochelys coriacea</i> There is final critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/1493 General project design guidelines: https://ecos.fws.gov/docs/tess/ipac_project_design_guidelines/doc4769.pdf	Endangered
Puerto Rican Boa <i>Epicrates inornatus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6628 General project design guidelines: https://ecos.fws.gov/docs/tess/ipac_project_design_guidelines/doc6757.pdf	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

THERE ARE NO FWS MIGRATORY BIRDS OF CONCERN WITHIN THE VICINITY OF YOUR PROJECT AREA.

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical](#)

[Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Marine Mammals

Marine mammals are protected under the [Marine Mammal Protection Act](#). Some are also protected under the Endangered Species Act¹ and the Convention on International Trade in Endangered Species of Wild Fauna and Flora².

The responsibilities for the protection, conservation, and management of marine mammals are shared by the U.S. Fish and Wildlife Service [responsible for otters, walruses, polar bears, manatees, and dugongs] and NOAA Fisheries³ [responsible for seals, sea lions, whales, dolphins, and porpoises]. Marine mammals under the responsibility of NOAA Fisheries are **not** shown on this list; for additional information on those species please visit the [Marine Mammals](#) page of the NOAA Fisheries website.

The Marine Mammal Protection Act prohibits the take of marine mammals and further coordination may be necessary for project evaluation. Please contact the U.S. Fish and Wildlife Service Field Office shown.

-
1. The [Endangered Species Act](#) (ESA) of 1973.
 2. The [Convention on International Trade in Endangered Species of Wild Fauna and Flora](#) (CITES) is a treaty to ensure that international trade in plants and animals does not threaten their survival in the wild.
 3. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

NAME

West Indian Manatee *Trichechus manatus*

Species profile: <https://ecos.fws.gov/ecp/species/4469>

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

ESTUARINE AND MARINE DEEPWATER

- [E1UBL](#)
-



**Appendix D – Memorandum of Agreement between the
United States Coast Guard and Puerto Rico State Historic
Preservation Office Regarding Hurricane Reconstitution
Project Plan**

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MEMORANDUM OF AGREEMENT
BETWEEN THE UNITED STATES COAST GUARD (USCG)
AND
THE PUERTO RICO STATE HISTORIC PRESERVATION OFFICER (SHPO)
REGARDING
HURRICANE RECONSTITUTION PROJECT EXECUTION PLAN
USCG BASE SAN JUAN, PUERTO RICO
SHPO: 07-31-20-01

WHEREAS, the USCG plans to repair and replace hurricane-damaged facilities that are located within Base San Juan, in San Juan Municipality, Puerto Rico as part of the Hurricane Reconstitution Project Execution Plan (Project); and

WHEREAS, the USCG plans to carry out the Project on federally controlled land and is therefore, considered an undertaking that is subject to review under Section 106 of the National Historic Preservation Act (NHPA), 54 U.S.C. 306 § 108 et seq., and its implementing regulations, see 36 C.F.R. Part 800; and

WHEREAS, the USCG in consultation with the SHPO has defined the undertaking's area of potential effects (APE) as the area identified in Attachment A: APE Map; and

WHEREAS, the USCG in consultation with the SHPO has determined that the Base San Juan Historic District is eligible for listing in the National Register of Historic Places (NRHP); and

WHEREAS, the USCG in consultation with the SHPO has determined that the undertaking will have an adverse effect on the NRHP-eligible Base San Juan Historic District, resulting from the demolition of three contributing buildings within the district, Building 103 Building 104, and Building 120 (CG Exchange) (see Attachment B: Section 106 Considerations Table and Map), and has consulted with the SHPO pursuant to 36 CFR Part 800; and

WHEREAS, the USCG in consultation with the SHPO has also determined that Building 124, Building 125, ad Building 126, are eligible for listing in the NRHP as contributing resources to the Puerto Rico Insular Quarantine Station. The station is significant under Criterion A for its association with the Insular Government's tuberculosis treatment program from 1912-1940; and

WHEREAS, the USCG is aware of the previous archaeological investigations that have occurred at Base San Juan, the archaeological significance of La Puntilla, and that additional identification efforts are necessary; and

WHEREAS, USCG will continue to consult with the SHPO regarding the identification, evaluation, and assessment of effects to archaeological historic properties pursuant to Stipulation D; and

WHEREAS, in accordance with 36 CFR Part 800.6 (a)(4), the USCG invited the public to participate in a 30-day project review and comment between 26 June to 26 July 2021. This

invitation was published in the *El Vocero*, *Primera Hora*, *Nuevo Dia*, and *San Juan Daily Star* and included a project overview and information on how to access both electronic and written copies of the draft Environmental Assessment that contained a project specific Cultural Resources Evaluation; and

WHEREAS, in accordance with 36 C.F.R. § 800.6(a)(1), the USCG has notified the Advisory Council on Historic Preservation (ACHP) of its adverse effect determination providing the specified documentation, and the ACHP has chosen not to participate in the consultation as pursuant to 36 C.F.R. § 800.6(a)(1)(iii);

NOW, THEREFORE, the USCG and the SHPO enter into this Memorandum of Agreement (Agreement) to ensure that the undertaking shall be implemented in accordance with the following stipulations in order to take into account the effect of the undertaking on historic properties.

STIPULATIONS

The USCG shall ensure that the following measures are carried out by a professional meeting the applicable Secretary of the Interior's Professional Qualifications Standards:

A. ARCHITECTURAL DOCUMENTATION

Three buildings will be demolished: Building 103 (Shop), Building 104 (Blacksmith Shop), and Building 120 (Insular Garage), all contributing resources to the NRHP-eligible Base San Juan Historic District

Prior to demolition of Buildings 103, 104, and 120, (as shown in Attachment B), will be documented using the HABS Level II format. The USCG shall ensure that all documentation is completed and accepted by SHPO prior to demolition and that copies are made available to the appropriate local archives designated by the SHPO.

B. REHABILITATION

The following buildings will be rehabilitated and are contributing resources within the NRHP-eligible Base San Juan Historic District: Building 100 (Office Building), Building 116 (Lighthouse Superintendent's Dwelling), and Building 117 (Insular Garage).

The following buildings will be rehabilitated and are contributing buildings to the NRHP-eligible Puerto Rico Insular Quarantine Station: Building 124 (Insular Bureau of Tuberculosis Dispensary), Building 125 (Insular Division of Roentgenology X-Ray Building and Laboratory), and Building 126 (Insular Quarantine Hospital Administration Building).

All buildings will be rehabilitated in accordance with *The Secretary of the Interior's Standards for Rehabilitation with Guidelines for Rehabilitating Historic Buildings* (NPS 1992). Designs and specifications for new construction will be developed in consultation with the SHPO and submitted to SHPO for review and comment.

C. NEW CONSTRUCTION

The following three buildings will be new construction: Health Building, Guard House, and Station/ANT/Command Center.

The USCG shall ensure that the design for each new construction project is compatible with guidelines set forth in the *Secretary of the Interior's Standards for Rehabilitation* (NPS 1992), specifically Standard 9 which states:

New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

Design of new buildings shall be compatible with the historic and architectural qualities of both the NRHP-eligible Base San Juan Historic District. Designs and specifications for new construction will be developed in consultation with the SHPO and submitted to SHPO for review and comment.

D. ARCHAEOLOGY

1. Identification and Evaluation

Prior to new construction, unless otherwise not feasible in accordance with Stipulation D.4, the USCG shall perform archaeological identification and evaluation of the archaeological APE. Archaeological investigations shall be conducted in consultation with the SHPO, and a report of the investigations, meeting the standards of the SHPO, shall be submitted to the SHPO for review.

The USCG shall conduct archaeological identification in a manner consisted with the Secretary of the Interior's Standards and Guidelines for Identification (48 FR 44720-23) and taking into account NPS publication *The Archeological Survey: Methods and Uses* (1978) and NPS National Register Bulletin 24: *Guidelines for Local Surveys: A Basis for Preservation Planning*. The USCG shall evaluate archaeological resources in accordance with 36 CFR 800.4(c) in a manner consisted with the Secretary of the Interior's Standards and Guidelines for Evaluation and taking into account NPS National Register Bulletin 15: *How to Apply the National Register Criteria for Evaluation* and NPS National Register

Bulletin 36: Guidelines for Evaluating and Registering Archaeological Properties.

2. Assessment of Effects

Depending on the outcome of the archaeological identification and evaluation efforts, the USCG in consultation with the SHPO will make a determination of a No Historic Properties Affected finding consistent with 36 CFR § 800.4(d)(1), a No Adverse Effect finding consistent with 36 CFR § 800.5(b), or a determination of Adverse Effect finding consistent with 36 CFR § 800.5(d)(2), as appropriate.

3. Resolution of Adverse Effects

If USCG in consultation with the SHPO determines an archaeological historic property will be adversely affected by the Undertaking, the USCG will make a reasonable and good faith effort to first avoid adverse effects on the archaeological historic property through implementation of avoidance measures and then through implementation of minimization measures.

If the USCG identifies that archaeological historic properties eligible for listing in the National Register under Criterion D will be subject to an Adverse Effect, the USCG shall ensure that a Data Recovery Plan (DRP) is developed in consultation with the SHPO for the recovery of significant archaeological data. The DRP shall be consistent with the Secretary of the Interior's Standards and Guidelines for Archeological Documentation (48 FR 44734-37) and shall take into account the ACHP's *Treatment of Archeological Properties*. The DRP shall specify at a minimum:

- The property, properties, or portions of properties where data recovery is to be carried out;
- The research questions to be addressed through data recovery, which an explanation of their relevance and importance;
- The methods to be used, with an explanation of their relevance to the research questions;
- The methods to be used in analysis, data management, and dissemination of data, including a schedule;
- The proposed disposition of recovered materials and records;
- The proposed methods for disseminating results of the work to the interested public; and
- A proposed schedule for the submission of progress reports and draft and final technical reports to the SHPO.

The DRP shall be submitted by the USCG to the SHPO for a review period of 30 calendar days. Unless the SHPO objects within 30 calendar days after receipt of the DRP, the USCG shall ensure that it is implemented.

If USCG identifies archaeological historic properties eligible for listing in the National Register under Criteria A, B, or C, in addition to Criterion D, will be subject to an Adverse Effect; the USCG shall identify additional treatment options in consultation with SHPO, as appropriate.

4. Archaeological Construction Monitoring

In certain circumstances, standard techniques for the identification and evaluation of archaeological historic properties cannot be feasibly used. The USCG in consultation with SHPO will conduct archaeological construction monitoring at all construction locations within the Archaeological APE that have moderate to high potential to contain significant archaeological resources where identification and evaluation efforts could not be completed using standard archaeological techniques due to access impairments (e.g., underneath existing buildings).

Should an archaeological resource documented during archaeological monitoring have the potential to be an historic property, the USCG shall follow the process outlined in Stipulations D.1 and D2. Should an archaeological resource documented during archaeological monitoring be determined an historic property, the USCG shall follow the process outlined in Stipulation D.3.

ADMINISTRATIVE CONDITIONS

I. QUALIFICATIONS

USCG will ensure all actions prescribed by this MOA will be carried out by or under the direct supervision of a person who meets the appropriate Secretary of the Interior's Professional Qualification Standards (SOI Standards; 36 CFR Part 61) in an applicable discipline.

II. AUTHORITY

The Agreement is generally authorized under the provisions of Section 106 of the NHPA and its implementing regulations. In accordance with 14 U.S.C. § 141(b), the USCG is authorized to enter into this Agreement with the SHPO.

III. DURATION

This Agreement will expire with the completion of the undertaking and its stipulations or if its terms are not carried out within five (5) years from the date of its execution. Prior to such time, the USCG may consult with the other signatories to reconsider the terms of the Agreement and amend it in accordance with Administration Condition VI (Amendments).

IV. POST-REVIEW DISCOVERIES

If during construction previously unknown archeological resources are discovered, all work in the immediate vicinity of the discovery will be halted, signatories to the Agreement will be notified, and procedures of 36 C.F.R. § 800.13 followed. In the event that human remains are discovered during construction, the ACHP's *Policy Statement Regarding Treatment of Burial Sites, Human Remains and Funerary Objects* will be followed.

V. DISPUTE RESOLUTION

Should any signatory to this Agreement object to any actions proposed or the manner in which the terms of this Agreement are implemented, the USCG shall consult with such party to resolve the objection. If the USCG determines that such objection cannot be resolved, the USCG will:

- a. Forward all documentation relevant to the dispute, including the USCG's proposed resolution, to the ACHP. The ACHP shall provide the USCG with its advice on the resolution of the objection within thirty (30) days of receiving adequate documentation. Prior to reaching a final decision on the dispute, the USCG shall prepare a written response that takes into account any timely advice or comments regarding the dispute from the ACHP, signatories and concurring parties, and provide

them with a copy of this written response. The USCG will then proceed according to its final decision.

- b. If the ACHP does not provide its advice regarding the dispute within the thirty (30)-day time period, the USCG may make a final decision on the dispute and proceed accordingly. Prior to reaching such a final decision, the USCG shall prepare a written response that takes into account any timely comments regarding the dispute from the signatories and concurring parties to the Agreement and provide them and the ACHP with a copy of such written response.
- c. The USCG's responsibilities to carry out all other actions subject to the terms of this Agreement that are not the subject of the dispute remain unchanged.

VI. AMENDMENTS

This Agreement may be amended when such an amendment is agreed to in writing by all signatories. The amendment will be effective on the date a copy signed by all of the signatories is filed with the ACHP.

VII. TERMINATION

If any signatory to this Agreement determines that its terms will not or cannot be carried out, that party shall immediately consult with the other parties to attempt to develop an amendment per Administrative Condition VI (Amendments). If within thirty (30) days (or another time period agreed to by all signatories) an amendment cannot be reached, any signatory may terminate the Agreement upon written notification to the other signatories.

Once the Agreement is terminated and prior to work continuing on the undertaking, the USCG must either (a) execute an Agreement pursuant to 36 C.F.R. § 800.6, or (b) request, take into account, and respond to the comments of the ACHP under 36 C.F.R. § 800.7. The USCG shall notify the signatories as to the course of action it will pursue.

VIII. ANTI-DEFICIENCY

Nothing in this Agreement shall require or authorize any agency or employee of the Federal Government to make or authorize any expenditure or obligation of funds exceeding appropriated funding, to obligate any payment of money before it is appropriated, to indemnify any other party absent specific statutory authorization, or to violate the Anti-Deficiency Act, 31 U.S.C. §§ 1341(a)(1)(A) and 1341 (a)(1)(B).

IX. OTHER PROVISIONS

Nothing in this Agreement is intended to conflict with current law or regulation or the directives of the Department of Homeland Security, the USCG, or any other party. If a term of this Agreement is inconsistent with such authority, then that term shall be invalid,

but the remaining terms and conditions of this Agreement shall remain in full force and effect.

EXECUTION of this Agreement by the USCG and the SHPO, the submission of a copy to the ACHP, and implementation of its terms evidence that the USCG has taken into account the effects of this undertaking on historic properties and afforded the ACHP an opportunity to comment.

Regarding the Hurricane Reconstitution Project Execution Plan
U.S. Coast Guard Base San Juan, San Juan, Puerto Rico

SIGNATORIES:

United States Coast Guard



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BERRY, JOHN.1013996373
Date: 2021.08.05 16:08:51
-04'00'

Date

J. D. Berry, P.E.
Captain, U.S. Coast Guard
Commanding Officer, Facilities Design and Construction Center

Puerto Rico State Historic Preservation Officer



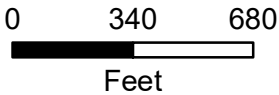
8/5/2021 Date

Carlos A. Rubio-Cancela
Puerto Rico State Historic Preservation Officer,
Puerto Rico State Historic Preservation Office

ATTACHMENT A:

Area of Potential Effects (APE) Map


- Above Ground APE
- Archaeological APE



DigitalGlobe World Imagery 2016

CLIENT USCG			
PROJ Hurricane Execution Plan - Shore at U.S. Coast Guard Sector San Juan			
SCALE 1:2,000	DR BY		
REVISION NO 0	CHK BY		
\\URS\Germantown.us.ie.us\Germantown\Projects\ENV\IAP\CRM\Amtrak\IPIDS 2019\900-GIS and Graphics\920 GIS\KCY - Kansas City, MO\KCY_PHE.mxd	PM		



TITLE	
Area of Potential Effects Map	
 12420 Milestone Center Dr. Germantown, MD 20876	PROJ NO 60588321
	FIGURE 1

ATTACHMENT B:

Section 106 Considerations Table and Map














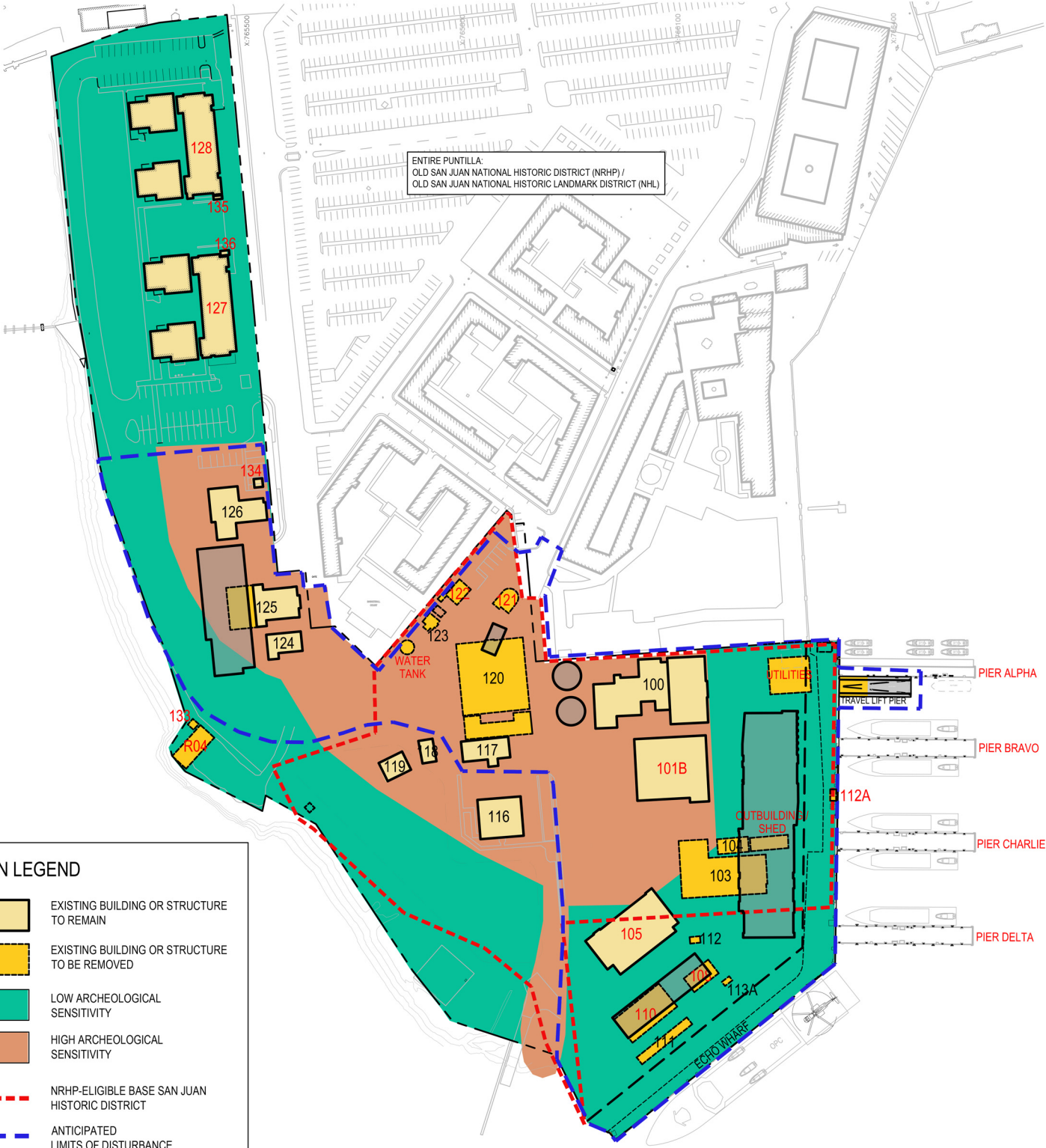
Table 1: Base San Juan: Historic-Age Buildings and NRHP Eligibility						
	Photos	Current Name	Historic Name	Historic Use (and map year)	Date	Eligibility
Partially demolish and rehabilitate		Building 100	Office Building	New Office Building (1935); Office Bldg. & Storehouse (1939, 1940, 1943, 1944); Command Center (2016)	1934, 1944, 2001	- <i>Contributes to the NRHP Eligible Base San Juan Historic District (Keeper of the NRHP 1998 Feb. 19)</i> - <i>Not Individually Eligible</i>
Demolish		Building 103	Shop	No label (1944); Station San Juan, ANT San Juan (2016)	1943-1944	- <i>Contributes to the NRHP Eligible Base San Juan Historic District (Keeper of the NRHP 1998 Feb. 19)</i> - <i>Not Individually Eligible</i>
Demolish		Building 104	Blacksmith Shop	Blacksmith Shop (1935, 1939, 1940, 1943); No label (1944) ,Small BoatOp. Shop (1983)	Ca. 1921-1935	- <i>Potentially contributes to the NRHP Eligible Base San Juan Historic District</i> - <i>Not Individually Eligible</i>
Demolish		Building 111	Storage	Cylinder Storage; Storage Area (1983)	1942	- <i>Not Individually Eligible</i>
Demolish		Building 112	Compress or Building	Paint House (1940); No label (1943, 1944); Compressor building (1983, 1995 survey)	Ca. 1940, or 1950-1960	- <i>Not Individually Eligible</i>
Demolish		Building 113A	N/A	N/A	N/A	- <i>Not Individually Eligible</i>
Rehabilitate		Building 116	Lighthouse Superintendent's Dwelling	Superintendent's Dwelling (1921, 1935); Quarters "A" (1939, 1940, 1943); Quarters 1 (1983, 2016)	Ca. 1912	- <i>NRHP-LISTED</i> - <i>"El Sistema de Faros de Puerto Rico, 1846-1979."</i> - <i>NRHP-LISTED</i> - <i>"Superintendent of Lighthouses' Dwelling."</i> - <i>Contributes to the NRHP Eligible Base San Juan Historic District (Keeper of the NRHP 1998 Feb. 19)</i>
Rehabilitate		Building 117	Insular Garage	Garage Building #30 (1921, 1935, 1939, 1940, 1943, 1944); addition placed on the south elevation (1948); supply building (1983, 1995); gym (1983); Shipping and Receiving (2016)	Ca. 1903-1908	- <i>Contributes to the NRHP Eligible Base San Juan Historic District (Keeper of the NRHP 1998 Feb. 19)</i> and the Superintendent of Lighthouses' Dwelling - <i>Not Individually Eligible</i>
Rehabilitate		Building 118	Laundry House	Laundry House (1921, 1935, 1939, 1940, 1943, 1944); photographic laboratory (1983, 1995 survey)	Ca. 1912	- <i>Not Individually Eligible</i>

TABLE LEGEND	
	CONTRIBUTING RESOURCE TO BE DEMOLISHED
	CONTRIBUTING RESOURCE TO BE REHABILITATED
	NOT INDIVIDUALLY ELIGIBLE

Rehabilitate		Building 119	Storage	Building #17 (1921); Storehouse (1935, 1939); Service Quarters (1940, 1943, 1944); Boat Crew Quarters (1983); LEDET building (1995); MWR/Barber (2016)	Ca. 1965.	- <i>Not Individually Eligible</i>
Demolish		Building 120	Insular Garage	Insular Gov't Garage (1921, 1935, 1939); "To be transferred, US War Department Reservation" (1940); Mess Hall and Galley (1943, 1944); NAFA Storage Building (1983, 1995); Exchange (2016)	1890, 1913, ca. 1935, 1940	- <i>Contributes to the NRHP Eligible Base San Juan Historic District (Keeper of the NRHP 1998 Feb. 19)</i> - <i>Not Individually Eligible</i>
Demolish		Building 123	Generator Building	Generator Building; Emergency Generator (1983)	Ca. 1956-1968	- <i>Not Individually Eligible</i>
Rehabilitate		Building 124	Insular Bureau of Tuberculosis Dispensary	"To be transferred from the Insular Government" (1940); Quarters (1943, 1944); Facilities Engineering Offices (1983); Dental Clinic (2016)	Ca. 1913-1920	- <i>Contributes to the NRHP Eligible Puerto Rico Insular Quarantine Station</i> - <i>Potentially Individually Eligible (SHPO 2016 Dec. 20)</i>
Partially demolish and rehabilitate		Building 125	Insular Division of Roentgenology X-Ray Building and Laboratory	"To be transferred from the Insular Government" (1940); Quarters (1943, 1944); Alterations to BOQ "George" (1965); Reserve Class Room Area (1983); Medical Clinic/CGIS (2016)	Ca. 1924	- <i>Contributes to the NRHP Eligible Puerto Rico Insular Quarantine Station</i> - <i>Potentially Individually Eligible (SHPO 2016 Dec. 20)</i>
Rehabilitate		Building 126	Insular Quarantine Hospital Administration Building	"To be transferred from the Insular Government" (1940); Quarters (1943, 1944); Quarters 243 (1966); Marine Safety Offices (1983); Administration (2016)	Ca. 1912	- <i>Contributes to the NRHP Eligible Puerto Rico Insular Quarantine Station</i> - <i>Not Individually Eligible</i>
Rehabilitate		Echo Wharf	Wharf		Ca. 1921-1935	- <i>Not Individually Eligible</i>
Rehabilitate		Landscape Features	N/A	Landscape Features: Fencing, Light Standards, Rip-Rap (1935, 1939, 1940), Roadways, Seawall (1958), Trees/Vegetation, Anchors	N/A	- <i>Not Individually Eligible</i>

PLAN LEGEND	
	EXISTING BUILDING OR STRUCTURE TO REMAIN
	EXISTING BUILDING OR STRUCTURE TO BE REMOVED
	LOW ARCHEOLOGICAL SENSITIVITY
	HIGH ARCHEOLOGICAL SENSITIVITY
	NRHP-ELIGIBLE BASE SAN JUAN HISTORIC DISTRICT
	ANTICIPATED LIMITS OF DISTURBANCE
	PROPOSED NEW BUILDING OR STRUCTURE
000	HISTORIC AGED BUILDING
000	NON-HISTORIC AGED BUILDING



SECTOR SAN JUAN
NATIONAL HISTORIC PRESERVATION ACT SECTION 106
CONSIDERATIONS MAP

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Appendix E – Viewshed Visualizations

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VIEW 1 PROPOSED



VIEW 1 EXISTING

**BASE SAN JUAN
NEW BUILDING VIEW SHED STUDIES
WEST 1.1 AND EAST 4.1 ALTERNATIVE
VIEWPOINT AT 150 FT**



VIEW 2 PROPOSED



VIEW 2 EXISTING

**BASE SAN JUAN
NEW BUILDING VIEW SHED STUDIES
WEST 1.1 AND EAST 4.1 ALTERNATIVE
VIEWPOINT AT 150 FT**



VIEW 3 PROPOSED



VIEW 3 EXISTING

BASE SAN JUAN
NEW BUILDING VIEW SHED STUDIES
WEST 1.1 AND EAST 4.1 ALTERNATIVE
VIEWPOINT AT 150 FT



VIEW 4 PROPOSED

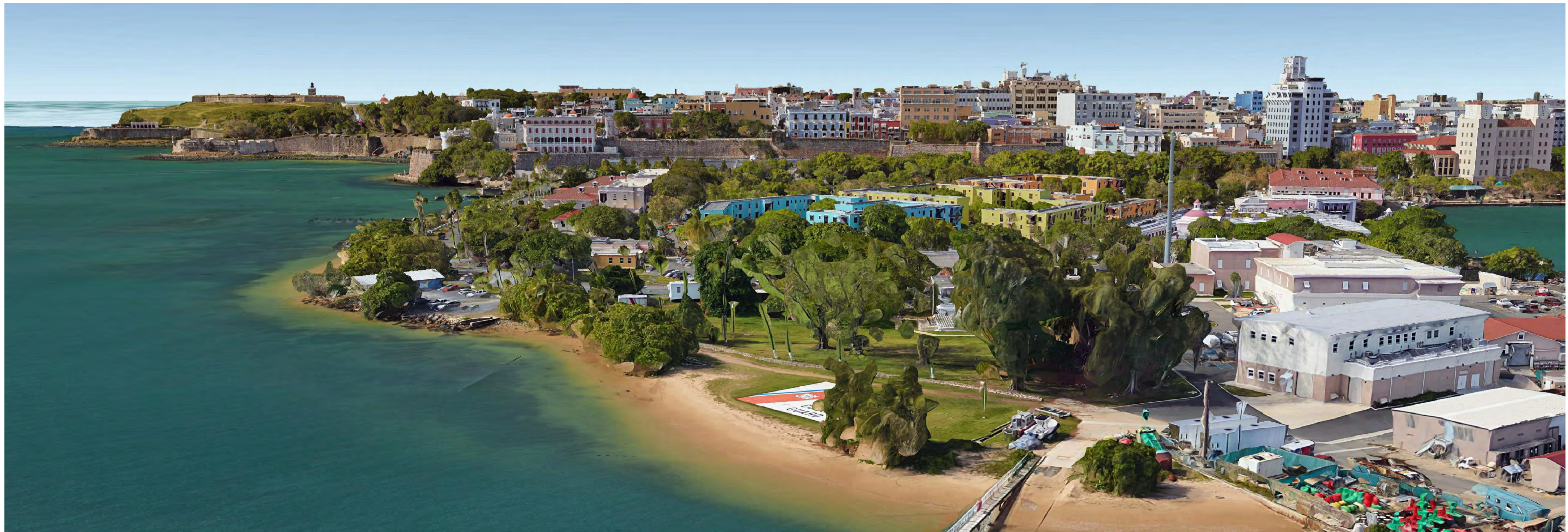


VIEW 4 EXISTING

**BASE SAN JUAN
NEW BUILDING VIEW SHED STUDIES
WEST 1.1 AND EAST 4.1 ALTERNATIVE
VIEWPOINT AT 150 FT**



VIEW 5 PROPOSED



VIEW 5 EXISTING

**BASE SAN JUAN
NEW BUILDING VIEW SHED STUDIES
WEST 1.1 AND EAST 4.1 ALTERNATIVE
VIEWPOINT AT 150 FT**



VIEW 6 PROPOSED



VIEW 6 EXISTING

**BASE SAN JUAN
NEW BUILDING VIEW SHED STUDIES
WEST 1.1 AND EAST 4.1 ALTERNATIVE
VIEWPOINT AT 150 FT**



VIEW 7 PROPOSED



VIEW 7 EXISTING

**BASE SAN JUAN
NEW BUILDING VIEW SHED STUDIES
WEST 1.1 AND EAST 4.1 ALTERNATIVE
VIEWPOINT AT 150 FT**