

DRAFT
Environmental Assessment

Child Development Center
NEPA ID EAXX-007-21-001-1736758141

United States Army Garrison Fort Hamilton
Brooklyn, Kings County, New York



January 2025

Prepared for: United States Army Garrison Fort Hamilton
Directorate of Public Works
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Draft Finding of No Significant Impact

Title: Environmental Assessment (EA) for the Construction and Operation of a New Child Development Center (CDC) Facility on United States Army Garrison Fort Hamilton, Brooklyn, Kings County, New York.

Description of the Proposed Action: The United States Department of the Army (Army) is planning to construct and operate a new CDC facility (Proposed Action) on United States Army Garrison Fort Hamilton (herein referred to as “Fort Hamilton” or the “Installation”) in Brooklyn, Kings County, New York. The Proposed Action includes the construction of a 16,632 square feet (ft²) single story building, three outdoor playgrounds totaling 16,667 ft², 20 new parking spaces, paved pedestrian pathways, perimeter fencing and lighting, landscaping, a truck delivery space, utility connections, stormwater management, and security features. White Avenue and Schum Avenue would be repaved within the alignment of the proposed CDC facility. Accessibility and force protection measures would be provided, as required.

The purpose of the Proposed Action is to better meet the Installation’s needs for childcare services. The current CDC facility has an enrollment capacity of approximately 76 children and is housed in an outdated building. The Proposed Action would increase enrollment capacity from approximately 76 to 126 children by building a larger facility. The modernized facility would support the Fort Hamilton CDC’s mission to offer a consistent, safe, and nurturing environment for children between six weeks and five years of age. The new CDC facility would have amenities such as a kitchen, changing areas, administrative support space, mothers’ nursing room, staff lounge, laundry, storage, and supply rooms.

Alternatives Considered:

The consideration of reasonable alternatives is required in accordance with the National Environmental Policy Act (NEPA; 42 United States Code [USC] § 4321 *et seq.*), President’s Council on Environmental Quality (CEQ) NEPA Regulations (40 Code of Federal Regulations [CFR] §§ 1500–1508), and Army Regulations (AR) 200-2 “Environmental Analysis of Army Actions” as promulgated by 32 CFR Part 651. Site selection standards were developed for the Proposed Action and used to identify, compare, and evaluate reasonable alternatives. The selection standards were developed to be consistent with the purpose and need for the Proposed Action and to address pertinent mission, environmental, safety, and health factors. The following site selection standards were used:

- Adequate space and infrastructure to accommodate the new facility;
- Compatible with the CDC’s mission;
- Compatible with the 2019 Fort Hamilton Area Development Plan (ADP);
- Complies with Army design standards and regulations;
- Protects children from environmental health and safety risks;
- Developable with minimal preparation, relocation, or demolition.

No Action Alternative: Under the No Action Alternative, the Army would not construct a new CDC facility on Fort Hamilton. The Preferred Alternative site would remain as a landscaped area and closed gravel parking lot. Child enrollment capacity would not be increased from 76 children to 126 children. The CDC would continue to be operated out of an outdated building.

Preferred Alternative: The Preferred Alternative site for the Proposed Action is an approximately 95,000 ft² site bounded by White Avenue, the Verrazzano-Narrows Bridge, Holiday Inn Express,

and Garrison Headquarters in northwestern Fort Hamilton. Approximately half of the site is a closed gravel parking lot with paved pedestrian pathways and the other half is a landscaped turf lawn area with several trees and shrubs. The Preferred Alternative site has sufficient land area to accommodate the Proposed Action and would require minimal preparation, relocation, and demolition of existing services and facilities. The Preferred Alternative site is compatible with the 2019 Fort Hamilton Area Development Plan and would allow easy access and connections to existing infrastructure and utilities. The Preferred Alternative site does not pose any known health and safety risks to children and is consistent with the CDC's mission. The Preferred Alternative site complies with the applicable Army standards and regulations, such as minimum distances to access control points (ACPs).

Implementation of the Proposed Action at the Preferred Alternative site would create 20 new paved parking spaces. Up to 14 trees would be removed during site preparation. Tree removals would be recorded, and replacement trees would be planted on Fort Hamilton in compliance with Fort Hamilton's 2009 *Tree Replacement Guidelines*. Construction timing is dependent on the availability of funding and is anticipated to occur between 2027 and 2030. Approximately 55 parking spaces in the White Avenue parking lot across from the Preferred Alternative site would be used temporarily for staging and material laydown during construction.

Alternatives Considered and Eliminated from Detailed Study: Two alternative site locations, Sites B and C, were considered for the Proposed Action but eliminated from detailed study because they did not meet all the site selection criteria. Site B is not large enough and does not comply with Army standards for CDCs because it is too close to Fort Hamilton's main ACP on 101st Street. In addition, Site B is next to a fueling station which could pose health and safety risks to children. Site C would require renovation of the existing Child and Youth Services building and construction of an addition to the building. Therefore, Site C would require substantial site preparation, relocation, and demolition that would disrupt ongoing Child and Youth Services operations. For these reasons, Sites B and C were rejected and do not require detailed analysis. Site A, the Preferred Alternative site, satisfies the purpose of and need for the Proposed Action and meets all the site selection standards.

Anticipated Environmental Effects: Resources evaluated in the EA include: topography, geology, and soils; water resources; biological resources; air quality; greenhouse gases and climate change; traffic and transportation; hazardous materials and waste; noise and vibration; cultural resources; health and safety; environmental justice; and cumulative impacts. No significant impacts would result from implementation of the Proposed Action at the Preferred Alternative site.

Comments: The Draft EA and Draft Finding of No Significant Impact (FONSI) were made available to the public for review for 30 days. A Notice of Availability was published in the *Brooklyn Daily Eagle* and *Brooklyn Paper* on TBD and documents were made available for review and download online at: <https://www.nan.usace.army.mil/Missions/Environmental/Environmental-Assessment/Fort-Hamilton-CDC/>. Copies of the Draft EA and Draft FONSI were also made available for review at the Brooklyn Public Library's Fort Hamilton Branch, 9424 4th Avenue, Brooklyn, NY 11209, and the Environmental Library of the Directorate of Public Works, located at 129 Wainwright Drive, Fort Hamilton, NY.

Finding of No Significant Impact: Based upon my review of the facts and analysis summarized above and contained within the subject EA, I find that the proposed construction and operation of a new CDC facility on Fort Hamilton adjacent to the Holiday Inn Express and Garrison Headquarters would not have a significant impact on the natural or human environment; therefore, an Environmental Impact Statement (EIS) is not required. This analysis fulfills the requirements of

NEPA (42 USC § 4321 *et seq.*), CEQ's NEPA regulations (40 CFR §§ 1500–1508), and AR 200-2 "Environmental Analysis of Army Actions" as promulgated by 32 CFR Part 651.

NICHOLAS PROTOPSALTIS
Environmental Engineer, DPW

DATE

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Table of Contents

LIST OF APPENDICES	I
LIST OF TABLES.....	I
LIST OF FIGURES	I
ACRONYMS AND ABBREVIATIONS.....	II
EXECUTIVE SUMMARY	IV
1 PURPOSE AND NEED FOR THE PROPOSED ACTION.....	1-1
1.1 Introduction	1-1
1.2 Project Location.....	1-1
1.3 Purpose and Need.....	1-4
1.4 Scope of the Environmental Assessment.....	1-4
1.5 Regulatory Compliance	1-4
1.6 Agency Coordination and Public Participation.....	1-6
2 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES	2-1
2.1 Proposed Action	2-1
2.2 Selection Standards for Project Alternatives	2-7
2.3 No Action Alternative	2-7
2.4 Alternatives Considered but Eliminated from Detailed Analysis	2-7
2.5 Identification of the Preferred Alternative	2-8
3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES.....	3-1
3.1 Scope of the Analysis	3-1
3.2 Topography, Geology, and Soils	3-2
3.3 Water Resources.....	3-3
3.4 Biological Resources	3-4
3.5 Air Quality	3-7
3.6 Greenhouse Gases and Climate Change.....	3-11
3.7 Traffic and Transportation	3-14
3.8 Hazardous Materials and Waste	3-16
3.9 Noise and Vibration	3-18
3.10 Cultural and Historic Resources	3-21
3.11 Health and Safety	3-30
3.12 Environmental Justice	3-31
3.13 Cumulative Impacts	3-32
3.14 Unavoidable Adverse Environmental Impacts.....	3-33
3.15 Irreversible and Irrecoverable Commitment of Resources	3-33
4 SUMMARY AND CONCLUSION.....	4-1
4.1 Alternatives.....	4-1
4.2 Impact Minimization and Mitigation Measures.....	4-1
5 REFERENCES.....	5-1
6 LIST OF PREPARERS.....	6-1
7 DISTRIBUTION	7-1

LIST OF APPENDICES

APPENDIX

A – Coordination
B – Greenhouse Gas Analysis
C – Air Quality Analysis
D – Site Photographs

LIST OF TABLES

TABLE	PAGE
Table ES-1. Summary of Environmental Consequences.....	viii
Table ES-2. Resource Area BMPs	ix
Table 2-1. Site Selection Standards	2-8
Table 3-1. Trees at the Preferred Alternative site	3-4
Table 5-2. De Minimis Quantities within Non-Attainment and Maintenance Areas.....	3-7
Table 3-3. Common Sources of Sound.....	3-18
Table 3-4. Noise Levels Associated with Outdoor Construction	3-20
Table 3-5. Fort Hamilton Short-Range Actions for Cumulative Impact Analysis.....	3-32
Table 4-1. Resource Area BMPs	4-1
Table 7-1. Distribution List	7-1

LIST OF FIGURES

FIGURE	PAGE
Figure 1-1. Fort Hamilton Site Location Map	1-2
Figure 1-2. Proposed Child Development Center Location Map	1-3
Figure 2-1. Proposed Child Development Center Components.....	2-5
Figure 2-2. Proposed Construction Access and Staging	2-6
Figure 2-3. Alternative Sites Considered	2-9
Figure 3-1. Location of precontact and contact period sites	3-24
Figure 3-2. Locations of the NRHP Listed and Eligible Buildings	3-25
Figure 3-3. Map of Fort Hamilton in 1935	3-26
Figure 3-4. Footprint of Demolished Building 110 on current APE	3-28
Figure 3-5. Outline of staging area	3-29

ACRONYMS AND ABBREVIATIONS

ABA	Architectural Barriers Act
ACP	Access Control Point
ACM	Asbestos Containing Material
AR	Army Regulation
Army	United States Department of the Army
BMPs	Best Management Practices
CAA	Clean Air Act
CDC	Child Development Center
CEQ	President's Council on Environmental Quality
CH ₄	Methane
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
CFR	Code of Federal Regulations
DoD	United States Department of Defense
DNL	Day-night Average Sound Level
DPW	Directorate of Public Works
EA	Environmental Assessment
ECL	Environmental Conservation Law
EIS	Environmental Impact Statement
EO	Executive Order
ft	Feet
ft ²	Feet Squared
FONSI	Finding of No Significant Impact
GHG	Greenhouse Gas
GWP	Global Warming Potential
HVAC	Heating, Ventilation and Air Conditioning
ICRMP	Integrated Cultural Resource Management Plan
MMT	Million Metric Tons
N ₂ O	Nitrous Oxide
NAA	Non-Attainment Area
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NEPA	National Environmental Policy Act
NHLD	National Historic Landmark District
NHPA	National Historic Preservation Act
NO _x	Nitrogen Oxides
NRHP	National Register of Historic Places
NYC DEP	New York City Department of Environmental Protection
NYC LPC	New York City Landmarks Preservation Commission
NYNHP	New York Natural Heritage Program
NYSDEC	New York State Department of Environmental Conservation
OSHA	Occupational Safety and Health Administration
OTR	Ozone Transport Region
PM	Particulate Matter
PM _{2.5}	Particulate Matter Less Than 2.5 Microns
ppb	Parts Per Billion

PPE	Personal Protective Equipment
RFFA	Reasonably Foreseeable Future Action
RONA	Record of Non-applicability
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SO ₂	Sulfur Dioxide
SQL	Standard Quantitation Limits
SVOC	Semi-Volatile Organic Compound
SWPPP	Stormwater Pollution Prevention Plan
TPY	Tons per Year
US	Unites States
USACE	United States Army Corps of Engineers
USAEC	United States Army Environmental Command
USC	United States Code
UFC	Unified Facilities Code
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
UXO	Unexploded Ordinance
VOC	Volatile Organic Compound

EXECUTIVE SUMMARY

This Environmental Assessment (EA) analyzes the potential impacts of the United States Department of the Army's (Army) proposal to construct and operate a new Child Development Center (CDC) facility at United States Army Garrison Fort Hamilton (herein referred to as "Fort Hamilton" or the "Installation"), Brooklyn, Kings County, New York. Within New York City, Fort Hamilton is situated in southern Brooklyn near the Narrows – an approximately 6.5-mile tidal straight between Brooklyn and Staten Island, New York, that connects the Upper New York Bay to the Lower New York Bay and the Atlantic Ocean. Fort Hamilton is next to the Verrazzano-Narrows Bridge within an intensely developed, highly populated urban area. The Installation is home to Army Active duty, Reserves and National Guard Soldiers and their family members.

This EA has been prepared in accordance with the National Environmental Policy Act (NEPA; 42 United States Code [USC] § 4321 *et seq.*), the President's Council on Environmental Quality (CEQ) NEPA Regulations (40 Code of Federal Regulations [CFR] §§ 1500–1508), and Army Regulations 200-2 "Environmental Analysis of Army Actions" as promulgated by 32 CFR Part 651. This EA will facilitate the decision-making process regarding the Proposed Action and its alternatives considered by the Army.

Purpose and Need

The purpose of the Proposed Action is to better meet the Installation's needs for childcare services. The current CDC facility has an enrollment capacity of approximately 76 children and is housed in an outdated building. The Proposed Action would increase enrollment capacity from approximately 76 to 126 children by building a larger facility. The modernized facility would support the Fort Hamilton CDC's mission to offer a consistent, safe, and nurturing environment for children between six weeks and five years of age.

Proposed Action

The Proposed Action includes the construction of a 16,632 square feet (ft²) single story building, three outdoor playgrounds totaling 16,667 ft², 20 new parking spaces, paved pedestrian pathways, perimeter fencing and lighting, landscaping, a truck delivery space, utility connections, stormwater management, and security features. White Avenue and Schum Avenue would be repaved within the alignment of the proposed CDC facility. Accessibility and force protection measures would be provided, as required. The new CDC facility would have amenities such as a kitchen, changing areas, administrative support space, mothers' nursing room, staff lounge, laundry, storage, and supply rooms.

Alternatives

The consideration of reasonable alternatives is required in accordance with NEPA; 42 USC § 4321 *et seq.*, CEQ NEPA Regulations (40 CFR §§ 1500–1508), and AR-200-2 "Environmental Analysis of Army Actions" as promulgated by 32 CFR Part 651. Site selection standards were developed for the Proposed Action and used to identify, compare, and evaluate reasonable alternatives. The selection standards were developed to be consistent with the purpose and need for the Proposed Action and to address pertinent mission, environmental, safety, and health factors. The following site selection standards were used:

- Adequate space and infrastructure to accommodate the new facility;
- Compatible with the CDC's mission;
- Compatible with the 2019 Fort Hamilton Area Development Plan (ADP);
- Complies with Army design standards and regulations;
- Protects children from environmental health and safety risks;
- Developable with minimal preparation, relocation, or demolition.

No Action Alternative: Under the No Action Alternative, the Army would not construct a new CDC facility on Fort Hamilton. The Preferred Alternative site would remain as a landscaped area and closed gravel parking lot. Child enrollment capacity would not be increased from 76 children to 126 children. The CDC would continue to be operated out of an outdated building.

Preferred Alternative: The Preferred Alternative site for the Proposed Action is an approximately 95,000 ft² site bounded by White Avenue, the Verrazzano-Narrows Bridge, Holiday Inn Express, and Garrison Headquarters in northwestern Fort Hamilton. Approximately half of the site is a closed gravel parking lot with paved pedestrian pathways and the other half is a landscaped turf lawn area with several trees and shrubs. The Preferred Alternative site has sufficient land area to accommodate the Proposed Action and would require minimal preparation, relocation, and demolition of existing services and facilities. The Preferred Alternative site is compatible with the 2019 Fort Hamilton Area Development Plan and would allow easy access and connections to existing infrastructure and utilities. The Preferred Alternative site does not pose any known health and safety risks to children and is consistent with the CDC's mission. The Preferred Alternative site complies with the applicable Army standards and regulations, such as minimum distances to access control points (ACPs).

Alternatives Considered and Eliminated from Detailed Study: Two alternative site locations, Sites B and C, were considered for the Proposed Action but eliminated from detailed study because they did not meet all the site selection criteria. Site B is not large enough and does not comply with Army standards for CDCs because it is too close to Fort Hamilton's main ACP on 101st Street. In addition, Site B is next to a fueling station which could pose health and safety risks to children. Site C would require renovation of the existing Child and Youth Services building and construction of an addition to the building. Therefore, Site C would require substantial site preparation, relocation, and demolition that would disrupt ongoing Child and Youth Services operations. For these reasons, Sites B and C were rejected and do not require detailed analysis. Site A, the Preferred Alternative site, satisfies the purpose of and need for the Proposed Action and meets all the site selection standards.

Affected Environment

In compliance with the guidelines contained in NEPA, CEQ regulations, and 32 CFR Part 651, only those specific resources potentially affected by implementation of the Proposed Action at the Preferred Alternative site were considered. These resources include the following: topography, geology, and soils; water resources; biological resources; air quality; greenhouse gases and climate change; traffic and transportation; hazardous materials and waste; noise and vibration; cultural resources; health and safety; environmental justice; and cumulative impacts.

Fort Hamilton and the surrounding area have been modified by extensive civilian and military excavation and construction activities over the last 170+ years. The Installation is in a highly

developed and densely populated urban area. Existing topographies, geology, and soils are previously disturbed. The Preferred Alternative site is primarily fill and gravel that was placed after the demolition of a building on the site in 2012 and subsequent establishment of a gravel parking lot. There are no surface waters, wetlands, navigable waterways, or floodplains at the Preferred Alternative site. The gravel parking lot was closed in 2023 due to persistent flooding.. Vegetation consists of 14 landscape trees of varying size and condition. Wildlife present are common urban adapted species. Migratory birds may be seasonally present. There are no federally or state listed species or critical habitats in the immediate vicinity of the Preferred Alternative site.

National Ambient Air Quality Standards (NAAQS) were established under the Clean Air Act for six principal pollutants which can be harmful to public health and the environment. Fort Hamilton is located within a maintenance zone for carbon monoxide (CO) and PM_{2.5} (particulate matter) and is within the Ozone Transportation Region and in a non-attainment area for ozone. Existing greenhouse gas emissions associated with the current CDC facility are primarily from transportation and building energy usage. With respect to traffic and transportation, the Preferred Alternative site is between White and Schum Avenues, which are located off John Warren Avenue, a major east-west roadway that runs through the center of the Installation. A review of New York State Department of Environmental Conservation records indicates that there were several historical petroleum releases at the site. These records have since been closed; however, one record mentioning the potential presence of historic fill material on site suggests the potential for soil and/or groundwater contamination either past or present, that would require further review and investigations prior to construction of the new CDC.

Existing levels of noise and vibration on the Installation are typical of urban environments. Primary sources of noise and vibration include the Verrazzano-Narrows Bridge and Belt Parkway. Sensitive noise receptors near the Preferred Alternative site include the Holiday Inn Express, Garrison Headquarters, and residential areas. Although the Preferred Alternative site has been previously disturbed, some limited areas around the site have a moderate potential for archaeological resources. The adjacent Garrison Headquarters (Building 113) is eligible for listing on the National Register of Historic Places (NRHP). Construction workers, installation staff, residents, and visitors could be exposed to health and safety risks associated with the Proposed Action. Within these groups, children, the elderly, and those with underlying health conditions may be most vulnerable. A review several environmental justice screening tools indicates that Fort Hamilton has a higher percentage of minorities and children under five years relative to national and state averages. The Installation's urban setting and proximity to major highways puts the population at higher risk of exposure to air and noise pollution compared to non-urban environments.

Environmental Consequences

The Proposed Action was evaluated to determine its potential direct and indirect environmental impact(s). The Preferred Alternative and No Action Alternative would result in the impacts identified in **Section 3** of this EA and summarized in **Table ES-1**, below. Best management practices (BMPs) and minimization measures would be incorporated into the Proposed Action to avoid and minimize potential adverse environmental impacts (**Table ES-2**). The Proposed Action is not anticipated to result in a significant impact. Therefore, no project specific mitigation measures are required to reduce adverse impacts to less-than significant levels.

Summary and Conclusion

The No Action Alternative would not fulfill the purpose of and need for the Proposed Action and was therefore rejected. The Preferred Alternative would fulfill the purpose of and need for the Proposed Action and meets all the following site selection standards: adequate space and infrastructure to accommodate the new facility; compatibility with the CDC mission; compatibility with the 2019 Fort Hamilton ADP; compliance with Army design standards and regulations; protection of children from environmental health and safety risks; and developable with minimal preparation, relocation, or demolition. Two other site alternatives were considered but rejected and eliminated from detailed analysis because they did not meet all the site selection standards.

No significant impacts would result from implementation of the Proposed Action at the Preferred Alternative site. While some potential impacts to the natural and human environment may occur during construction and operation of the Proposed Action, these impacts would be minor and typical compared with other routine construction projects. BMPs and other measures would be implemented to further minimize the likelihood that these activities would have a significant impact on the environment.

Table ES-1. Summary of Environmental Consequences

Resource Area	No Action Alternative	Preferred Alternative
Topography, Geology, Soils	No impact	Minor short-term adverse impact to soil from construction disturbance (e.g., excavation)
Water Resources	No impact	Minor short-term adverse impact to stormwater system caused by soil erosion during construction
Biological Resources	No impact	Minor short-term adverse impact from tree removals and site disturbance during construction.
Air Quality	No impact	Minor short-term adverse impact from construction equipment emissions. Minor long-term adverse impact from emissions caused by a potential increase in vehicle usage.
Greenhouse Gases and Climate Change	No impact	Minor short-term adverse impact from construction emissions. Minor long-term impacts from emissions of operations and vehicle usage.
Traffic and Transportation	No impact	Minor short-term adverse impact during construction from increased traffic, temporary road closures, and staging in the White Avenue parking lot. Minor long-term beneficial impact from creation of 20 new parking spaces and 12 dedicated CDC parking spaces.
Hazardous Materials and Waste	No impact	No impact. Any potential HTRW concerns would be addressed prior to construction.
Noise and Vibration	No impact	Minor short-term adverse impact from increased noise and vibration caused by construction equipment. Minor short-term adverse impact during operations from exposure to highway noise during outdoor activities (annoyance).
Cultural and Historic Resources	No impact	Minor short-term adverse impact to potential archaeological resources during excavation. Minor short-term adverse impact to adjacent Garrison Headquarters building from construction vibration.
Health and Safety	No impact	Minor short-term adverse impact from potential construction hazards.

Resource Area	No Action Alternative	Preferred Alternative
Environmental Justice	No impact	<p>Minor short-term adverse impact from increased noise and emissions during construction.</p> <p>Minor short-term beneficial impact from potential generation of construction jobs.</p> <p>Minor long-term beneficial impact from increased capacity at CDC.</p>

Table ES-2. Resource Area BMPs

Resource	BMPs and Measures to Minimize Impacts
Topography, Geology, and Soils	<ul style="list-style-type: none"> Sediment and erosion control measures would be implemented to minimize soil runoff.
Water	<ul style="list-style-type: none"> Sediment and erosion control devices would be implemented minimize soil runoff offsite and into the stormwater system. All work would be performed in accordance with the Fort Hamilton Stormwater Management Plan, NYSDEC SPDES General Permit for Construction Activity, and SWPPP. Stormwater management features would be incorporated into the design to capture and filter stormwater before discharging into the stormwater system.
Biological	<ul style="list-style-type: none"> All trees would be assessed prior to removal and replaced in accordance with Fort Hamilton's <i>Tree Replacement Guidelines</i>.
Air Quality	<ul style="list-style-type: none"> Utilizing equipment with alternative fuel sources may be considered (e.g. electric instead of diesel or newer diesel engines) as able. Continuously wetting dry on and off-road surfaces to minimize fugitive dust.
Greenhouse Gases and Climate Change	<ul style="list-style-type: none"> Utilizing equipment with alternative fuel sources may be considered (e.g. electric instead of diesel or newer diesel engines) as able.

Resource	BMPs and Measures to Minimize Impacts
Traffic and Transportation	<ul style="list-style-type: none"> • During construction, increased local traffic congestion would be minimized by using signs and flaggers as necessary to control traffic. • Construction areas would be clearly marked and fenced off for safety and security. • White Avenue and Schum Avenue would not be fully closed at the same time during construction to maintain north-south access within northwestern Fort Hamilton. • Work would be performed during daylight business hours to the greatest extent practicable. • Twelve existing parking spaces would be dedicated to child drop off and pickup to alleviate local congestion. Twenty new parking spaces and concrete pathways would be installed to improve parking and pedestrian circulation. • A truck delivery space would be constructed on White Avenue to minimize traffic congestion associated with deliveries.
Hazardous Materials and Waste	<ul style="list-style-type: none"> • A Phase I ESA and/or Phase II ESI would be completed to further characterize the environmental condition of property prior to construction and inform construction plans and specifications.
Noise and Vibration	<ul style="list-style-type: none"> • Construction would occur during normal weekday business hours to the greatest extent practicable. • Construction equipment mufflers would be properly maintained and in good working condition. • Occupants adjacent to construction areas would be notified of the construction activity and the anticipated duration of construction prior to the onset of work. • Features that muffle noise would be incorporated into the design as needed. • Vibration monitoring may be provided if needed.
Cultural and Historic	<ul style="list-style-type: none"> • Work would be performed in accordance with the Fort Hamilton ICRMP. • Monitoring of excavations below two feet would be overseen by an archaeological monitor. • Vibration monitoring would be conducted for Building 113.

Resource	BMPs and Measures to Minimize Impacts
Health and Safety	<ul style="list-style-type: none"> • Safety measures would be implemented during construction to protect children, including: adult supervision; the requirement that construction vehicles and equipment be secured when not in use; and the placement of barriers, such as fencing, as well as “No Trespassing” signs around the construction site in order to limit access and deter children from playing in this area. • Flaggers and signs would be used to warn pedestrians and workers about potential hazards and limit access. • All construction contractors would be required to prepare and implement health and safety plans that comply with EM 385-1-1, Occupational Safety and Health Administration, local military base rules and any other federal, state and local laws, ordinances, criteria, rule and regulations that may apply. These include safety measures outlined in 29 CFR Part 1926, <i>Safety and Health</i> Regulations for Construction, and AR 385-10, Army Safety Program. • Dig permits would be obtained from Fort Hamilton as needed prior to any subsurface activities so that underground hazards are avoided, such as electrical lines. Construction activities would be coordinated with the Fort Hamilton Safety Office to identify any potential UXO hazards and to develop a mitigation plan should any UXO be discovered. • The Proposed Action would be designed in accordance with Army standards for CDCs and antiterrorism and force protection requirements of UFC 4-010-01 “DoD Minimum Antiterrorism Standards for Buildings.” • The proposed CDC facility would have life safety and security features such as a locking vestibule, intruder detection system, video monitoring security system, fire suppression system, lighting, and fixed bollards. • Perimeter fencing and landscaping would provide privacy around the building and playgrounds. Landscaping would incorporate child safe plants.
Environmental Justice	<ul style="list-style-type: none"> • Short-term noise and air impacts would be limited to periods of active construction and would be minimized using BMPs described in Sections 3.5 and 3.9. Examples of noise BMPs include properly maintaining construction equipment mufflers and notifying adjacent occupants of construction activities and the anticipated duration of construction prior to the onset of work. Examples of air quality BMPs include limiting vehicle idling to three minutes and implementing dust suppression techniques, such as stabilizing bare soil.

1 PURPOSE AND NEED FOR THE PROPOSED ACTION

1.1 Introduction

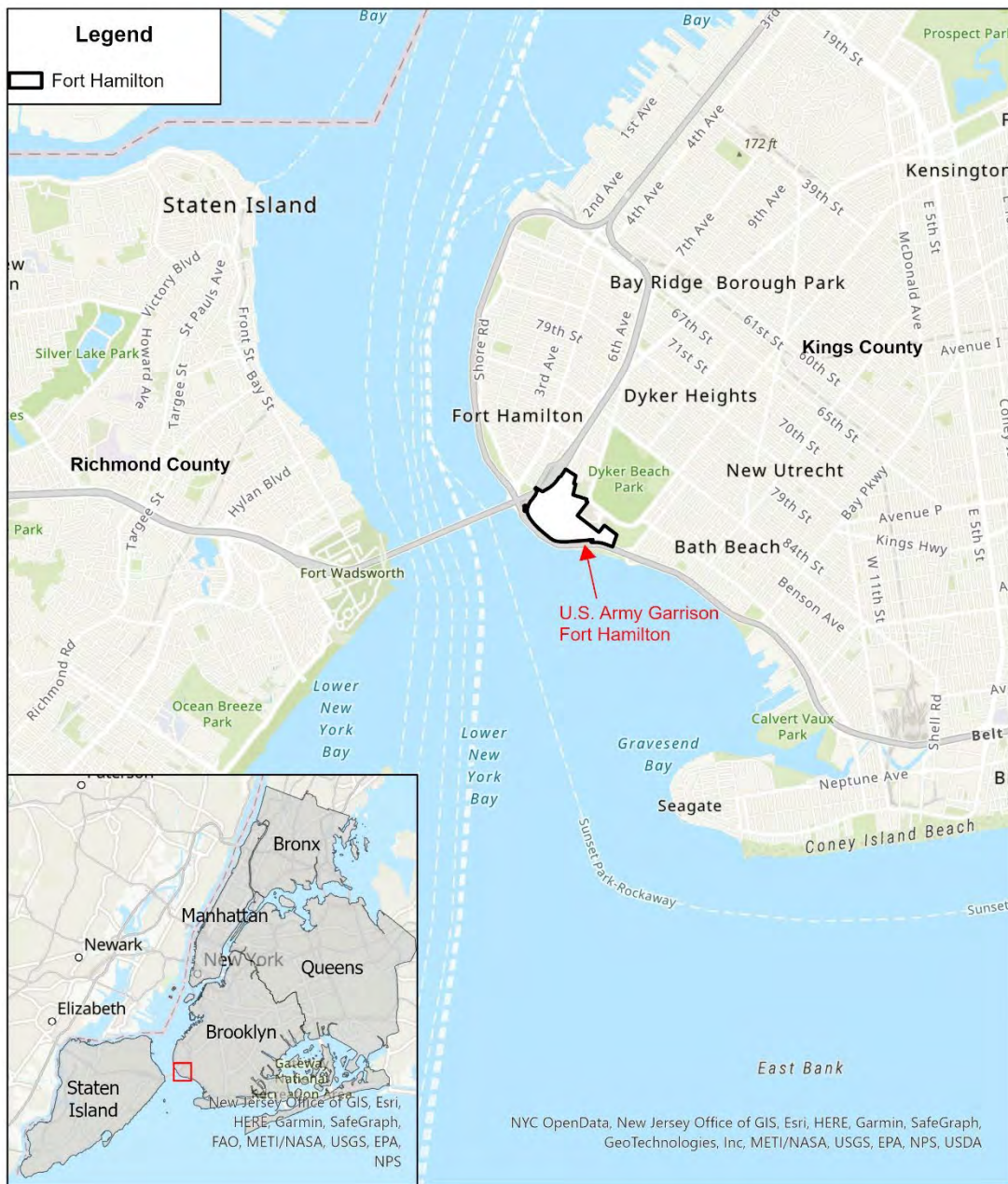
The Army is planning to construct and operate a new CDC facility (Proposed Action) on Army Garrison Fort Hamilton in Brooklyn, Kings County, New York. The Proposed Action includes the construction of a new 16,632 ft² single story building, three outdoor playgrounds totaling 16,667 ft², 20 new parking spaces, paved pedestrian pathways, perimeter fencing and lighting, landscaping, a truck delivery space, utility connections, stormwater management, and security features. White Avenue and Schum Avenue would be repaved within the alignment of the new CDC facility. Accessibility and force protection measures would be provided, as required. The purpose of the Proposed Action is to better meet the Installation's needs for childcare services. The current CDC facility has an enrollment capacity of approximately 76 children and is housed in an outdated building. The Proposed Action would increase enrollment capacity from approximately 76 to 126 children by building a larger facility. In addition, the modernized facility would support the Fort Hamilton CDC's mission to offer a consistent, safe, and nurturing environment for children between six weeks and five years of age. The new CDC facility would have amenities such as a kitchen, changing areas, administrative support space, mothers' nursing room, staff lounge, laundry, storage, and supply rooms.

This EA has been prepared to analyze the potential impacts related to the construction and operation of the proposed CDC facility and the required environmental compliance. This report also identifies mitigation measures to minimize the potential environmental consequences associated with the implementation of the Proposed Action. This EA has been prepared in accordance with NEPA (42 USC § 4321 *et seq.*), the President's CEQ NEPA Regulations (40 CFR §§ 1500–1508), and Army Regulations 200-2 "Environmental Analysis of Army Actions" as promulgated by 32 CFR Part 651.

1.2 Project Location

Fort Hamilton is located to the southwest within the Borough of Brooklyn, Kings County, New York (**Figure 1-1**). Within New York City, Fort Hamilton is situated at the far western end of Long Island and on the eastern shore of the Narrows – an approximately 6.5-mile tidal straight between Brooklyn and Staten Island, New York, that connects the Upper New York Bay to the Lower New York Bay and the Atlantic Ocean. Fort Hamilton is in the shadow of the Verrazano-Narrows Bridge near the Bay Ridge section of Brooklyn and is encircled by busy highways, Shore Drive/Belt Parkway, and Fort Hamilton Parkway, and mixed residential and commercial city streets within an intensely developed, highly populated urban area.

The project area is on Fort Hamilton and is generally bounded by White Avenue to east, Verrazano-Narrows Bridge to the west, Holiday Inn Express to the north, and Garrison Headquarters to the south (**Figure 1-2**). The project area is approximately 95,000 ft² and contains a gravel parking lot with concrete pathways, a landscaped area with turf lawn and trees, and sections of White Avenue and Schum Avenue (**Appendix D – Site Photos**). The existing gravel parking lot within the project area was closed in 2023 due to persistent flooding.



Site Location Map

Child Development Center
Army Garrison Fort Hamilton
Brooklyn, New York

By: U.S. Army Corps of Engineers, NY District
Date: 26 September 2023
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Figure 1-1. Fort Hamilton Site Location Map



Project Area Map

Child Development Center
 Army Garrison Fort Hamilton
 Brooklyn, New York

0 80 160 Feet



By: U.S. Army Corps of Engineers, NY District
 Date: 28 September 2023
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Figure 1-2. Proposed Child Development Center Location Map

1.3 Purpose and Need

The purpose of the Proposed Action is to better meet the Installation's needs for childcare services. A new facility is needed because the existing CDC facility has a limited enrollment capacity of approximately 76 children and is housed in an outdated building. The Proposed Action would increase enrollment capacity from approximately 76 to 126 children by building a larger facility. In addition, the modernized facility would support the Fort Hamilton CDC's mission to offer a consistent, safe, and nurturing environment for children.

1.4 Scope of the Environmental Assessment

An EA considers the effects of a proposed action on the human environment, which includes the natural and physical environment. It uses a systematic, interdisciplinary approach to evaluate a proposed action and possible alternatives and must disclose all considerations to the public. The scope of this EA includes the Proposed Action, alternatives considered, a description of the existing environment, and direct impacts, including those for reasonably foreseeable environmental trends and planned actions. The scope of the Proposed Action and the range of alternatives to be considered are presented in **Section 2**. The Army NEPA-implementing regulations, 32 CFR Part 651, require the consideration of the No Action Alternative, which is analyzed to provide the baseline against which the environmental impacts of implementing the range of alternatives addressed can be compared.

This EA identifies the potential environmental impacts of the Proposed Action and alternatives on affected resource areas. Per CEQ regulations (40 CFR § 1501.9[f][1]), only resource areas that apply to the Proposed Action and alternatives are analyzed. The following resource areas are analyzed in this EA: topography, geology, and soils; water resources; biological resources; air quality; greenhouse gases and climate change; traffic and transportation; hazardous materials and waste; noise and vibration; cultural resources; health and safety; environmental justice; and cumulative impacts.

1.5 Regulatory Compliance

NEPA is a federal law requiring the analysis of potential environmental impacts associated with proposed federal actions prior to implementation. The intent of NEPA is to inform decisions based on potential environmental consequences and take action(s) to protect, restore, or enhance the environment. NEPA established the CEQ, which is charged with developing implementing regulations and ensuring federal agency compliance with NEPA. The CEQ regulations mandate all federal agencies use a prescribed approach to environmental impact analysis. The approach includes an evaluation of the potential environmental consequences associated with a proposed action and consideration of alternative courses of action.

The process for implementing NEPA is outlined in 40 CFR §§ 1500–1508, *Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act*. These CEQ regulations specify that an EA be prepared to determine whether a Finding of No Significant Impact (FONSI) is appropriate or if the preparation of an Environmental Impact Statement (EIS) is necessary.

The Army provides its procedures for environmental review to comply with the NEPA and the CEQ regulations in AR 200-2 "Environmental Effects of Army Actions" as promulgated in 32 CFR Part 651. In addition to NEPA and its implementing regulations, the Proposed Action would comply with other applicable federal, state, and local environmental laws and regulations. If the EA predicts the

Proposed Action would result in significant impacts, then the Army would decide whether to conduct mitigation to reduce impacts below the level of significance, prepare an EIS, or abandon the Proposed Action. The EA will also be used to guide the Army in implementing the Proposed Action in a manner consistent with department standards for environmental stewardship should the Proposed Action be approved for implementation. In addition to NEPA and its implementing regulations, the Proposed Action must comply with other applicable federal, state, and local environmental laws and regulations. This EA evaluates compliance of the Proposed Action with potential requirements of the applicable environmental laws, regulations, and Executive Orders (EOs), including but not limited to:

- Archaeological Resources Protection Act, 16 U.S.C. 470 *et seq.*;
- Clean Air Act, 42 U.S.C. 7401 *et seq.*;
- Clean Water Act, 33 U.S.C. 1251 *et seq.*;
- Coastal Zone Management Act, 16 U.S.C. 1451 *et seq.*;
- Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. 9601-9675
- Endangered Species Act, 16 U.S.C. 1531-1544;
- Energy Independence and Security Act, H.R. 6. P.L. 110-140;
- Energy Policy Act of 2005, 42 USC 13201 *et seq.*;
- Migratory Bird Treaty Act, 16 U.S.C. 703 *et seq.*;
- National Historic Preservation Act, 16 U.S.C. 470 *et seq.*;
- Noise Control Act, 42 U.S.C. 4901 *et seq.*;
- Occupational Safety and Health Act, 29 U.S.C. 651 *et seq.*;
- Pollution Prevention Act, 42 U.S.C. 13101 *et seq.*;
- Resource Conservation and Recovery Act, 42 U.S.C. 6901 *et seq.*;
- Toxic Substances Control Act, 15 U.S.C. 2601 *et seq.*;
- Bald and Golden Eagle Protection Act, 16 U.S.C. 668-668d;
- Architectural Barriers Act of 1968, 42 U.S.C. 4151 *et seq.*

In addition, the Proposed Action must comply with the applicable EOs:

- EO 11514, Protection and Enhancement of Environmental Quality, as amended;
- EO 11988, Floodplain Management, as amended;
- EO 13690, Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input;
- EO 12416, Intergovernmental Review of Federal Programs;
- EO 13132, Federalism;
- EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations;
- EO 14008, Tackling the Climate Crisis at Home and Abroad;
- EO 13045, Protection of Children from Environmental Health Risks and Safety Risks;
- EO 13175, Consultation and Coordination with Indian Tribal Governments;
- EO 13186, Responsibilities of Federal Agencies to Protect Migratory Birds;
- EO 13990, Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis;
- EO 13985, Advancing Racial Equity and Support for Underserved Communities Through the Federal Government;
- EO 14096, Revitalizing our Nation's Commitment to Environmental Justice for All.

The following additional permits, guidelines, and planning documents may require consideration and/or compliance:

- Fort Hamilton Integrated Cultural Resources Management Plan;
- Fort Hamilton Integrated Natural Resources Management Plan;
- Fort Hamilton Storage Tank Management Plan;
- Fort Hamilton Integrated Solid Waste Management Plan;
- Fort Hamilton Area Development Plan;
- Fort Hamilton Tree Replacement Guidelines;
- Fort Hamilton Hazardous Waste Management Plan;
- Fort Hamilton Spill Prevention, Control, and Countermeasure Plan;
- Fort Hamilton Storm Water Management Plan.

1.6 Agency Coordination and Public Participation

1.6.1 Intergovernmental Coordination

EO 12372, *Intergovernmental Review of Federal Programs*, July 14, 1982, as amended by EO 12416, April 8, 1983, with the same title and supplemented by EO 13132, *Federalism*, August 10, 1999, requires federal agencies to provide opportunities for consultation by elected officials of state and local governments that could be affected by a federal proposal. Through the intergovernmental coordination process, the Army notifies relevant federal, state, and local agencies of a proposed action and alternatives, and provides them with sufficient time to make known their environmental concerns specific to the action. The process also provides the Army with the opportunity to cooperate with and consider state and local views in implementing the federal proposal. **Section 7** of this EA contains the intergovernmental coordination list and **Appendix A** contains documentation of intergovernmental coordination.

1.6.2 Government to Government Coordination and Consultation

The National Historic Preservation Act (NHPA) (54 USC §§ 306101-306131) requires federal agencies to consult with Native American tribal governments to identify cultural resources that may be adversely affected by the agency's proposed action. Consistent with the NHPA, Department of Defense (DoD) Instruction 4710.02, *DoD Interactions with Federally Recognized Tribes*, September 24, 2018, AR 200-1 *Environmental Enhancement and Protection*, December 13, 2007, and EO 13175, *Consultation and Coordination with Indian Tribal Governments*, November 6, 2000, federally recognized tribes that are historically affiliated with the Fort Hamilton geographic region are invited to consult on all proposed undertakings that potentially affect properties of cultural, historical, or religious significance to the tribes. The tribal consultation process is distinct from NEPA consultation with federal, state, and local governments or the intergovernmental coordination process, and it requires separate consultation with all relevant tribes. The timelines for tribal consultation are also distinct from those of other consultations. The Fort Hamilton point-of-contact for Native American tribes is the Installation Commander (DoD 4710.02, Section 3.4[a]). **Section 7** lists the Native American tribal governments coordinated or consulted with regarding the Proposed Action, and **Appendix A** contains relevant correspondence.

1.6.3 Other Agency Consultations

Review pursuant to Section 106 of the NHPA (54 USC §§ 306101-306131) and its implementing regulations (36 CFR § 800) is being conducted concurrently with the NEPA review process. Relevant Section 106 review documents will be transmitted to the New York State Historic

Preservation Office (NYSHPO), New York City Landmarks Preservation Commission (NYC LPC), and tribal partners. Records of Section 106 coordination to date are provided in **Appendix A**. Results of Section 106 coordination, including letters of concurrence, will be provided in the Final EA. Review pursuant to Section 7 of the Endangered Species Act (16 USC §§ 1531-1544) and its implementing regulations (50 CFR § 17) was completed using the United States Fish and Wildlife Service (USFWS) Information Planning and Consultation tool. Results of the Section 7 review are provided in **Appendix A**. Please refer to **Section 7**, below, for a full list of federal, state, and local agencies that were contacted.

1.6.4 Public Involvement

NEPA requirements help ensure environmental information is made available to the public during the decision-making process and prior to an action's implementation. A premise of NEPA is that the quality of federal decisions will be enhanced if the public is involved in the planning process. A Notice of Availability was published in the *Brooklyn Daily Eagle* and *Brooklyn Paper* and the Draft EA and Draft FONSI were made available for review and download online at <https://www.nan.usace.army.mil/FortHamiltonCDC>. Copies of the Draft EA and Draft FONSI were also made available for review at the Brooklyn Public Library's Fort Hamilton Branch, 9424 4th Avenue, Brooklyn, NY 11209, and the Environmental Library of the Directorate of Public Works, located at 129 Wainwright Drive, Fort Hamilton, NY

2 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

As discussed in **Section 1.5**, the NEPA process provides for an evaluation of potential environmental consequences associated with a proposed action and considers alternative courses of action. Reasonable alternatives must satisfy the purpose of and need for a proposed action, as defined in **Section 1.3**. In addition, CEQ guidance recommends the inclusion of a No Action Alternative against which potential impacts would be compared. While the No Action Alternative would not satisfy the purpose of or need for the Proposed Action, it is analyzed in detail in accordance with Army NEPA-implementing regulations (32 CFR Part 651).

2.1 Proposed Action

The Army proposes to construct and operate a new CDC facility on Fort Hamilton. The proposed project area is a 95,000 ft² site generally bounded by White Avenue, the Verrazzano-Narrows Bridge, Holiday Inn Express, and Garrison Headquarters in northwestern Fort Hamilton. Approximately half of the site is a gravel parking lot with paved pedestrian pathways and the other half is a landscaped turf lawn area with several trees and shrubs. The Proposed Action would include a new single-story building, three outdoor playgrounds, additional parking, a truck delivery space, perimeter fencing and lighting, concrete pathways, utility connections, stormwater management, security features, and installation of electrical and mechanical equipment (**Figure 2-1**). White Avenue and Schum Avenue would be repaved within the alignment of the new CDC facility.

The new CDC facility would be designed in accordance with Unified Facilities Criteria (UFC) Department of Defense (DoD) *Minimum Antiterrorism Standards for Buildings*, UFC 4-101-01 (dated 8 October 2003, including change 1 dated 22 January 2007) (DoD 2008), as well as conforming to other project-specific design requirements and guidance for structural, mechanical, electrical, plumbing, communications, fire protection, and safety. The design would comply with UFC 1-200-02 *High Performance and Sustainable Building Requirements*, which complies with the Energy Policy Act of 2005, the Energy Independence and Security Act of 2007, and the *Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings* (Guiding Principles). The design would comply with the *Army Standards for CDCs* (April 2021) and would be fully accessible in accordance with standard UFC requirements and the Architectural Barriers Act of 1968 (ABA; 42 U.S.C. §§4151 *et seq.*) and implementing regulations (36 CFR Part 1191).

CDC Building. The proposed CDC facility would have a single story 16,632 ft² building. The building would have brick veneer exterior walls and a side-gabled roof with asphalt shingles. The inside of the building would have four infant and pre-toddler activity rooms, three pre-school and pre-kindergarten activity rooms, and one outreach and transitional care activity room. All activity rooms would have storage and bathrooms. A nursing mothers' room would be located near the infant and pre-toddler activity rooms. Administrative rooms near the building entrance would include a staff lounge, reception, offices, waiting area, janitor's closet, isolation area, training room, laundry room, recycling room, reception, bathroom, and stroller and car seat storage. A kitchen and active playroom would also be provided. Rooms for mechanical and electrical equipment would only be accessible via secure doors to prevent unauthorized access. The main entrance to the building would be located off Schum Avenue and would have a locking vestibule and a covered concrete entrance pathway leading to a new parking area. Several other paved pathways would

be constructed around the new building and would connect to existing pathways to improve pedestrian circulation. The pathways would also connect to doorways on each side of the building for life safety and staff access.

Playgrounds. Outdoor playgrounds would have age-appropriate child development equipment, safety surfacing, and fencing. One playground would be constructed on the Schum Avenue side of the building by the main entrance. Two playgrounds would be installed on the White Avenue side of the building. The three playgrounds would have a total size of 16,667 ft². Fixed bollards would be situated at five feet spacing on the White Avenue side of the building for protection from traffic due to proximity to the roadway.

Parking and Roadways. There would be 20 new asphalt parking spaces for privately-owned-vehicles on Schum Avenue. A concrete pathway would be installed around the new parking spaces for access. Twelve existing parking spaces on Schum Avenue would be dedicated to child pick up and drop off. There would be a tractor-trailer delivery space (55-by-10-ft) on White Avenue. Within the alignment of the new CDC facility, White Avenue and Schum Avenue would be repaved curb-to-curb with traffic lines repainted. The closed gravel parking lot within the project area would be demolished.

Perimeter Fencing, Lighting, and Landscaping. Perimeter fencing would be installed around the building and playgrounds. Exterior lighting would be provided in the new parking area and around the building and playgrounds. Lighting would be mounted to the building and poles. Shrubs and coniferous trees would be planted along the outside edges of playground perimeter fencing. New trees would be planted in the front and the back of the building. Landscaped areas would be seeded with turf grass. Up to 14 trees would be removed for the Proposed Action. Replacement trees would be planted on Fort Hamilton in accordance with Fort Hamilton's *Tree Replacement Guidelines*.

Utilities and Site Improvements. Utility connections would be provided by the existing providers and would be modified or extended from those serving the existing, adjacent buildings. Required utility connections include potable water, sanitary sewer, electricity, steam (for heating), and telephone and fiber-optic communications. Mechanical and electrical equipment would be enclosed by chain link fence on the Schum Avenue side of the building, away from the playground.

Development of the site would increase impervious surface cover, requiring implementation of stormwater management measures designed to minimize stormwater related impacts to water quality and water quantity. The stormwater management measures would be based on the *Fort Hamilton Stormwater Management Plan* and *New York State Stormwater Design Manual*, with consideration given to a variety of measures, including underground management devices.

Construction and Operations. Construction of the proposed CDC facility would involve clearing and grading of approximately 95,000 ft²; White and Schum Avenues would be repaved within this footprint. Construction timing is dependent on the availability of construction funds. Currently, construction is expected to commence between 2027 and 2030. Construction would occur during daylight business hours to the greatest extent practicable. Construction access into Fort Hamilton would occur via the main access control point on John Warren Avenue. Construction staging and laydown would use approximately half of the parking lot across from the proposed site on White Avenue (**Figure 2-2**). Construction is expected to result in the temporary use of approximately 55 parking spaces until the White Avenue parking lot is no longer needed for staging.

The new CDC facility would be operated year-round from 0600 hours to 1800 hours, Monday to Friday. Tractor trailers would make approximately twelve deliveries per month on White Avenue for food and supplies.

Additionally, the Proposed Action would incorporate the following measures and BMPs to comply with requirements that apply specifically to Fort Hamilton:

- The Proposed Action would exceed one acre of soil disturbance. Stormwater permits and approvals for construction activities would be obtained from NYSDEC and the New York City Department of Environmental Protection (NYC DEP) prior to construction. A Stormwater Pollution Prevention Plan (SWPPP) would be developed for the stormwater construction permit. The SWPPP would identify BMPs that would be implemented for sediment and erosion control. The Proposed Action would be consistent with the soil erosion management guidelines in the *Fort Hamilton Stormwater Management Plan* and *Fort Hamilton Integrated Natural Resources Management Plan*, as applicable.
- Stormwater would be managed in accordance with and Section 438 of the Energy Independence and Security Act of 2007 (42 USC §§ 17001 *et seq.*), *Fort Hamilton Stormwater Management Plan*, and *New York State Stormwater Management Design Manual*, as applicable.
- The Proposed Action would comply with the *Fort Hamilton Integrated Cultural Resources Management Plan*. In the case of inadvertent discovery of prehistoric or historic artifacts during project construction, all construction would cease, the site would be secured, and the Fort Hamilton Cultural Resource Manager would contact NYC LPC, NYSHPO, and federally recognized tribes within 24 hours.
- Prior to any activities involving digging, drilling, grading, or any other subsurface disturbance activity, the construction team would initiate and procure a Dig Permit as needed (FH Form 200-1 for Land Excavation and Water Use).
- While the project area is not anticipated to contain unexploded ordinance (UXO), the construction specifications would provide clear instructions to construction personnel on the steps to follow if UXO is discovered. A pre-construction safety brief would be provided by the Fort Hamilton Safety Office to the construction team outlining how to recognize UXO and the steps to follow. If UXO is discovered, all work would cease, workers would muster at an off-site location, and the discovery would be reported immediately to the Fort Hamilton Dispatch Office.
- The construction contractor would create a waste management plan and report waste reuse and recycling quantities in accordance with Fort Hamilton's waste management policies.
- During construction, heavy equipment would be required to park overnight on paved surfaces. All equipment would be regularly inspected for hydraulic and fuel leaks. If leaks are detected, clean-up and repair would be performed immediately. In the event of a hazardous material or petroleum spill at the project area, the Fort Hamilton Dispatch Office and Environmental Division Office would be contacted immediately in accordance with the Installation's spill response policy.

- All construction equipment would comply with the three-minute idling limit pursuant to New York City Administrative Code, Title 24, Section 24-163. All non-road diesel equipment would comply with the Federal Clean Air Nonroad Diesel Rule, which regulates emissions from nonroad diesel engines and sulfur content in nonroad diesel fuel.
- Dust suppression techniques would be used during construction to reduce air pollution. Recommended methods include application of water, soil stabilizers, or vegetation; use of covers on soil stockpiles and dump truck loads; use of silt fences; and suspension of earth-movement activities during high-wind conditions (gusts exceeding 25 miles per hour). The construction area would be kept tidy and any fugitive soil or debris on the public roadway would be swept regularly.
- During construction and operation, electricity from Fort Hamilton would be used preferentially over the use of generators. All generator use would be pre-approved by the Fort Hamilton Air Quality Manager and adhere to applicable regulatory requirements. If generators are used, then duration of use would be documented to calculate emissions.
- Temporary road closures on White Avenue and Schum Avenue are anticipated during construction. Road closures would be required for repaving activities but may also be needed during other stages of construction to maintain safety. Signage and flaggers would be used where appropriate to redirect pedestrians, cyclists, and motor vehicle operators during temporary road closures and to maintain safety during construction. Temporary fencing would be installed around the construction area for safety and security, as shown in the design plans.
- Tree removals would be performed in accordance with Fort Hamilton's *Tree Replacement Guidelines*. Trees would be identified and measured prior to removal and replacement trees would be provided. Where appropriate, tree protection measures, such as tree guards, may be used to protect trees from damage during construction.

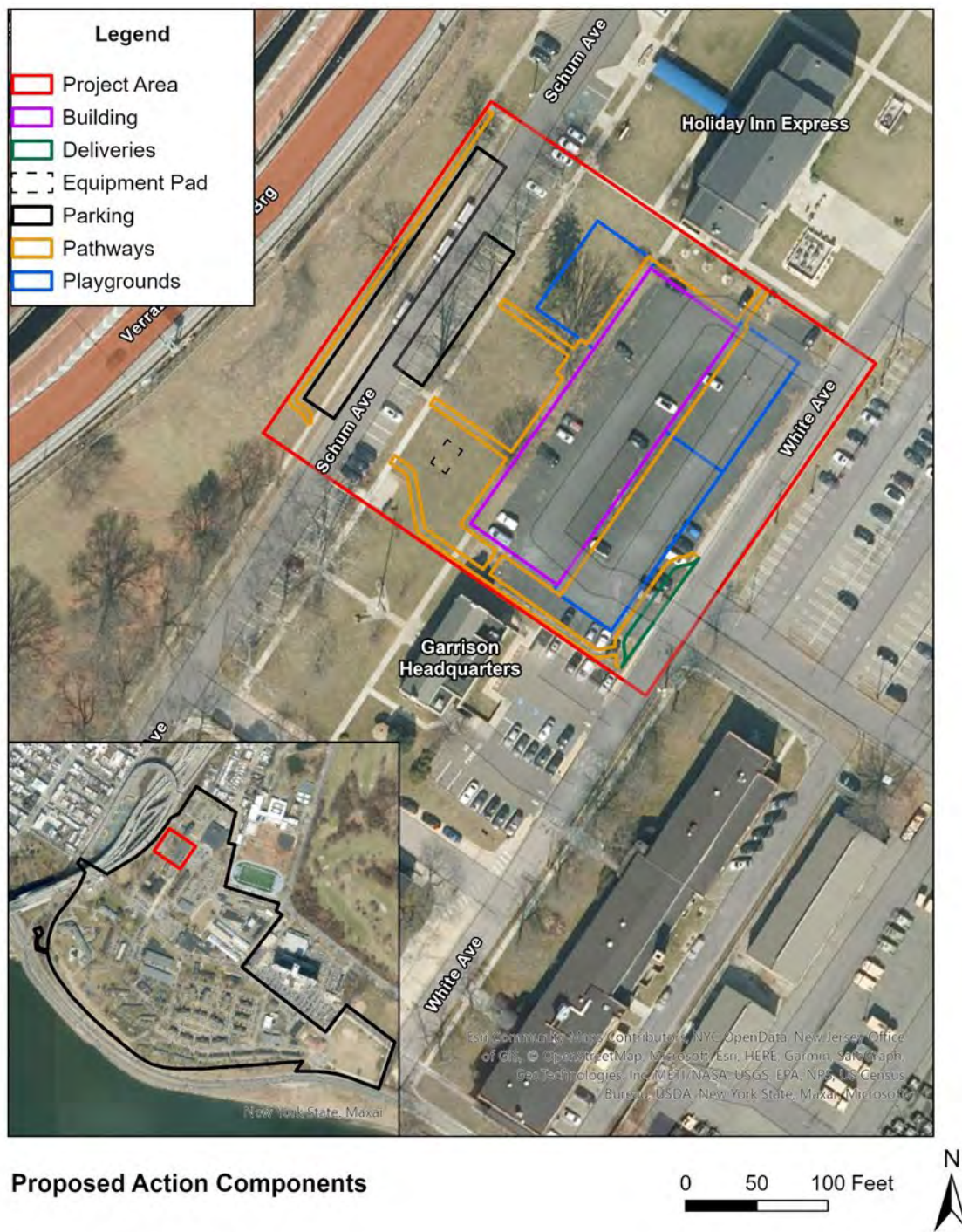
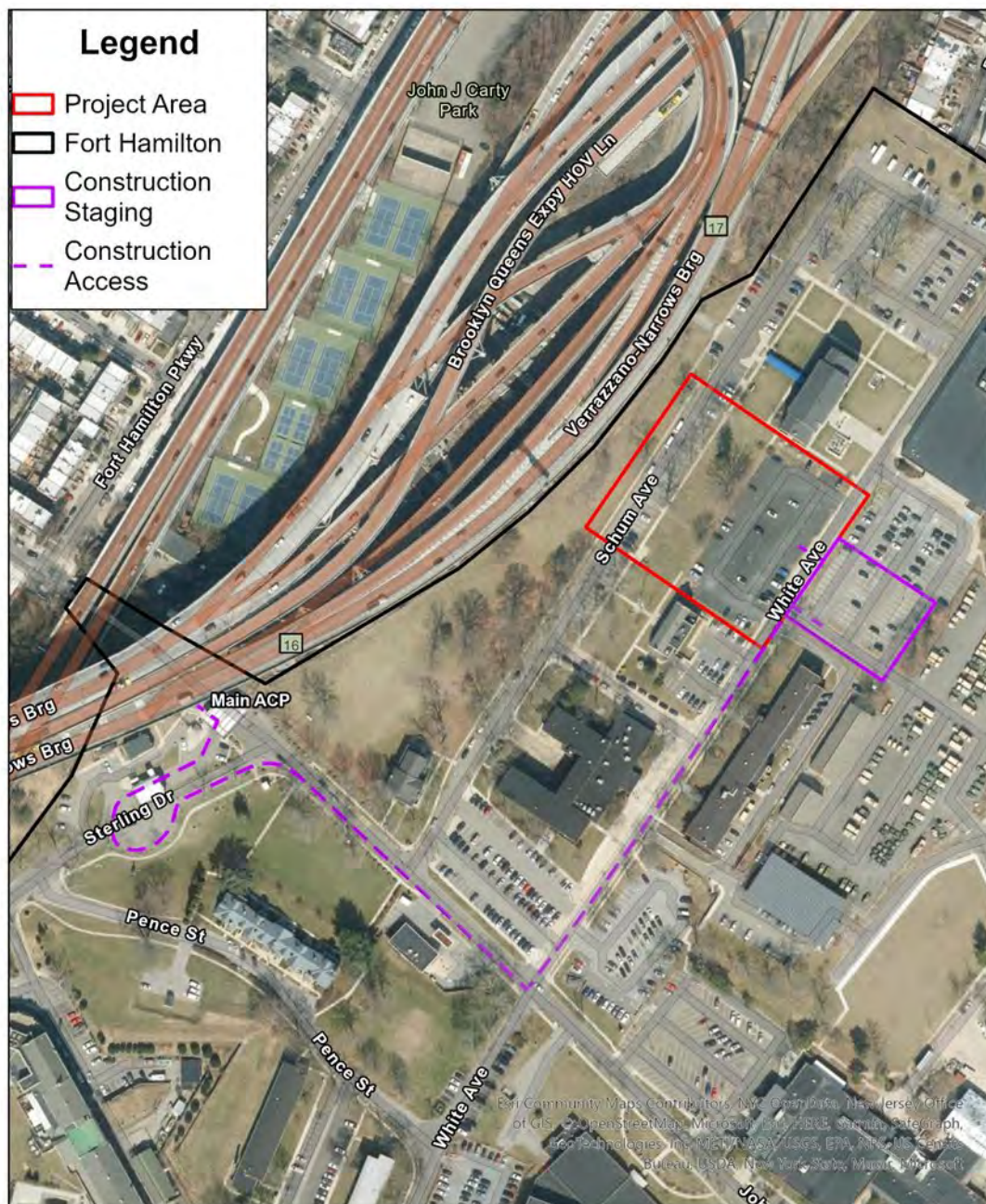


Figure 2-1. Proposed Child Development Center Components



Construction Access and Staging

0 125 250 Feet



Child Development Center
Army Garrison Fort Hamilton
Brooklyn, New York

By: U.S. Army Corps of Engineers, NY District
Date: 28 September 2023
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Figure 2-2. Proposed Construction Access and Staging

2.2 Selection Standards for Project Alternatives

The development of selection standards is an effective mechanism for the identification, comparison, and evaluation of reasonable alternatives. The selection standards were developed to be consistent with the purpose of and need for the Proposed Action and to address pertinent mission, environmental, safety, and health factors. The following selection standards were utilized to identify reasonable alternatives for analysis in the EA:

- Adequate space and infrastructure to accommodate the new facility;
- Compatible with the CDC's mission;
- Compatible with the 2019 *Fort Hamilton Area Development Plan (ADP)*;
- Complies with Army design standards and regulations;
- Protects children from environmental health and safety risks;
- Developable with minimal preparation, relocation, or demolition.

2.3 No Action Alternative

Under the No Action Alternative, the Army would not construct a new CDC facility within Fort Hamilton. The project site would remain as a landscaped area and closed gravel parking lot. Child enrollment capacity would not be increased from 76 children to 126 children. The CDC would continue to be operated out of an outdated building.

The No Action Alternative would not satisfy the purpose of and need for the Proposed Action as described in **Section 1.3**; however, the Army environmental review process requires consideration of the No Action Alternative, and CEQ guidance recommends inclusion of the No Action Alternative in an EA to assess environmental consequences that may occur if the Proposed Action is not implemented. Therefore, the No Action Alternative will be carried forward for detailed analysis and serves as a baseline against which the Proposed Action can be compared.

2.4 Alternatives Considered but Eliminated from Detailed Analysis

As part of the alternative development process, alternative sites for the Proposed Action on Fort Hamilton were considered (**Figure 2-3**). Site A is approximately 95,000 ft² and is bordered by Holiday Inn Express, Garrison Headquarters, White Avenue, and Schum Avenue in northwestern Fort Hamilton. Site B is approximately 40,000 ft² and is bordered by Pence Street, John Warren Avenue, White Avenue, and Building 209 on the western side of Fort Hamilton. Site C is the existing Child and Youth Services Building 412 bordered by Pershing Loop, Sterling Drive, John Warren Avenue, and Building 403 on the eastern side of Fort Hamilton. Site C is approximately 70,000 ft².

In comparing these sites, Site A meets all the site selection criteria and Sites B and C do not (**Table 2-1**). Site B is not large enough and does not comply with Army standards for CDCs because it is too close to Fort Hamilton's main ACP on 101st Street. In addition, Site B is next to a fueling station which could pose health and safety risks to children. Site C would require renovation of the existing Child and Youth Services building and construction of an addition to the building. Therefore, Site C would require substantial site preparation, relocation, and demolition that would disrupt ongoing Child and Youth Services operations. For these reasons, Sites B and C were rejected and do not require detailed analysis. Site A satisfies the purpose of and need for the Proposed Action and meets the site selection standards.

Table 2-1. Site Selection Standards

Site	Adequate Space and Infrastructure	Meets CDC Mission	Compatible with ADP	Complies with Army Regulations	Protects Health and Safety	Minimal Preparation, Relocation, or Demolition
Site A	X	X	X	X	X	X
Site B		X	X			X
Site C	X	X	X	X	X	

2.5 Identification of the Preferred Alternative

The Preferred Alternative is to implement the Proposed Action at Site A, as described in **Section 2.1**.

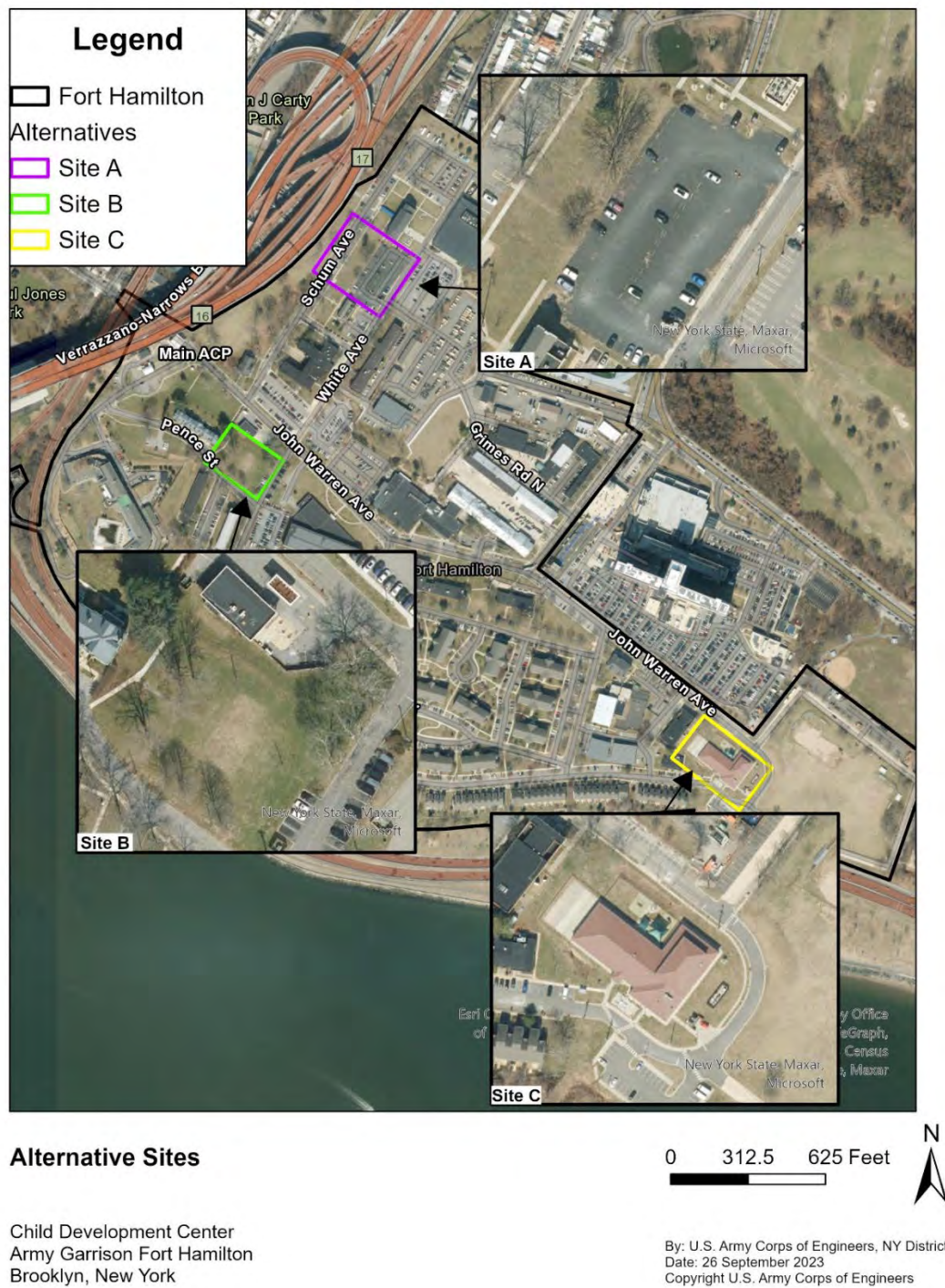


Figure 2-3. Alternative Sites Considered

3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section describes the existing natural and human environment that may be impacted by the implementation of the Proposed Action at the Preferred Alternative site or the No Action Alternative.

3.1 Scope of the Analysis

In compliance with the guidelines contained in NEPA, CEQ regulations, and 32 CFR Part 651, this section is limited to the discussion of only those specific resources potentially affected by implementation of the Proposed Action at the Preferred Alternative site.

Based on the scope of the Proposed Action, issues with minimal or no effects were identified through a preliminary screening process. The following describes those resources areas not carried forward for a detailed analysis, along with the rationale for their elimination.

- **Land Use** would not be affected because the Proposed Action would be consistent with the ADP. Currently, the Preferred Alternative site is within the buildable area of Fort Hamilton. There would be no land use change because of the construction of the Proposed Action at the Preferred Alternative site. Construction of the Proposed Action would be consistent with any architectural guidelines or requirements addressed in the 2019 ADP.
- **Socioeconomic** conditions would not be affected by the construction of the Proposed Action on Fort Hamilton. Existing CDC operations would be shifted to the new facility once constructed.
- **Visual Resources** would not be affected because the Proposed Action would be consistent with the ADP and any architectural guidelines or requirements specific to Fort Hamilton. The Preferred Alternative site previously had a building that was demolished in 2012 and converted into a gravel parking lot. The Proposed Action at the Preferred Alternative site would feature a single-story building with brick exterior veneer, side-gabled roof, and landscaping that would be consistent with the Installation's existing, visual aesthetics.
- **Coastal Resources** would not be affected by the Proposed Action. There are no coastal resources at the Preferred Alternative site, such as coastal erosion hazard areas and coastal barrier resources system units. The Preferred Alternative site is not located within the Coastal Zone Management Area according to the New York State Department of State Coastal Zone Area Map. Therefore, the Proposed Action is not subject to the requirements of the Coastal Zone Management Act.
- **Utility Infrastructure** would not be affected because the Proposed Action would tie into existing utilities (e.g., sewer, gas) that serves the adjacent buildings. Existing utilities at the Preferred Alternative site previously supported a building that was demolished in 2012.

Resources Studied in Detail

Preliminary analysis, based on the scope of the Preferred Alternative and No Action Alternative, identified potential environmental issues warranting analysis of the following: topography, geology, and soils; water resources; biological resources; air quality; greenhouse gases and climate change; traffic and transportation; hazardous materials and waste; noise and vibration; cultural resources; health and safety; environmental justice; and cumulative impacts.

3.2 Topography, Geology, and Soils

3.2.1 Affected Environment

Topography

Fort Hamilton's topography comprises gentle, undulating slopes with elevations ranging from 60 feet North American Vertical Datum 1988 (NAVD 88) around the Community Club to 20 feet NAVD 88 at the ball fields. The variable topography is a result of historical cut and fill operations related to changes in Fort Hamilton's mission. In general, land surfaces within Fort Hamilton and the surrounding area have been modified by extensive civilian and military excavations and construction activities over the last 170+ years, including construction of housing units and other structures, and the construction of the adjacent transportation routes, including the Shore Drive and the approaches to the Verrazano-Narrows Bridge.

Geology

Situated in the Coastal Plain physiographic province of the Atlantic Coast Lowland, Fort Hamilton is positioned on the southern part of the western portion of the Ronkonkoma and Harbor Hill ridges of the terminal moraine of the last or Wisconsin glaciation (between 14,000 and 16,000 years ago).

The area encompassing the project area is situated on a contact between outwash sand and gravel and till moraine. Outwash sand and gravel typically consists of coarse to fine gravel with sand, proglacial fluvial deposition, well rounded and stratified, generally finer texture away from ice border. Till moraine typically consists of more variable soil than till and may include ablation till. Specifically, the site is underlain by glacial and alluvial deposits of Quaternary in age. The underlying bedrock geology is unknown.

Soils

In general, surface deposits within Fort Hamilton are largely fill, which cover a sequence of buried mud flats, sand beaches, and glacial debris. Thick deposits of sand and clay, as well as bedrock composed of schists, gneisses, and granites also are present. At the project area, former Building 110 was demolished in 2012. During demolition, waste material was removed from the site and excavated areas were backfilled with several feet of compacted, clean dirt fill. Clean fill was later topped with a layer of gravel to establish a parking lot.

Based on a review of the United States Department of Agriculture – Natural Resources Conservation Services (USDA-NRCS) soil survey, the following soil resources are mapped underlying the site within the Proposed Action area:

- **Urban Land, till substratum, 0-3 percent slopes:** This soil series is mapped within most of the site. The typical profile (as detailed in the survey) consists of cemented material to a depth of 15 inches, underlain by gravelly sandy loam to a depth of 79 inches below the natural ground surface (limit of the report).
- **Greenbelt-Urban Land complex, 0-3 percent slopes; Greenbelt-Urban Land complex, 3-8 percent slopes; and Urban Land-Greenbelt complex, 3-8 percent slopes:** The typical profile (as detailed in the survey) for these soil series consists of cemented material

to a depth of 15 inches, underlain by gravelly sandy loam to a depth of 79 inches, and loam to a depth of 30 inches, underlain by sandy loam to a depth of 79 inches below the natural ground surface (limit of the report).

3.2.2 Environmental Consequences

Preferred Alternative

Construction

Excavation and grading during construction would result in a maximum of 95,000 ft² of soil disturbance. Impacts to surface topography, geology, and soils would be minor because the site has been previously disturbed. As a result of this previous disturbance, the soils in the affected areas are primarily fill. Work would proceed in accordance with BMPs for stabilizing soils and minimizing erosion. Sediment and erosion controls would be installed prior to the start of work. Impacts to soil would be short-term and cease once construction is complete. For these reasons, construction would not have a significant impact on topography, geology, and soils.

Operation

Once constructed, the proposed CDC would be used to provide childcare services. Therefore, operational activities would not impact topography, geology, and soils.

No Action Alternative

The No Action Alternative would continue CDC operations at the existing facility and no new construction would occur. The No Action Alternative would not impact topography, geology, or soils.

3.3 Water Resources

3.3.1 Affected Environment

Surface Water

No federally or state-regulated waterbodies occur on Fort Hamilton. The Narrows and Gravesend Bay are the nearest surface waters. According to NYSDEC, the Narrows and Gravesend Bay are Class I saline surface waters. The best usage of Class I waters are secondary contact recreation and fishing, suitable for fish, shellfish, and wildlife propagation and survival (6 CRR-NY 701.13).

Wetlands, Navigable Waterways, and Floodplains

No federally or state-regulated wetlands or navigable waterways occur on Fort Hamilton. According to the Federal Emergency Management Agency's 2015 Preliminary Flood Insurance Rate Maps, a small portion of the Fort Hamilton shoreline is within a coastal high hazard area (Zone VE), 1-percent annual chance floodplain (Zone AE), and 0.2-percent chance annual floodplain (Shaded Zone X). Most of the Installation, including the Preferred Alternative site, is not within a floodplain.

Groundwater and Water Supply

Fort Hamilton is within the Kings/Queens Counties Sole Source Aquifer (SSA) designated by the United States Environmental Protection Agency (USEPA). No public or private water supply wells are located within the vicinity of Fort Hamilton. Fort Hamilton is part of the New York City Water Supply System operated by the City of New York. Water is supplied via a water main pipeline. Flooding of the gravel parking lot at the Preferred Alternative site indicates that groundwater is likely present.

3.3.2 Environmental Consequences

Preferred Alternative

Construction

The construction footprint would be greater than 5,000 ft² and, therefore, must comply with Section 438 of the Energy Independence and Security Act of 2007. Stormwater would be managed during construction activities using BMPs such as erosion controls and stabilized construction entrances.

Under the *Fort Hamilton Storm Water Management Plan*, stormwater collected from the western portion of the Installation is sent to a combined sanitary/storm sewer system and treated at NYC DEP's Owl's Head Water Pollution Control Plant. The eastern portion of the Installation is serviced by a separate storm sewer system, which discharges through three outfalls to the Gravesend Bay. Sediment and erosion controls would be implemented during construction to prevent sediment runoff from entering the combined sanitary/storm system. In addition, all work would be performed in accordance with a State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activities. Dewatering would be performed as needed in accordance with the plans and specifications and the applicable permits, laws, and regulations. For these reasons, construction would not have a significant impact on water resources.

Operation

Stormwater at the Preferred Alternative site is combined with the sanitary sewer and delivered to the wastewater treatment plant for treatment. A stormwater management system would be installed. The stormwater management system would capture stormwater and direct it to the sanitary sewer. Therefore, operation of proposed CDC facility would not impact water resources.

No Action Alternative

The No Action Alternative would continue CDC operations at the existing facility and no new facility construction would occur. Therefore, water resources would not be impacted during implementation of the No Action Alternative.

3.4 Biological Resources

3.4.1 Affected Environment

Vegetation

Fort Hamilton is in a densely developed urban environment that has undergone extensive change throughout its history. Within Fort Hamilton, green spaces are primarily landscaped turf lawn with a mix of ornamental trees and shrubs. Installation-wide vegetation surveys were completed between 2020 and 2023 for the *Fort Hamilton Integrated Natural Resource Management Plan*. Survey results show that Fort Hamilton has a variety of common native, invasive, and ornamental plants including trees, shrubs, vines, and herbaceous vegetation. Many of the species present were planted over the course of Fort Hamilton's development. There are 14 trees of varying age and condition at the Preferred Alternative site (**Table 3-1**).

Table 3-1. Trees at the Preferred Alternative site

Quantity	Common Name	Scientific Name
3	Callery Pear	<i>Pyrus calleryana</i>
1	Honey Locust	<i>Gleditsia triacanthos</i>
4	Kwanzan Cherry	<i>Prunus serrulata</i>

Quantity	Common Name	Scientific Name
1	Norway Spruce	<i>Picea abies</i>
1	Pin Oak	<i>Quercus palustris</i>
1	Hawthorne	<i>Crataegus sp.</i>
1	White Oak	<i>Quercus alba</i>
2	London Planetree	<i>Platanus acerifolia</i>

Rare, Threatened, and Endangered Species

The Endangered Species Act (ESA) of 1973 (16 USC 1531-1543, P.L. 93-205) establishes legal protection for fish, wildlife, plants, and invertebrates that are federally listed as endangered or threatened. In addition, the State of New York protects state designated rare species under the New York Endangered Species Act (6 New York Code of Rules and Regulations [NYCRR] Part 182) and the New York State Environmental Conservation Law (ECL), Section 9-1503, Part 193 (Protected Native Plants).

An Official Species List, dated July 16, 2024, was obtained from the USFWS to identify federally threatened and endangered species that may occur at the Preferred Alternative site (**Appendix A**). Two federally threatened birds, the piping plover (*Charadrius melodus*) and rufa red knot (*Calidris canutus rufa*), and one federally endangered mammal, the northern long-eared bat (*Myotis septentrionalis*), were identified as having the potential to occur at the Preferred Alternative site. The piping plover is a small migratory shorebird that nests and feeds along coastal sand and gravel beaches. The red knot is a migratory shorebird that uses coastal marine habitat like sandy beaches, tidal wetlands, and mudflats for foraging. The northern long-eared bat is a small bat that overwinters in caves and abandoned mines and roosts in forested habitat during the summer. The Official Species List also identified the monarch butterfly (*Danaus plexippus*) as potentially occurring at the Preferred Alternative site. The monarch butterfly is a candidate for listing under the ESA but is not currently listed as threatened or endangered. There is no USFWS designated critical habitat on Fort Hamilton.

According to New York Natural Heritage Program records, the state-endangered peregrine falcon (*Falco peregrinus*) nests on the Brooklyn tower of the Verrazzano-Narrows Bridge, approximately 2,600 ft horizontally from the Preferred Alternative site. No other state rare species are known to occur near the Preferred Alternative site. National Marine Fishery Service resources are not present on Fort Hamilton.

Wildlife

New York City is in the Atlantic Flyway, a major migration corridor for a variety of migratory songbirds, waterfowl, shorebirds, and birds of prey that are protected under the Migratory Bird Treaty Act (16 U.S.C. 703 *et seq.*) and Bald and Golden Eagle Protection Act (16 U.S.C. 668-668d). According to eBird, a public online database of bird sightings, approximately 115 bird species have been observed from the Gravesend Bay shoreline adjacent to Fort Hamilton, including bald eagles (*Haliaeetus leucocephalus*). Fort Hamilton also supports common urban adapted species such as squirrels (*Sciurus carolinensis*), opossums (*Didelphis virginiana*), rats (*Rattus norvegicus*), raccoons (*Procyon lotor*), chipmunks (*Tamias striatus*), house sparrows (*Passer domesticus*), Canada geese (*Branta canadensis*), pigeons (*Columba livia*), and a variety of insects.

3.4.2 Environmental Consequences

Preferred Alternative

Construction

Construction would result in the removal of up to 14 trees of varying size and condition. All trees would be assessed prior to removal and replaced in accordance with Fort Hamilton's *Tree Replacement Guidelines*. Shrubs and coniferous trees would be planted along the outside edges of playground perimeter fencing. Several trees would also be planted in the front and back of the proposed building. Where appropriate, tree protection measures may be used during construction to prevent damage from equipment. For these reasons, construction would not have a significant impact on vegetation.

Fort Hamilton does not contain the appropriate habitat for piping plovers and red knots, and there are no known occurrences of these species at this location. Northern long-eared bats have not been detected in Kings County and the Preferred Alternative site does not contain the appropriate habitat for this species. The Preferred Alternative site does not contain suitable nesting habitat for the state-endangered peregrine falcon and bald eagles. Peregrine falcons and bald eagles are unlikely to occur on Fort Hamilton except as occasional flyovers. The peregrine falcon nest on the Verrazzano-Narrows Bridge is located within a managed nest box on a 693 ft tall tower approximately 2,600 ft from the Preferred Alternative site; therefore, it would not be impacted by construction and consultation with the New York Natural Heritage Program is not warranted. Vegetation surveys conducted on Fort Hamilton between 2020 and 2023 did not find any federally or state listed plants. The Preferred Development site is primarily gravel which lacks milkweed and flowering plants that would be needed to support monarch butterflies. For these reasons, construction would have no impact on rare, threatened, or endangered species. In compliance with Section 7 of ESA, no effect determinations were made for the piping plover, red knot, and northern long-eared bat on July 16, 2024; further consultation with USFWS is not warranted. The no effect determinations are documented in USFWS letters provided in **Appendix A**.

Construction may result in minor, short-term impacts to wildlife such as birds and common urban adapted species. Impacts would likely be limited to noise and site disturbance (e.g., tree removals, excavation, and grading) and would cease once construction is complete. Due to the site's poor habitat quality and urban setting, few animals are expected to occur at the site. If wildlife is present, it could easily relocate to similar, nearby habitat types on Fort Hamilton once construction is underway. For these reasons, construction would not have a significant impact on wildlife.

Operation

Once constructed, site landscaping would provide habitat that is similar to the existing condition. Landscaping would be routinely maintained. Therefore, operational activities would not have a significant impact on biological resources.

No Action Alternative

The No Action Alternative would continue CDC operations at the existing facility and no new facility construction would occur. Therefore, biological resources would not be impacted by implementation of the No Action Alternative.

3.5 Air Quality

3.5.1 Affected Environment

The Clean Air Act (CAA) is a federal law that regulates air emissions from stationary and mobile sources. This law authorized the USEPA to establish National Ambient Air Quality Standards (NAAQS) to protect public health and welfare, to regulate emissions of certain hazardous pollutants, and to designate geographical areas as in “attainment”, “non-attainment”, or “maintenance” for criteria air pollutants. Examples of stationary sources include coal-fired power plants, glass manufacturing plants, cement manufacturing plants, and petroleum refineries. Mobile sources may include vehicles, generators, mowers, ocean vessels, and large ships. An attainment area is defined as a geographic area in which levels of a given criteria of air pollutant (e.g. ozone, CO, particulate matter (PM), sulfur dioxide (SO₂), nitrogen oxide (NO), and lead (Pb) meet or is lower than the health-based NAAQS. A non-attainment area is a geographic area in which air pollutant(s) do not meet/exceeds the health-based NAAQS (USEPA 2023a and 2023b). It is possible for a geographic area to be in attainment for one or more pollutant, and at the same time be in non-attainment for other pollutant(s). Maintenance areas are geographical areas that have been redesignated after having historically been in nonattainment and were subsequently brought into attainment and are under an attainment maintenance plan.

General Conformity (40 CFR 51 and 93) “prohibits a federal agency from interfering with the ability of a state or tribe to achieve the [NAAQS]” (USEPA 2010 and 2024a). Only actions that cause emissions in designated non-attainment and maintenance areas are subject to these regulations. A vast majority of federal actions do not result in a significant increase in emissions and therefore, include several exemptions. Applicability to General Conformity is determined by:

1. Whether the action will occur in a non-attainment or maintenance area,
2. Whether one or more of the specific exemptions apply to the action,
3. Whether the federal agency has included the action on its list of “presumed to conform” actions,
4. Whether the total direct and indirect emissions are below or above the *de minimis* levels, and/or,
5. Where the facility has an emission budget approved by the state or tribe as part of the state implementation plan (SIP) or Tribal Implementation Plan, the federal agency determines if the emissions from the proposed action are within the budget.

The *de minimis* threshold quantities within non-attainment and maintenance areas are defined as follows:

Table 2-2. De Minimis Quantities within Non-Attainment and Maintenance Areas (USEPA 2024b)

CRITERIA POLLUTANT	TONS/YEAR
Non-Attainment Areas (NAAs)	
Ozone (VOC or NO_x):	
Serious NAA's	50
Severe NAA's	25
Extreme NAA's	10
Other NAA: Outside an Ozone Transport Region:	100
Other NAA: Inside an Ozone Transport Region:	
VOC	50

NO _x	100
Carbon Monoxide: (all maintenance areas)	100
SO₂ or NO₂: (all NAA's)	100
PM₁₀:	
Moderate NAA's	100
Serious NAA's	70
PM_{2.5} (direct emissions, Sox, NO_x, VOC, and Ammonia)	
Moderate NAA's	100
Serious NAA's	70
Lead (Pb): All NAA's	25
Maintenance Areas	
Ozone (NO_x), SO_x or NO_x:	
All maintenance areas	100
Ozone (VOCs)	
Maintenance inside an OTR	50
Maintenance outside an OTR	100
Carbon Monoxide:	
All maintenance areas	100
PM₁₀:	
All maintenance areas	100
PM_{2.5} (direct emissions, Sox, NO_x, VOC, and Ammonia)	100
All maintenance areas	100
Lead (Pb):	
All maintenance areas	25

Projects within non-attainment or maintenance areas that emit criteria pollutants, but do not have annual emissions exceeding these thresholds are considered exempt from General Conformity and in compliance with the SIP, as applicable.

The USEPA NEPAAssist tool (last accessed August 2024) was used to determine if Fort Hamilton falls within non-attainment and maintenance zones. Fort Hamilton is located in Kings County, New York which is in a non-attainment area for ozone 1-Hour (1979 standard-revoked) and ozone 8-Hour (per the 1997, 2008, and 2015 standards), and in a maintenance area for CO (1971), PM-2.5 24-Hour (2006 standard), and PM2.5 annual (1997 standard). These designations are summarized in the table below from the USEPA Kings County Green Book. Note, that while the Green Book 8-hour ozone (2015) nonattainment designation was classified as “moderate”, a voluntary reclassification from “moderate” to “serious” non-attainment has recently been established by New York State and the USEPA (NYSDEC 2024).

Table 3-3. New York Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants

Criteria Pollutant	Designation	Non-Attainment Years	Classification
1-Hour Ozone (1979)-NAAQS revoked	Non-attainment	1992-2004 (revoked)	Severe 17
8-Hour Ozone (1979)-NAAQS revoked	Non-attainment	2004-2014 (revoked)	Moderate

8-Hour Ozone (2008)	Non-attainment	2012-2024	Severe 15
8-Hour Ozone (2015)	Non-attainment	2018-2024	Moderate (to be reclassified as "Serious")
Carbon Monoxide (CO) (1971)	Maintenance	1992-2001	Moderate >12.7 ppm
PM-2.5 (1997)-NAAQS revoked	Maintenance	2005-2013 (revoked)	Former Subpart 1
PM-2.5 (2006)	Maintenance	2009-2013	Former Subpart 1

Source: current as of 30 June 2024 https://www3.epa.gov/airquality/greenbook/anayo_ny.html

Note: If a criteria pollutant is not on this list, then that criteria pollutant is considered to be in attainment.

New York is also within the Ozone Transport Region (OTR), which makes up a collective group of several northeast states required to submit a SIP and install a certain level of controls for the pollutants that form ozone, regardless of if they meet the ozone thresholds (USEPA 2023c). Ozone is controlled through regulations on its precursor emissions, which include NO_x and VOCs; however, VOCs are emitted at a fractional rate compared to NO_x.

Kings County, New York is assumed in attainment for all other criteria pollutants, due to a lack of additional listings for other criteria pollutants.

3.5.2 Environmental Consequences

Preferred Alternative

Construction

Potential emissions from construction-related activities are anticipated to be associated with diesel mobile sources including construction equipment used on the site and trucks moving to/from the site on public and/or private roads. Emissions from these two source types include NO_x, VOCs, SO₂, CO, and PM_{2.5}. The Proposed Action would have temporary emissions associated with the construction of the CDC, which includes the use of mobile equipment such as diesel-powered generators, compactors, compressors, dozers, excavators, loaders and graders, as well as off-road trucks. Emissions associated with the construction of the Preferred Alternative were estimated using project planning information provided for the current level of design, consisting of the anticipated equipment types, horsepower, and operating hours of those diesel engines powering the equipment. Conservative factors were used to represent the average level of engine load (load factors) and the average emissions of typical engines used to power the equipment (emissions factors). These estimates were developed using the following equation:

$$E = \text{hrs} \times \text{LF} \times \text{EF}^1$$

E = Emissions per period of time (e.g. such as a year or the entire project)

Hrs = number of operating hours in the associated period of time (e.g. hours per year, hours per project)

LF = Load Factor, an estimate of the average percentage of full load an engine is run at in its usual operating mode.

EF = Emissions Factor, an estimate of the amount a pollutant (e.g. CO) that an engine emits while performing a defined amount of work.

¹ Converted from grams (g) to Metric Tons (MT). 1,000,000 g = 1 MT

To provide the upper limit of a conservative estimate, emissions were first calculated on the project as a whole, assuming that construction would be completed within the same calendar year, and additionally estimated on an average yearly basis for the designs current estimation that construction would be conducted over a duration of 850-days (approximately 2.3 years). Should the emissions under this assumption exceed the *de minimis* quantities, then a yearly emissions estimate would provide a more precise calculation on a yearly basis, providing for a comparison of the two for the Preferred Alternative. Further, it should be noted that the emissions from diesel engines vary with the age of an engine and, most importantly, with when it was manufactured. Newer engines of a given size and function typically emit lower levels of pollutants than older engines. The emission factors used in these calculations assume that the equipment pre-dates most emission control requirements (known as Tier 0 engines in most cases), to provide a reasonable yet conservative emission estimate. If newer engines, or alternative fuel source engines (e.g. electric), are used for construction activities, then emissions would be lower than estimated. The Emissions Factor² estimates used in this calculation originated from a recent U.S. Army Corps of Engineers (USACE) project using similar equipment, estimated conservatively to allow for a contingency should different equipment be used during construction.

Calculated emissions are anticipated as follows, based on the current level of design for the project as a whole, as well as the average potential yearly average estimates for approximately 850-days or 2.3 years of construction for comparison purposes:

Table 3-4. Air Quality Emissions Estimates (tons/year)

YEAR	Criteria Pollutant				
	NO _x	VOC	SO ₂	PM _{2.5}	CO
1 (12 months)	0.475	0.00937	0.000375	0.00787	0.000375
2 (12 months)	0.475	0.00937	0.000375	0.00787	0.000375
3 (3 months)	0.316	0.00625	0.00025	0.00525	0.00025
PROJECT TOTAL	1.267	0.025	0.001	0.021	0.001

As Fort Hamilton is located within a maintenance zone for CO and PM_{2.5} and is within the OTR for ozone, these criteria pollutants were compared to the applicable *de minimis* quantities emission thresholds, including the more stringent ozone (VOC and NO_x) threshold, as follows:

Table 3-5. Air Quality Emissions compared to De Minimis Quantities Thresholds

Criteria Pollutant	Estimated Construction Emissions for the Total Project (tons/year)	Applicable De Minimis Quantities (tons/year) ³
Ozone (VOC)	0.025	25
Ozone (NO_x)	1.267	25
PM_{2.5}	0.021	100

² Emissions Factor estimates were sourced from the USACE Rahway River (Tidal) Coastal Storm Risk Management Study, General Conformity Emissions Estimates dated 2020.

³ While the recent ozone (2015) nonattainment designation was classified as “moderate” and is being redesignated as “serious”, the ozone (2008) nonattainment designation is “severe”; therefore, the more stringent *de minimis* threshold of “severe” is the applicable threshold for NO_x and VOC within this nonattainment area, at 25 tons per year.

CO	0.001	100
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Note: Green highlight indicates emissions estimate is below the applicable *de minimis* quantities. Red highlight indicates emissions estimate is above the applicable *de minimis* quantities. Estimated emissions for the total project were conservatively estimated based on the 30% designs, to account for future design changes.

The estimated construction emissions for Ozone (VOC, NO_x), PM_{2.5}, and CO are well below the applicable *de minimis* quantities thresholds for the entire project and for the average yearly emissions; therefore, the construction of the CDC is considered exempt and not applicable to General Conformity. A record of non-applicability (RONA) is provided in **Appendix C**.

Additionally, it should be noted that during construction fugitive dust at the construction site may be generated during construction activities, including from trucks and equipment moving on unpaved surfaces; however, this dust can be significantly reduced utilizing BMPs, such as continuously wetting dry and unpaved surfaces.

Operation

During operations of the Proposed Action, utility heating/cooling equipment and associated emissions from anticipated ancillary and external but related sources (such as the boiler system, and vehicular traffic to and from the CDC, respectively) would occur; however, is anticipated to be consistent with the current CDC, if not improved with the use of newer equipment with better emissions and energy use ratings. These emissions are difficult to quantify without further details about the utility equipment to be installed and the types of vehicles used during commutes (electric vs. gasoline vs. diesel engines), for example. With the capacity increase of the CDC, it is possible that increased vehicular emissions may be observed, assuming those children would be dropped off/picked up via a vehicle and not by another means (e.g. walking, bicycle). However, the new facility would be constructed in accordance with the UFC 1-200-02 *High Performance and Sustainable Building Requirements*, which complies with the Energy Policy Act of 2005, the Energy Independence and Security Act of 2007, and the *Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings* (Guiding Principles), and therefore, would be a more energy-efficient operating structure.

No Action Alternative

The No Action Alternative would continue CDC operations at the existing facility and no new facility construction or operations would occur. Therefore, air quality would not be expected to change with implementation of the No Action Alternative. The site would remain a gravel parking lot for the foreseeable future, the current CDC would continue to be used. Therefore, the No Action Alternative would not result in emissions or associated air quality impacts from current existing conditions.

3.6 Greenhouse Gases and Climate Change

3.6.1 Affected Environment

Greenhouse gases (GHGs) are gaseous compounds that absorb infrared radiation, trapping heat in the atmosphere and making the planet's near-surface air and oceans warmer, on average. Climate change is a term commonly used to describe the climatic effects of this warming. The most important GHGs directly emitted by human activities include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and several fluorine-containing halogenated substances. Natural processes and human actions have been identified as affecting the climate, but while CO₂, CH₄, and N₂O occur naturally in the atmosphere, human activities have increased their atmospheric

concentrations. From the pre-industrial era (i.e., ending about 1750) to 2022, concentrations of these greenhouse gases have increased globally by 50%, 162%, and 24%, respectively.

The Intergovernmental Panel on Climate Change, a group formed under the United Nations to address the global challenge of climate change, developed the global warming potential (GWP) concept to compare the ability of a greenhouse gas to trap heat in the atmosphere relative to other gases. A GWP is a quantified measure of the relative warming impact of a particular greenhouse gas over a specified period (e.g., 100 years). The reference GHG is CO₂, meaning CO₂ is given a GWP of 1 and other GHGs are given GWP values relative to CO₂. GHG emissions in CO₂ equivalents (CO₂e) are calculated by multiplying each GHG by its GWP and summing the results, usually expressed as metric tons or million metric tons (MMT). EPA 2024c has most recently recommended GWP values of 28 for CH₄ and 265 for N₂O (relative to CO₂ with a GWP of 1). Other values are used by other authorities for CH₄ and N₂O due to changes in the state of the science and the use of time periods other than 100 years. The GWP of CO₂ is 1 in all cases.

In 2022, United States GHG emissions totaled 6,343.2 MMT CO₂e, 3.0% lower than 1990 levels and 0.2% higher than in 2021 (USEPA 2024c). The 2021 New York state GHG emissions totaled 367.9 MMT CO₂e (NYSDEC 2023), 9% lower than the 1990 baseline and 6% higher than in 2020. New York's 2021 emissions made up 5.8% of the national total that year.

Since the effects of GHGs take place in the atmosphere and are global in scale, the specific location of the emissions is less important than it is for other regulated pollutants, which generally produce their effects on a more local to regional scale. This suggests that localized displacement of GHG emission sources, such as transportation emissions, would not significantly increase or decrease the global warming effect of the GHGs.

3.6.2 Environmental Consequences

Preferred Alternative

Construction

Construction equipment would be used primarily for site preparation, material handling, and general construction activities. Such equipment would include graders, loaders, and generators, all of which is typically diesel powered. Combustion of diesel fuel produces GHG emissions, primarily CO₂ with minor amounts of N₂O and CH₄.

The likely amounts of these emissions have been calculated using engineering estimates of equipment types, horsepower, and operating hours during the construction period. In this calculation, emission factors that express the mass of emissions per unit of work (grams of emissions per horsepower-hour, or g/hp-hr) are multiplied by each type of equipment's horsepower, operating hours, and load factor to determine grams of emissions. Load factor is a number between zero and 1.0 that expresses the average percentage of full load that the type of equipment works under during its typical operation. The equation can be expressed as:

$$E = EF \times hp \times hrs \times LF$$

E = emissions in grams

EF = emission factor in g/hp-hr

hp = horsepower rating of the equipment

hrs = operating hours of the equipment during the construction period

LF = load factor

Table 3-6. Emissions of GHGs from Construction Activities (metric tons)

Metric Tons of GHGs			
CO ₂	N ₂ O	CH ₄	CO _{2e}
76.2	0.005	0.006	77.6

Note: Estimated emissions for the total project were conservatively estimated based on the 30% designs, to account for future design changes.

The estimated 77.6 metric tons of GHGs in CO_{2e} would be a small incremental increase in the state-wide and national GHG emissions and would only occur over the duration of construction. The most feasible method of reducing these emissions would be to use equipment with alternative power sources, such as alternatively-fueled or electric equipment. While the use of alternative fuels and the electrification of vehicles and equipment is undergoing development in some common transportation sectors (e.g., passenger cars and trucks, commercial on-road trucks), the relatively low populations of construction-related equipment means this equipment is not yet widely available or used by construction contractors. Development and wide deployment of electric or alternatively fueled construction equipment would lower the GHG impacts of this and many other construction projects but is clearly beyond the scale of this project.

Operation

Emissions of GHGs from the operation of the new CDC would be similar in nature to the emissions resulting from the operation of the existing CDC. Emissions would primarily result from the transportation of children to and from the center, commuting of CDC staff to and from the center, and heating and cooling of the building to maintain acceptable interior temperatures. Heating would be accomplished through direct fossil fuel combustion (likely to be natural gas) or through electrical resistance heating or heat pumps, while cooling would be accomplished through electrical cooling systems (air conditioners or heat pumps).

Under the Preferred Alternative, the CDC's capacity would increase, enabling parents to use the facility for their children who would otherwise use an alternative CDC in a different location. There is no information on whether alternative CDCs are closer to or further from potential clients' residences compared with the Preferred Alternative site's location so it is reasonable to assume that overall transportation distances would be similar. Accordingly, overall emissions of GHGs from transporting CDC clients to and from the center would remain similar, if different in the precise locations of the emissions. In the same way, new staff at the new CDC, brought on board to accommodate the increased capacity of the center, would produce GHG emissions from their commuting to and from the center, but it is reasonable to assume that the new staff members would otherwise be employed at other locations in the area, resulting in similar levels of GHG emissions.

With regard to the GHG emissions from building operations under the Preferred Alternative, the new building would result in GHG emissions from heating and cooling in the same manner as the existing building. Being larger, there would be more air volume to treat than in the existing building. Offsetting the increased heating and cooling volume would be more energy efficient heating and cooling appliances and more energy efficient building design and construction. As an example, the U.S. Department of Energy estimated in 2015 that air conditioners use approximately 50% less energy and furnaces use about 10% less energy than in 1990 (USDOE 2024). The net effect is

likely to be a net reduction in energy usage and resulting GHG emissions despite the larger building footprint.

No Action Alternative

Under the No Action Alternative, the current capacity of the CDC would remain the same and the additional children who would be accommodated under the Preferred Alternative would likely attend a different CDC, resulting in the generation of similar volumes of GHGs within the area as would occur under the Preferred Alternative. The current CDC would continue to operate in an older building with heating, ventilation, and air conditioning (HVAC) systems operating beyond their service life with lower energy efficiency than new equipment would have.

3.7 Traffic and Transportation

3.7.1 Affected Environment

Fort Hamilton's transportation infrastructure supports personnel, residents, and visitors. Motor vehicles, bicycles, and walking are the primary modes of transportation on Fort Hamilton. Fort Hamilton is accessible by three ACPs on 101st Street, 7th Avenue, and Poly Place. The 101st Street ACP is located on John Warren Avenue in western Fort Hamilton under the Verrazano-Narrows Bridge. The 101st Street ACP is the main ACP and has a visitor control center. All shipments enter and exit through the 101st Street ACP. The 7th Avenue ACP is on Wainwright Drive by the Brooklyn Veterans Hospital in northern Fort Hamilton. The Poly Place ACP is on Poly Place next to the 7th Avenue ACP. The Poly Place ACP is currently closed. The 101st Street and 7th Avenue ACPs lead traffic to John Warren Avenue, Fort Hamilton's largest east-west road that runs through the center of the Installation. John Warren Avenue connects to many of Fort Hamilton's other main and side roads, providing access to the Installation's facilities and residential areas.

Sterling Drive is a main east-west road that runs along the southern edge of Fort Hamilton and connects to John Warren Avenue, forming a loop around the southern half of the Installation. White Avenue and Schum Avenue are two main north-south roads connected to John Warren Avenue in western Fort Hamilton that provide access to the Installation's facilities and parking lots. Grimes Road and MacArthur Road are two main north-south roads connected to John Warren Avenue that provide access to the primary residential area in southeastern Fort Hamilton. A network of side roads connects to the main roads. Most of the side roads have a single row of parking spaces. Paved pathways line most of the roads within Fort Hamilton for pedestrian circulation.

3.7.2 Environmental Consequences

Preferred Alternative

Construction

Construction is expected to start between 2027 and 2030 and have an approximately two-year duration. Construction would have a minor, short-term impact on the flow and volume of traffic at the 101st Street ACP, Sterling Drive, John Warren Avenue, White Avenue, and Schum Avenue (**Figure 2-2**). Standard construction equipment and vehicles would be used such as dump trucks, flatbed trucks, concrete trucks, pickup trucks, excavators, and paving equipment. Although a two-year construction duration is anticipated, the volume of construction traffic would vary throughout the project. During the heaviest periods of construction, multiple trucks would use the proposed access route daily to deliver materials to the site and remove construction waste. During lighter periods of construction, trucks would enter and leave the Installation occasionally.

Construction would have a minor, short-term impact on parking. A staging area for equipment and materials is proposed on the southern half of the paved parking lot on White Avenue, directly across from the construction site. The southern entrance to the White Avenue parking lot and approximately 55 parking spaces would be temporarily closed during construction for staging. The White Avenue parking lot would reopen once the staging area is no longer needed. Workers would park their personal vehicles in the staging and construction areas to the greatest extent practicable. In addition, the existing gravel parking lot at the Preferred Alternative site would be demolished. However, demolition of the existing gravel parking lot would not impact parking because the lot was closed in 2023 due to persistent flooding.

The sections of White Avenue and Schum Avenue within the alignment of the proposed CDC facility would be repaved with traffic lines repainted. Repaving would likely require temporary road closures which would have a minor, short-term impact on traffic flow. Temporary road closures may also be needed during other stages of construction to maintain safety. Each road closure could last several days. Pedestrian pathways within the construction area may also be temporarily closed for safety during construction, resulting in a minor, short-term impact to pedestrian circulation.

Best practices would be implemented during construction to minimize short-term impacts to traffic and transportation. During construction, increased local traffic congestion would be minimized by using signs and flaggers as necessary to control traffic. Construction areas would be clearly marked and fenced off for safety and security. White Avenue and Schum Avenue would not be fully closed at the same time during construction to maintain north-south access within northwestern Fort Hamilton. Work would be performed during daylight business hours to the greatest extent practicable. Although pathways within the construction footprint would be closed to pedestrians during construction, there is an existing network of alternative pathways that could be used as a detour. Although a portion of the White Avenue parking lot would be closed for staging during construction, there are alternative parking locations in northwestern Fort Hamilton that are available, including street parking and seven other parking lots. For these reasons, construction would not have a significant impact on traffic and transportation.

Operation

Once constructed, the proposed CDC facility would typically operate year-round from 6:00 a.m. to 6:00 p.m. on weekdays. Some localized traffic congestion may occur and would be limited to when children are picked up and dropped off. To minimize local traffic congestion, 12 existing parking spaces on Schum Avenue would be dedicated to drop off and pickup, and 20 new parking spaces would be built. In addition, new pedestrian pathways would be installed around the proposed CDC facility, providing additional circulation and access. A dedicated parking space would also be constructed on White Avenue for routine tractor trailer deliveries to the new CDC facility. Approximately 12 truck deliveries are expected per month. The truck delivery space would allow tractor trailers to safely park on White Avenue without blocking traffic. For these reasons, operation would not have a significant impact on traffic and transportation.

No Action Alternative

The No Action Alternative would continue CDC operations at the existing facility and no new facility construction would occur. Therefore, traffic and transportation would not be impacted during implementation of the No Action Alternative.

3.8 Hazardous Materials and Waste

3.8.1 Affected Environment

Fort Hamilton is located in a densely populated urban environment of the New York City Metropolitan area, in Brooklyn, New York. The property is located within Fort Hamilton and is vacant, unoccupied land containing no present-day developments, buildings, structures, or operations. According to a demolition report prepared in Fiscal Year 2011, and Fort Hamilton personnel, the property was previously developed with a building identified as “Building 110” which served as a Lodging Facility or “guest house, UOX Transit Bachelor’s Quarters” (All Phase Services 2011). Neighboring properties consist of a hotel, parking lot, commissary and Garrison Headquarters.

Existing historical site records were provided by the Installation, and additionally obtained from the New York Department of Environmental Conservation (NYSDEC) Info Locator Database⁴ for review, to further assess the environmental condition of property of the site related to potential hazardous, toxic, radioactive waste (HTRW) related concerns. Several historical spill records were identified associated with the property and former Building 110, related to releases of petroleum product (heating oil) from former underground storage tanks. While petroleum is not a chemical regulated under the Comprehensive Environmental Response, Compensation, and Liability Act, releases of petroleum to the environment are relevant to the review of contaminants and exposures. These Spill Records are listed on the NYSDEC database as Spill Numbers 1105054, 0809004, and 0312460, discussed in more detail below:

Spill number 0312460 was issued to the site in 2004 when approximately 20-gallons of petroleum product (heating oil) was inadvertently released to the environment due to human error overfilling an underground storage tank (Tank 110N). According to the spill report (Laurel Environmental Associates, LTD 2007), soil samples were collected in the spill area at depths ranging from 18-inches to three feet below ground surface and analyzed for volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs). The sample results indicated that no VOCs or SVOCs were present, with the exception of Chrysene at 170 parts per billion (ppb), and Fluoranthene at 430 ppb in one sample. The report explains that while these contaminants are present, with Chrysene exceeding the Recommended Soil Cleanup Objectives at the time of 61 ppb, and Fluoranthene below the Recommended Soil Cleanup Objectives of 50,000 ppb, they are not likely to be associated with the petroleum spill, but rather with potential historic fill material that may be present at the site. Historic fill describes any imported material used for the purposes of raising the topographic gradient of a site, which may potentially be contaminated prior to placement with byproducts of industrial processes, construction/demolition debris, dredge spoils, incinerator and/or coal ash, and other waste materials from its origin site unless proven otherwise. This spill is reported as closed as of 7 February 2008 on the NYSDEC database.

Spill numbers 0809004 and 1105054 were issued to the site in 2008 and 2011, respectively, when an unknown quantity of heating oil from two 10,000-gallon underground storage tanks (Tank 110S and 110N) were inadvertently released to the environment due to an equipment failure. According to USAG Fort Hamilton records, remedial actions occurred. Subsequently both tanks and associated appurtenances were emptied, cleaned of all products and associated sludge, and

4

https://giservices.dec.ny.gov/gis/dil/?_gl=1*1t0kdcg*_ga*MTQ5MDE4NDAYMC4xNzA2NTU1NDEz*_ga_QEDRGF4PYB*MTcyMjM3NDQ4MS45LjAuMTcyMjM3NDQ4MS4wLjAuMA

removed per New York City regulations. A total of 30-yards of impacted soil was excavated and removed for disposal off-site. Post excavation samples were collected confirming the contaminated soils were fully excavated. According to the tank closure and remediation report, groundwater was not impacted by the spills (Action Remediation, Inc. 2011). Both spill numbers are reported closed as of 18 November 2011 on the NYSDEC database.

Subsequently, the property was prepared for demolition and building removal. As part of the pre-demolition process, regulated materials such as PCB containing equipment, mercury-containing thermostats and light bulbs, and asbestos containing materials (ACM) were abated and removed for disposal and/or recycling from the facility. Following demolition, construction debris and waste (e.g. concrete, granite, building rubble, soil etc.) was dismantled, excavated, and disposed of off-site. Clean fill was imported to the site to fill in the excavation cavities (including the former swimming pool) and return the site to grade (All Phase Services 2011).

While no impacts to groundwater were reported during the previous spills or reportedly identified during demolition, a monitoring well is present in the approximate center of the site. Records indicate the monitoring well purpose was to support the engineering and design geotechnical investigation that occurred at the site in 2023, documented in the 60% design geotechnical report prepared in 2024 (USACE 2024). The monitoring well was installed to a depth of 100 feet below ground surface and used to measure groundwater depth conditions. No environmental sampling data are available from this monitoring well, therefore, the environmental condition of groundwater beneath the site is unknown.

3.8.2 Environmental Consequences

Preferred Alternative

Construction

The new CDC facility would consist of educational and childcare operations that are not anticipated to contain hazardous materials or wastes generation and handling. Petroleum products (e.g. diesel fuel) are anticipated to be used onsite during construction activities, related to the use of diesel-powered construction equipment. Spill prevention measures would be utilized during construction to prevent spills in compliance with USAG Fort Hamilton's Spill Prevention, Control, and Countermeasures (SPCC) Plan, and Stormwater Management Plan (SMP) for construction activities.

While the historical spill cases associated with petroleum product releases have been closed with the NYSDEC, the report documenting the closure of Spill Number 0312460 indicated the likely presence of historic fill material at the site. Aside from the mentioned reported clean fill used to backfill excavation cavities, the subsurface soil and groundwater conditions beneath the site and areas backfilled are unknown. Prior to construction, a Phase I Environmental Site Assessment (ESA) and/or Phase II Environmental Site Investigation (ESI) would be performed at the property to determine if historic fill material and any other Recognized Environmental Conditions (RECs) are present that may affect the construction of the CDC, as well as to inform the construction design of the new facility. Any potential RECs identified would be mitigated prior to construction to ensure no risks to human health or the environment are present in the soil or groundwater at the site that could affect the construction and/or operations of the CDC. BMPs and additional mitigation measures may be considered for areas of the property as necessary, such as the installation of vapor barriers if deemed necessary. As part of the construction activities, it is

understood that the existing gravel and subsurface soils would be removed and disposed of off-site to make way for the building foundation and footings. Materials excavated and removed from the site, and any waste generated as part of construction activities, would be properly managed and disposed in accordance with local, state, and federal regulations for material waste handling and disposal.

Operation

The operations of the new CDC facility would consist of educational and childcare operations that are not anticipated to contain hazardous materials or waste generation and handling; therefore, no impacts are anticipated.

No Action Alternative

The No Action Alternative would continue CDC operations at the existing facility and no new facility construction would occur. Therefore, hazardous material and waste related impacts associated with no action would not be anticipated.

3.9 Noise and Vibration

3.9.1 Affected Environment

Sound is a physical phenomenon consisting of vibrations that travel through a medium, such as air, and are sensed by the human ear. Noise is generally defined as unwanted sound that may interfere with communication, damage hearing, and/or diminish the quality of the environment. Human response to noise varies depending on the type and characteristics of the noise, such as distance between the noise source and the receptor, receptor sensitivity, and time of day.

Sound is characterized by intensity and frequency. Intensity is the physical measurement of sound pressure level, described in decibels (dB). The dB is a logarithmic unit that expresses the ratio of sound pressure level to a standard reference level. Loudness is not directly proportional to sound intensity because dB is logarithmic. For example, 20 dB is 10 times more intense than a sound at 10 dB. Frequency is the physical measurement of sound in cycles per second, measured in Hertz. The perception of frequency is pitch, such as low-pitched and high-pitched sounds. The human ear responds differently to different frequencies. "A-weighting", measured in A-weighted decibels (dBA), approximates how the human ear perceives a sound based on frequency. Common sounds encountered in daily city life and their dBA levels are provided in **Table 3-2**.

Table 3-3. Common Sources of Sound

Common Sources of Noise	Average Sound Level (dBA)
Whisper	30
Normal conversation/laughter	50-65
Vacuum cleaner at 10 feet	70
Midtown Manhattan traffic	70-85
Motorcycle	88
Lawnmower	85-90
Train	100
Jackhammer/power saw	110
Thunderclap	120

Common Sources of Noise	Average Sound Level (dBA)
Nearby jet takeoff	110 - 120

Source: NYC DEP 2018

The A-weighted day-night average sound level (DNL) is a noise metric that was developed to reflect a person's cumulative exposure to sound over a 24-hour period. DNL is defined as the average sound energy in a 24-hour period with a 10-dB penalty added to the nighttime levels (10:00 p.m. to 7:00 a.m.). DNL is a useful descriptor for noise because it averages ongoing yet intermittent noise and measures total sound energy over a 24-hour period.

The Noise Control Act of 1972 (42 USC 4901 *et seq.*) establishes a national policy to promote an environment free from noise. According to the USEPA, outdoor DNLs characteristic of urban environments like Fort Hamilton range from 60 to 85 dBA (USEPA 1974). The USEPA recommends maintaining environmental noises below 70 dBA over 24-hours to prevent noise-induced hearing loss and 55 dBA over 24-hours outdoors and 45 dBA over 24-hours indoors to prevent activity interference and annoyance (USEPA 1974). The primary source of existing noise on Fort Hamilton is vehicular traffic on the Verrazano-Narrows Bridge and the Belt Parkway, located west and south of the Installation, respectively. Other sources of noise on Fort Hamilton are typical of urban environments such as local vehicular traffic, airplanes flying overhead, and motorized equipment. Sensitive noise receptors on Fort Hamilton include residential and recreational areas, including the Holiday Inn Express next to Preferred Alternative site.

Vibration is generally defined as rhythmic repetitive motion that may be experienced from a particular extraneous media such as the ground or equipment. The duration of constant repetitive motion can cause disturbances in the environment both naturally (e.g., an earthquake) and mechanically (e.g., large vehicles, equipment, and machinery), as well as occupational hazards to the human body having the potential to cause injury from prolonged exposure (e.g., jack hammer). Vibration levels are a function of the source strength, the distance between the equipment and the structure, characteristics of the transmitting equipment, and the receiver structure condition.

3.9.2 Environmental Consequences

Preferred Alternative

Construction

There would be a short-term increase in localized noise and vibration generated during the construction. Short-term increases in noise and vibration would be due to heavy construction activities such as site preparation, excavation, roadway repaving, and building construction. Existing structure demolition would not be needed because Building 110 was already demolished at the site in 2012. Some intermittent construction noise and vibration would be generated by trucks entering and leaving the construction and staging areas to deliver materials and haul waste. Typical noise levels associated with outdoor construction are provided in **Table 3-3**. With multiple items of equipment operating concurrently, noise levels can be relatively high during daytime periods at locations within several hundred feet of active construction sites. Receptors within several hundred feet of the Proposed Alternative site include the Holiday Inn Express, Garrison Headquarters, Military Entrance Processing Station, commissary, Building 114, and Building 111. The following BMPs are recommended to minimize disturbance from noise and vibration:

- Perform construction during normal weekday business hours. Avoid unnecessary late night and weekend construction.
- Ensure that equipment mufflers are properly maintained and in good working condition.
- Notify occupants adjacent to construction areas of the construction activity and anticipated duration of construction prior to the onset of work.
- Where feasible, implement engineering controls such as noise barriers.
- Monitoring may be used to determine if vibration levels are potentially damaging to nearby structures (see **Section 3.10**).

Table 3-4. Noise Levels Associated with Outdoor Construction

Construction Type	Equipment	Noise Level (dBA) at 50-ft
Earth moving	Compactors, front loaders, backhoes, tractors, scrapers/graders, pavers, trucks	70-95
Materials handling	Concrete mixers and pumps, cranes	75-90
Stationary	Pumps, generators, compressors	70-80
Impact	Pneumatic wrenches, jack hammers and rock drills, pile drivers	80-100
Other	Vibrator, saws	70-80

Source: USEPA 1971

Noise and vibration levels would vary throughout the construction period depending on the construction activity and equipment used. There would be periods of relative quiet outside of the construction workday and between heavy construction activities such as excavation. Construction noise and vibration would be short-term and limited to the time it takes to complete each construction activity. BMPs would be implemented as necessary to minimize noise and vibration. For these reasons, construction would not have a significant impact with respect to noise and vibration.

Operation

Operation of the proposed CDC facility is expected to generate noise from routine activities such as vehicular traffic, truck deliveries, and recess. Operation would not generate vibration. Operational noise would be minor and equivalent to existing, background noise levels on Fort Hamilton.

The proposed CDC facility would be approximately 250 feet from the Verrazzano-Narrows Bridge, a primary source of noise on Fort Hamilton. Sound generally decreases as distance to the sound source increases. This decrease is known as “drop-off.” Levels of highway noise typically range from 70-80 dBA at a distance of 50 feet from the highway. Generally, sound levels from a line source (e.g., moving traffic) produce a 3 dBA decrease for each doubling of distance, or a 4.5 dBA decrease per distance doubling over soft ground, such as lawn. Assuming a 3 dBA decrease for each doubling distance, noise levels from the Verrazzano-Narrows Bridge are estimated to be 64-74 dBA at the Preferred Alternative site.

Adults and children would be exposed to highway noise at the Preferred Alternative site due to its proximity to the Verrazzano-Narrows Bridge. Exposure to highway noise would be limited to outdoor activities, such as recess. On a typical day, children and staff would have up to 30 minutes of outdoor time two-to-three times per day for activities like recess. Highway noise could cause minor disturbances during outdoor activities, such as annoyance. However, the duration of

highway noise exposure would be short-term and minor and would be offset by periods of relative quiet experienced indoors. Furthermore, features that muffle noise would be incorporated into the design, such as tree and shrub plantings around the perimeter of the playground fencing. With respect to indoor noise, the new CDC building would be constructed using insulated building materials in accordance with standard UFC requirements. The indoor environment is therefore unlikely to be affected by highway noise. For these reasons, operation would not have a significant impact with respect to noise and vibration.

No Action Alternative

The No Action Alternative would not generate any noise or vibration related to construction. Operational noise and vibration levels at the existing CDC facility would remain the same. Therefore, the No Action Alternative would not have a significant impact on noise and vibration.

3.10 Cultural and Historic Resources

3.10.1 Affected Environment

Cultural resources are historic properties as defined by the National Historic Preservation Act (NHPA), cultural items as defined by the Native American Graves Protection and Repatriation Act (NAGPRA), archaeological resources as defined by the Archaeological Resources Protection Act, sacred sites as defined by EO 13007 to which access is afforded under the American Indian Religious Freedom Act, and collections and associated records as defined by 36 CFR 79. NEPA requires consideration of “important historic, cultural, and natural aspects of our natural heritage.” Consideration of cultural resources under NEPA includes the necessity to independently comply with the applicable procedures and requirements of other federal and state laws, regulations, EOs, Presidential Memoranda, and Army guidance.

The NHPA of 1966, as amended (Public Law 89-665; 54 USC §300101 et seq.), establishes the policy of the federal government to provide leadership in the preservation of historic properties and administer federally owned or controlled historic properties. Section 106 of the NHPA (54 USC §306108) requires federal agencies to consider the effect an undertaking may have on historic properties; its implementing regulations, 36 CFR Part 800, describe the procedures for identifying and evaluating historic properties; assessing the effects of federal actions on historic properties; and consulting to avoid, reduce, or minimize adverse effects. The Proposed Action is a federal undertaking as defined by 36 CFR §800.3.

In accordance with Section 106 of the National Historic Preservation Act, its implementing regulations, and the specific legal requirements described in Chapter 6 of AR-200-1, an assessment of effects to cultural resources was performed for the CDC that included a review of the history of the project area, previously documented historic properties and archaeological sites, and a site visit to document current conditions at the site and to determine if there are any structures within the proposed project area and vicinity with the potential for NRHP eligibility that may be impacted by the Proposed Action. Coordination for the Proposed Action has been initiated and is ongoing.

Much of the history for the project area can be found in the Cultural Resources Management Plan (ICRMP) for Fort Hamilton (DPW 2020). New York City and Brooklyn itself have a long history of use and habitation. The area now occupied by Fort Hamilton was part of the village of New Utrecht settled by the Dutch in 1657. New Utrecht was originally part of the Nayack patent, one of two

tracts of land on Long Island purchased by Augustine Herman for Cornelis van Werckhoven in 1652 (DPW 2020). Van Werckhoven was a member of the Dutch government and a speculator in colonial lands. The Nayack patent was named after the historic Native American village of Nayack which enclosed present day Fort Hamilton. With the arrival of the Dutch, the forests in and around lower New York City were cleared for small farms and later, larger settlements. This only intensified with the military occupation of New York City. Colonial forces built an earthen battery at the site in 1776 during the Revolutionary War. The site was later captured by British and Hessian troops until 1783 (DPW 2020). Between 1825 and 1831 the masonry casemate fort and earthen redoubt of Fort Hamilton was built.

In addition to the military and colonial history of the area there are also reports of Native American artifacts and habitations at Fort Hamilton. These reports are derived from old sources and have not been field verified (DPW 2020). The Integrated Cultural Resource Management Plan (ICRMP) for Fort Hamilton listed these reports as:

- “(1) “A cache of stone and flint blades found at the Narrows in 1837. Furman says that the quantity was a wagonload” (Parker 1922:582). This is site number 1 in Arthur C. Parker's inventory of Kings County archaeological sites. The reference is to Gabriel Furman, *Antiquities of Long Island* (1874). This site is also referenced in Bailey (1840:6), who refers to the artifacts as "arrow-heads" and "axes.”
- (2) Parker (1922:Plate 179) illustrates "traces of occupation" at Fort Hamilton.
- (3) Bolton's site number 68, Fort Hamilton (see Letter B on Figure 3.18): "Shell beds indicated occupation, probably as a fishing camp" (Bolton 1934:147; see also Bergen 1884:255).
- (4) Bolton's site number 68, Nayack, The Narrows. Bolton (1934:147) states: "This is supposed to have been the place to which the natives of Werpoes removed after the sale of Manhattan." Bolton also notes Furman's (1874) report of a large cache of flint blades found here.” (DPW 2020)

A review of the New York State Historic Preservation Office (CRIS) database confirmed there are no precontact-period archaeological sites within the Fort Hamilton reservation. However, the area is labeled as archaeologically sensitive as a result of the reported Parker sites, which were subsumed under the number New York State Museum (NYSM) 3611.

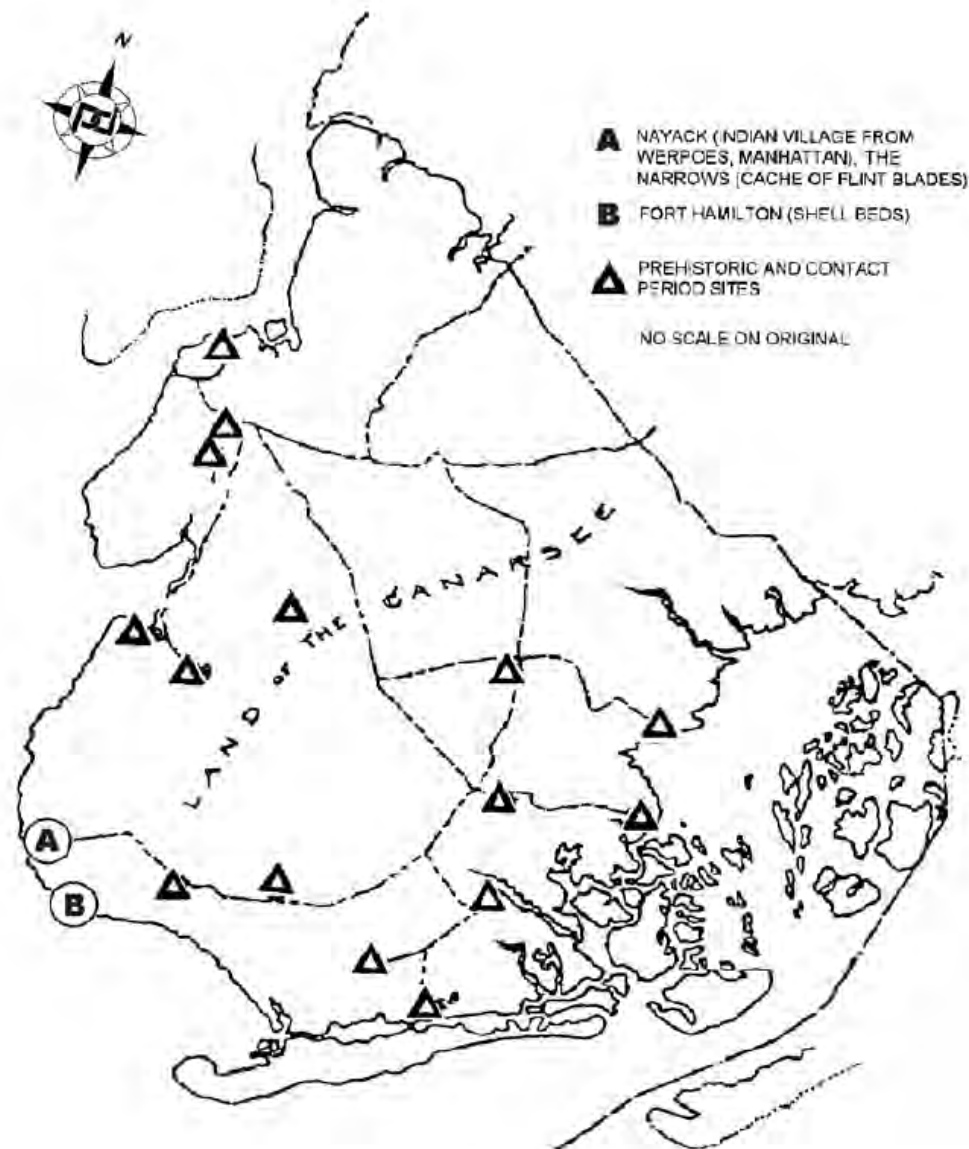
There are four potential historic period archaeological sites that have been noted at Fort Hamilton (DPW 2020). These are:

- (1) A filled stone well or cistern beneath an asphalt road between Buildings 230 and 207. Reported by Mr. Russell Gilmore, then curator of the Harbor Defense Museum, this feature of unknown age was exposed during road work in 1980. This site does not have an official site number. This site is located approximately 1,260 feet from the Area of Potential Effect (APE).
- (2) Nineteenth-century deposits and possible building remains surrounding Building 117, possibly associated with a complex of four buildings of which only Building 117 is still standing (site A047-01-0423 [renumbered A04701.000423]). This area was subjected to archaeological investigations and architectural

evaluations, which have concluded that the site does not meet the eligibility criteria for inclusion in the NRHP. This site is located approximately 600 feet from the APE.

- (3) Late nineteenth-century/early twentieth-century artifact deposits and possible displaced foundation stones associated with two former buildings (site A047-01-0424 [renumbered A04701.000424]). This site is in the northern section of the former parade ground, 150 feet east of the reviewing stand and 100 feet south of Building 302. This site was investigated through a Phase II archaeological survey conducted in August 2003, which determined the site not eligible for inclusion in the NRHP. This site is located approximately 1500 feet from the APE.
- (4) A possible filled-in cellar hole south of Building 312; the feature is near the approximate location of Simon Cortelyou's house. This site does not have a formal site number." (DPW 2020). This site is located approximately 2100 feet away from the APE.

No historic period archaeological sites have been identified within the proposed project area.



**Figure 3-1. Location of precontact and contact period sites in the Borough of Brooklyn.
Fort Hamilton ICRMP 2020**

Three buildings on the installation are listed in the National Register of Historic Places (NRHP): (1) Building 207, the Casemate Fortification; (2) Building 220, the Sentry Station; and (3) Building 230, the Caponier. All of these listed buildings are located approximately 1,300 feet from the APE. In addition, there are three structures that have been determined eligible for listing in the NRHP Building 113, Building 201, and the Denyse Wharf (DPW 2020). Of those three eligible buildings only Building 113 is located in proximity to the project area. Building 201 and Denyse Warf are, 900 and 2,000 feet away respectively (Figure 3-3).

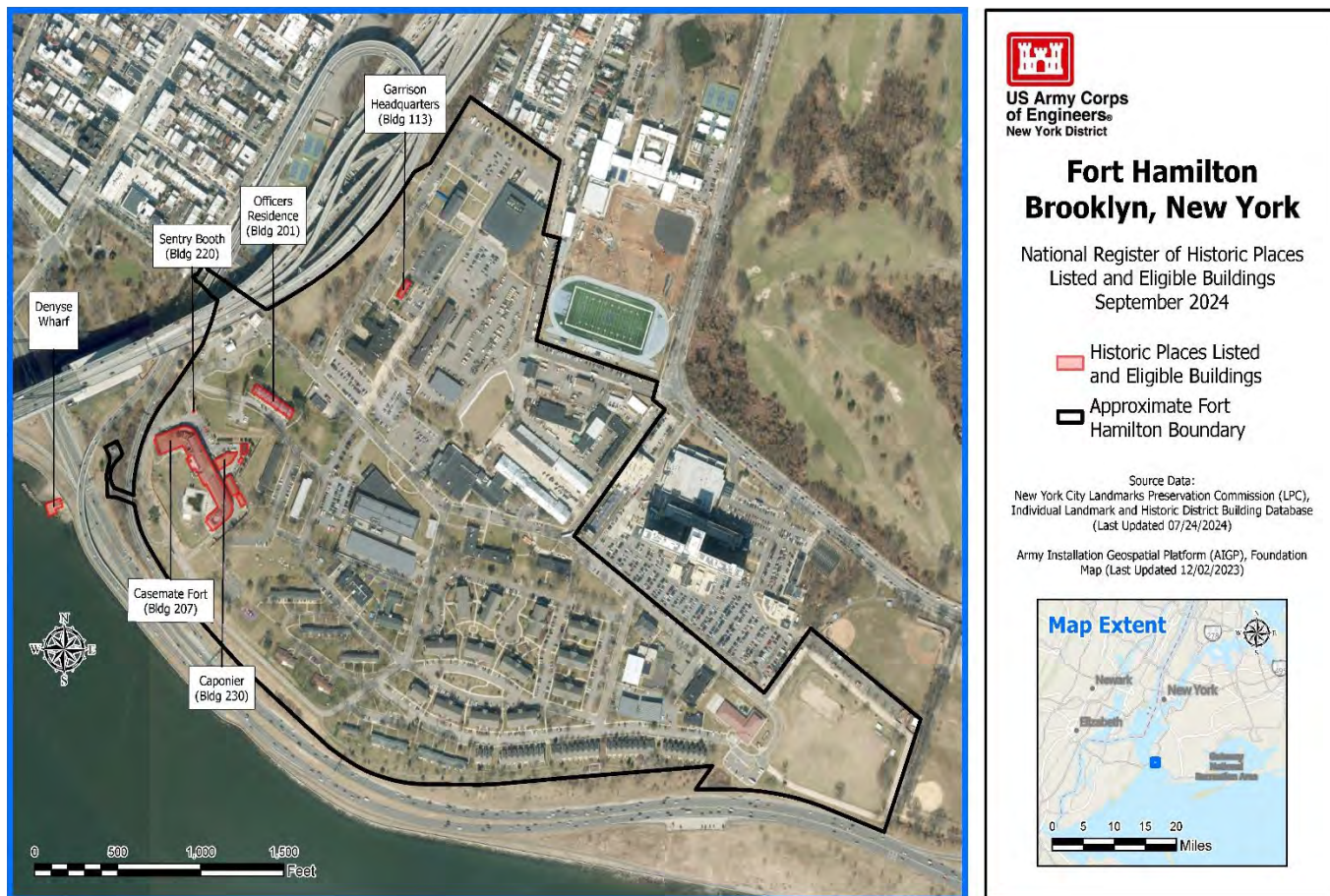


Figure 3-2. Locations of the NRHP Listed and Eligible Buildings

3.10.2 Environmental Consequences

The physical APE for the CDC consists of the parking lot and associated open areas between the Garrison Headquarters (Building 113) and The Holiday Inn (Building 107). Proposed activities would include construction of the CDC building itself as well as playgrounds, new parking areas and pathways. This APE has had various uses throughout the history of Fort Hamilton. Most recently it was used as a gravel parking lot with a grassy area and trees. However, the parking lot fell into disuse due to sinkholes developing across the lot. Prior to that the site was home to a set of barracks (Building 110). This building was evaluated in 1999 and deemed not eligible for the NRHP. It, along with two other buildings, 109 and 111 were demolished in 2010 -2011 to make way for the current parking lot and Holiday Inn. The area of Building 110 is the APE for CDC (see red square in **Figure 3-3**). In addition, the APE includes a staging area directly east of the proposed project site (see yellow rectangle in **Figure 3-3**).

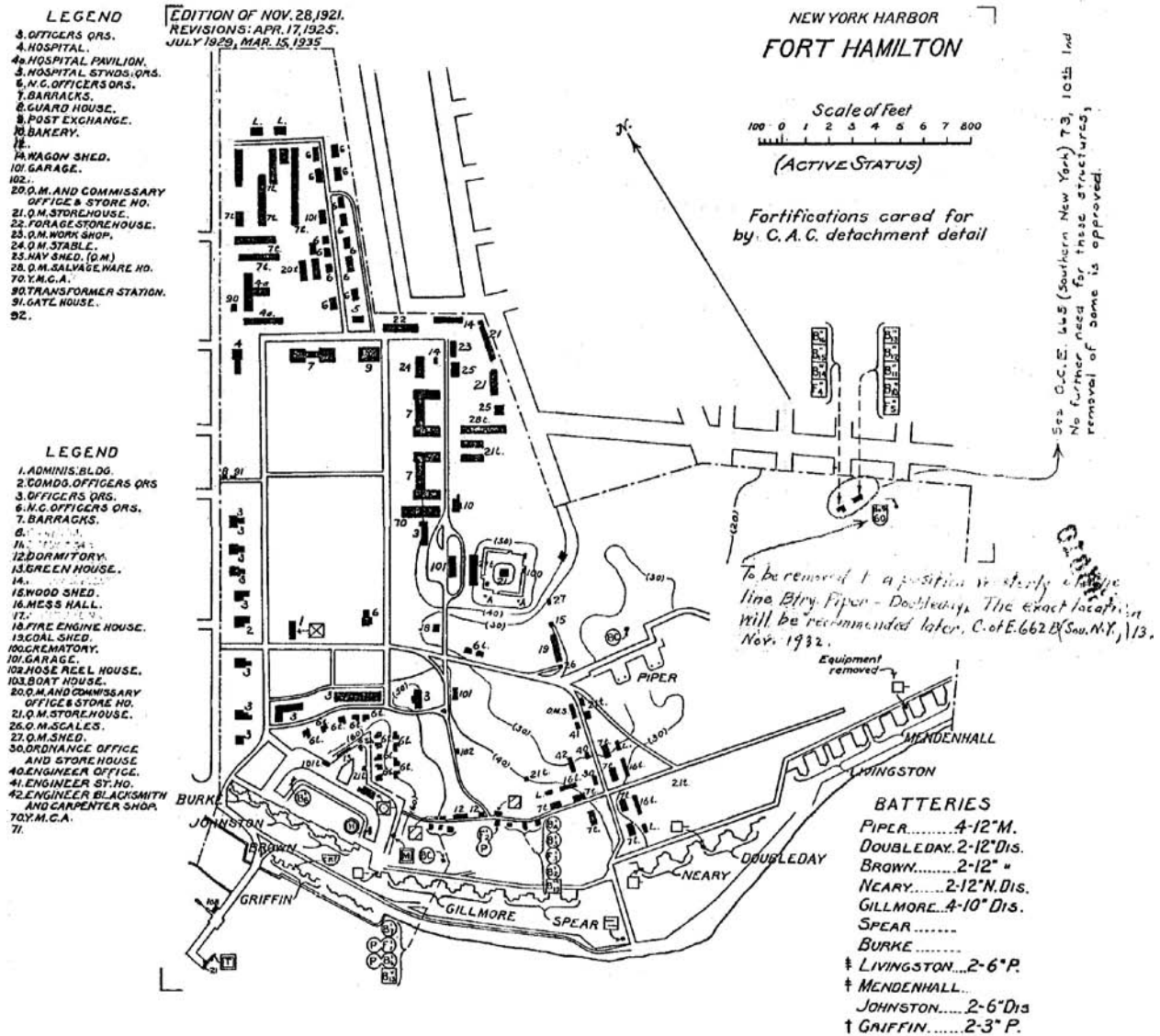


Figure 3-3. Map of Fort Hamilton in 1935 showing the location of former barracks, Building 110. Fort Hamilton ICRMP, Brooklyn, Kings County, New York (Harbor Defense Museum Archives).

The neighboring building to the south of the APE is the current Garrison Headquarters (Building 113). This building has been determined eligible for listing in the NRHP. Building 113 was built in 1925 as the YMCA building. The building is eligible under Criteria C, as it "embodies the distinctive characteristics of a type, period or method of construction. It is an intact example of Gregorian Revival style military architecture. It is also one of the Installation's best examples of non-defensive architecture associated with an era of development between the two world wars." (NRHP Evaluation form 1999).

In 1986, a cultural sensitivity survey was done for Fort Hamilton and revised in 2020. The 1986 survey determined that almost all areas of the Installation have high potential for the presence of

cultural resources (Klein et al. 1986, DPW 2020). Klein et al. (1986) established a system for classifying areas within Fort Hamilton on the basis of general archaeological sensitivity. Their classification was based on the assumption that, “prior to the late nineteenth century, all areas in the installation had high degrees of sensitivity for precontact period and early historic archaeological resources. Since the late nineteenth century, portions of the fort have been modified to varying degrees during episodes of construction and demolition.” (DPW 2020). In the years since the 1986 survey many areas on Fort Hamilton have changed with new buildings being built and other structures demolished.

Klein et al. (1989) identified 155 potential Euro-American archaeological sites in adjacent areas and reported a high sensitivity within Fort Hamilton for early historic sites. These sites cannot be accurately located due to the loss of the mylar map identifying the location of these sites. The survey also defined eighteen ground disturbance areas (GDAs) on the basis of ground disturbance or potential disturbance documented on maps and construction plans. The archaeological sensitivity assessment was updated in 2020 for the 2020 ICRMP. This survey used modern survey techniques, high resolution 1924 arial photography, and a geophysical investigation to further investigate areas of potential sensitivity as defined by Klein.

Fort Hamilton was broken down into 19 sensitivity areas. This sensitivity analysis describes the location of previous surveys, disturbance assessment, depth of fill levels, sites identified and ultimately a sensitivity determination for the entire Garrison. The APE (former location of Building 110) is included in Sensitivity Area 7. Sensitivity Area 7 includes the area around and between buildings 107 and 113. This area is described as containing two feet of fill covering the entire area as well as distinct areas of disturbance due to construction, demolition and utilities. Based off this analysis, Area 7, and therefore the APE, is believed to have a moderate potential for both European and Native American resources at depths below 2 feet.

Preferred Alternative

The Preferred Alternative was evaluated under Section 106 for both direct and indirect effects of construction, operation, and maintenance to cultural resources.

Construction

There are no known archaeological sites or historic properties located within the physical APE for the Preferred Alternative. The APE has been affected by episodes of construction and demolition and utilities related disturbances. Building 110, previously located on the site was determined not eligible for the NRHP and demolished in 2012. Another building that was located northwest of Building 113 in the western portion of the APE was demolished before 1951. Although it is anticipated that the APE is affected by disturbances, limited areas around and between the demolished buildings and Building 113, located at depths below the two feet of fill or more, are believed to have a moderate potential for archaeological resources. Currently, more than fifty percent of the APE is covered by gravel fill, making archaeological investigations impractical in advance of construction. Therefore, to ensure the Proposed Action would not have an adverse effect on cultural resources, archaeological monitoring would be employed for all construction below the two feet of documented fill in previously undisturbed areas to ensure any undocumented historic or Native American archaeological remains are documented. Any significant archaeological discoveries and procedures for documenting those resources and avoidance, minimization, or mitigation of effects would be coordinated with the NYSHPO, the NYCLPC, and other consulting parties including Tribes, as appropriate.

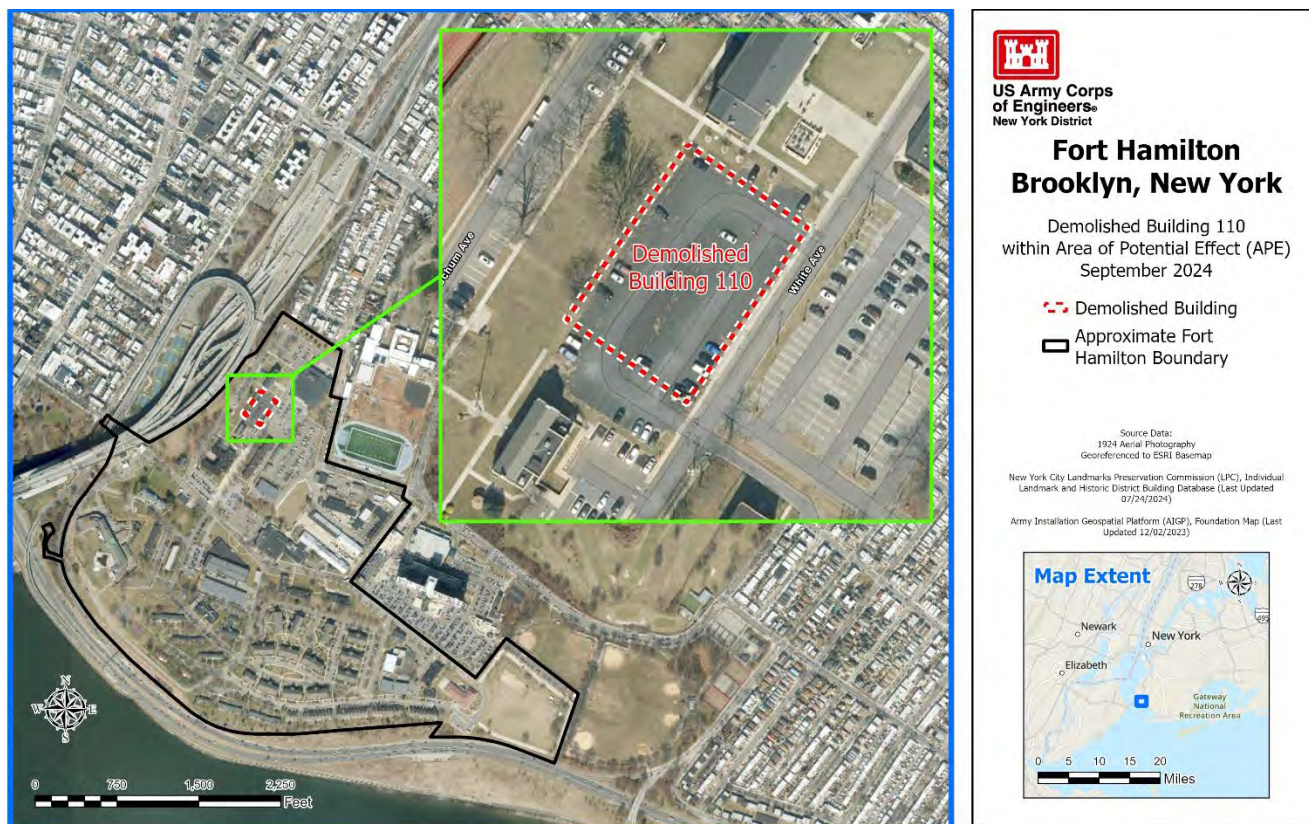


Figure 3-4. Footprint of Demolished Building 110 on current APE

The staging area, the parking lot directly across the street from the proposed project site, (Sensitivity Area 17) also has a moderate level of archaeological sensitivity. The sensitivity analysis performed for the Installation described the areas within Sensitivity Area 17 currently beneath parking lots, as likely not having been disturbed by construction and/or demolition of large buildings or structures (DPW 2020). Therefore, the staging area is considered sensitive for archaeological deposits related to nineteenth century uses of the Installation, however, the use of the lot as a staging area would have no effect on buried resources. The area would not be excavated for the proposed project, nor would any construction take place on the parking lot and that could disturb archaeological deposits.

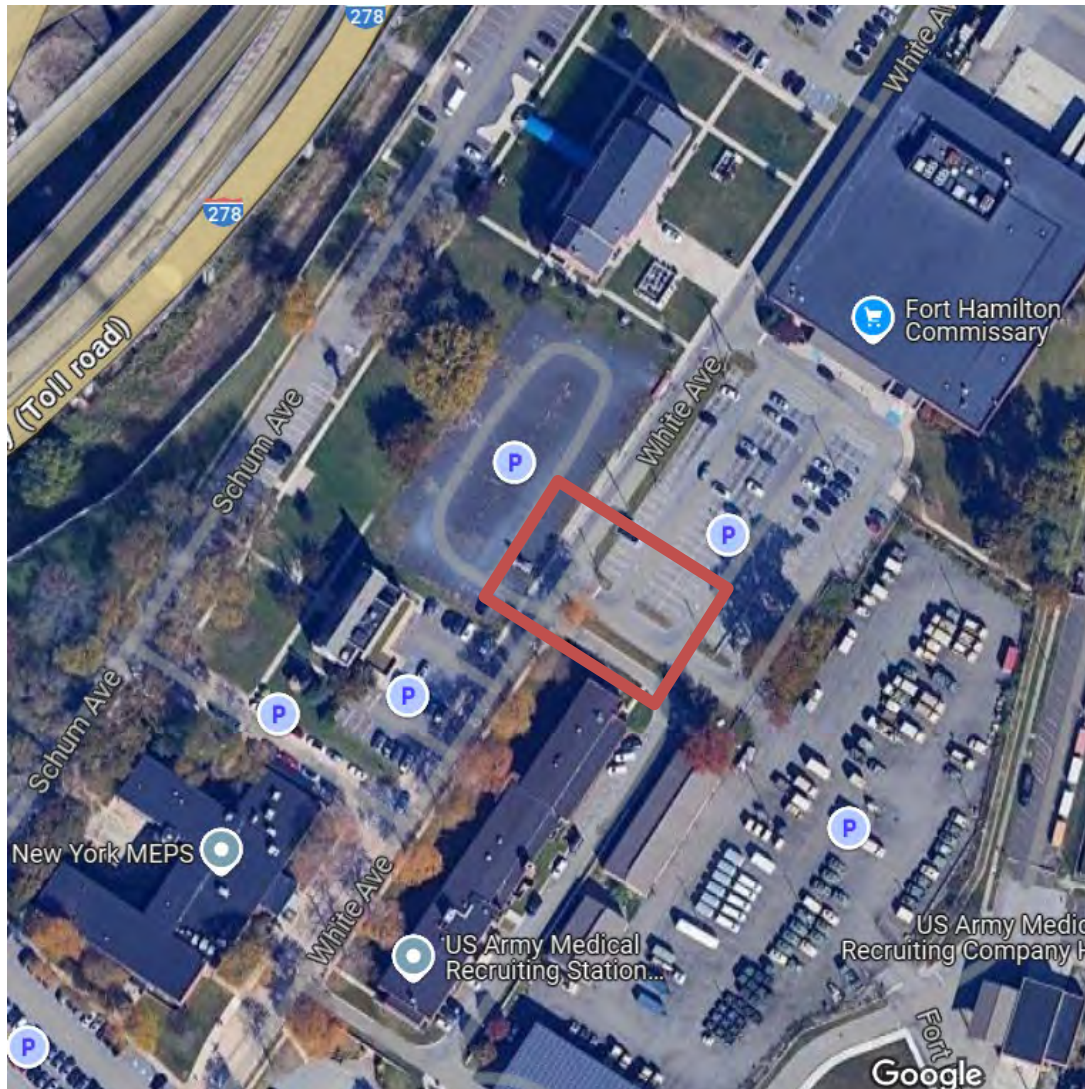


Figure 3-5. Outline of staging area

In addition to the direct effects of the construction of the CDC there is also indirect effects on the surrounding buildings and areas. These potential indirect effects are to the viewsheds of listed and eligible buildings, vibrations from construction to listed and eligible buildings as well as potential effects to the staging area. There is one NRHP-eligible building directly adjacent to the APE, Building 113. As described above, Building 113 is eligible under criterion C and was a former YMCA building built in 1925. Today this building is the Garrison Headquarters. The APE and surrounding areas have changed drastically since the building of 113 in 1925. The elevated highway that leads to the Verrazzano Bridge, built in 1959, is situated 276 feet from the front of the building. The neighboring building, Building 110, was also demolished. Various other buildings have been constructed within the viewshed since the construction of Building 113. The 1925 viewshed has been altered significantly as has the context of the surrounding buildings. The CDC building itself would be situated approximately 45 feet from Building 113, providing an appropriate offset from the historic structure. Therefore, the construction of the CDC is not expected to adversely affect the historic viewshed of the building.

There is the potential for adverse effects to Building 113 from vibrations during construction due to the proximity of the proposed CDC to the existing Building 113. There is about 45 feet between Building 113 and the proposed CDC. To mitigate for the potential adverse effects of vibration, an assessment would be needed to determine the appropriate vibration thresholds. To ensure that thresholds are not exceeded, a monitor, at minimum, would be placed at Building 113 to monitor all construction activities and if thresholds are exceeded additional protective measures would be coordinated with the NYSHPO and the NYC LPC to ensure any adverse effects are mitigated.

Operation

Once built, the operation of proposed CDC would have no impact on any historic properties or sacred, cultural, or traditional resources.

No Action Alternative

The No Action Alternative would continue CDC operations at the current facility. No construction would occur. Therefore, the No Action Alternative would have no impact on any historic properties or sacred, cultural, or traditional resources.

3.11 Health and Safety

3.11.1 Affected Environment

Potential environmental health and safety risks to construction workers and the public resulting from implementation of the Proposed Action were evaluated in accordance with 29 CFR Part 1926, *Safety and Health Regulations for Construction*, AR 385-10, *Army Safety Program*, and EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, April 23, 1997. Construction workers face workplace hazards such as moving objects, heights, noise, vibration, temperature, and toxicants. The public, including personnel, residents, and visitors, are also subject to similar health and safety risks from construction activities, as well as various operational activities. Children and the elderly are particularly vulnerable to environmental health and safety risks.

3.11.2 Environmental Consequences

Preferred Alternative

Construction

Safety measures would be implemented during construction avoid and minimize any adverse impacts to the health and safety of children, including: adult supervision; the requirement that construction vehicles and equipment be secured when not in use; and the placement of barriers, such as fencing, as well as “No Trespassing” signs around the construction site in order to limit access and deter children from playing in this area. Flaggers and signs would be used to warn pedestrians and workers about potential hazards and limit access. All construction contractors would be required to prepare and implement health and safety plans that comply with EM 385-1-1, *Occupational Safety and Health Administration*, local military base rules and any other federal, state and local laws, ordinances, criteria, rule and regulations that may apply. These include safety measures outlined in 29 CFR Part 1926, *Safety and Health Regulations for Construction*, and AR 385-10, *Army Safety Program*. Health and safety measures would be followed during construction to protect the health and safety of all construction workers, residents, personnel, and visitors on Fort Hamilton.

Dig Permits would be obtained from Fort Hamilton as needed prior to any subsurface activities so that underground hazards are avoided, such as electrical lines. Construction activities would be coordinated with the Fort Hamilton Safety Office to identify any potential UXO hazards and to develop a mitigation plan should any UXO be discovered. For these reasons, construction would not have a significant impact on health and safety.

Operation

The Proposed Action would be designed in accordance with Army standards for CDCs and antiterrorism and force protection requirements of UFC 4-010-01 DoD *Minimum Antiterrorism Standards for Buildings*. Measures that protect health and safety during operations would be implemented, such as measures that protect children from environmental risks. The proposed CDC facility would feature life safety and security features such as a locking vestibule, intruder detection system, video monitoring security system, fire suppression system, lighting, and fixed bollards for protection from traffic. Perimeter fencing and landscaping would provide safety and privacy around the building and playgrounds. Landscaping would incorporate child safe plants. As described in **Section 3.9**, the design would incorporate features that minimize noise levels. Electrical and mechanical equipment would be safely secured and inaccessible to children. For these reasons, operational activities would not have a significant impact health and safety.

No Action Alternative

The No Action Alternative would continue CDC operations at the existing facility and no new facility construction would occur. Therefore, the No Action Alternative would not have a significant impact on health and safety.

3.12 Environmental Justice

3.12.1 Affected Environment

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income regarding the development, implementation, and enforcement of environmental laws, regulations, and policies, with no group bearing a disproportionate burden of environmental harms and risks. Environmental justice is considered in Army project planning and implementation in accordance with EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, February 11, 1994; EO 13985, *Advancing Racial Equity and Support for Underserved Communities Through the Federal Government*, January 20, 2021; EO 14096, *Revitalizing our Nation's Commitment to Environmental Justice for All*, April 21, 2023; CEQ's Environmental Justice Guidance under NEPA, December 10, 1997; and AR 200-2 as promulgated by 32 CFR Part 651.

Historically overburdened communities in the vicinity of Fort Hamilton were identified using the CEQ Climate and Economic Justice Screening Tool, NYSDEC Potential Environmental Justice Areas Mapper, and EPA Environmental Justice Screen Tool. According to these tools, Fort Hamilton has a higher percentage of minorities and children under five years relative to national and state averages. In addition, Fort Hamilton's urban setting and proximity to major highways puts the population at higher risk of exposure to air and noise pollution compared to non-urban environments.

3.12.2 Environmental Consequences

Preferred Alternative

Construction

Construction has the potential to have a minor, short-term impact on historically overburdened and vulnerable communities, such as minority groups and children. Construction would cause temporary increases in noise and air pollution from the operation of equipment and the generation of fugitive dust and emissions. Short-term noise and air impacts would be limited to periods of active construction and would be minimized using BMPs described **Sections 3.5** and **3.9**. Examples of noise BMPs include properly maintaining construction equipment mufflers and notifying adjacent occupants of construction activities and the anticipated duration of construction prior to the onset of work. Examples of air quality BMPs include limiting vehicle idling to three minutes and implementing dust suppression techniques, such as stabilizing bare soil. Construction may also generate short-term beneficial impacts, such as the creation of small number of local construction jobs. For these reasons, construction would not have a significant impact with respect to environmental justice.

Operation

The proposed CDC facility would increase enrollment capacity from 76 to 126 children. Increased enrollment capacity may have a minor, long-term beneficial impact on overburdened communities on Fort Hamilton by providing more access to childcare services. Although some minor, beneficial impacts may occur with respect to environmental justice, these impacts would not be significant.

No Action Alternative

The No Action Alternative would continue CDC operations at the existing facility and no new facility construction would occur. The existing CDC's enrollment capacity would remain the same. Therefore, the No Action Alternative would not have a significant impact with respect to environmental justice.

3.13 Cumulative Impacts

Cumulative impacts result when the effects of an action are added to or interact with other effects in a particular place and within a particular time. It is this combined effect, along with any resulting environmental degradation, that is the focus of cumulative impact analyses. The cumulative environmental effect analysis evaluates the impacts associated with the Proposed Action combined with the effects of other past, present, and reasonably foreseeable future actions (RFFAs), regardless of the agency or person responsible for such actions. This section provides a summary of cumulative effects associated with the Proposed Action in relation to other RFFAs and recently completed projects at Fort Hamilton. This section addresses only those resources subject to cumulative effects; resources for which there are "no impacts" associated with the Proposed Action are not addressed.

The 2019 ADP outlines Fort Hamilton's future development so that facilities, infrastructure, and resources are well managed in support of the military community. The ADP proposes facility consolidation and improvements, new construction, and unit moves. Proposed and approved actions are categorized by their status, urgency, and funding. Short-range (0-5 year) proposals, such as building and street improvements, are listed in **Table 3-2**.

Table 3-5. Fort Hamilton Short-Range Actions for Cumulative Impact Analysis

Actions	Description
Construct Running Trail	Construct Running Trail

Actions	Description
Construct Connecting Pathway from John Warren Avenue to Officers Club	Construct Pathway from General John Warrant Avenue to Officers Club
Improve Club Area Landscaping, Construct Additional Outdoor Dining Spaces, and Install Interior Refrigerator	Plant Trees/Shrubs Plant Grass Construct Canopies Improve Club Area
Repair Retaining Wall and Stairs	Repair Retaining Wall and Stairs
Improve Historic Park	Plant Trees/Shrubs Plant Grass Improve Historic Park
Construct Network Enterprise Facility	Construct Network Enterprise Facility
Renovate Building 412	Renovate Building 412
Enhance Ballfields for Physical Training	Enhance Ballfield for Physical Training
Improve Transportation Motor Pool Parking	Improve Transportation Motor Pool Parking
Construct New Express Kiosk with Fuel	Construct New Express Kiosk with Fuel

In consideration of potential cumulative impacts, each of the actions in **Table 3-2** has some potential to result in adverse impacts, consistent with typical construction projects. Most of the actions are new construction, building repairs, redevelopments, or infrastructure improvements within previously disturbed sites on Fort Hamilton. Therefore, the actions listed in **Table 3-2** would not result in significant cumulative impacts related to loss of natural resources or land use conversion.

The Proposed Action, combined with other ongoing and proposed actions on Fort Hamilton, has the potential to result in minor, short-term increases in traffic, noise levels, emissions, and solid waste generation; however, the effects would generally be limited to the construction timeframe of each project and be proportional to the size of the construction site. Overall, the Proposed Action would not result in, or contribute to, significant adverse cumulative impacts to the resources on Fort Hamilton or the region.

3.14 Unavoidable Adverse Environmental Impacts

Unavoidable, short-term, adverse impacts from implementation of the Proposed Action at the Preferred Alternative site would primarily be associated with construction activities. Impacts would include periodic high noise levels, fugitive dust emissions, and disruption to traffic flow and parking; however, these impacts would be short-term and generally limited to the immediate area. Unavoidable, long-term, adverse environmental impacts would result from a slight increased demand on local infrastructure and utilities systems, including water supply, electrical services, and solid waste.

3.15 Irreversible and Irretrievable Commitment of Resources

Implementation of the Proposed Action at the Preferred Alternative site would result in an irreversible and irretrievable commitment of resources by the Army. Committed resources would include building materials, supplies, and their costs; labor; planning and engineering costs; infrastructure capacity; funds used for construction; tree replacement costs; and the land that would be developed. Other committed resources would include water, natural gas, fossil fuels, and electricity used for the construction and continued operation of the Proposed Action.

4 SUMMARY AND CONCLUSION

The Proposed Action would involve the construction and operation of a new CDC facility on Fort Hamilton. The new CDC facility would be used to provide childcare services for 126 children between ages six weeks to five years. The facility would support the Fort Hamilton CDC's mission to offer a consistent, safe, and nurturing environment for children.

4.1 Alternatives

The No Action Alternative would not fulfill the purpose of and need for the Proposed Action and was therefore rejected. The Preferred Alternative would fulfill the purpose of and need for the Proposed Action and meets all the site selection standards including: adequate space and infrastructure to accommodate the new facility; compatibility with the CDC mission; compatibility with the 2019 Fort Hamilton ADP; compliance with Army design standards and regulations; protection of children from environmental health and safety risks; and developable with minimal preparation, relocation, or demolition. Two other site alternatives were considered but ultimately rejected and eliminated from detailed analysis because they did not meet all the site selection standards. For these reasons, the Preferred Alternative was selected.

4.2 Impact Minimization and Mitigation Measures

No significant cumulative effects would result from implementation of the Proposed Action at the Preferred Alternative site. While some potential impacts to the natural and human environment may occur during construction and operation of the Proposed Action, these impacts would be minor and typical compared with other routine construction projects. BMPs and other measures identified in **Table 4-1** would be implemented to further minimize the likelihood that these activities would have a significant impact on the environment.

Table 4-1. Resource Area BMPs

Resource	BMPs and Measures to Minimize Impacts
Topography, Geology, and Soils	<ul style="list-style-type: none">Sediment and erosion control measures would be implemented to minimize soil runoff.
Water	<ul style="list-style-type: none">Sediment and erosion control devices would be implemented minimize soil runoff offsite and into the stormwater system.All work would be performed in accordance with the Fort Hamilton Stormwater Management Plan, NYSDEC SPDES General Permit for Construction Activity, and SWPPP.Stormwater management features would be incorporated into the design to capture and filter stormwater before discharging into the stormwater system.
Biological	<ul style="list-style-type: none">All trees would be assessed prior to removal and replaced in accordance with Fort Hamilton's <i>Tree Replacement Guidelines</i>.
Air Quality	<ul style="list-style-type: none">Utilizing equipment with alternative fuel sources may be considered (e.g. electric instead of diesel) as able. Continuously wetting dry on and off-road surfaces to minimize fugitive dust.

Resource	BMPs and Measures to Minimize Impacts
Greenhouse Gases and Climate Change	<ul style="list-style-type: none"> Utilizing equipment with alternative fuel sources may be considered (e.g. electric instead of diesel) as able.
Traffic and Transportation	<ul style="list-style-type: none"> During construction, increased local traffic congestion would be minimized by using signs and flaggers as necessary to control traffic. Construction areas would be clearly marked and fenced off for safety and security. White Avenue and Schum Avenue would not be fully closed at the same time during construction to maintain north-south access within northwestern Fort Hamilton. Work would be performed during daylight business hours to the greatest extent practicable. Twelve existing parking spaces would be dedicated to child drop off and pickup to alleviate local traffic congestion. Twenty new parking spaces and concrete pathways would be installed to improve parking and pedestrian circulation. A truck delivery space would be constructed on White Avenue to minimize traffic congestion associated with deliveries.
Hazardous Materials and Waste	<ul style="list-style-type: none"> Phase I ESA and/or Phase II ESI to further characterize the environmental condition of property prior to construction and inform construction plans and specs.
Noise and Vibration	<ul style="list-style-type: none"> Construction would occur during normal weekday business hours. Construction equipment mufflers would be properly maintained and in good working condition. Occupants adjacent to construction areas would be notified of the construction activity and the anticipated duration of construction prior to the onset of work. Features that muffle noise would be incorporated into the design. Vibration monitoring may be provided if needed.
Cultural and Historic	<ul style="list-style-type: none"> Work would be performed in accordance with the Fort Hamilton ICRMP. Monitoring of excavations below two feet would be overseen by an archaeological monitor. Vibration monitoring would be conducted for Building 113
Health and Safety	<ul style="list-style-type: none"> Safety measures would be implemented during construction to protect children, including: adult supervision; the requirement that construction vehicles and equipment be secured when not in use; and the placement of barriers, such as fencing, as well as "No Trespassing" signs around the construction site in order to limit access and deter children from playing in this area. Flaggers and signs would be used to warn pedestrians and workers about potential hazards and limit access. All construction contractors would be required to prepare and implement health and safety plans that comply with EM 385-1-

Resource	BMPs and Measures to Minimize Impacts
	<p>1, Occupational Safety and Health Administration, local military base rules and any other federal, state and local laws, ordinances, criteria, rule and regulations that may apply. These include safety measures outlined in 29 CFR Part 1926, <i>Safety and Health</i> Regulations for Construction, and AR 385-10, Army Safety Program.</p> <ul style="list-style-type: none"> • Dig permits would be obtained from Fort Hamilton prior to any subsurface activities so that underground hazards are avoided, such as electrical lines. Construction activities would be coordinated with the Fort Hamilton Safety Office to identify any potential UXO hazards and to develop a mitigation plan should any UXO be discovered. • The Proposed Action would be designed in accordance with Army standards for CDCs and antiterrorism and force protection requirements of UFC 4-010-01 "DoD Minimum Antiterrorism Standards for Buildings." • The proposed CDC facility would have life safety and security features such as a locking vestibule, intruder detection system, video monitoring security system, fire suppression system, lighting, and fixed bollards. • Perimeter fencing and landscaping would provide privacy around the building and playgrounds. Landscaping would incorporate child safe plants..
Environmental Justice	<ul style="list-style-type: none"> • Short-term noise and air impacts would be limited to periods of active construction and would be minimized using BMPs described in Sections 3.5 and 3.9. Examples of noise BMPs include properly maintaining construction equipment mufflers and notifying adjacent occupants of construction activities and the anticipated duration of construction prior to the onset of work. Examples of air quality BMPs include limiting vehicle idling to three minutes and implementing dust suppression techniques, such as stabilizing bare soil.

Careful design, the use of good engineering and BMPs and the implementation of certain operational procedures would avoid, minimize, or mitigate these and other minor potential impacts. An EIS is, therefore, not required.

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7 DISTRUBUTION

A listing of external agencies and persons who received copies of this EA is provided in **Table 7-1**.

Table 7-1. Distribution List

Federal and Regional Agencies	
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Other	
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Appendix A – Coordination

NEPA ID EAXX-007-21-001-1736758141



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NEW YORK 10278-0090

January 6, 2025

Environmental Analysis Branch
Planning Division

Dr. Jeffrey Bendremer, PhD, RPA
Tribal Historic Preservation Officer
Stockbridge-Munsee Community Band of Mohican Indians
86 Spring Street
Williamstown, MA 01267

Re: United States Army Garrison Fort Hamilton Brooklyn New York, Child Development Center

Dear Dr. Bendremer,

The U.S. Army Corps of Engineers, New York District (District) is undertaking an Environmental Assessment on behalf of the United States Army Garrison (USAG) Fort Hamilton for a proposed Child Development Center (CDC). In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality regulations, and Section 106 of the National Historic Preservation Act (NHPA) (54 USC § 306108) and its implementing regulations at 36 CFR Part 800, a cultural resources survey was carried out including an assessment of effects for the proposed (CDC). This NHPA consultation is being coordinated with the proposed project's NEPA process. As a Federally Recognized Tribe with expressed interest in the area this letter report has been prepared to give your office an opportunity to review and comment on the determination of effects pursuant to 54 USC § 306108.

The Undertaking

The United States Department of the Army (Army) is planning to construct and operate a new CDC facility (Proposed Action) on United States Army Garrison Fort Hamilton (herein referred to as "Fort Hamilton" or the "Installation") in Brooklyn, Kings County, New York (Figure 1). The Proposed Action includes the construction of a 16,632 square feet single story building, three outdoor playgrounds totaling 16,667 square feet, 24 new parking spaces, paved pedestrian pathways, perimeter fencing and lighting, landscaping, a truck delivery space, utility connections, stormwater management, and security features (Figure 2).

Two options were considered for this Proposed Action, the No Action Alternative and the Preferred Alternative. The No Action Alternative is that the CDC would remain at its current location, which is an obsolete 1960s era building with no ability to increase its capacity, and the proposed site would remain a landscaped area and gravel parking lot. The Preferred Alternative will allow for an increase enrollment capacity by building a larger facility. In addition, the modernized facility will support the Fort Hamilton CDC's

mission to offer a consistent, safe, and nurturing environment for children between six weeks and five years of age. The new CDC facility will offer new and improved amenities such as a kitchen, changing areas, administrative support space, mothers' nursing room, staff lounge, laundry, storage, and supply rooms.

In accordance with Section 106 of the National Historic Preservation Act, its implementing regulations, and the specific legal requirements described in Chapter 6 of AR-200-1, the Proposed Action is considered an Undertaking having the potential to affect cultural resources. The physical Area of Potential Effect (APE) for the CDC consists of the parking lot and associated open areas between the Garrison Headquarters (Building 113) and The Holiday Inn (Building 107). Proposed activities will include construction of the CDC building itself as well as playgrounds, new parking areas and pathways (Figure 3). In addition, the APE includes a staging area directly east of the proposed project site.

History of the APE and Identification of Cultural Resources

Background research included a review of the history of the APE, a review of site files held by the Fort Hamilton, the New York State Office of Parks, Recreation, and Historic Preservation and the Landmarks Preservation Commission to gather information on previously documented historic properties and archaeological sites, review of cultural resource survey reports and a site visit to document current conditions at the site and to determine if there are any known cultural resources or structures within the proposed project area and vicinity with the potential for NRHP eligibility that may be impacted by the Proposed Action.

Much of the history of the project area can be found within the Integrated Cultural Resources Management Plan (ICRMP) for Fort Hamilton (DPW 2020). The New York City and Brooklyn itself have a long history of use and habitation. The area now occupied by Fort Hamilton was part of the Village of New Utrecht settled by the Dutch in 1657. New Utrecht was originally part of the Nayack Patent, one of two tracts of land on Long Island purchased by Augustine Herman for Cornelis Van Werckhoven in 1652 (DPW 2020). Van Werckhoven was a member of the Dutch government and a speculator in colonial lands. The Nayack Patent was named after the historic Native American village of Nayack which overlapped with present day Fort Hamilton. With the arrival of the Dutch, the forests in and around lower New York City were cleared for small farms and later, larger settlements. This only intensified with the military occupation of New York City during the Revolutionary War. Colonial forces built an earthen battery at the site in 1776. The site was later captured by British and Hessian troops until 1783 (DPW 2020). Between 1825 and 1831 the masonry casemate fort and earthen redoubt of Fort Hamilton was built.

In addition to the military and colonial history of the area there are also reports of Native American artifacts and habitations at Fort Hamilton. These reports are derived from sources nearly a century old and have not been field verified (DPW 2020). The

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- (1) A filled stone well or cistern beneath an asphalt road between Buildings 230 and 207. Reported by Mr. Russell Gilmore, then curator of the Harbor Defense Museum, this feature of unknown age was exposed during road work in 1980. This site does not have an official site number. This site is located approximately 1,260 feet from the APE.
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No historic period archaeological sites have been identified within the project APE.

Three buildings on the installation are listed in the National Register of Historic Places (NRHP): (1) Building 207, the Casemate Fortification; (2) Building 220, the Sentry Station; and (3) Building 230, the Caponier. All these listed buildings are located approximately 1,300 feet from the APE. In addition, there are three structures that have been determined eligible for listing in the NRHP, Building 113, Building 201, and the Denyse Wharf. Of those three eligible buildings only Building 113 is located in proximity to the project area, being directly adjacent to it. Building 201 and Denyse Warf are 900 and 2,000 feet away, respectively (Figure 5 and 6)

The APE has had various uses throughout the history of Fort Hamilton. Most recently it was used as a gravel parking lot with a grassy area and trees. However, the parking lot fell into disuse due to sinkholes developing across the lot. Prior to that the site was home to a set of barracks (designated Building 110). This building was evaluated in 1999 and deemed not eligible for the NRHP. It, along with two other buildings, 109 and 111 were demolished in 2010-2011 to make way for the current parking lot and Holiday Inn. The 1935 map in Figure 7 depicts the former location of Building 110 and APE for the CDC.

The neighboring building to the south of the APE is the current Garrison Headquarters (Building 113). This building has been determined eligible for listing in the NRHP. Building 113 was built in 1925 as the YMCA building. The building is considered eligible under Criteria C, as it "embodies the distinctive characteristics of a type, period, or method of construction. It is an intact example of Gregorian Revival style military architecture. It is also one of the Installation's best examples of non-defensive architecture associated with an era of development between the two world wars." (NRHP Evaluation form 1999) (Figure 8).

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assumption that, “prior to the late nineteenth century, all areas in the installation had high degrees of sensitivity for precontact period and early historic archaeological resources. Since the late nineteenth century, portions of the fort have been modified to varying degrees during episodes of construction and demolition.” (DPW 2020). In the years since the 1986 survey many areas on Fort Hamilton have changed with new buildings being built and other structures demolished.

The APE (former location of Building 110) is included in Sensitivity Area 7. Sensitivity Area 7 includes the area around and between buildings 107 and 113. This area is described as containing two feet of fill covering the entire area as well as distinct areas of disturbance due to construction, demolition, and utilities. Based off this analysis, Area 7, and therefore the APE, is believed to have a moderate potential for both European and Native American resources at depths below 2 feet.

The staging area for the project consists of the parking lot directly across the street from the proposed project site (Figure 11). This area is within Sensitivity Area 17. Sensitivity Area 17 has a moderate level of archaeological sensitivity based on the archaeological sensitivity assessment. The sensitivity analysis performed for the installation described the areas within Sensitivity Area 17 that are currently beneath parking lots, as likely not having been disturbed by construction and/or demolition of large buildings or structures (DPW 2020).

Determination of Effects

There are no known archaeological sites or historic properties located within the direct APE for the Preferred Alternative. The APE has been affected by episodes of construction, demolition, and utilities-related disturbances. Building 110, previously located on the site was determined not eligible for the NRHP and demolished in 2011 (Figure 10). Another building that was located northwest of Building 113 in the western portion of the APE was demolished before 1951. Although it is anticipated that the APE is affected by disturbances, limited areas around the demolished building footprint, located at depths below two feet are believed to have a moderate potential for archaeological resources that may be affected by the project.

The direct APE also includes the staging area to the east (Figure 11). The staging area consists of the parking lot directly across the street from the proposed project site, which has a moderate level of archaeological sensitivity based on the archaeological sensitivity assessment prepared in 2020. The sensitivity analysis performed for the installation described the areas within Sensitivity Area 17, currently beneath parking lots, as likely not having been disturbed by construction or demolition of large buildings or structures (DPW 2020). However, the use of the lot as a staging area will have no effect on buried resources. The area will not be excavated for the proposed project, nor will any construction take place on the parking lot that could disturb archaeological deposits.

In addition to the direct effects of the construction of the CDC the District has also considered indirect effects to the surrounding buildings and areas. The District considered potential effects to the viewsheds of NRHP-listed and eligible buildings and from vibrations from construction to listed and eligible buildings. There is one NRHP-eligible building within the indirect/visual APE, Building 113. As described above, Building 113 is eligible under criterion C and is a former YMCA building built in 1925. Today this building is serving as the Garrison Headquarters. The setting of Building 113 has changed drastically since it was constructed. The elevated highway that leads to the Verrazzano Bridge, built in 1959, is situated 276 feet from the front of the building. The neighboring buildings, Building 109, 111 and 110, were also demolished in 2012 and other buildings have been constructed within the viewshed since the construction of Building 113. While its integrity of setting would be impacted by the proposed action, the historic property has been previously impacted to a greater extent by the loss of other early 20th Century buildings. In addition, the setting is not an essential factor to the Criteria C significance, as the building was determined eligible in 1999. The building was deemed eligible due to its distinctive characteristics of a type, as an intact example of Gregorian Revival style military architecture. The CDC building itself will be situated approximately 45 feet from Building 113, providing an appropriate offset from the historic structure. The buildings integrity of location, design, materials, workmanship, feeling, and association would remain unchanged as a result of the proposed action. Therefore, the construction of the CDC is not expected to adversely affect the historic viewshed of the building.

Recommendations

A review of existing information and the archaeological sensitivity analysis prepared for the installation indicated that limited areas around the demolished Building 110 footprint, located at depths below two feet, have a moderate potential for archaeological resources. Currently, more than fifty percent of the direct APE is covered by gravel fill and utility lines traverse the property, making archaeological investigations impractical in advance of construction. Therefore, no further archaeological investigations are recommended at this time within the APE but archaeological monitoring will be employed for all construction below the two feet of documented fill in previously undisturbed areas to ensure any undocumented historic or precontact archaeological remains are properly handled. In the event that archaeological deposits are discovered during construction all work will be suspended, the site will be secured, and the NYSHPO, NYCLPC, and federally recognized tribes as applicable, will be contacted so that procedures for avoidance, minimization, or mitigation of effects can be implemented prior to resumption of construction activities that have the potential to affect cultural resources. The staging area will not be excavated for the proposed project, nor will any construction take place on the parking lot that could disturb archaeological deposits; therefore, no further work is recommended for the staging area.

The District has determined that while there is no visual impact anticipated there is the potential for adverse effects to Building 113 from vibration during construction due

to the proximity of the proposed CDC to the existing Building 113. There is about 45 feet between Building 113 and the proposed CDC. To ensure that thresholds are not exceeded, a vibration impact assessment will be performed in advance of construction and if threshold exceedances are anticipated modifications will be made to reduce vibrations where possible and if necessary additional mitigation measures will be coordinated with the NYSHPO and the NYCLPC. Additionally, a vibration monitor will be placed at Building 113 to identify any inadvertent exceedances and if thresholds are exceeded all work will stop until protective measures can be coordinated with the NYSHPO and the NYCLPC.

The District, on behalf of the Fort Hamilton Garrison, invites you to review the information presented here and provide any comments in accordance with 54 USC § 306108 within thirty days of receipt of this letter. Thank you for your assistance with this project. If you or your staff require additional information or have any questions, please contact Arianna Stimpfl, Project Archaeologist, at (917) 790-8605 or by email at Arianna.M.Stimpfl@usace.army.mil.

Sincerely,

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Peter M. Wepler
Chief, Environmental Analysis Branch

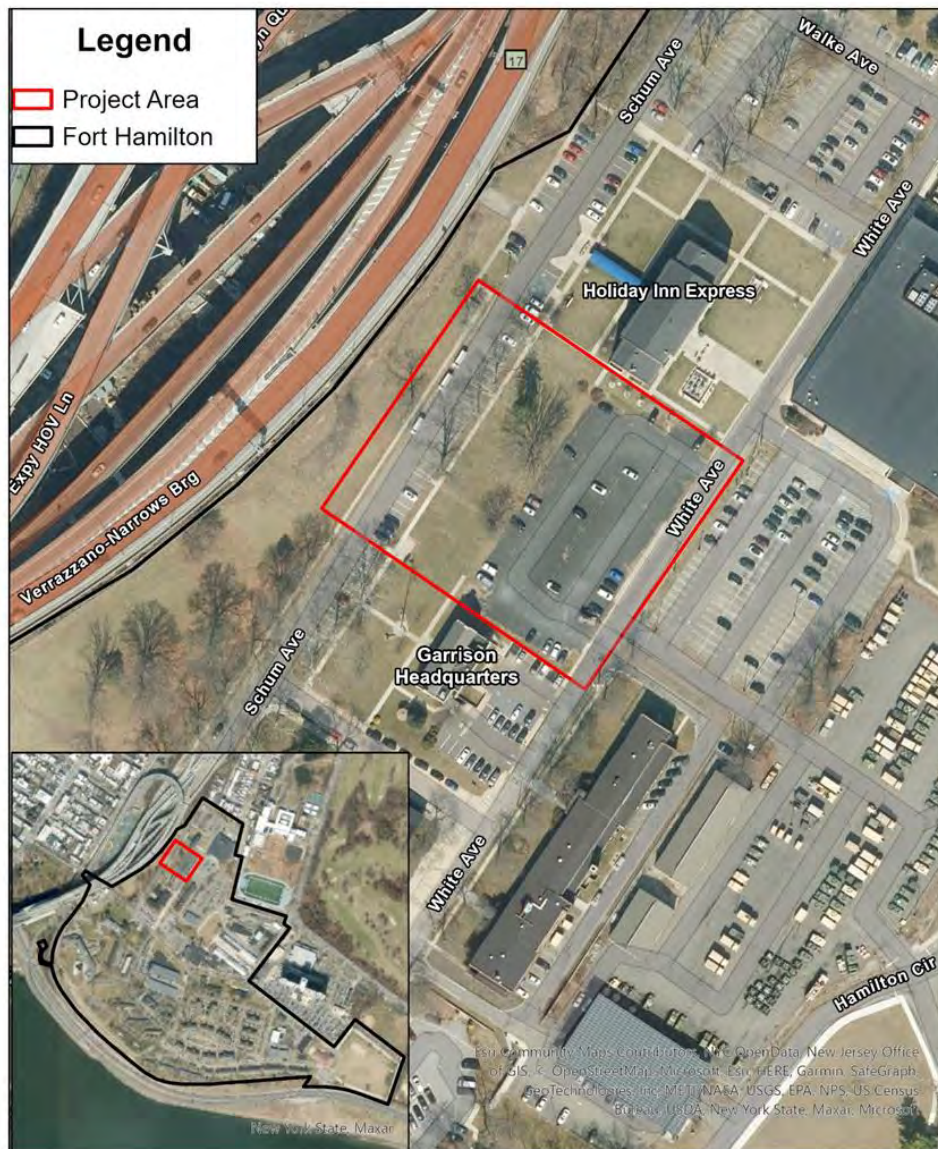
References:

Klein, Terry H., Amy Friedlander, and Martha Bowers. 1986. *A Cultural Resource Overview and Management Plan for the U.S. Army Property, Fort Hamilton, Brooklyn, New York, Fort Totten, Queens, New York*. Prepared for the National Park Service, Mid-Atlantic Region, Philadelphia, by the Cultural Resources Group, Louis Berger and Associates, Inc., East Orange, New Jersey.

Directorate of Public Works (DPW). 2020. *Integrated Cultural Resources Management Plan for Fort Hamilton, Brooklyn, Kings County, New York*. Prepared by Panamerican Consultants, Inc., Buffalo, New York

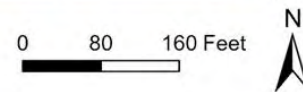


Figure 1: Fort Hamilton Site Location Map (USACE)



Project Area Map

Child Development Center
Army Garrison Fort Hamilton
Brooklyn, New York



By: U.S. Army Corps of Engineers, NY District
Date: 28 September 2023
Copyright U.S. Army Corps of Engineers

Figure 2: Proposed Child Development Center Location Map (USACE)

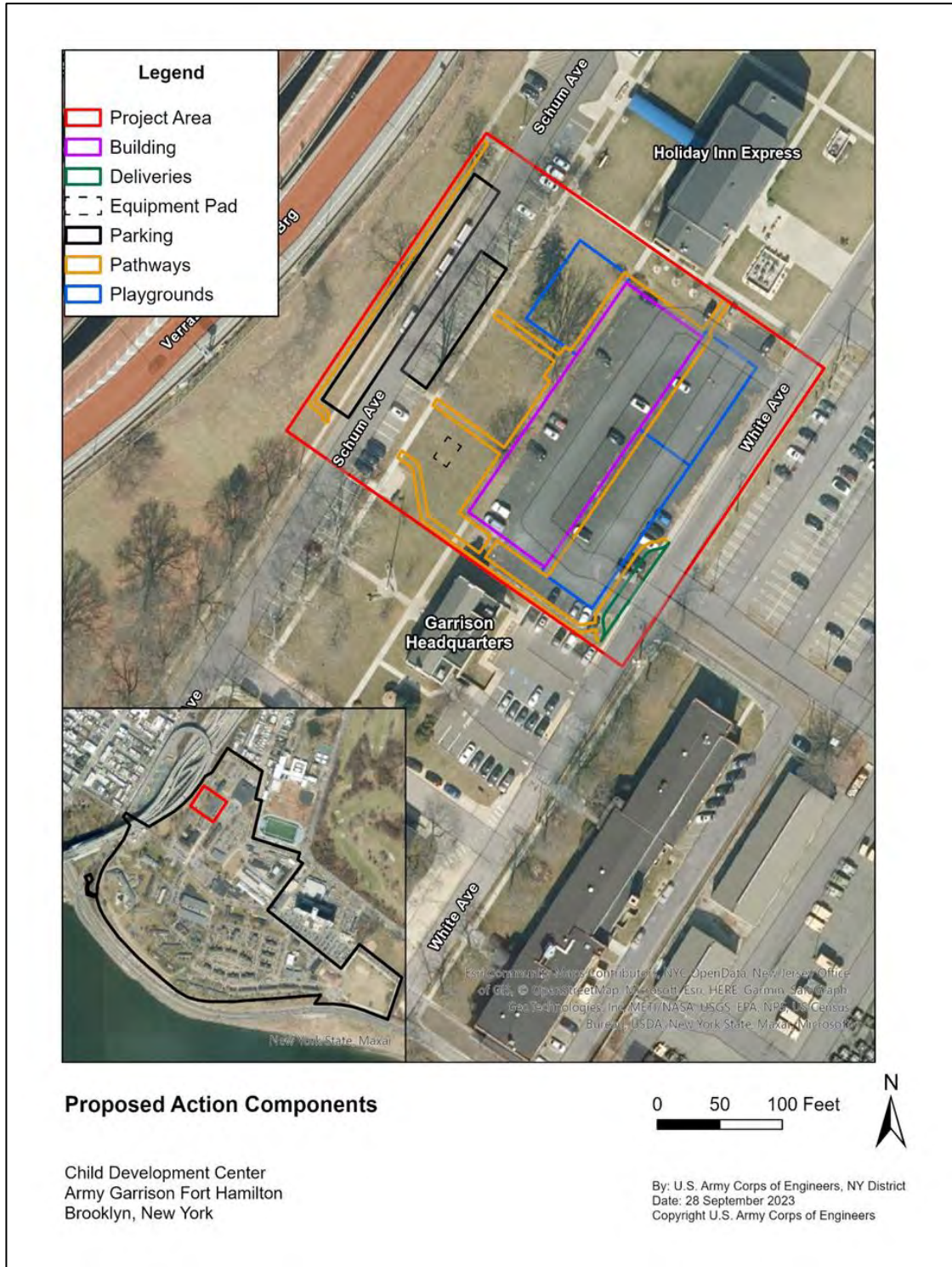


Figure 3: Proposed Child Development Center Components (USACE)



Figure 4: Location of precontact and contact period sites in the Borough of Brooklyn. Fort Hamilton ICRMP, Brooklyn, Kings County, New York (*Bolton 1934*).

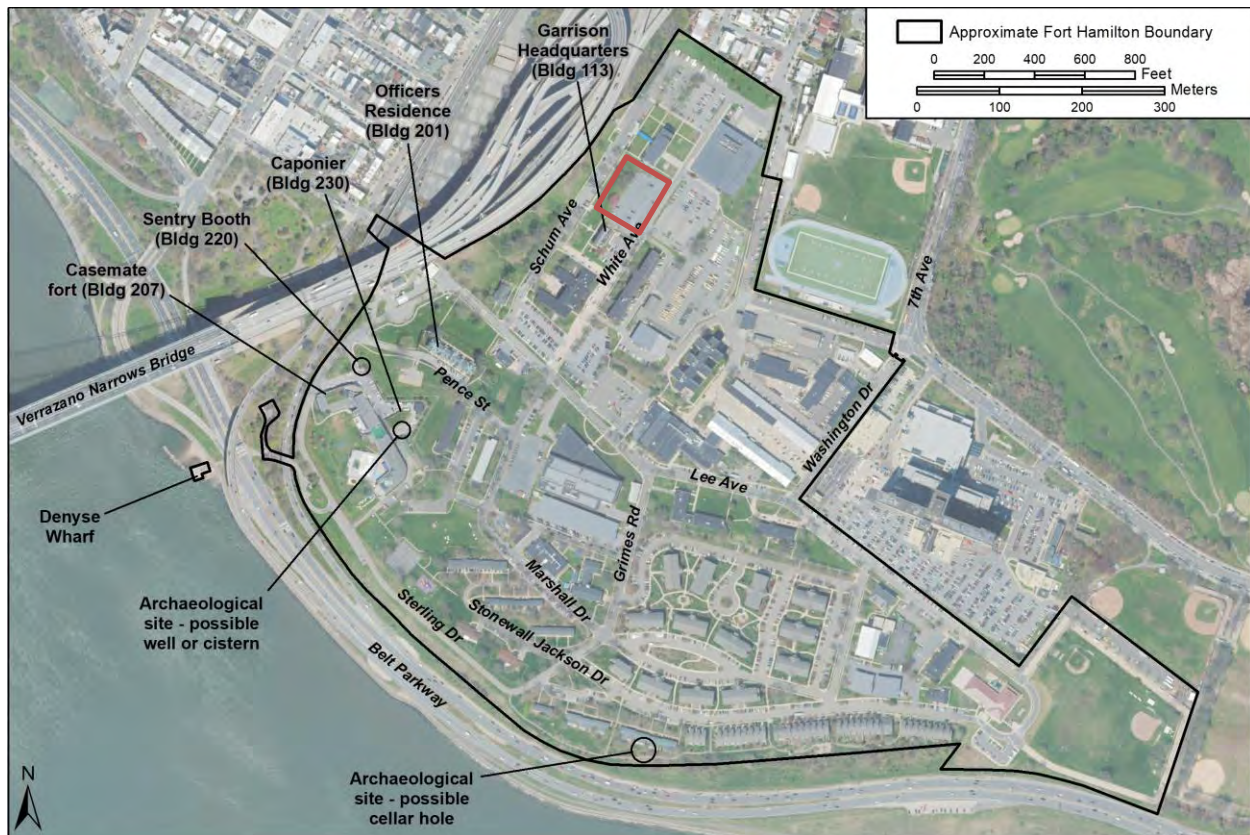


Figure 5: Location of NRHP-listed and eligible structures and possible archaeological sites on the US Army Garrison Fort Hamilton Fort Hamilton ICRMP, Brooklyn, Kings County, New York with APE drawn in red (Panamerican 2020).

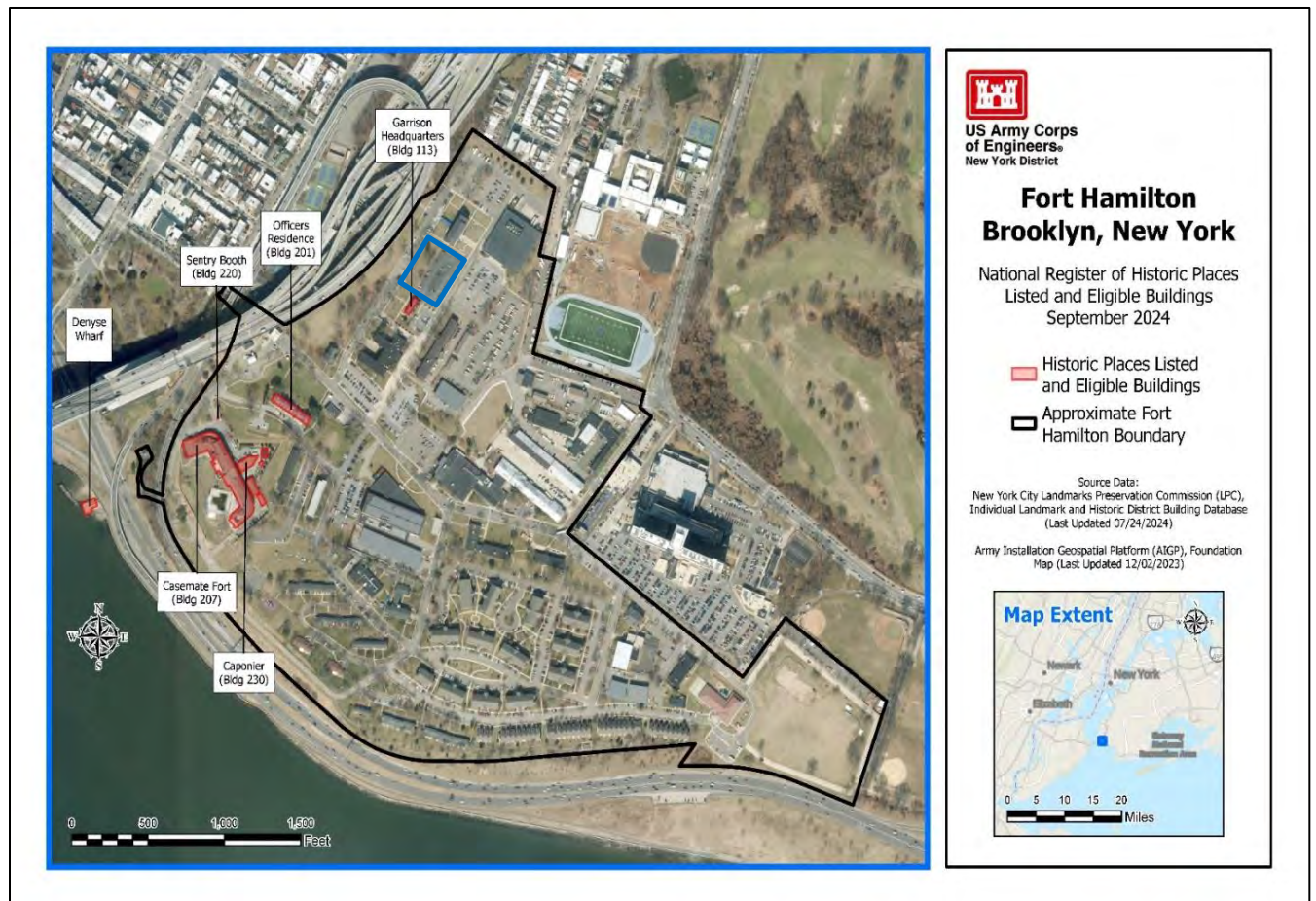


Figure 6: Locations of the NRHP Listed and Eligible Buildings with APE drawn in blue (USACE)

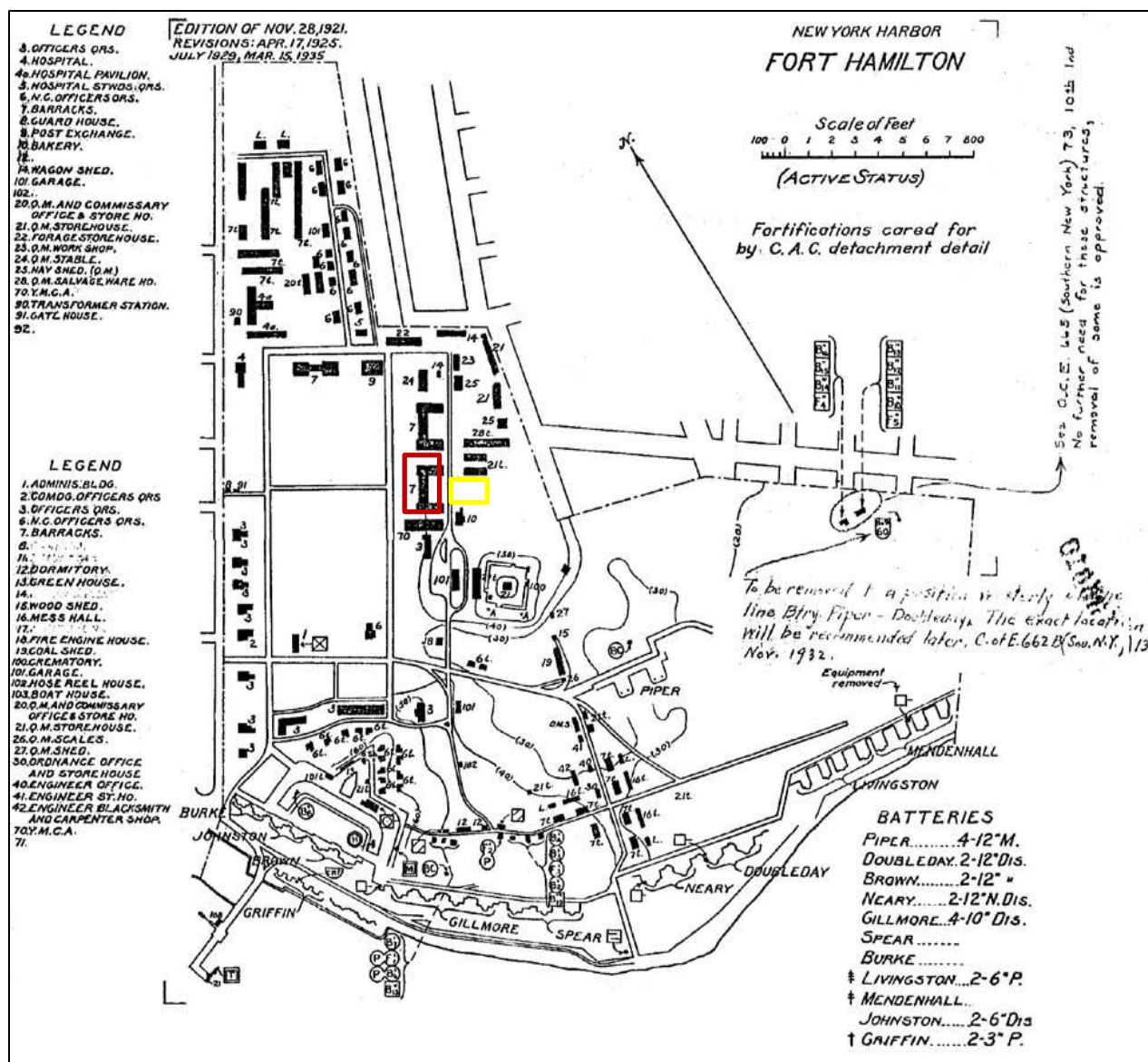


Figure 7: Map of Fort Hamilton in 1935 showing the location of former barracks, Building 110 (labelled 7 on the map). Fort Hamilton ICRMP, Brooklyn, Kings County, New York (Harbor Defense Museum Archives).



Figure 8: Building 113 from Schum Avenue, view northeast. Fort Hamilton ICRMP, Brooklyn, Kings County, New York (Panamerican 2020).



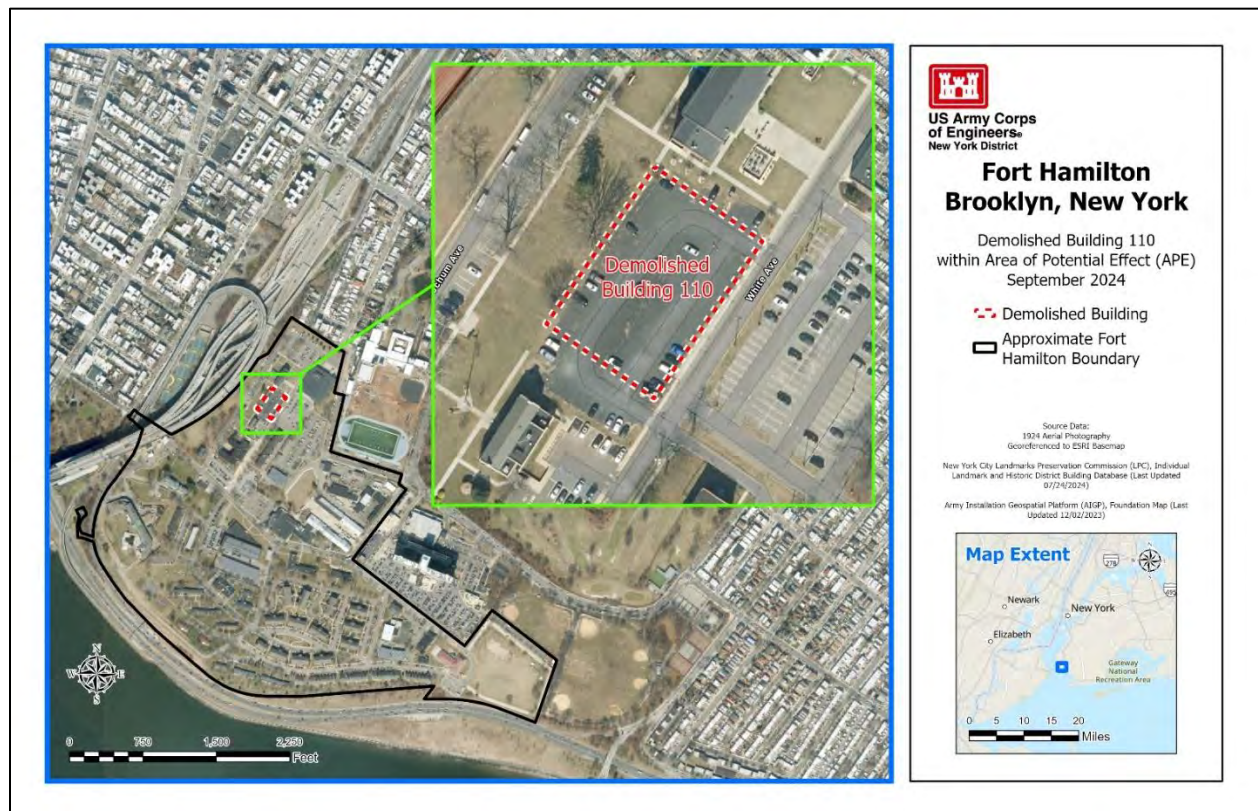


Figure 10: Footprint of Demolished Building 110 on current APE (USACE)



Figure 11: Outline of staging area (USACE)



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NEW YORK 10278-0090

January 6, 2025

Environmental Analysis Branch
Planning Division

Nancy Herter, PhD
Director, Technical Preservation Services Bureau
New York State Division for Historic Preservation
Peebles Island State Park
P.O. Box 189
Waterford, New York 12188-0189

Re: United States Army Garrison Fort Hamilton Brooklyn New York, Child Development Center

Dear Dr. Herter,

The U.S. Army Corps of Engineers, New York District (District) is undertaking an Environmental Assessment on behalf of the United States Army Garrison (USAG) Fort Hamilton for a proposed Child Development Center (CDC). In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality regulations, and Section 106 of the National Historic Preservation Act (NHPA) (54 USC § 306108) and its implementing regulations at 36 CFR Part 800, a cultural resources survey was carried out including an assessment of effects for the proposed (CDC). This NHPA consultation is being coordinated with the proposed project's NEPA process. The purpose of the attached letter report is to give the Technical Preservation Bureau an opportunity to review and comment on the District's determination of effects pursuant to 54 USC § 306108.

The Undertaking

The United States Department of the Army (Army) is planning to construct and operate a new CDC facility (Proposed Action) on United States Army Garrison Fort Hamilton (herein referred to as "Fort Hamilton" or the "Installation") in Brooklyn, Kings County, New York (Figure 1). The Proposed Action includes the construction of a 16,632 square foot single story building, three outdoor playgrounds totaling 16,667 square feet, 24 new parking spaces, paved pedestrian pathways, perimeter fencing and lighting, landscaping, a truck delivery space, utility connections, stormwater management, and security features (Figure 2).

Two options were considered for this Proposed Action, the No Action Alternative and the Preferred Alternative. The No Action Alternative is that the CDC would remain at its current location, which is an obsolete 1960s era building with no ability to increase its capacity, and the proposed site would remain a landscaped area and gravel parking lot. The Preferred Alternative will allow for an increase enrollment capacity by building a

larger facility. In addition, the modernized facility will support the Fort Hamilton CDC's mission to offer a consistent, safe, and nurturing environment for children between six weeks and five years of age. The new CDC facility will offer new and improved amenities such as a kitchen, changing areas, administrative support space, mothers' nursing room, staff lounge, laundry, storage, and supply rooms.

In accordance with Section 106 of the National Historic Preservation Act, its implementing regulations, and the specific legal requirements described in Chapter 6 of AR-200-1, the Proposed Action is considered an Undertaking having the potential to affect cultural resources. The physical Area of Potential Effect (APE) for the CDC consists of the parking lot and associated open areas between the Garrison Headquarters (Building 113) and The Holiday Inn (Building 107). Proposed activities will include construction of the CDC building itself as well as playgrounds, new parking areas and pathways (Figure 3). In addition, the APE includes a staging area directly east of the proposed project site.

History of the APE and Identification of Cultural Resources

Background research included a review of the history of the APE, a review of site files held by the Fort Hamilton, the New York State Office of Parks, Recreation, and Historic Preservation and the Landmarks Preservation Commission to gather information on previously documented historic properties and archaeological sites, review of cultural resource survey reports and a site visit to document current conditions at the site and to determine if there are any known cultural resources or structures within the proposed project area and vicinity with the potential for NRHP eligibility that may be impacted by the Proposed Action.

Much of the history of the project area can be found within the Integrated Cultural Resources Management Plan (ICRMP) for Fort Hamilton (DPW 2020). The New York City and Brooklyn itself have a long history of use and habitation. The area now occupied by Fort Hamilton was part of the Village of New Utrecht settled by the Dutch in 1657. New Utrecht was originally part of the Nayack Patent, one of two tracts of land on Long Island purchased by Augustine Herman for Cornelis Van Werckhoven in 1652 (DPW 2020). Van Werckhoven was a member of the Dutch government and a speculator in colonial lands. The Nayack Patent was named after the historic Native American village of Nayack which overlapped with present day Fort Hamilton. With the arrival of the Dutch, the forests in and around lower New York City were cleared for small farms and later, larger settlements. This only intensified with the military occupation of New York City during the Revolutionary War. Colonial forces built an earthen battery at the site in 1776. The site was later captured by British and Hessian troops until 1783 (DPW 2020). Between 1825 and 1831 the masonry casemate fort and earthen redoubt of Fort Hamilton was built.

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Recommendations

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Sincerely,

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Peter M. Weppler
Chief, Environmental Analysis Branch

References:

Klein, Terry H., Amy Friedlander, and Martha Bowers. 1986. *A Cultural Resource Overview and Management Plan for the U.S. Army Property, Fort Hamilton, Brooklyn, New York, Fort Totten, Queens, New York*. Prepared for the National Park Service, Mid-Atlantic Region, Philadelphia, by the Cultural Resources Group, Louis Berger and Associates, Inc., East Orange, New Jersey.

Directorate of Public Works (DPW). 2020. *Integrated Cultural Resources Management Plan for Fort Hamilton, Brooklyn, Kings County, New York*. Prepared by Panamerican Consultants, Inc., Buffalo, New York



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NEW YORK 10278-0090

January 6, 2025

Environmental Analysis Branch
Planning Division

Rainbow Chavis
Tribal Historic Preservation Office
Shinnecock Indian Nation
P.O. Box 5006
Southampton, NY 11969

Re: United States Army Garrison Fort Hamilton Brooklyn New York, Child Development Center

Dear Ms. Chavis,

The U.S. Army Corps of Engineers, New York District (District) is undertaking an Environmental Assessment on behalf of the United States Army Garrison (USAG) Fort Hamilton for a proposed Child Development Center (CDC). In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality regulations, and Section 106 of the National Historic Preservation Act (NHPA) (54 USC § 306108) and its implementing regulations at 36 CFR Part 800, a cultural resources survey was carried out including an assessment of effects for the proposed CDC. This NHPA consultation is being coordinated with the proposed project's NEPA process. As a Federally Recognized Tribe with expressed interest in the area this letter report has been prepared to give your office an opportunity to review and comment on the determination of effects pursuant to 54 USC § 306108.

The Undertaking

The United States Department of the Army (Army) is planning to construct and operate a new CDC facility (Proposed Action) on United States Army Garrison Fort Hamilton (herein referred to as "Fort Hamilton" or the "Installation") in Brooklyn, Kings County, New York (Figure 1). The Proposed Action includes the construction of a 16,632 square foot single story building, three outdoor playgrounds totaling 16,667 square feet, 24 new parking spaces, paved pedestrian pathways, perimeter fencing and lighting, landscaping, a truck delivery space, utility connections, stormwater management, and security features (Figure 2).

Two options were considered for this Proposed Action, the No Action Alternative and the Preferred Alternative. The No Action Alternative is that the CDC would remain at its current location, which is an obsolete 1960s era building with no ability to increase its capacity, and the proposed site would remain a landscaped area and gravel parking lot. The Preferred Alternative will allow for an increase enrollment capacity by building a larger facility. In addition, the modernized facility will support the Fort Hamilton CDC's

mission to offer a consistent, safe, and nurturing environment for children between six weeks and five years of age. The new CDC facility will offer new and improved amenities such as a kitchen, changing areas, administrative support space, mothers' nursing room, staff lounge, laundry, storage, and supply rooms.

In accordance with Section 106 of the National Historic Preservation Act, its implementing regulations, and the specific legal requirements described in Chapter 6 of AR-200-1, the Proposed Action is considered an Undertaking having the potential to affect cultural resources. The physical Area of Potential Effect (APE) for the CDC consists of the parking lot and associated open areas between the Garrison Headquarters (Building 113) and The Holiday Inn (Building 107). Proposed activities will include construction of the CDC building itself as well as playgrounds, new parking areas and pathways (Figure 3). In addition, the APE includes a staging area directly east of the proposed project site.

History of the APE and Identification of Cultural Resources

Background research included a review of the history of the APE, a review of site files held by the Fort Hamilton, the New York State Office of Parks, Recreation, and Historic Preservation and the Landmarks Preservation Commission to gather information on previously documented historic properties and archaeological sites, review of cultural resource survey reports and a site visit to document current conditions at the site and to determine if there are any known cultural resources or structures within the proposed project area and vicinity with the potential for NRHP eligibility that may be impacted by the Proposed Action.

Much of the history of the project area can be found within the Integrated Cultural Resources Management Plan (ICRMP) for Fort Hamilton (DPW 2020). The New York City and Brooklyn itself have a long history of use and habitation. The area now occupied by Fort Hamilton was part of the Village of New Utrecht settled by the Dutch in 1657. New Utrecht was originally part of the Nayack Patent, one of two tracts of land on Long Island purchased by Augustine Herman for Cornelis Van Werckhoven in 1652 (DPW 2020). Van Werckhoven was a member of the Dutch government and a speculator in colonial lands. The Nayack Patent was named after the historic Native American village of Nayack which overlapped with present day Fort Hamilton. With the arrival of the Dutch, the forests in and around lower New York City were cleared for small farms and later, larger settlements. This only intensified with the military occupation of New York City during the Revolutionary War. Colonial forces built an earthen battery at the site in 1776. The site was later captured by British and Hessian troops until 1783 (DPW 2020). Between 1825 and 1831 the masonry casemate fort and earthen redoubt of Fort Hamilton was built.

In addition to the military and colonial history of the area there are also reports of Native American artifacts and habitations at Fort Hamilton. These reports are derived from sources nearly a century old and have not been field verified (DPW 2020). The

Integrated Cultural Resource Management Plan (ICRMP) for Fort Hamilton listed these reports as:

- “(1) “A cache of stone and flint blades found at the Narrows in 1837. Furman says that the quantity was a wagonload” (Parker 1922:582). This is site number 1 in Arthur C. Parker's inventory of Kings County archaeological sites. The reference is to Gabriel Furman, *Antiquities of Long Island* (1874). This site is also referenced in Bailey (1840:6), who refers to the artifacts as "arrowheads" and "axes."
- (2) Parker (1922:Plate 179) illustrates "traces of occupation" at Fort Hamilton.
- (3) Bolton's site number 68, Fort Hamilton (see Letter B on Figure 3.18): "Shell beds indicated occupation, probably as a fishing camp" (Bolton 1934:147; see also Bergen 1884:255).
- (4) Bolton's site number 68, Nayack, The Narrows. Bolton (1934:147) states: "This is supposed to have been the place to which the natives of Werpoes removed after the sale of Manhattan." Bolton also notes Furman's (1874) report of a large cache of flint blades found here.” (DPW 2020) (Figure 4)

A review of the New York State Historic Preservation Office (CRIS) database confirmed there are no precontact-period archaeological sites within the Fort Hamilton reservation. However, the area is labeled as archaeologically sensitive as a result of the reported Parker sites, which were subsumed under the number New York State Museum (NYSM) 3611.

There are four potential historic period archaeological sites that have been noted at Fort Hamilton (DPW 2020) (Figure 5). These are:

- (1) A filled stone well or cistern beneath an asphalt road between Buildings 230 and 207. Reported by Mr. Russell Gilmore, then curator of the Harbor Defense Museum, this feature of unknown age was exposed during road work in 1980. This site does not have an official site number. This site is located approximately 1,260 feet from the APE.
- (2) Nineteenth-century deposits and possible building remains surrounding Building 117, possibly associated with a complex of four buildings of which only Building 117 is still standing (site A047-01-0423 [renumbered A04701.000423]). This area was subjected to archaeological investigations and architectural evaluations, which have concluded that the site does not meet the eligibility criteria for inclusion in the NRHP. This site is located approximately 600 feet from the APE.
- (3) Late nineteenth-century/early twentieth-century artifact deposits and possible displaced foundation stones associated with two former buildings (site A047-01-0424 [renumbered A04701.000424]). This site

is in the northern section of the former parade ground, 150 feet east of the reviewing stand and 100 feet south of Building 302. This site was investigated through a Phase II archaeological survey conducted in August 2003, which determined the site not eligible for inclusion in the NRHP. This site is located approximately 1500 feet from the APE.

- (4) A possible filled-in cellar hole south of Building 312; the feature is near the approximate location of Simon Cortelyou's house. This site does not have a formal site number." (DPW 2020). This site is located approximately 2100 feet away from the APE.

No historic period archaeological sites have been identified within the project APE.

Three buildings on the installation are listed in the National Register of Historic Places (NRHP): (1) Building 207, the Casemate Fortification; (2) Building 220, the Sentry Station; and (3) Building 230, the Caponier. All these listed buildings are located approximately 1,300 feet from the APE. In addition, there are three structures that have been determined eligible for listing in the NRHP, Building 113, Building 201, and the Denyse Wharf. Of those three eligible buildings only Building 113 is located in proximity to the project area, being directly adjacent to it. Building 201 and Denyse Warf are 900 and 2,000 feet away, respectively (Figure 5 and 6)

The APE has had various uses throughout the history of Fort Hamilton. Most recently it was used as a gravel parking lot with a grassy area and trees. However, the parking lot fell into disuse due to sinkholes developing across the lot. Prior to that the site was home to a set of barracks (designated Building 110). This building was evaluated in 1999 and deemed not eligible for the NRHP. It, along with two other buildings, 109 and 111 were demolished in 2010-2011 to make way for the current parking lot and Holiday Inn. The 1935 map in Figure 7 depicts the former location of Building 110 and APE for the CDC.

The neighboring building to the south of the APE is the current Garrison Headquarters (Building 113). This building has been determined eligible for listing in the NRHP. Building 113 was built in 1925 as the YMCA building. The building is considered eligible under Criteria C, as it "embodies the distinctive characteristics of a type, period, or method of construction. It is an intact example of Gregorian Revival style military architecture. It is also one of the Installation's best examples of non-defensive architecture associated with an era of development between the two world wars." (NRHP Evaluation form 1999) (Figure 8).

In 1986, a cultural sensitivity survey was done for Fort Hamilton and revised in 2020. The 1986 survey determined that almost all areas of the Installation have high potential for the presence of cultural resources (Klein et al. 1986, DPW 2020) (Figure 9). Klein et al. (1986) established a system for classifying areas within Fort Hamilton on the basis of general archaeological sensitivity. Their classification was based on the

assumption that, “prior to the late nineteenth century, all areas in the installation had high degrees of sensitivity for precontact period and early historic archaeological resources. Since the late nineteenth century, portions of the fort have been modified to varying degrees during episodes of construction and demolition.” (DPW 2020). In the years since the 1986 survey many areas on Fort Hamilton have changed with new buildings being built and other structures demolished.

The APE (former location of Building 110) is included in Sensitivity Area 7. Sensitivity Area 7 includes the area around and between buildings 107 and 113. This area is described as containing two feet of fill covering the entire area as well as distinct areas of disturbance due to construction, demolition, and utilities. Based off this analysis, Area 7, and therefore the APE, is believed to have a moderate potential for both European and Native American resources at depths below 2 feet.

The staging area for the project consists of the parking lot directly across the street from the proposed project site (Figure 11). This area is within Sensitivity Area 17. Sensitivity Area 17 has a moderate level of archaeological sensitivity based on the archaeological sensitivity assessment. The sensitivity analysis performed for the installation described the areas within Sensitivity Area 17 that are currently beneath parking lots, as likely not having been disturbed by construction and/or demolition of large buildings or structures (DPW 2020).

Determination of Effects

There are no known archaeological sites or historic properties located within the direct APE for the Preferred Alternative. The APE has been affected by episodes of construction, demolition, and utilities-related disturbances. Building 110, previously located on the site was determined not eligible for the NRHP and demolished in 2011 (Figure 10). Another building that was located northwest of Building 113 in the western portion of the APE was demolished before 1951. Although it is anticipated that the APE is affected by disturbances, limited areas around the demolished building footprint, located at depths below two feet are believed to have a moderate potential for archaeological resources that may be affected by the project.

The direct APE also includes the staging area to the east (Figure 11). The staging area consists of the parking lot directly across the street from the proposed project site, which has a moderate level of archaeological sensitivity based on the archaeological sensitivity assessment prepared in 2020. The sensitivity analysis performed for the installation described the areas within Sensitivity Area 17, currently beneath parking lots, as likely not having been disturbed by construction or demolition of large buildings or structures (DPW 2020). However, the use of the lot as a staging area will have no effect on buried resources. The area will not be excavated for the proposed project, nor will any construction take place on the parking lot that could disturb archaeological deposits.

In addition to the direct effects of the construction of the CDC the District has also considered indirect effects to the surrounding buildings and areas. The District considered potential effects to the viewsheds of NRHP-listed and eligible buildings and from vibrations from construction to listed and eligible buildings. There is one NRHP-eligible building within the indirect/visual APE, Building 113. As described above, Building 113 is eligible under criterion C and is a former YMCA building built in 1925. Today this building is serving as the Garrison Headquarters. The setting of Building 113 has changed drastically since it was constructed. The elevated highway that leads to the Verrazzano Bridge, built in 1959, is situated 276 feet from the front of the building. The neighboring buildings, Building 109, 111 and 110, were also demolished in 2012 and other buildings have been constructed within the viewshed since the construction of Building 113. While its integrity of setting would be impacted by the proposed action, the historic property has been previously impacted to a greater extent by the loss of other early 20th Century buildings. In addition, the setting is not an essential factor to the Criteria C significance, as the building was determined eligible in 1999. The building was deemed eligible due to its distinctive characteristics of a type, as an intact example of Gregorian Revival style military architecture. The CDC building itself will be situated approximately 45 feet from Building 113, providing an appropriate offset from the historic structure. The buildings integrity of location, design, materials, workmanship, feeling, and association would remain unchanged as a result of the proposed action. Therefore, the construction of the CDC is not expected to adversely affect the historic viewshed of the building.

Recommendations

A review of existing information and the archaeological sensitivity analysis prepared for the installation indicated that limited areas around the demolished Building 110 footprint, located at depths below two feet, have a moderate potential for archaeological resources. Currently, more than fifty percent of the direct APE is covered by gravel fill and utility lines traverse the property, making archaeological investigations impractical in advance of construction. Therefore, no further archaeological investigations are recommended at this time within the APE but archaeological monitoring will be employed for all construction below the two feet of documented fill in previously undisturbed areas to ensure any undocumented historic or precontact archaeological remains are properly handled. In the event that archaeological deposits are discovered during construction all work will be suspended, the site will be secured, and the NYSHPO, NYCLPC, and federally recognized tribes as applicable, will be contacted so that procedures for avoidance, minimization, or mitigation of effects can be implemented prior to resumption of construction activities that have the potential to affect cultural resources. The staging area will not be excavated for the proposed project, nor will any construction take place on the parking lot that could disturb archaeological deposits; therefore, no further work is recommended for the staging area.

The District has determined that while there is no visual impact anticipated there is the potential for adverse effects to Building 113 from vibration during construction due

to the proximity of the proposed CDC to the existing Building 113. There is about 45 feet between Building 113 and the proposed CDC. To ensure that thresholds are not exceeded, a vibration impact assessment will be performed in advance of construction and if threshold exceedances are anticipated modifications will be made to reduce vibrations where possible and if necessary additional mitigation measures will be coordinated with the NYSHPO and the NYCLPC. Additionally, a vibration monitor will be placed at Building 113 to identify any inadvertent exceedances and if thresholds are exceeded all work will stop until protective measures can be coordinated with the NYSHPO and the NYCLPC.

The District, on behalf of the Fort Hamilton Garrison, invites you to review the information presented here and provide any comments in accordance with 54 USC § 306108 within thirty days of receipt of this letter. Thank you for your assistance with this project. If you or your staff require additional information or have any questions, please contact Arianna Stimpfl, Project Archaeologist, at (917) 790-8605 or by email at Arianna.M.Stimpfl@usace.army.mil.

Sincerely,

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Peter M. Wepler
Chief, Environmental Analysis Branch

References:

Klein, Terry H., Amy Friedlander, and Martha Bowers. 1986. *A Cultural Resource Overview and Management Plan for the U.S. Army Property, Fort Hamilton, Brooklyn, New York, Fort Totten, Queens, New York*. Prepared for the National Park Service, Mid-Atlantic Region, Philadelphia, by the Cultural Resources Group, Louis Berger and Associates, Inc., East Orange, New Jersey.

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January 6, 2025

Environmental Analysis Branch
Planning Division

Amanda Sutphin
New York City Landmarks Preservation Commission
Municipal Building
One Center Street, 9th Floor
New York, N.Y. 10007

Ref: United States Army Garrison Fort Hamilton Brooklyn New York, Child Development Center; Project Number 106.K (U.S. Army Corps of Engineers)

Dear Ms. Sutphin,

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The Undertaking

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basis of general archaeological sensitivity. Their classification was based on the assumption that, “prior to the late nineteenth century, all areas in the installation had high degrees of sensitivity for precontact period and early historic archaeological resources. Since the late nineteenth century, portions of the fort have been modified to varying degrees during episodes of construction and demolition.” (DPW 2020). In the years since the 1986 survey many areas on Fort Hamilton have changed with new buildings being built and other structures demolished.

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The staging area for the project consists of the parking lot directly across the street from the proposed project site (Figure 11). This area is within Sensitivity Area 17. Sensitivity Area 17 has a moderate level of archaeological sensitivity based on the archaeological sensitivity assessment. The sensitivity analysis performed for the installation described the areas within Sensitivity Area 17 that are currently beneath parking lots, as likely not having been disturbed by construction and/or demolition of large buildings or structures (DPW 2020).

Determination of Effects

There are no known archaeological sites or historic properties located within the direct APE for the Preferred Alternative. The APE has been affected by episodes of construction, demolition, and utilities-related disturbances. Building 110, previously located on the site was determined not eligible for the NRHP and demolished in 2011 (Figure 10). Another building that was located northwest of Building 113 in the western portion of the APE was demolished before 1951. Although it is anticipated that the APE is affected by disturbances, limited areas around the demolished building footprint, located at depths below two feet are believed to have a moderate potential for archaeological resources that may be affected by the project.

The direct APE also includes the staging area to the east (Figure 11). The staging area consists of the parking lot directly across the street from the proposed project site, which has a moderate level of archaeological sensitivity based on the archaeological sensitivity assessment prepared in 2020. The sensitivity analysis performed for the installation described the areas within Sensitivity Area 17, currently beneath parking lots, as likely not having been disturbed by construction or demolition of large buildings or structures (DPW 2020). However, the use of the lot as a staging area will have no effect on buried resources. The area will not be excavated for the proposed project, nor will any construction take place on the parking lot that could disturb archaeological deposits.

In addition to the direct effects of the construction of the CDC the District has also considered indirect effects to the surrounding buildings and areas. The District considered potential effects to the viewsheds of NRHP-listed and eligible buildings and from vibrations from construction to listed and eligible buildings. There is one NRHP-eligible building within the indirect/visual APE, Building 113. As described above, Building 113 is eligible under criterion C and is a former YMCA building built in 1925. Today this building is serving as the Garrison Headquarters. The setting of Building 113 has changed drastically since it was constructed. The elevated highway that leads to the Verrazzano Bridge, built in 1959, is situated 276 feet from the front of the building. The neighboring buildings, Building 109, 111 and 110, were also demolished in 2012 and other buildings have been constructed within the viewshed since the construction of Building 113. While its integrity of setting would be impacted by the proposed action, the historic property has been previously impacted to a greater extent by the loss of other early 20th Century buildings. In addition, the setting is not an essential factor to the Criteria C significance, as the building was determined eligible in 1999. The building was deemed eligible due to its distinctive characteristics of a type, as an intact example of Gregorian Revival style military architecture. The CDC building itself will be situated approximately 45 feet from Building 113, providing an appropriate offset from the historic structure. The buildings integrity of location, design, materials, workmanship, feeling, and association would remain unchanged as a result of the proposed action. Therefore, the construction of the CDC is not expected to adversely affect the historic viewshed of the building.

Recommendations

A review of existing information and the archaeological sensitivity analysis prepared for the installation indicated that limited areas around the demolished Building 110 footprint, located at depths below two feet, have a moderate potential for archaeological resources. Currently, more than fifty percent of the direct APE is covered by gravel fill and utility lines traverse the property, making archaeological investigations impractical in advance of construction. Therefore, no further archaeological investigations are recommended at this time within the APE but archaeological monitoring will be employed for all construction below the two feet of documented fill in previously undisturbed areas to ensure any undocumented historic or precontact archaeological remains are properly handled. In the event that archaeological deposits are discovered during construction all work will be suspended, the site will be secured, and the NYSHPO, NYCLPC, and federally recognized tribes as applicable, will be contacted so that procedures for avoidance, minimization, or mitigation of effects can be implemented prior to resumption of construction activities that have the potential to affect cultural resources. The staging area will not be excavated for the proposed project, nor will any construction take place on the parking lot that could disturb archaeological deposits; therefore, no further work is recommended for the staging area.

The District has determined that while there is no visual impact anticipated there is the potential for adverse effects to Building 113 from vibration during construction due to the proximity of the proposed CDC to the existing Building 113. There is about 45 feet between Building 113 and the proposed CDC. To ensure that thresholds are not exceeded, a vibration impact assessment will be performed in advance of construction and if threshold exceedances are anticipated modifications will be made to reduce vibrations where possible and if necessary additional mitigation measures will be coordinated with the NYSHPO and the NYCLPC. Additionally, a vibration monitor will be placed at Building 113 to identify any inadvertent exceedances and if thresholds are exceeded all work will stop until protective measures can be coordinated with the NYSHPO and the NYCLPC.

The District, on behalf of the Fort Hamilton Garrison, invites you to review the information presented here and provide any comments in accordance with 54 USC § 306108 within thirty days of receipt of this letter. Thank you for your assistance with this project. If you or your staff require additional information or have any questions, please contact Arianna Stimpfl, Project Archaeologist, at (917) 790-8605 or by email at Arianna.M.Stimpfl@usace.army.mil.

Sincerely,

WEPPLER.PETER
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Peter M. Wepler
Chief, Environmental Analysis Branch

References:

Klein, Terry H., Amy Friedlander, and Martha Bowers. 1986. *A Cultural Resource Overview and Management Plan for the U.S. Army Property, Fort Hamilton, Brooklyn, New York, Fort Totten, Queens, New York*. Prepared for the National Park Service, Mid-Atlantic Region, Philadelphia, by the Cultural Resources Group, Louis Berger and Associates, Inc., East Orange, New Jersey.

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REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NEW YORK 10278-0090

January 6, 2025

Environmental Analysis Branch
Planning Division

Susan Bachor
Delaware Tribe Historic Preservation
Delaware Tribe of Indians
126 University Circle
Stroud Hall, Rm. 437
East Stroudsburg, PA 18301

Re: United States Army Garrison Fort Hamilton Brooklyn New York, Child Development Center

Dear Ms. Bachor,

The U.S. Army Corps of Engineers, New York District (District) is undertaking an Environmental Assessment on behalf of the United States Army Garrison (USAG) Fort Hamilton for a proposed Child Development Center (CDC). In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality regulations, and Section 106 of the National Historic Preservation Act (NHPA) (54 USC § 306108) and its implementing regulations at 36 CFR Part 800, a cultural resources survey was carried out including an assessment of effects for the proposed (CDC). This NHPA consultation is being coordinated with the proposed project's NEPA process. As a Federally Recognized Tribe with expressed interest in the area this letter report has been prepared to give your office an opportunity to review and comment on the determination of effects pursuant to 54 USC § 306108.

The Undertaking

The United States Department of the Army (Army) is planning to construct and operate a new CDC facility (Proposed Action) on United States Army Garrison Fort Hamilton (herein referred to as "Fort Hamilton" or the "Installation") in Brooklyn, Kings County, New York (Figure 1). The Proposed Action includes the construction of a 16,632 square foot single story building, three outdoor playgrounds totaling 16,667 square feet, 24 new parking spaces, paved pedestrian pathways, perimeter fencing and lighting, landscaping, a truck delivery space, utility connections, stormwater management, and security features (Figure 2).

Two options were considered for this Proposed Action, the No Action Alternative and the Preferred Alternative. The No Action Alternative is that the CDC would remain at its current location, which is an obsolete 1960s era building with no ability to increase its capacity, and the proposed site would remain a landscaped area and gravel parking lot. The Preferred Alternative will allow for an increase enrollment capacity by building a

larger facility. In addition, the modernized facility will support the Fort Hamilton CDC's mission to offer a consistent, safe, and nurturing environment for children between six weeks and five years of age. The new CDC facility will offer new and improved amenities such as a kitchen, changing areas, administrative support space, mothers' nursing room, staff lounge, laundry, storage, and supply rooms.

In accordance with Section 106 of the National Historic Preservation Act, its implementing regulations, and the specific legal requirements described in Chapter 6 of AR-200-1, the Proposed Action is considered an Undertaking having the potential to affect cultural resources. The physical Area of Potential Effect (APE) for the CDC consists of the parking lot and associated open areas between the Garrison Headquarters (Building 113) and The Holiday Inn (Building 107). Proposed activities will include construction of the CDC building itself as well as playgrounds, new parking areas and pathways (Figure 3). In addition, the APE includes a staging area directly east of the proposed project site.

History of the APE and Identification of Cultural Resources

Background research included a review of the history of the APE, a review of site files held by the Fort Hamilton, the New York State Office of Parks, Recreation, and Historic Preservation and the Landmarks Preservation Commission to gather information on previously documented historic properties and archaeological sites, review of cultural resource survey reports and a site visit to document current conditions at the site and to determine if there are any known cultural resources or structures within the proposed project area and vicinity with the potential for NRHP eligibility that may be impacted by the Proposed Action.

Much of the history of the project area can be found within the Integrated Cultural Resources Management Plan (ICRMP) for Fort Hamilton (DPW 2020). The New York City and Brooklyn itself have a long history of use and habitation. The area now occupied by Fort Hamilton was part of the Village of New Utrecht settled by the Dutch in 1657. New Utrecht was originally part of the Nayack Patent, one of two tracts of land on Long Island purchased by Augustine Herman for Cornelis Van Werckhoven in 1652 (DPW 2020). Van Werckhoven was a member of the Dutch government and a speculator in colonial lands. The Nayack Patent was named after the historic Native American village of Nayack which overlapped with present day Fort Hamilton. With the arrival of the Dutch, the forests in and around lower New York City were cleared for small farms and later, larger settlements. This only intensified with the military occupation of New York City during the Revolutionary War. Colonial forces built an earthen battery at the site in 1776. The site was later captured by British and Hessian troops until 1783 (DPW 2020). Between 1825 and 1831 the masonry casemate fort and earthen redoubt of Fort Hamilton was built.

In addition to the military and colonial history of the area there are also reports of Native American artifacts and habitations at Fort Hamilton. These reports are derived from sources nearly a century old and have not been field verified (DPW 2020). The

Integrated Cultural Resource Management Plan (ICRMP) for Fort Hamilton listed these reports as:

- “(1) “A cache of stone and flint blades found at the Narrows in 1837. Furman says that the quantity was a wagonload” (Parker 1922:582). This is site number 1 in Arthur C. Parker's inventory of Kings County archaeological sites. The reference is to Gabriel Furman, *Antiquities of Long Island* (1874). This site is also referenced in Bailey (1840:6), who refers to the artifacts as "arrowheads" and "axes."
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A review of the New York State Historic Preservation Office (CRIS) database confirmed there are no precontact-period archaeological sites within the Fort Hamilton reservation. However, the area is labeled as archaeologically sensitive as a result of the reported Parker sites, which were subsumed under the number New York State Museum (NYSM) 3611.

There are four potential historic period archaeological sites that have been noted at Fort Hamilton (DPW 2020) (Figure 5). These are:

- (1) A filled stone well or cistern beneath an asphalt road between Buildings 230 and 207. Reported by Mr. Russell Gilmore, then curator of the Harbor Defense Museum, this feature of unknown age was exposed during road work in 1980. This site does not have an official site number. This site is located approximately 1,260 feet from the APE.
- (2) Nineteenth-century deposits and possible building remains surrounding Building 117, possibly associated with a complex of four buildings of which only Building 117 is still standing (site A047-01-0423 [renumbered A04701.000423]). This area was subjected to archaeological investigations and architectural evaluations, which have concluded that the site does not meet the eligibility criteria for inclusion in the NRHP. This site is located approximately 600 feet from the APE.
- (3) Late nineteenth-century/early twentieth-century artifact deposits and possible displaced foundation stones associated with two former buildings (site A047-01-0424 [renumbered A04701.000424]). This site

is in the northern section of the former parade ground, 150 feet east of the reviewing stand and 100 feet south of Building 302. This site was investigated through a Phase II archaeological survey conducted in August 2003, which determined the site not eligible for inclusion in the NRHP. This site is located approximately 1500 feet from the APE.

- (4) A possible filled-in cellar hole south of Building 312; the feature is near the approximate location of Simon Cortelyou's house. This site does not have a formal site number." (DPW 2020). This site is located approximately 2100 feet away from the APE.

No historic period archaeological sites have been identified within the project APE.

Three buildings on the installation are listed in the National Register of Historic Places (NRHP): (1) Building 207, the Casemate Fortification; (2) Building 220, the Sentry Station; and (3) Building 230, the Caponier. All these listed buildings are located approximately 1,300 feet from the APE. In addition, there are three structures that have been determined eligible for listing in the NRHP, Building 113, Building 201, and the Denyse Wharf. Of those three eligible buildings only Building 113 is located in proximity to the project area, being directly adjacent to it. Building 201 and Denyse Warf are 900 and 2,000 feet away, respectively (Figure 5 and 6)

The APE has had various uses throughout the history of Fort Hamilton. Most recently it was used as a gravel parking lot with a grassy area and trees. However, the parking lot fell into disuse due to sinkholes developing across the lot. Prior to that the site was home to a set of barracks (designated Building 110). This building was evaluated in 1999 and deemed not eligible for the NRHP. It, along with two other buildings, 109 and 111 were demolished in 2010-2011 to make way for the current parking lot and Holiday Inn. The 1935 map in Figure 7 depicts the former location of Building 110 and APE for the CDC.

The neighboring building to the south of the APE is the current Garrison Headquarters (Building 113). This building has been determined eligible for listing in the NRHP. Building 113 was built in 1925 as the YMCA building. The building is considered eligible under Criteria C, as it "embodies the distinctive characteristics of a type, period, or method of construction. It is an intact example of Gregorian Revival style military architecture. It is also one of the Installation's best examples of non-defensive architecture associated with an era of development between the two world wars." (NRHP Evaluation form 1999) (Figure 8).

In 1986, a cultural sensitivity survey was done for Fort Hamilton and revised in 2020. The 1986 survey determined that almost all areas of the Installation have high potential for the presence of cultural resources (Klein et al. 1986, DPW 2020) (Figure 9). Klein et al. (1986) established a system for classifying areas within Fort Hamilton on the basis of general archaeological sensitivity. Their classification was based on the

assumption that, “prior to the late nineteenth century, all areas in the installation had high degrees of sensitivity for precontact period and early historic archaeological resources. Since the late nineteenth century, portions of the fort have been modified to varying degrees during episodes of construction and demolition.” (DPW 2020). In the years since the 1986 survey many areas on Fort Hamilton have changed with new buildings being built and other structures demolished.

The APE (former location of Building 110) is included in Sensitivity Area 7. Sensitivity Area 7 includes the area around and between buildings 107 and 113. This area is described as containing two feet of fill covering the entire area as well as distinct areas of disturbance due to construction, demolition, and utilities. Based off this analysis, Area 7, and therefore the APE, is believed to have a moderate potential for both European and Native American resources at depths below 2 feet.

The staging area for the project consists of the parking lot directly across the street from the proposed project site (Figure 11). This area is within Sensitivity Area 17. Sensitivity Area 17 has a moderate level of archaeological sensitivity based on the archaeological sensitivity assessment. The sensitivity analysis performed for the installation described the areas within Sensitivity Area 17 that are currently beneath parking lots, as likely not having been disturbed by construction and/or demolition of large buildings or structures (DPW 2020).

Determination of Effects

There are no known archaeological sites or historic properties located within the direct APE for the Preferred Alternative. The APE has been affected by episodes of construction, demolition, and utilities-related disturbances. Building 110, previously located on the site was determined not eligible for the NRHP and demolished in 2011 (Figure 10). Another building that was located northwest of Building 113 in the western portion of the APE was demolished before 1951. Although it is anticipated that the APE is affected by disturbances, limited areas around the demolished building footprint, located at depths below two feet are believed to have a moderate potential for archaeological resources that may be affected by the project.

The direct APE also includes the staging area to the east (Figure 11). The staging area consists of the parking lot directly across the street from the proposed project site, which has a moderate level of archaeological sensitivity based on the archaeological sensitivity assessment prepared in 2020. The sensitivity analysis performed for the installation described the areas within Sensitivity Area 17, currently beneath parking lots, as likely not having been disturbed by construction or demolition of large buildings or structures (DPW 2020). However, the use of the lot as a staging area will have no effect on buried resources. The area will not be excavated for the proposed project, nor will any construction take place on the parking lot that could disturb archaeological deposits.

In addition to the direct effects of the construction of the CDC the District has also considered indirect effects to the surrounding buildings and areas. The District considered potential effects to the viewsheds of NRHP-listed and eligible buildings and from vibrations from construction to listed and eligible buildings. There is one NRHP-eligible building within the indirect/visual APE, Building 113. As described above, Building 113 is eligible under criterion C and is a former YMCA building built in 1925. Today this building is serving as the Garrison Headquarters. The setting of Building 113 has changed drastically since it was constructed. The elevated highway that leads to the Verrazzano Bridge, built in 1959, is situated 276 feet from the front of the building. The neighboring buildings, Building 109, 111 and 110, were also demolished in 2012 and other buildings have been constructed within the viewshed since the construction of Building 113. While its integrity of setting would be impacted by the proposed action, the historic property has been previously impacted to a greater extent by the loss of other early 20th Century buildings. In addition, the setting is not an essential factor to the Criteria C significance, as the building was determined eligible in 1999. The building was deemed eligible due to its distinctive characteristics of a type, as an intact example of Gregorian Revival style military architecture. The CDC building itself will be situated approximately 45 feet from Building 113, providing an appropriate offset from the historic structure. The buildings integrity of location, design, materials, workmanship, feeling, and association would remain unchanged as a result of the proposed action. Therefore, the construction of the CDC is not expected to adversely affect the historic viewshed of the building.

Recommendations

A review of existing information and the archaeological sensitivity analysis prepared for the installation indicated that limited areas around the demolished Building 110 footprint, located at depths below two feet, have a moderate potential for archaeological resources. Currently, more than fifty percent of the direct APE is covered by gravel fill and utility lines traverse the property, making archaeological investigations impractical in advance of construction. Therefore, no further archaeological investigations are recommended at this time within the APE but archaeological monitoring will be employed for all construction below the two feet of documented fill in previously undisturbed areas to ensure any undocumented historic or precontact archaeological remains are properly handled. In the event that archaeological deposits are discovered during construction all work will be suspended, the site will be secured, and the NYSHPO, NYCLPC, and federally recognized tribes as applicable, will be contacted so that procedures for avoidance, minimization, or mitigation of effects can be implemented prior to resumption of construction activities that have the potential to affect cultural resources. The staging area will not be excavated for the proposed project, nor will any construction take place on the parking lot that could disturb archaeological deposits; therefore, no further work is recommended for the staging area.

The District has determined that while there is no visual impact anticipated there is the potential for adverse effects to Building 113 from vibration during construction due

to the proximity of the proposed CDC to the existing Building 113. There is about 45 feet between Building 113 and the proposed CDC. To ensure that thresholds are not exceeded, a vibration impact assessment will be performed in advance of construction and if threshold exceedances are anticipated modifications will be made to reduce vibrations where possible and if necessary additional mitigation measures will be coordinated with the NYSHPO and the NYCLPC. Additionally, a vibration monitor will be placed at Building 113 to identify any inadvertent exceedances and if thresholds are exceeded all work will stop until protective measures can be coordinated with the NYSHPO and the NYCLPC.

The District, on behalf of the Fort Hamilton Garrison, invites you to review the information presented here and provide any comments in accordance with 54 USC § 306108 within thirty days of receipt of this letter. Thank you for your assistance with this project. If you or your staff require additional information or have any questions, please contact Arianna Stimpfl, Project Archaeologist, at (917) 790-8605 or by email at Arianna.M.Stimpfl@usace.army.mil.

Sincerely,

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Peter M. Wepler
Chief, Environmental Analysis Branch

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DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, NEW YORK DISTRICT
JACOB K. JAVITS FEDERAL BUILDING
26 FEDERAL PLAZA
NEW YORK NEW YORK 10278-0090

January 6, 2025

REPLY TO
ATTENTION OF

Environmental Analysis Branch
Planning Division

Ms. Katelyn Lucas
Tribal Historic Preservation Office
Delaware Nation
2825 Fish Hatchery Road
Allentown, PA 18103

Ref: United States Army Garrison Fort Hamilton Brooklyn New York, Child Development Center

Dear Ms. Lucas,

The U.S. Army Corps of Engineers, New York District (District) is undertaking an Environmental Assessment (EA) on behalf of the United States Army Garrison (USAG) Fort Hamilton for a proposed Child Development Center (CDC). In accordance with the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality regulations, and Section 106 of the National Historic Preservation Act (NHPA) (54 USC § 306108) and its implementing regulations at 36 CFR Part 800, a cultural resources survey was carried out including an assessment of effects for the proposed CDC. This NHPA consultation is being coordinated with the proposed project's NEPA process. As a Federally Recognized Tribe with interest in this area this letter report has been prepared to give your office an opportunity to review and comment on the determination of effects pursuant to 54 USC § 306108.

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In addition to the direct effects of the construction of the CDC the District has also considered indirect effects to the surrounding buildings and areas. The District considered potential effects to the viewsheds of NRHP-listed and eligible buildings and from vibrations from construction to listed and eligible buildings. There is one NRHP-eligible building within the indirect/visual APE, Building 113. As described above, Building 113 is eligible under criterion C and is a former YMCA building built in 1925. Today this building is serving as the Garrison Headquarters. The setting of Building 113 has changed drastically since it was constructed. The elevated highway that leads to the Verrazzano Bridge, built in 1959, is situated 276 feet from the front of the building. The neighboring buildings, Building 109, 111 and 110, were also demolished in 2012 and other buildings have been constructed within the viewshed since the construction of Building 113. While its integrity of setting would be impacted by the proposed action, the historic property has been previously impacted to a greater extent by the loss of other early 20th Century buildings. In addition, the setting is not an essential factor to the Criteria C significance, as the building was determined eligible in 1999. The building was deemed eligible due to its distinctive characteristics of a type, as an intact example of Gregorian Revival style military architecture. The CDC building itself will be situated approximately 45 feet from Building 113, providing an appropriate offset from the historic structure. The buildings integrity of location, design, materials, workmanship, feeling, and association would remain unchanged as a result of the proposed action. Therefore, the construction of the CDC is not expected to adversely affect the historic viewshed of the building.

Recommendations

A review of existing information and the archaeological sensitivity analysis prepared for the installation indicated that limited areas around the demolished Building 110 footprint, located at depths below two feet, have a moderate potential for archaeological resources. Currently, more than fifty percent of the direct APE is covered by gravel fill and utility lines traverse the property, making archaeological investigations impractical in advance of construction. Therefore, no further archaeological investigations are recommended at this time within the APE but archaeological monitoring will be employed for all construction below the two feet of documented fill in previously undisturbed areas to ensure any undocumented historic or precontact archaeological remains are properly handled. In the event that archaeological deposits are discovered during construction all work will be suspended, the site will be secured, and the NYSHPO, NYCLPC, and federally recognized tribes as applicable, will be contacted so that procedures for avoidance, minimization, or mitigation of effects can be implemented prior to resumption of construction activities that have the potential to affect cultural resources. The staging area will not be excavated for the proposed project, nor will any construction take place on the parking lot that could disturb archaeological deposits; therefore, no further work is recommended for the staging area.

The District has determined that while there is no visual impact anticipated there is the potential for adverse effects to Building 113 from vibration during construction due to the proximity of the proposed CDC to the existing Building 113. There is about 45 feet between Building 113 and the proposed CDC. To ensure that thresholds are not exceeded, a vibration impact assessment will be performed in advance of construction and if threshold exceedances are anticipated modifications will be made to reduce vibrations where possible and if necessary additional mitigation measures will be coordinated with the NYSHPO and the NYCLPC. Additionally, a vibration monitor will be placed at Building 113 to identify any inadvertent exceedances and if thresholds are exceeded all work will stop until protective measures can be coordinated with the NYSHPO and the NYCLPC.

The District, on behalf of the Fort Hamilton Garrison, invites you to review the information presented here and provide any comments in accordance with 54 USC § 306108 within thirty days of receipt of this letter. Thank you for your assistance with this project. If you or your staff require additional information or have any questions, please contact Arianna Stimpfl, Project Archaeologist, at (917) 790-8605 or by email at Arianna.M.Stimpfl@usace.army.mil.

Sincerely,

WEPPLER.PETER
.M.1228647353

Digitally signed by
WEPPLER.PETER.M.1228647353
Date: 2025.01.06 17:53:31
-05'00'

Peter M. Wepler
Chief, Environmental Analysis Branch

References:

Klein, Terry H., Amy Friedlander, and Martha Bowers. 1986. *A Cultural Resource Overview and Management Plan for the U.S. Army Property, Fort Hamilton, Brooklyn, New York, Fort Totten, Queens, New York*. Prepared for the National Park Service, Mid-Atlantic Region, Philadelphia, by the Cultural Resources Group, Louis Berger and Associates, Inc., East Orange, New Jersey.

Directorate of Public Works (DPW). 2020. *Integrated Cultural Resources Management Plan for Fort Hamilton, Brooklyn, Kings County, New York*. Prepared by Panamerican Consultants, Inc., Buffalo, New York



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Long Island Ecological Services Field Office
340 Smith Road
Shirley, NY 11967-2258
Phone: (631) 286-0485 Fax: (631) 286-4003



In Reply Refer To:

07/16/2024 20:36:09 UTC

Project Code: 2024-0117153

Project Name: Child Development Center at U.S. Army Garrison Fort Hamilton, Brooklyn, NY

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 enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

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 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 IPaC system by completing the same process used to receive the enclosed list.

The purpose of the 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 threatened and endangered species and/or designated critical habitat.

A Biological Assessment 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 Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to 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. 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:

<https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts, see <https://www.fws.gov/program/migratory-bird-permit/what-we-do>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures, see <https://www.fws.gov/library/collections/threats-birds>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/partner/council-conservation-migratory-birds>.

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

Attachment(s):

- Official Species List

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:

Long Island Ecological Services Field Office
340 Smith Road
Shirley, NY 11967-2258
(631) 286-0485

PROJECT SUMMARY

Project Code: 2024-0117153

Project Name: Child Development Center at U.S. Army Garrison Fort Hamilton, Brooklyn, NY

Project Type: Military Development

Project Description: The U.S. Department of the Army is proposing to construct and operate a new child development center facility at U.S. Army Garrison Fort Hamilton in Brooklyn, Kings County, NY. The new child development center would be constructed on an approximately 95,000 sq ft site bordered by the Verrazzano-Narrows Bridge, Garrison Headquarters, Holiday Inn Express, and White Avenue. The site has been previously disturbed and is located within in a highly developed area of the installation. Existing site conditions include a closed gravel parking lot, paved walkways and streets, and turf lawn with trees and shrubs. Construction would include a new single-story building (16,632 sq ft), three outdoor playgrounds (16,667 sq ft), 24 new parking spaces, paved pedestrian pathways, perimeter fencing and lighting, landscaping, a truck delivery space, utility connections, stormwater management, and security features. White Avenue and Schum Avenue would be repaved within the project footprint. Up to 14 trees would be removed during site preparation. Trees would be replaced on the installation in accordance with the installation's tree replacement guidelines. During construction, equipment would access the site using existing paved roadways within the installation. Staging and material laydown would utilize an existing paved parking lot next to the construction site, across White Avenue. Construction is dependent on the availability of funding and is anticipated to occur between 2027 and 2030. The U.S. Army Corps of Engineers, New York District, is supporting the project design and environmental review under the National Environmental Policy Act (NEPA). NEPA review is expected to conclude in early 2025.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@40.61136295,-74.02880824346946,14z>



Counties: Kings County, New York

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. Note that 1 of these species should be considered only under certain conditions.

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
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none">▪ This species only needs to be considered if the project includes wind turbine operations. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered

BIRDS

NAME	STATUS
Piping Plover <i>Charadrius melodus</i> Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened
Rufa Red Knot <i>Calidris canutus rufa</i> There is proposed critical habitat for this species. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

CRITICAL HABITATS

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

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: Army Corps of Engineers
Name: Eric Pasay
Address: 26 Federal Plaza
Address Line 2: USACE Planning (Room 17-421) c/o PSC Mail Center
City: New York
State: NY
Zip: 10278-0090
Email: eric.s.pasay@usace.army.mil
Phone: 9177906205

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Army



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Long Island Ecological Services Field Office
340 Smith Road
Shirley, NY 11967-2258
Phone: (631) 286-0485 Fax: (631) 286-4003



In Reply Refer To:

07/16/2024 20:49:58 UTC

Project code: 2024-0117153

Project Name: Child Development Center at U.S. Army Garrison Fort Hamilton, Brooklyn, NY

Federal Nexus: yes

Federal Action Agency (if applicable): Army

Subject: Record of project representative's no effect determination for 'Child Development Center at U.S. Army Garrison Fort Hamilton, Brooklyn, NY'

Dear Eric Pasay:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on July 16, 2024, for 'Child Development Center at U.S. Army Garrison Fort Hamilton, Brooklyn, NY' (here forward, Project). This project has been assigned Project Code 2024-0117153 and all future correspondence should clearly reference this number. **Please carefully review this letter.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat Rangewide Determination Key (Dkey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.***

Determination for the Northern Long-Eared Bat

Based upon your IPaC submission and a standing analysis, your project has reached the determination of "No Effect" on the northern long-eared bat. To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed

action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17).

Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no consultation with the Service is required (ESA §7). If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13].

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination for the northern long-eared bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Monarch Butterfly *Danaus plexippus* Candidate
- Piping Plover *Charadrius melodus* Threatened
- Rufa Red Knot *Calidris canutus rufa* Threatened

You may coordinate with our Office to determine whether the Action may affect the animal species listed above and, if so, how they may be affected.

Next Steps

Based upon your IPaC submission, your project has reached the determination of “No Effect” on the northern long-eared bat. If there are no updates on listed species, no further consultation/coordination for this project is required with respect to the northern long-eared bat. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional coordination with the Service should take place to ensure compliance with the Act.

If you have any questions regarding this letter or need further assistance, please contact the Long Island Ecological Services Field Office and reference Project Code 2024-0117153 associated with this Project.

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

Child Development Center at U.S. Army Garrison Fort Hamilton, Brooklyn, NY

2. Description

The following description was provided for the project 'Child Development Center at U.S. Army Garrison Fort Hamilton, Brooklyn, NY':

The U.S. Department of the Army is proposing to construct and operate a new child development center facility at U.S. Army Garrison Fort Hamilton in Brooklyn, Kings County, NY. The new child development center would be constructed on an approximately 95,000 sq ft site bordered by the Verrazzano-Narrows Bridge, Garrison Headquarters, Holiday Inn Express, and White Avenue. The site has been previously disturbed and is located within in a highly developed area of the installation. Existing site conditions include a closed gravel parking lot, paved walkways and streets, and turf lawn with trees and shrubs. Construction would include a new single-story building (16,632 sq ft), three outdoor playgrounds (16,667 sq ft), 24 new parking spaces, paved pedestrian pathways, perimeter fencing and lighting, landscaping, a truck delivery space, utility connections, stormwater management, and security features. White Avenue and Schum Avenue would be repaved within the project footprint. Up to 14 trees would be removed during site preparation. Trees would be replaced on the installation in accordance with the installation's tree replacement guidelines. During construction, equipment would access the site using existing paved roadways within the installation. Staging and material laydown would utilize an existing paved parking lot next to the construction site, across White Avenue. Construction is dependent on the availability of funding and is anticipated to occur between 2027 and 2030. The U.S. Army Corps of Engineers, New York District, is supporting the project design and environmental review under the National Environmental Policy Act (NEPA). NEPA review is expected to conclude in early 2025.

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@40.61136295,-74.02880824346946,14z>



DETERMINATION KEY RESULT

Based on the information you provided, you have determined that the Proposed Action will have no effect on the Endangered northern long-eared bat (*Myotis septentrionalis*). Therefore, no consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (87 Stat. 884, as amended 16 U.S.C. 1531 *et seq.*) is required for those species.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of the northern long-eared bat or any other listed species?

Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

No

2. The action area does not overlap with an area for which U.S. Fish and Wildlife Service currently has data to support the presumption that the northern long-eared bat is present. Are you aware of other data that indicates that northern long-eared bats (NLEB) are likely to be present in the action area?

Bat occurrence data may include identification of NLEBs in hibernacula, capture of NLEBs, tracking of NLEBs to roost trees, or confirmed NLEB acoustic detections. Data on captures, roost tree use, and acoustic detections should post-date the year when white-nose syndrome was detected in the relevant state. With this question, we are looking for data that, for some reason, may have not yet been made available to U.S. Fish and Wildlife Service.

No

3. Does any component of the action involve construction or operation of wind turbines?

Note: For federal actions, answer 'yes' if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

No

4. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

Yes

5. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

No

6. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

No

7. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

No

8. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

No

9. Have you determined that your proposed action will have no effect on the northern long-eared bat? Remember to consider the [effects of any activities](#) that would not occur but for the proposed action.

If you think that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, answer “No” below and continue through the key. If you have determined that the northern long-eared bat does not occur in your project’s action area and/or that your project will have no effects whatsoever on the species despite the potential for it to occur in the action area, you may make a “no effect” determination for the northern long-eared bat.

Note: Federal agencies (or their designated non-federal representatives) must consult with USFWS on federal agency actions that may affect listed species [50 CFR 402.14(a)]. Consultation is not required for actions that will not affect listed species or critical habitat. Therefore, this determination key will not provide a consistency or verification letter for actions that will not affect listed species. If you believe that the northern long-eared bat may be affected by your project or if you would like assistance in deciding, please answer “No” and continue through the key. Remember that this key addresses only effects to the northern long-eared bat. Consultation with USFWS would be required if your action may affect another listed species or critical habitat. The definition of [Effects of the Action](#) can be found here: <https://www.fws.gov/media/northern-long-eared-bat-assisted-determination-key-selected-definitions>

Yes

PROJECT QUESTIONNAIRE

Will all project activities be completed by November 30, 2024?

No

IPAC USER CONTACT INFORMATION

Agency: Army Corps of Engineers
Name: Eric Pasay
Address: 26 Federal Plaza
Address Line 2: USACE Planning (Room 17-421) c/o PSC Mail Center
City: New York
State: NY
Zip: 10278-0090
Email: eric.s.pasay@usace.army.mil
Phone: 9177906205

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Army



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Long Island Ecological Services Field Office
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Shirley, NY 11967-2258
Phone: (631) 286-0485 Fax: (631) 286-4003



In Reply Refer To:

07/16/2024 20:45:57 UTC

Project code: 2024-0117153

Project Name: Child Development Center at U.S. Army Garrison Fort Hamilton, Brooklyn, NY

Federal Nexus: yes

Federal Action Agency (if applicable): Army

Subject: Federal agency coordination under the Endangered Species Act, Section 7 for 'Child Development Center at U.S. Army Garrison Fort Hamilton, Brooklyn, NY'

Dear Eric Pasay:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on July 16, 2024, for "Child Development Center at U.S. Army Garrison Fort Hamilton, Brooklyn, NY" (here forward, Project). This project has been assigned Project Code 2024-0117153 and all future correspondence should clearly reference this number.

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into the IPaC must accurately represent the full scope and details of the Project. Failure to accurately represent or implement the Project as detailed in IPaC or the Northeast Determination Key (DKey), invalidates this letter. **Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid.**

To make a no effect determination, the full scope of the proposed project implementation (action) should not have any effects (either positive or negative effect(s)), to a federally listed species or designated critical habitat. Effects of the action are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action. (See § 402.17). Under Section 7 of the ESA, if a federal action agency makes a no effect determination, no further consultation with, or concurrence from, the Service is

required (ESA §7). If a proposed Federal action may affect a listed species or designated critical habitat, formal consultation is required (except when the Service concurs, in writing, that a proposed action "is not likely to adversely affect" listed species or designated critical habitat [50 CFR §402.02, 50 CFR§402.13]).

The IPaC results indicated the following species is (are) potentially present in your project area and, based on your responses to the Service's Northeast DKey, you determined the proposed Project will have the following effect determinations:

Species	Listing Status	Determination
Piping Plover (<i>Charadrius melodus</i>)	Threatened	No effect
Rufa Red Knot (<i>Calidris canutus rufa</i>)	Threatened	No effect

Conclusion If there are no updates on listed species, no further consultation/coordination for this project is required for the species identified above. However, the Service recommends that project proponents re-evaluate the Project in IPaC if: 1) the scope, timing, duration, or location of the Project changes (includes any project changes or amendments); 2) new information reveals the Project may impact (positively or negatively) federally listed species or designated critical habitat; or 3) a new species is listed, or critical habitat designated. If any of the above conditions occurs, additional consultation with the Service should take place before project implements any changes which are final or commits additional resources.

In addition to the species listed above, the following species and/or critical habitats may also occur in your project area and are not covered by this conclusion:

- Monarch Butterfly *Danaus plexippus* Candidate
- Northern Long-eared Bat *Myotis septentrionalis* Endangered

Please Note: If the Action may impact bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act (BGEPA) (54 Stat. 250, as amended, 16 U.S.C. 668a-d) by the prospective permittee may be required. Please contact the Migratory Birds Permit Office, (413) 253-8643, or PermitsR5MB@fws.gov, with any questions regarding potential impacts to Eagles.

If you have any questions regarding this letter or need further assistance, please contact the Long Island Ecological Services Field Office and reference the Project Code associated with this Project.

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

Child Development Center at U.S. Army Garrison Fort Hamilton, Brooklyn, NY

2. Description

The following description was provided for the project 'Child Development Center at U.S. Army Garrison Fort Hamilton, Brooklyn, NY':

The U.S. Department of the Army is proposing to construct and operate a new child development center facility at U.S. Army Garrison Fort Hamilton in Brooklyn, Kings County, NY. The new child development center would be constructed on an approximately 95,000 sq ft site bordered by the Verrazzano-Narrows Bridge, Garrison Headquarters, Holiday Inn Express, and White Avenue. The site has been previously disturbed and is located within in a highly developed area of the installation. Existing site conditions include a closed gravel parking lot, paved walkways and streets, and turf lawn with trees and shrubs. Construction would include a new single-story building (16,632 sq ft), three outdoor playgrounds (16,667 sq ft), 24 new parking spaces, paved pedestrian pathways, perimeter fencing and lighting, landscaping, a truck delivery space, utility connections, stormwater management, and security features. White Avenue and Schum Avenue would be repaved within the project footprint. Up to 14 trees would be removed during site preparation. Trees would be replaced on the installation in accordance with the installation's tree replacement guidelines. During construction, equipment would access the site using existing paved roadways within the installation. Staging and material laydown would utilize an existing paved parking lot next to the construction site, across White Avenue. Construction is dependent on the availability of funding and is anticipated to occur between 2027 and 2030. The U.S. Army Corps of Engineers, New York District, is supporting the project design and environmental review under the National Environmental Policy Act (NEPA). NEPA review is expected to conclude in early 2025.

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@40.61136295,-74.02880824346946,14z>



QUALIFICATION INTERVIEW

1. As a representative of this project, do you agree that all items submitted represent the complete scope of the project details and you will answer questions truthfully?

Yes

2. Does the proposed project include, or is it reasonably certain to cause, intentional take of listed species?

Note: This question could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered, or proposed species.

No

3. Is the action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

Yes

4. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) the lead agency for this project?

No

5. Are you including in this analysis all impacts to federally listed species that may result from the entirety of the project (not just the activities under federal jurisdiction)?

Note: If there are project activities that will impact listed species that are considered to be outside of the jurisdiction of the federal action agency submitting this key, contact your local Ecological Services Field Office to determine whether it is appropriate to use this key. If your Ecological Services Field Office agrees that impacts to listed species that are outside the federal action agency's jurisdiction will be addressed through a separate process, you can answer yes to this question and continue through the key.

Yes

6. Are you the lead federal action agency or designated non-federal representative requesting concurrence on behalf of the lead Federal Action Agency?

Yes

7. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)?

No

8. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

No

9. Is the lead federal action agency the Natural Resources Conservation Service?

No

10. Will the proposed project involve the use of herbicide where listed species are present?

No

11. Are there any caves or anthropogenic features suitable for hibernating or roosting bats within the area expected to be impacted by the project?

No

12. Does any component of the project associated with this action include activities or structures that may pose a collision risk to **birds** (e.g., plane-based surveys, land-based or offshore wind turbines, communication towers, high voltage transmission lines, any type of towers with or without guy wires)?

Note: For federal actions, answer 'yes' if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

No

13. Does any component of the project associated with this action include activities or structures that may pose a collision risk to **bats** (e.g., plane-based surveys, land-based or offshore wind turbines)?

Note: For federal actions, answer 'yes' if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

No

14. Will the proposed project result in permanent changes to water quantity in a stream or temporary changes that would be sufficient to result in impacts to listed species?

For example, will the proposed project include any activities that would alter stream flow, such as water withdrawal, hydropower energy production, impoundments, intake structures, diversion structures, and/or turbines? Projects that include temporary and limited water reductions that will not displace listed species or appreciably change water availability for listed species (e.g. listed species will experience no changes to feeding, breeding or sheltering) can answer "No". Note: This question refers only to the amount of water present in a stream, other water quality factors, including sedimentation and turbidity, will be addressed in following questions.

No

15. Will the proposed project affect wetlands where listed species are present?

This includes, for example, project activities within wetlands, project activities within 300 feet of wetlands that may have impacts on wetlands, water withdrawals and/or discharge of contaminants (even with a NPDES).

No

16. Will the proposed project activities (including upland project activities) occur within 0.125 miles of the water's edge of a stream or tributary of a stream where listed species may be present?

No

17. Will the proposed project directly affect a streambed (below ordinary high water mark (OHWM)) of the stream or tributary where listed species may be present?

No

18. Will the proposed project bore underneath (directional bore or horizontal directional drill) a stream where listed species may be present?

No

19. Will the proposed project involve a new point source discharge into a stream or change an existing point source discharge (e.g., outfalls; leachate ponds) where listed species may be present?

No

20. Will the proposed project involve the removal of excess sediment or debris, dredging or in-stream gravel mining where listed species may be present?

No

21. Will the proposed project involve the creation of a new water-borne contaminant source where listed species may be present?

Note New water-borne contaminant sources occur through improper storage, usage, or creation of chemicals. For example: leachate ponds and pits containing chemicals that are not NSF/ANSI 60 compliant have contaminated waterways. Sedimentation will be addressed in a separate question.

No

22. Will the proposed project involve perennial stream loss, in a stream or tributary of a stream where listed species may be present, that would require an individual permit under 404 of the Clean Water Act?

No

23. Will the proposed project involve blasting where listed species may be present?

No

24. Will the proposed project include activities that could negatively affect fish movement temporarily or permanently (including fish stocking, harvesting, or creation of barriers to fish passage).

No

25. Will the proposed project involve earth moving that could cause erosion and sedimentation, and/or contamination along a stream or tributary of a stream where listed species may be present?

Note: Answer "Yes" to this question if erosion and sediment control measures will be used to protect the stream.

No

26. Will earth moving activities result in sediment being introduced to streams or tributaries of streams where listed species may be present through activities such as, but not limited to, valley fills, large-scale vegetation removal, and/or change in site topography?

No

27. Will the proposed project involve vegetation removal within 200 feet of a perennial stream bank where aquatic listed species may be present?

No

28. Will erosion and sedimentation control Best Management Practices (BMPs) associated with applicable state and/or Federal permits, be applied to the project? If BMPs have been provided by and/or coordinated with and approved by the appropriate Ecological Services Field Office, answer "Yes" to this question.

No

29. Is the project being funded, lead, or managed in whole or in part by U.S Fish and Wildlife Restoration and Recovery Program (e.g., Partners, Coastal, Fisheries, Wildlife and Sport Fish Restoration, Refuges)?

No

30. Will the proposed project result in changes to beach dynamics that may modify formation of habitat over time?

Note: Examples of projects that result in changes to beach dynamics include 1) construction of offshore breakwaters and groins; 2) mining of sand from an updrift ebb tidal delta; 3) removing or adding beach sands; and 4) projects that stabilize dunes (including placement of sand fences or planting vegetation).

No

31. [Hidden Semantic] Is the project area located within the piping plover AOI?

Automatically answered

Yes

32. If you have determined that the piping plover is unlikely to occur within your project's action area or that your project is unlikely to have any potential effects on the piping plover, you may wish to make a "no effect" determination for the piping plover. Additional guidance on how to make this decision can be found in the project review section of your local Ecological Services Field Office's website. CBFO: <https://www.fws.gov/office/chesapeake-bay-ecological-services/project-review> ; MEFO: <https://www.fws.gov/office/maine-ecological-services> ; NJFO: <https://www.fws.gov/office/new-jersey-ecological-services/new-jersey-field-office-project-review-guide> ; NEFO: <https://www.fws.gov/office/new-england-ecological-services/endangered-species-project-review#Step5> ; WVFO: <https://www.fws.gov/office/west-virginia-ecological-services/project-planning>. If you are unsure, answer "No" and continue through the key.

Would you like to make a no effect determination for the piping plover?

Yes

33. [Hidden Semantic] Is the project area located within the piping plover AOI?

Automatically answered

Yes

34. [Hidden Semantic] Is the project area located within the red knot AOI?

Automatically answered

Yes

35. If you have determined that the red knot is unlikely to occur within your project's action area or that your project is unlikely to have any potential effects on the red knot, you may wish to make a "no effect" determination for the red knot. Additional guidance on how to make this decision can be found in the project review section of your local Ecological Services Field Office's website. CBFO: <https://www.fws.gov/office/chesapeake-bay-ecological-services/project-review> ; MEFO: <https://www.fws.gov/office/maine-ecological-services> ; NJFO: <https://www.fws.gov/office/new-jersey-ecological-services/new-jersey-field-office-project-review-guide> ; NEFO: <https://www.fws.gov/office/new-england-ecological-services/endangered-species-project-review#Step5> ; WVFO: <https://www.fws.gov/office/west-virginia-ecological-services/project-planning>. If you are unsure, answer "No" and continue through the key.

Would you like to make a no effect determination for the red knot?

Yes

36. [Semantic] Does the project intersect the Virginia big-eared bat critical habitat?

Automatically answered

No

37. [Semantic] Does the project intersect the Indiana bat critical habitat?

Automatically answered

No

38. [Semantic] Does the project intersect the candy darter critical habitat?

Automatically answered

No

39. [Semantic] Does the project intersect the diamond darter critical habitat?

Automatically answered

No

40. [Semantic] Does the project intersect the Big Sandy crayfish critical habitat?

Automatically answered

No

41. [Hidden Semantic] Does the project intersect the Guyandotte River crayfish critical habitat?

Automatically answered

No

42. Do you have any other documents that you want to include with this submission?

No

PROJECT QUESTIONNAIRE

1. Briefly describe the habitat within the construction/disturbance limits of the project site.

A building was demolished on the site in 2012. The site was converted to a gravel parking lot which is now closed. There are several paved walkways through the site. The remainder of the site is mowed turf lawn with ornamental and trees and shrubs. There are 14 trees of varying size and condition. The site is in a highly developed area of a U.S. Army installation next to the off ramps to the Verrazzano-Narrows Bridge.

2. Approximately how many acres of trees would the proposed project remove?

0

3. Approximately how many total acres of disturbance are within the disturbance/construction limits of the proposed project?

2

IPAC USER CONTACT INFORMATION

Agency: Army Corps of Engineers
Name: Eric Pasay
Address: 26 Federal Plaza
Address Line 2: USACE Planning (Room 17-421) c/o PSC Mail Center
City: New York
State: NY
Zip: 10278-0090
Email: eric.s.pasay@usace.army.mil
Phone: 9177906205

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Army

ENVIRONMENTAL REVIEW

Project number: 106.K (US ARMY CORPS OF ENGINEERS)
Project: FT. HAMILTON CHILD DEVELOPMENT CENTER
Address: 9275 FT HAMILTON PARKWAY BBL: 3061530001
Date Received: 5/29/2024

Comments:

Within the radius: S/NR eligible Fort Hamilton Building 113 Recreation Center, aka Garrison Headquarters, 113 Schum Avenue.

LPC review of archaeological sensitivity models and historic maps indicates that there is potential for the recovery of remains from 19th Century and Indigenous Peoples occupation on the project site. Accordingly, the Commission recommends that an archaeological documentary study be performed for this site to clarify these initial findings and provide the threshold for the next level of review if such review is necessary (see CEQR Technical Manual 2021).

Cc: NYS SHPO



6/4/2024

SIGNATURE
Gina Santucci, Environmental Review Coordinator

DATE

File Name: 37349_FSO_DNP_06042024.docx



DEPARTMENT OF THE ARMY
US ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON FORT HAMILTON
BROOKLYN NY 11252-5300

May 21, 2024

Subject: New Child Development Center Facility at United States Army Garrison Fort Hamilton, Brooklyn, NY

To Whom It May Concern:

The United States Army Corps of Engineers, New York District, is supporting the United States Army Garrison Fort Hamilton (Fort Hamilton) by preparing an Environmental Assessment (EA) for the construction and operation of a new Child Development Center facility (Proposed Action) at Fort Hamilton in Brooklyn, Kings County, New York. The EA is being prepared in accordance with the National Environmental Policy Act (NEPA) of 1969 (42 United States Code § 4321 et seq.), Council on Environmental Quality NEPA Regulations (40 Code of Federal Regulations [CFR] §§ 1500-1508), and Army Regulations 200-2 "Environmental Analysis of Army Actions" (32 CFR Part 651). The mission of the Fort Hamilton Child Development Center is to offer a consistent, safe, and nurturing environment for children between six weeks and five years of age. The purpose of the Proposed Action is to build a newer and larger Child Development Center facility to better meet the installation's need for childcare services. The Proposed Action will increase the Child Development Center's capacity from approximately 76 to 126 children.

The new Child Development Center facility is proposed in northwestern Fort Hamilton on an approximately 95,000 square feet (ft²) site bound by the Holiday Inn Express, Garrison Headquarters, White Avenue, and the Verrazzano-Narrows Bridge. The proposed site currently contains a closed gravel parking lot and a landscaped lawn area with several trees and shrubs. Current designs for the Child Development Center facility include a 16,632 ft² single story building, three outdoor playgrounds totaling 16,667 ft², and 24 new parking spaces, among other features and amenities. Additional information regarding the Proposed Action can be found in the Description of Proposed Action and Alternatives (DOPAA) available online at: <https://www.nan.usace.army.mil/Missions/Environmental/Environmental-Assessment/Fort-Hamilton-CDC/>.

If you have information regarding potential impacts of the Proposed Action on the human environment, which includes the natural and physical environment or other environmental aspects of which we are unaware, we would appreciate receiving such information for inclusion and consideration during the NEPA compliance process. We look forward to and welcome your participation in the process. Please respond within 30 days of receipt of this letter to ensure that your concerns are adequately addressed in the EA.

Please send your written responses via email to FortHamiltonCDC-EA@usace.army.mil. Thank you in advance for your participation.

Sincerely,

Nicholas S. Protopsaltis, P.E.
Director, DPW
USAG Fort Hamilton, NY

Letters were sent to stakeholders in May 2024 inviting them to review and comment on the Description of Proposed Action and Alternatives (DOPAA). The DOPAA was made publicly available on the U.S. Army Corps of Engineers, New York District website in March 2024. Letters were sent to the following stakeholders:

- Steve Sinkevich, U.S. Fish and Wildlife Service
- Mark Austin, U.S. Environmental Protection Agency
- Daniel Mackay, New York State Historic Preservation Office
- New York Natural Heritage Program
- Region 2 Environmental Permits Division, New York State Department of Environmental Conservation
- Gina Santucci, New York City Landmarks Preservation Commission
- Stormwater Permit Program, New York City Department of Environmental Protection
- Hilary Semel, New York City Mayor's Office of Environmental Coordination
- Katelyn Lucas, Delaware Nation
- Deborah Dotson, Delaware Nation
- Brad KillsCrow, Delaware Tribe of Indians
- Susan Bachor, Delaware Tribe of Indians
- Jeffery Bendremer, Stockbridge-Munsee Community Band of Mohican Indians
- Shannon Holsey, Stockbridge-Munsee Community Band of Mohican Indians
- Rainbow Chavis, Shinnecock Indian Nation
- Jeremy Dennis, Shinnecock Indian Nation
- Bryan Polite, Shinnecock Indian Nation
- Michelle Osman, USAG Fort Hamilton Child and Youth Services
- Lizbeth Graziano, USAG Fort Hamilton Child Development Center
- Kresskala Stewart, USAG Fort Hamilton Child and Youth Services
- Colonel Brian A. Jacobs, USAG Fort Hamilton Garrison Commander
- Denis Sutton, Holiday Inn Express

Appendix B – Greenhouse Gas Analysis

NEPA ID EAXX-007-21-001-1736758141



*US Army Corps of Engineers – New York District
Fort Hamilton Child Development Center
Greenhouse Gas Emission Estimates*

Greenhouse gas (GHG) emissions have been estimated using project planning information developed by the New York District, consisting of anticipated equipment types and estimates of the horsepower and operating hours of the diesel engines powering the equipment. In addition to this planning information, conservative factors have been used to represent the average level of engine load of operating engines (load factors) and the average emissions of typical engines used to power the equipment (emission factors). The basic emission estimating equation is the following:

$$E = \text{hrs} \times \text{LF} \times \text{EF}$$

Where:

E = Emissions per period of time such as a year or the entire project.

hrs = Number of operating hours in the period of time (e.g., hours per year, hours per project).

LF = Load factor, an estimate of the average percentage of full load an engine is run at in its usual operating mode.

EF = Emission factor, an estimate of the amount of a pollutant (such as CO₂) that an engine emits while performing a defined amount of work.

In these estimates, the emission factors are in units of grams of pollutant per horsepower hour (g/hphr). For each piece of equipment, the number of horsepower hours (hphr) is calculated by multiplying the engine's horsepower by the load factor assigned to the type of equipment and the number of hours that piece of equipment is anticipated to work during the year or during the project. For example, a crane with a 250-horsepower engine would have a load factor of 0.43 (meaning on average the crane's engine operates at 43% of its maximum rated power output). If the crane were anticipated to operate 1,000 hours during the course of the project, the horsepower hours would be calculated by:

$$250 \text{ horsepower} \times 0.43 \times 1,000 \text{ hours} = 107,500 \text{ hphr}$$

The emission factors for CO₂, N₂O, and CH₄ used in these calculations are based on locally-specific emissions data related to off-road and on-road diesel engines.¹ In the example of the crane engine, a CO₂ emission factor of 571 g/hphr would be used to estimate emissions from this crane on the project by the following equation:

$$\frac{107,500 \text{ hphr} \times 571 \text{ g CO}_2/\text{hphr}}{1,000,000 \text{ g/metric ton}} = 61.4 \text{ metric tons (tonnes) of NO}_x$$

As noted above, information on the equipment types, horsepower, and hours of operation associated with the project have been obtained from the project's plans and represent current best estimates of the equipment and work that will be required. Load factors have been obtained from various sources depending on the type of equipment. Land-side

¹ <https://www.panynj.gov/port/en/our-port/sustainability/air-emissions-inventories-and-related-studies.html>
SCG 1 July 2024



*US Army Corps of Engineers – New York District
Fort Hamilton Child Development Center
Greenhouse Gas Emission Estimates*

nonroad equipment load factors are from the documentation for EPA's NONROAD emission estimating model, "Median Life, Annual Activity, and Load Factor Values for Nonroad Engine Emissions Modeling, EPA420-P-04-005, April 2004."

The following pages summarize the estimated emissions of CO₂, N₂O, and CH₄ in sum for the project including the anticipated equipment and engine information developed by the New York District, the load factors and emission factors as discussed above, and the estimated emissions from the project. GHG emissions are also presented in terms of CO₂ equivalents, as discussed in the text.

USACE - New York District
Fort Hamilton Child Development Center
Greenhouse Gas Emission Estimates
31 July 2024

Emission estimates	Metric Tons of GHGs			
	CO ₂	N ₂ O	CH ₄	CO ₂ e
CO ₂ equivalents	1	265	28	—
Construction emissions, metric tons	76.2	0.005	0.006	77.6

			Load	Operating		CO ₂	N ₂ O	CH ₄	CO ₂	N ₂ O	CH ₄	CO ₂ e
Equipment Type	hp	Count	Factor	hours	hphr	g/hphr	g/hphr	g/hphr	MT	MT	MT	MT
Compactor	250	2	0.43	61	6,558	571	0.044	0.048	3.7	0.0003	0.0003	3.8
Compressor	75	2	0.43	117	3,773	571	0.044	0.048	2.2	0.0002	0.0002	2.2
Compressor	100	1	0.43	3	129	571	0.044	0.048	0.1	0.0000	0.0000	0.1
Concrete saw	50	1	0.59	22	649	571	0.044	0.048	0.4	0.0000	0.0000	0.4
Crane	225	3	0.43	31	2,999	571	0.044	0.048	1.7	0.0001	0.0001	1.8
Crane	300	3	0.43	83	10,707	571	0.044	0.048	6.1	0.0005	0.0005	6.3
Dozer	100	1	0.59	0	0	571	0.044	0.048	0.0	0.0000	0.0000	0.0
Dozer	250	1	0.59	0	0	571	0.044	0.048	0.0	0.0000	0.0000	0.0
Dozer	340	1	0.59	0	0	571	0.044	0.048	0.0	0.0000	0.0000	0.0
Excavator	300	2	0.59	52	9,204	571	0.044	0.048	5.3	0.0004	0.0004	5.4
Excavator	325	1	0.59	7	1,342	571	0.044	0.048	0.8	0.0001	0.0001	0.8
Excavator	350	1	0.59	15	3,098	571	0.044	0.048	1.8	0.0001	0.0001	1.8
Excavator	400	1	0.59	4	944	571	0.044	0.048	0.5	0.0000	0.0000	0.6
Generator	10	4	0.43	1133	4,872	571	0.044	0.048	2.8	0.0002	0.0002	2.8
Grader	135	1	0.59	0	0	571	0.044	0.048	0.0	0.0000	0.0000	0.0
Off-road truck	100	2	0.59	34	2,006	571	0.026	0.043	1.1	0.0001	0.0001	1.2
Off-road truck	200	6	0.59	287	33,866	571	0.026	0.043	19.3	0.0009	0.0015	19.6
Off-road truck	250	1	0.59	7	1,033	571	0.026	0.043	0.6	0.0000	0.0000	0.6
Off-road truck	300	1	0.59	15	2,655	571	0.026	0.043	1.5	0.0001	0.0001	1.5
Off-road truck	350	2	0.59	15	3,098	571	0.026	0.043	1.8	0.0001	0.0001	1.8
Off-road truck	400	1	0.59	69	16,284	571	0.026	0.043	9.3	0.0004	0.0007	9.4
Pump	50	2	0.43	117	2,516	571	0.044	0.048	1.4	0.0001	0.0001	1.5
Rubber tired loader	175	6	0.59	223	23,025	571	0.044	0.048	13.1	0.0010	0.0011	13.4
Skid Steer Loader	175	2	0.21	39	1,433	571	0.044	0.048	0.8	0.0001	0.0001	0.8
Other diesel engines	150	2	0.59	36	3,186	571	0.044	0.048	1.8	0.0001	0.0002	1.9
Other diesel engines	200	1	0.59	0	0	571	0.044	0.048	0.0	0.0000	0.0000	0.0
Totals		51		2,370	133,375				76.2	0.005	0.006	77.6

Appendix C – Clean Air Act Analysis

NEPA ID EAXX-007-21-001-1736758141

Record of Non-Applicability (RONA)
Clean Air Act General Conformity Determination
United States Army Garrison (USAG) Fort Hamilton New Childcare
Development Center (CDC), Brooklyn, Kings County, New York

Description of the Proposed Action: The United States Department of the Army (Army) is planning to construct and operate a new CDC facility (Proposed Action) on United States Army Garrison Fort Hamilton (herein referred to as “Fort Hamilton” or the “Installation”) in Brooklyn, Kings County, New York. The Proposed Action includes the construction of a 16,632 square feet (ft²) single story building, three outdoor playgrounds totaling 16,667 ft², 20 new parking spaces, paved pedestrian pathways, perimeter fencing and lighting, landscaping, a truck delivery space, utility connections, stormwater management, and security features. White Avenue and Schum Avenue would be repaved within the alignment of the proposed CDC facility. Accessibility and force protection measures would be provided, as required.

The purpose of the Proposed Action is to better meet the Installation’s needs for childcare services. The current CDC facility has an enrollment capacity of approximately 76 children and is housed in an outdated building. The Proposed Action would increase enrollment capacity from approximately 76 to 126 children by building a larger facility. In addition, the modernized facility would support the Fort Hamilton CDC’s mission to offer a consistent, safe, and nurturing environment for children between six weeks and five years of age. The new CDC facility would have amenities such as a kitchen, changing areas, administrative support space, mothers’ nursing room, staff lounge, laundry, storage, and supply rooms.

Alternatives Considered:

The consideration of reasonable alternatives is required in accordance with the National Environmental Policy Act (NEPA; 42 United States Code [USC] § 4321 *et seq.*), President’s Council on Environmental Quality (CEQ) NEPA Regulations (40 Code of Federal Regulations [CFR] §§ 1500–1508), and Army Regulations (AR) 200-2 “Environmental Analysis of Army Actions” as promulgated by 32 CFR Part 651. Site selection standards were developed for the Proposed Action and used to identify, compare, and evaluate reasonable alternatives. The selection standards were developed to be consistent with the purpose and need for the Proposed Action and to address pertinent mission, environmental, safety, and health factors. The following site selection standards were used:

- Adequate space and infrastructure to accommodate the new facility;
- Compatible with the CDC’s mission;
- Compatible with the 2019 Fort Hamilton Area Development Plan (ADP);
- Complies with Army design standards and regulations;
- Protects children from environmental health and safety risks;
- Developable with minimal preparation, relocation, or demolition.

No Action Alternative: Under the No Action Alternative, the Army would not construct a new CDC facility on Fort Hamilton. The Preferred Alternative site would remain as a landscaped area and closed gravel parking lot. Child enrollment capacity would not be increased from 76 children to 126 children. The CDC would continue to be operated out of an outdated building.

Preferred Alternative: The Preferred Alternative site for the Proposed Action is an approximately 95,000 ft² site bounded by White Avenue, the Verrazzano-Narrows Bridge, Holiday Inn Express, and Garrison Headquarters in northwestern Fort Hamilton. Approximately half of the site is a closed gravel parking lot with paved pedestrian pathways and the other half contains is a landscaped turf lawn area with several trees and shrubs. The Preferred Alternative site has sufficient land area to accommodate the Proposed Action and would require minimal preparation, relocation, and demolition of existing services and facilities. The Preferred Alternative site is compatible with the 2019 Fort Hamilton Area Development Plan and would allow easy access and connections to existing infrastructure and utilities. The Preferred Alternative site does not pose any known health and safety risks to children and is consistent with the CDC's mission. The Preferred Alternative site complies with the applicable Army standards and regulations, such as minimum distances to access control points (ACPs).

Implementation of the Proposed Action at the Preferred Alternative site would create 20 new paved parking spaces. Up to 14 trees would be removed during site preparation. Tree removals would be recorded, and replacement trees would be planted on Fort Hamilton in compliance with Fort Hamilton's 2009 *Tree Replacement Guidelines*. Construction timing is dependent on the availability of funding and is anticipated to occur between 2027 and 2030. Approximately 55 parking spaces in the White Avenue parking lot across from the Preferred Alternative site would be temporarily used for staging and material laydown during construction.

General Conformity Determination:

General Conformity (40 CFR 51 and 93) "prohibits a federal agency from interfering with the ability of a state or tribe to achieve the National Ambient Air Quality Standards [(NAAQS)]". Only actions that cause emissions in designated non-attainment and maintenance areas are subject to these regulations. A vast majority of federal actions do not result in a significant increase in emissions and therefore, include several exemptions. Applicability to General Conformity is determined by:

1. Whether the action will occur in a non-attainment or maintenance area,
2. Whether one or more of the specific exemptions apply to the action,
3. Whether the federal agency has included the action on its list of "presumed to conform" actions,
4. Whether the total direct and indirect emissions are below or above the *de minimis* levels, and/or,
5. Where the facility has an emission budget approved by the state or tribe as part of the SIP or Tribal Implementation Plan, the federal agency determines if the emissions from the proposed action are within the budget.

To provide the upper limit of a conservative estimate, emissions were first calculated on the project as a whole, assuming that construction would be completed within the same calendar year, and additionally estimated on an average yearly basis for the designs current estimation that construction would be conducted over a duration of 850-days (approximately 2.3 years). Should the emissions under this assumption exceed the *de minimis* quantities, then a yearly emissions estimate would provide a more precise calculation on a yearly basis, providing for a comparison of the two for the Preferred Alternative.

As Fort Hamilton is located within a maintenance zone for CO and PM_{2.5} and is within the Ozone Transportation Region and in non-attainment area for ozone, these criteria pollutants were compared to the applicable *de minimis* quantities emission thresholds, including the more stringent ozone (VOC and NOx) threshold, as follows:

Air Quality Emissions compared to De Minimis Quantities Thresholds

Criteria Pollutant	Estimated Construction Emissions for the Total Project (tons/year)	Applicable De Minimis Quantities (tons/year) ¹
Ozone (VOC)	0.025	25
Ozone (NOx)	1.267	25
PM _{2.5}	0.021	100
CO	0.001	100

Note: Green highlight indicates emissions estimate is below the applicable *de minimis* quantities. Red highlight indicates emissions estimate is above the applicable *de minimis* quantities.

Record of Non-Applicability:

Project related emissions for Alternatives, including the No Action Alternative, were estimated to evaluate the applicability of General Conformity regulations (40 CFR 93 Subpart B).

The estimated construction emissions were calculated for Ozone (VOC, NOx), PM_{2.5}, and CO, and found to be well below the applicable *de minimis* quantities thresholds for the entire project and for the average yearly emissions; therefore, the Preferred Alternative construction and operation of the CDC is considered exempt and not applicable to General Conformity. Refer to the attachment for the CAA calculations.

The project is presumed to conform with General Conformity requirements and is considered to be exempt from Subpart B under 40 CFR 93.153(c)(1).

NICHOLAS PROTOPALTIS
Environmental Engineer, DPW

DATE

¹ While the recent ozone (2015) nonattainment designation was classified as “moderate” and is being redesignated as “serious”, the ozone (2008) nonattainment designation is “severe”; therefore, the more stringent *de minimis* threshold of “severe” is the applicable threshold for NOx and VOC within this nonattainment area, at 25 tons per year.

USACE - New York District
Fort Hamilton Child Development Center
Air Quality Assessment
1-Aug-24

$$E = \text{hrs} \times \text{LF} \times \text{EF}$$

$$E = \text{hphr} \times \text{g/hphr} / 1,000,000\text{g/tons}$$

Emission estimates	Metric Tons of Criteria Pollutants				
	NOx	VOC	SO2	PM2.5	CO
E					
Construction emissions, metric tons	1.267	0.025	0.001	0.021	0.001

Equipment Type	hp	Count	LF	HRS	hphr	EF	EF	EF	EF	EF	NOx MT	VOC MT	SO2 MT	PM2.5 MT
			Load Factor	Operating hours		NOx g/hphr	VOC g/hphr	SO2 g/hphr	PM2.5 g/hphr	CO g/hphr				
Compactor	250	2	0.43	61	6,558	9.50	0.19	0.005	0.16	1.21	0.062	0.001	3.28E-05	1.05E-03
Compressor	75	2	0.43	117	3,773	9.50	0.19	0.005	0.16	1.21	0.036	0.001	1.89E-05	6.04E-04
Compressor	100	1	0.43	3	129	9.50	0.19	0.005	0.16	1.21	0.001	0.000	6.45E-07	2.06E-05
Concrete saw	50	1	0.59	22	649	9.50	0.19	0.005	0.16	1.21	0.006	0.000	3.25E-06	1.04E-04
Crane	225	3	0.43	31	2,999	9.50	0.19	0.005	0.16	1.21	0.028	0.001	1.50E-05	4.80E-04
Crane	300	3	0.43	83	10,707	9.50	0.19	0.005	0.16	1.21	0.102	0.002	5.35E-05	1.71E-03
Dozer	100	1	0.59	0	0	9.50	0.19	0.005	0.16	1.21	0.000	0.000	0.00E+00	0.00E+00
Dozer	250	1	0.59	0	0	9.50	0.19	0.005	0.16	1.21	0.000	0.000	0.00E+00	0.00E+00
Dozer	340	1	0.59	0	0	9.50	0.19	0.005	0.16	1.21	0.000	0.000	0.00E+00	0.00E+00
Excavator	300	2	0.59	52	9,204	9.50	0.19	0.005	0.16	1.21	0.087	0.002	4.60E-05	1.47E-03
Excavator	325	1	0.59	7	1,342	9.50	0.19	0.005	0.16	1.21	0.013	0.000	6.71E-06	2.15E-04
Excavator	350	1	0.59	15	3,098	9.50	0.19	0.005	0.16	1.21	0.029	0.001	1.55E-05	4.96E-04
Excavator	400	1	0.59	4	944	9.50	0.19	0.005	0.16	1.21	0.009	0.000	4.72E-06	1.51E-04
Generator	10	4	0.43	1133	4,872	9.50	0.19	0.005	0.16	1.21	0.046	0.001	2.44E-05	7.80E-04
Grader	135	1	0.59	0	0	9.50	0.19	0.005	0.16	1.21	0.000	0.000	0.00E+00	0.00E+00
Off-road truck	100	2	0.59	34	2,006	9.50	0.19	0.005	0.16	1.21	0.019	0.000	1.00E-05	3.21E-04
Off-road truck	200	6	0.59	287	33,866	9.50	0.19	0.005	0.16	1.21	0.322	0.006	1.69E-04	5.42E-03
Off-road truck	250	1	0.59	7	1,033	9.50	0.19	0.005	0.16	1.21	0.010	0.000	5.16E-06	1.65E-04
Off-road truck	300	1	0.59	15	2,655	9.50	0.19	0.005	0.16	1.21	0.025	0.001	1.33E-05	4.25E-04
Off-road truck	350	2	0.59	15	3,098	9.50	0.19	0.005	0.16	1.21	0.029	0.001	1.55E-05	4.96E-04
Off-road truck	400	1	0.59	69	16,284	9.50	0.19	0.005	0.16	1.21	0.155	0.003	8.14E-05	2.61E-03
Pump	50	2	0.43	117	2,516	9.50	0.19	0.005	0.16	1.21	0.024	0.000	1.26E-05	4.02E-04
Rubber tired loader	175	6	0.59	223	23,025	9.50	0.19	0.005	0.16	1.21	0.219	0.004	1.15E-04	3.68E-03
Skid Steer Loader	175	2	0.21	39	1,433	9.50	0.19	0.005	0.16	1.21	0.014	0.000	7.17E-06	2.29E-04
Other diesel engines	150	2	0.59	36	3,186	9.50	0.19	0.005	0.16	1.21	0.030	0.001	1.59E-05	5.10E-04
Other diesel engines	200	1	0.59	0	0	9.50	0.19	0.005	0.16	1.21	0.000	0.000	0.00E+00	0.00E+00
Totals		51		2,370	133,375						1.267	0.025	0.001	0.021

*Emissions Factors sourced from a recent USACE (Rahway River (Tidal) Coastal Storm Risk Management Study) project utilizing similar equipment and estimated conservatively.

Appendix D – Site Photographs

NEPA ID EAXX-007-21-001-1736758141



Photo 1: View of the project area facing north towards the Holiday Inn Express (December 2023).



Photo 2: View of the project area site facing northeast (December 2023).



Photo 3: View of the project area facing west towards Schum Avenue and the Verrazzano-Narrows Bridge (December 2023).



Photo 4: View of the project area facing east towards White Avenue and a paved parking lot (December 2023).