ENVIRONMENTAL ASSESSMENT

Adaptive Use of
Fort Hancock and the
Sandy Hook Proving Ground Historic District

Prepared by
The National Park Service
In Association with
Sandy Hook Partners LLC
February 2002, Revised July 2003
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Sandy Hook Unit
Gateway National Recreation Area•New York/New Jersey
United States Department of the Interior/National Park Service
Introduction

The Sandy Hook Unit of Gateway National Recreation Area, a unit of the National Park System, proposes to embark upon an important and exciting project: the rehabilitation and return to active use of the nationally significant historic buildings of Fort Hancock and the Sandy Hook Proving Ground. Since the establishment of the park in 1972, both park management and other advocates of historic preservation have been frustrated by the general inability to preserve these beautiful structures. The physical needs of these buildings, after years of neglect, far exceed available funds and manpower. It has been all that the park could do to stem the tide of deterioration. While staff and partners have worked hard to preserve this precious historic resource, its total loss has always been a real possibility and remains so today if nothing further is done.

Through the National Park Service authority to offer long-term leases of certain buildings in exchange for capital improvement and fair market return, we can actually save Fort Hancock and the Sandy Hook Proving Ground. The $60 to $90 million dollar investment by the Sandy Hook Partners (including utilities and information technology upgrades) will bring alive again 36 of the 37 Fort Hancock’s buildings involved in the lease and will also be a benefit to the NPS as well as the other institutions and organizations at Sandy Hook. The rehabilitation will be done under the close supervision of the park, and according to the stringent standards of the National Park Service, the National Historic Preservation Act and the State of New Jersey Historic Preservation Office. The park’s limited assets can then be redirected and focused on the rescue of other significant historic structures, and lease income will provide new financial resources to that effort.

This project is just a part of our overall vision for the future of Sandy Hook. In addition to a rehabilitated and revitalized Fort Hancock, a seven-mile multi-use pathway will provide safe and enjoyable access for bicyclists and pedestrians to the wealth of park resources and sites. A $3 million dollar permanent ferry dock will enhance accessibility to the park ease competition for parking within the park. Finally, initiatives are under way to reduce the park’s reliance on non-renewable energy sources, and become an outstanding example of energy conservation and the utilization of alternate energy sources.

This park, as all units of the National Park System, takes seriously its mission to preserve its historic and natural resources, and to make them available for the enjoyment of the American people. Park management is confident that this project will not diminish Sandy Hook’s natural resources, nor limit current recreational opportunities. The document that follows illustrates the years of careful planning that have led us to this proposal, the large number of partners and stakeholders who have participated in the planning, and the lines of thought that led to this particular proposal. The National Park Service invites you to consider it carefully, and looks forward to your thoughtful comment and input.
EXPERIENCE YOUR AMERICA
The National Park Service cares for special places saved by the American People so that all may experience our heritage.

Environmental Assessment - Executive Summary

Adaptive Use of Fort Hancock and the Sandy Hook Proving Ground Historic District

This Environmental Assessment evaluates actions to fully implement the “Fort Hancock Gateway Village” concept approved in the 1979 General Management Plan. This adaptive use concept was reaffirmed in the 1990 General Management Plan Amendment that identified historic leasing as a means to implement the plan. It does not reevaluate alternatives considered in previous planning processes. The Assessment evaluates a No Action Alternative that continues current management practices and a Rehabilitation Alternative (Proposed Action) that provides for rehabilitation and reuse of 100 historic structures (37 associated with the historic leasing program, 19 used by park partners and 44 continued use for park service purposes).

Under the No Action Alternative, the NPS would continue to manage the property according to established policies, standards and guidelines within current budgetary constraints. A limited number of historic structures would be rehabilitated by non-profit partners and by the NPS as funds from the NPS competitive funding program allow. Most structures would continue to deteriorate, some to a condition beyond repair.

In the Proposed Action, all landscape and historic structures would be rehabilitated according to Secretary of the Interior’s Standards for the Treatment of Historic Properties. To the greatest degree possible, all character defining features would be preserved and protected in place. Two options for replacing missing or deteriorated features and installing new features needed to support the adaptive use are considered. The first Option replaces missing and adds new features in a contemporary compatible design. The second Option replaces missing and adds new features with accurate reproductions of features that existed during the periods of greatest significance of the Fort Hancock and Sandy Hook Proving Ground zones. Both options provide for replacement of the missing Fort Hancock Hospital and construction of a new NPS maintenance building in the existing maintenance yard.

Presently Fort Hancock has 708 parking spaces. To support new uses, approximately 665 additional spaces would be required. Alternatives for parking including construction of a 1400 car intercept lot south of Fort Hancock and expanded on street parking were considered and dismissed because they would not meet the requirements of the adaptive use program. The 665 new parking spaces would be gained through redesign and expansion of six existing parking lots and construction of six new lots on six acres of previously disturbed land dispersed around the perimeter of the fort. As mitigation, a comparably-sized area known as K lot would be re-vegetated as high value habitat. The number of beach parking spaces, capped at 4,300 would remain the same because beach goers could use spaces on the eastern edge of Fort Hancock on summer weekends.
One hundred and fifty missing trees would be replaced and landscaping appropriate to the district would be added. New walkways, lighting and site furnishing would be added as required.

Electrical and phone lines along Hartshorne Drive from the park entrance to the fort would be put underground. Within Fort Hancock, electric, telephone, water and sewer lines would be repaired or replaced within existing utility trenches. Natural gas service would be provided to the Park. In Fort Hancock, gas lines would be installed in existing utility trenches. Along Hartshorne Drive, the gas line would follow the proposed Multi-Use Path and its impacts evaluated in the MUP Environmental Assessment.

Impacts of the No Action Alternative on the National Historic Landmark would be major and long term. Integrity of the property would continue to be lost. This alternative would have no or only minor impacts on natural resources and the socioeconomic environment.

Impacts of the Rehabilitation Alternative on the National Historic Landmark would be major and long-term. The condition of the landscape and structures would be greatly improved and all aspects of site integrity would be maintained or enhanced. Natural resource impacts would result primarily from construction of new parking lots. Natural vegetation and wildlife habitat would be impacted but mitigated. There would be only minor and short-term impacts on endangered and other species of special concern. The Socioeconomic impacts would be major and long-term by increasing local employment, enhancing local business and improving Sandy Hook as an education, research, conference and tourist destination.
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I. PURPOSE OF AND NEED FOR THE ACTION

Significant cultural resources of the “Fort Hancock and Sandy Hook Proving Ground Historic District” (District) have generally deteriorated over the past twenty-five years due to budget constraints. The greatest majority of the historic buildings and cultural features that make up the District are in fair to poor condition and urgently require preservation treatment. The plan for adaptive use of these resources, using the historic leasing authority and other partnership methods, was developed during the general management planning process for Gateway National Recreation Area. This approach is reflected in both the Final Environmental Statement and General Management Plan for Gateway National Recreation Park (1979) and General Management Plan Amendment and Interpretive Prospectus & Development Concept Plan for the Sandy Hook Unit (1990). As part of the 1979 GMP process, the concept of adaptive use at Fort Hancock was reviewed formally by the public and other interested entities, and compliance was completed. This Environmental Assessment (EA) analyzes only the impacts and effects of physical actions necessary to implement this plan.

The National Park Service (NPS) is proposing a series of actions to implement an adaptive use program. These actions are described and evaluated in this EA under sections titled the “Rehabilitation Alternative.” An alternative series of actions are described and evaluated under sections titled the “No Action Alternative.” Additional alternatives and additional actions were considered early in the planning process, but subsequently were dismissed from further consideration for reasons that are also described in this document. The environmental impacts and effects of dismissed alternatives and actions are not evaluated in this EA.

This EA analyzes the impacts of these actions on the environment in accordance with the National Environmental Policy Act of 1969 (NEPA), Council on Environmental Quality Regulations (Title 40 Code of Federal Regulations Part 1500 et seq.), the National Historic Preservation Act of 1966, as amended 1992 (NHPA), the Advisory Council on Historic Preservation’s Final Rule, as amended January 11, 2001 (Title 36 Code of Federal Regulations Part 800), NPS Management Policies 2001, Director’s Order 28 Cultural Resource Management Guideline (1994), Director’s Order 12, Conservation Planning, Environmental Impact Analysis and Decision-making (2001), and other laws and regulations, require the consideration of impacts on cultural resources listed on or eligible for listing on the National Register of Historic Places. The undertakings described in this document are subject to Section 106 of the NHPA. This document was submitted to the New Jersey State Historic Preservation Officer (SHPO) for review and comment.

After publication of the draft Environmental Assessment, President George W. Bush issued Executive Order: Preserve America on March 3, 2003. “...each agency...shall seek partnerships with ...the private sector to promote local economic development and vitality through the use of historic properties in a manner that contributes to the long-term preservation and productive use of those properties. Each agency shall...encourage, support, and foster public-private initiatives and investment in the use, reuse, and rehabilitation of historic properties, to the extent such support is not inconsistent with other provisions of law, the Secretary of the Interior’s Standards for Archaeology and Historic Preservation, and essential national department and agency mission requirements.”
II. BACKGROUND

A. PROJECT SETTING

Established in 1972 as part of the Gateway National Recreation Area, the Sandy Hook Unit (the park) is a peninsula, approximately 1,700 acres in size, that extends north from coastal New Jersey into the confluence of Raritan Bay, Sandy Hook Bay, Lower New York Bay, and the Atlantic Ocean (Figure 1). The park lies at the northern end of New Jersey's barrier island system. Approximately twelve miles of ocean and bay shoreline ring the park, which varies in width from less than one-tenth mile to approximately one mile.

Situated adjacent to one of the most densely developed urban areas in the United States, the park preserves one of the relatively undisturbed barrier island ecosystems in New Jersey, and supports multiple historic sites and natural habitats. The entire park is a National Historic Landmark. Over 200 historic structures remain standing in the park with approximately 120 of these located within the Fort Hancock Area. Current tenants in Fort Hancock include the National Oceanic and Atmospheric Administration, New Jersey Marine Sciences Consortium, Brookdale Community College, and the Marine Academy of Science and Technology. The U.S. Coast Guard maintains an installation at the northern tip of the Sandy Hook peninsula, immediately adjacent to the park, which houses approximately 300 military personnel and dependents. In addition to cultural and natural resources, the park provides recreational facilities, including opportunities for swimming, sun-bathing, picnicking, bird-watching, beach-combing, surfing, hiking, and fishing. More than two million people visit the park every year.

B. RELATIONSHIP TO OTHER PLANS AND PROJECTS

The park currently is managed under the Final Environmental Statement/General Management Plan (1979)(GMP), and the General Management Plan Amendment/Interpretive Prospectus and Development Concept Plan (1990)(GMP-AMEND). Among other actions, the 1979 Plan specified that “development at Sandy Hook would be focused at the Fort Hancock Gateway Village” and five beach centers (NPS 1979). The 1979 Plan further specified that “Gateway Village would be designed to preserve the significant aspects of the fort’s historic character” and that “most historic features would be adaptively restored — maintaining their historic appearance — as the core facilities of the village.” The term “village” was used deliberately to signal a concentration of intensive uses, including “staying in a hostel; attending or participating in cultural and educational events, lectures, shows, exhibits, and festivals; dancing; singing; swimming; playing indoor sports; eating; gardening; studying; doing research; and so on.”

The 1979 GMP included Fort Hancock and the Proving Ground in the “rehabilitation zone,” which was intended “to retain the integrity of the historic scene and to provide for adaptive use through rehabilitation of historic structures.” The 1990 Amendment to the 1979 Plan clarified adaptive use of Fort Hancock (NPS 1990). The amendment proposed that the rehabilitation zone be managed through a public/private arrangement that would involve one or more lessees and described the process for the park’s selection of private sector partners through issuance of a request for proposals. Possible uses within the rehabilitation zone included educational facilities (residential and nonresidential), hostels,
Figure 1

Fort Hancock NHL District

Sandy Hook Proving Ground

North Beach

Gunnison Beach

Atlantic Ocean

Beach Area E

Life Saving Station NHL (Visitor Center)

Beach Area D

Cove House NHL

Utility Zone

Horseshoe Cove

Utility Corridor

Area of Proposed Action

Area of Potential Effects

Gateway National Recreation Area, Sandy Hook Unit and
The Fort Hancock and Sandy Hook Proving Ground
Historic District

National Historic Landmark
research centers, conference/education centers, professional offices, overnight accommodations, and restaurants, among others.

In addition to the amended General Management Plan, a 1997 Strategic Plan was completed for the Gateway National Recreation Area, which specified goals and targets, including those for the Sandy Hook Unit (NPS 1997). These goals include improving visitor satisfaction, improving park facilities, restoring disturbed lands, and improving the condition of cultural and natural resources. Adaptive use of buildings at Fort Hancock and the Proving Ground would further all of those goals.

Over the last five years, the park has conducted research and experimented on a number of topics associated with the adaptive use: signage, pedestrian and vehicle circulation, the cultural landscape, building paint schemes and character defining features. The resulting information has been collected and formulated into several draft plans including the *Fort Hancock Rehabilitation Guidelines* (Part 4, Critical Building Repair Issues is included in Appendix A). Important actions associated with these plans are evaluated in this EA.

Prior to issuance of the Request for Proposals, the *Fort Hancock Rehabilitation Guidelines* (1999), were developed to outline physical changes that would be allowed. Over the last five years, the park has conducted research and experimentation on four topics associated with adaptive use: signage, pedestrian and vehicle circulation, the cultural landscape, and building paint schemes. The information on signage, circulation, and paint schemes has been collected and formulated into three draft plans. The information on cultural landscapes has been collected and formulated into a series of reports and plans. Important actions associated with these plans are evaluated in this EA.

Projects currently in progress at the park include: rehabilitation of two World War II era barracks (Building 119 & 120) for 28 dormitory rooms; upgrade of fire-safety utilities at the Sandy Hook Education Center (Building 102); construction of a multi-use path from the park entrance to Fort Hancock; removal and replacement of underground and aboveground fuel storage tanks throughout the park; and installation of underground electrical and water lines in the Hartshorne Drive corridor.

Recently completed projects include: rehabilitation of the Post Theater (Building 67), and the Firehouse (Building 76), a major upgrade to the park’s wastewater treatment facilities in 1996, elevation of a portion of Hartshorne Drive; and rehabilitation of the Sandy Hook Lighthouse, a National Historic Landmark, in 2000. In 2001, rehabilitation was completed for the adaptive use of a Mess Hall (Building 58) as the interim park headquarters. Also rehabilitated is the Hospital Steward’s Quarters (Building 20) as the Sandy Hook Bird Observatory by the New Jersey Audubon Society. This partnership was authorized through Cooperative Agreement. Adaptive rehabilitation of the building is complete and this new public educational facility opened in 2002.

Future actions currently being planned for the park include: construction of a sand-slurry pipeline; installation of a natural gas pipeline; construction of a permanent ferry dock at Fort Hancock; rehabilitation of water and other utility systems; development of Fort Hancock Barracks 25 as the park visitor center; and redesign of the park entrance plaza. None of the above projects are prerequisites to the rehabilitation of Fort Hancock and will be pursued regardless of the outcome of the plan.
The sand-slurry pipeline would be used to recycle sand on a recurring schedule from the north of the park where it is accreting to the "critical zone" in the southern portion of the park where it is eroding. This project would maintain sufficient beach width to protect facilities and maintain vehicle access to the park. An EA is being prepared and construction of the sand-slurry pipeline is expected to begin in 2003.

The multi-use path will extend from the park entrance to Fort Hancock in accordance with the park's General Management Plan. The EA has been prepared, a Finding of No Significant Impact has been made and construction has begun. Concurrent with this project would be the installation of the natural gas line. The permanent ferry dock planned for Fort Hancock will provide alternative transportation to the park. Initial scoping for the EA has begun with a target completion date in 2005. Construction is unlikely to begin prior to 2006.

Rehabilitation of the park's water and other utility systems to improve the reliability of water and wastewater systems began in 2002. In 2002, re-roofing and masonry stabilization was completed on Fort Hancock Barracks 25. The adaptive use of the barracks as the park Visitor Center is expected to begin in 2007. A redesign of the park entrance plaza will be coordinated with plans by the State of New Jersey to replace the Highlands Bridge. The State now expects this project to begin 2006.

Another project presently under rehabilitation is the Sandy Hook Keepers Quarters by the Sandy Hook Foundation, the Park's non-profit Friends Group. The building will be adaptively rehabilitated as offices and a public museum operated by the New Jersey Lighthouse Society. The new facility will be completed in 2003.

C. PUBLIC INVOLVEMENT

There has been extensive public involvement in planning for the future of Sandy Hook and specifically on the adaptive use of Fort Hancock. Since 1979, adaptive use of Fort Hancock has been included in both the park's GMP and GMP-Amendment. Although the 1990 amendment was categorically excluded from NEPA consideration, the original GMP involved extensive public participation.

There was significant public notice prior to the issuing of the Request for Proposal (RFP) for the leasing of properties under the historic leasing program. In the fall of 1998, marketing and informational brochures were sent to over 9,000 prospective respondents, including non-profit associations throughout the Northeast and architectural firms in New Jersey and New York City. There were press reports on the program in local and state media that further spread public interest and knowledge of the program. Through these efforts, a mailing list of potential respondents was developed that eventually grew to over 300 names.

The RFP for the historic leasing program was issued on August 6, 1999, and remained open through November 8, 1999. It identified thirty-two buildings available for lease; an additional sixteen buildings potentially were available. Announcement of the program was made through media releases and to direct mailing of those on the RFP mailing list. Three site visits and a pre-submittal conference attended by several hundred interested parties were conducted during the period that the RFP was open.
In response to the RFP, twenty-two proposals were received and evaluated by a panel of senior National Park Service managers who made their recommendations to the National Park Service Northeast Regional Director. In April 2000, a media notice was issued announcing the selection of two of the proposals for negotiation: The American Littoral Society who proposed use of one building on Officers’ Row as offices, and the Wassel Realty Group (d.b.a.: Sandy Hook Partners) who proposed a comprehensive development for the remaining properties.

Three workshops concerning vehicle and pedestrian circulation issues at Fort Hancock were conducted in 1999 and 2000. Numerous individuals and some twenty local interest groups attended the workshops, the results of which have been incorporated into this EA.

D. ADAPTIVE USE OF FORT HANCOCK

As noted above, the adaptive use of the District was evaluated for compliance with NEPA, NHPA, and other federal regulations during the planning process as described in the GMP. Therefore, the adaptive use alternative is not again being evaluated in this EA. One of the primary methods used to implement the adaptive use concept is the authority vested in the National Park Service under Section 207 of the National Historic Preservation Act, as amended 1980. Other methods include the implementation of cooperative agreements and special use permits. Section 207 describes the parameters of the federal government’s historic leasing program, which is excluded categorically from consideration under NEPA. The Marine Academy of Science and Technology campus and the James J. Howard Marine Laboratory are examples of adaptive use projects already completed in the historic district.

E. ISSUES

The primary issues associated with the actions considered in this EA are:

1. Rehabilitation for new uses of approximately 100 historic buildings (thirty-seven associated with the historic leasing program and sixty-three under Park Service management or through cooperative agreement).
2. Preservation of the historic fabric and character-defining features of all historic buildings in the Fort Hancock District.
3. Rehabilitation of the Fort Hancock cultural landscape and preservation of its character defining features.
4. Provision for a safe and universally accessible park environment for visitors and partners;
5. Preservation of archeological resources.
6. Protection of wildlife habitats and special status species, including natural vegetation, Piping Plover, Osprey, and Wild Wormwood; and
7. Provision for an efficient operational environment necessary for current and new uses.

To address these issues, the Rehabilitation Alternative has been designed to: (1) provide for the needs of new uses; (2 and 3) preserve character-defining features of the historic buildings and landscape; (4) make all buildings and the landscape in general, accessible to all; (5) monitor construction activities to ensure that archeologically important resources are documented and preserved; and (6) avoid,
minimize, and mitigate impacts to natural resources, including special status species, or the greatest extent possible.

F. IMPACT TOPICS

Impact Topics Analyzed in this Document

Impacts of the alternatives on the following topics are presented in this EA: buildings and structures; circulation and parking; cultural landscapes; hazardous materials; water quantity; natural vegetation; threatened and endangered species; sand dune system; socio-economics; and visitor and partner experience.

Impact Topics Dismissed from Further Analysis in this Document

The following impact topics, either would not be affected or would be affected in a negligible fashion by the alternatives evaluated in this EA.

In addition, these topics are not considered to be highly controversial. Therefore, these topics, have been dismissed from further consideration or analysis. Negligible effects are effects that are localized and immeasurable or at the lowest levels of detection in a local or regional context.

Geology and Soils, Including Prime Farmlands

Substrates in the park consist of recent depositions of sand, gravel, silt, clay, and organic material with sand typically dominating soil composition. Soils at the park have high permeability, low capacity to retain water, low shrink-swell potential, and low compressibility. Neither alternative evaluated in this EA would affect geology or properties of soil at the park. According to the New Jersey State Office of the U.S. Department of Agriculture’s Natural Resource Conservation Service, no prime and/or unique farmlands are present in the park and, therefore, none would be affected (D. Smart, personal communication).

Air Quality

Although the Rehabilitation Alternative would result in increased weekday traffic in the park, the primary sources of air pollution in the area are the densely concentrated industrial and urban developments and traffic of Essex, Union, Middlesex, and Monmouth Counties, New Jersey, and the greater New York area. Additional miles driven within the vicinity of the park under the Rehabilitation Alternative would not increase traffic miles driven throughout the region and would not measurably affect local or regional air quality.

Wildlife (other than Piping Plovers and Osprey)

While the Rehabilitation Alternative would result in an increase in vehicle trips into the park, this would occur during morning and afternoon weekday commuting hours when Hartshorne Drive is already well traveled and generally free of wildlife, and would not result in increased vehicle/wildlife
encounters. With over one million vehicle trips into the park per year, the number of wildlife struck by vehicles is negligible.

**Water Quality**

The park completed in 1997 construction of a new treatment plant that purifies wastewater in accordance with standards administered by the New Jersey Department of Environmental Protection. Treated water currently is pumped to retention ponds located approximately one-quarter mile east of Fort Hancock, where the water percolates into a perched, brackish, water table that lies approximately three feet below ground in the Fort Hancock area. Water in the surface aquifer generally flows west-to-east from Sandy Hook Bay to the Atlantic Ocean. Although the plant is permitted to discharge up to 189,000 gallons of treated effluent per day, it currently operates well below capacity with discharges ranging from 60,000 to approximately 110,000 gallons per day.

Although the action alternative evaluated in this EA would irrigate thirty to forty acres with treated wastewater, no surface or subsurface run-off would enter or otherwise affect water quality or salinity in Sandy Hook Bay. In addition, using treated wastewater for irrigation at Fort Hancock would not affect the quality of potable water available to the park or nearby communities, as drinking water is pumped from contained aquifers hundreds of feet below the surface water table, such as the Farrington/Middle Potomac-Raritan-Magothy Aquifer at a depth of over 900 feet.

**Flood plains**

Much of the park, including Hartshorne Drive and Fort Hancock, lies within the 100-year floodplain, which includes all parkland up to an elevation of 10.8 feet above mean sea level (MSL)(NPS 1994). Within the project area, the average elevation of Fort Hancock is approximately eight feet above MSL and the elevation of Hartshorne Drive varies from approximately four to almost ten feet above MSL.

Although the areas evaluated in this EA are located within the 100-year floodplain, the proposed actions would not reduce the functions or capacity of the floodplain. Therefore, effects on floodplains are excepted from further consideration in accordance with exception V(B)(2)(b) and V(B)(4) of the NPS's July 1, 1993, *Floodplain Management Guideline*, which respectively cover “entrance, access, and internal roads to or within units of the NPS” and “historic or archaeological structures, sites, or artifacts whose location is integral to their significance.”

**Wetlands**

Although wetlands are present in the project area, no actions evaluated in this EA would affect those wetlands.

**Traffic**

In response to public concerns about possible traffic impacts, the National Park Service commissioned two traffic studies. Existing traffic conditions are described in section IV. Affected Environment and anticipated impacts are described in section V. Environmental Consequences.
III. ALTERNATIVES INCLUDING THE PROPOSED ACTION

A. BACKGROUND TO THE ALTERNATIVES

In order to comply with federal regulations and NPS policies, the park conducted two general management planning processes that culminated in approved plans – the Final Environmental Statement/General Management Plan (1979)(GMP), and the General Management Plan Amendment/Interpretive Prospectus and Development Concept Plan (1990)(GMP-AMEND). The park currently is managed under the GMP and the GMP-AMEND. As required by NEPA, NHPA, and other regulations and policies, these two planning processes evaluated a proposed action, three alternative actions, and a no action alternative. These five alternatives found in the Draft Environmental Statement/General Management Plan were:

• Mix of outdoor and indoor recreation, conservation and environmental protection, and year-round educational, cultural, and recreational programs (proposed action).
• Extensive and diverse recreational opportunities (alternative A).
• Preservation, restoration, and protection of natural and cultural features (alternative B).
• Preservation and protection of local community and neighborhood values (alternative C).
• No action.

One of the primary aspects of the 1979 proposed action was the concept of adaptive use of the Fort Hancock and Proving Ground zones. The GMP specified that “development at Sandy Hook would be focused at the Fort Hancock Gateway Village” and “five” beach centers. The GMP further specified that “Gateway Village would be designed to preserve the significant aspects of the fort’s historic character” and that “most historic features would be adaptively restored – maintaining their historic appearance – as the core facilities of the village.” The term “village” was used deliberately to signal a concentration of intensive uses, such as “staying in a hostel; attending or participating in cultural and educational events, lectures, shows, exhibits, and festivals; dancing; singing; swimming; playing indoor sports; eating; gardening; studying; doing research; and so on.” The GMP included Fort Hancock and the Proving Ground in the “rehabilitation zone,” which was intended “to retain the integrity of the historic scene and to provide for adaptive use through rehabilitation of historic structures.” The GMP-AMEND clarified adaptive use of Fort Hancock. The amendment proposed that the rehabilitation zone be managed through a public/private arrangement that would involve one or more lessees and described the process for the park’s selection of private sector partners through issuance of a request for proposals.

This EA evaluates two alternatives for implementing the concept of adaptive use at Fort Hancock and the Sandy Hook Proving Ground. It does not re-evaluate any of the five alternatives listed above, nor does it evaluate the park’s historic leasing program, which is excluded categorically from compliance with NEPA and other federal regulations. This EA describes and evaluates actions proposed for the rehabilitation of features that contribute to the park’s National Register properties as defined by the Secretary of the Interior’s Standards for the Treatment of Historic Properties, 1995 (Secretary’s Standards).
B. DESCRIPTION OF THE NO ACTION ALTERNATIVE

Under this alternative, the NPS would continue to manage the resources of the District according to its policies, standards and guidelines, and within current budgetary constraints. Treatment of the historic resources would be in accordance with the Secretary’s Standards. There would be no full-scale implementation of an adaptive use program as described in the GMP.

The National Park Service would continue with its historic building and cultural landscape maintenance program in the District at the park’s current annual base funding level of approximately $235,000. Additional cyclic maintenance and capital improvement projects would be funded on a project-specific basis through the NPS’s special, competitive, one-year funding program. The park has received an average annual allocation over the last five years from this one-year program of approximately $250,000.

Interpretive programs would continue at current levels, with current goals and objectives. The number and type of park partners would continue basically unchanged. Occupation of buildings by existing park partners under existing types of agreements would continue unchanged. The seasonal leasing of eight Officers’ Row houses (the other Officers’ Row houses do not meet safety codes, due to deterioration) to non-profit organizations would continue for as long as they meet safety codes. These leases require only a minimal maintenance investment in the buildings on the part of the lessees. Within five years certain historic buildings, including the Officers’ Club (Building 114) would likely deteriorate to a condition beyond repair.

C. DESCRIPTION OF THE REHABILITATION ALTERNATIVE (PROPOSED ACTION)

Introduction

The Department of the Interior (DOI) and the NPS have responsibility for the natural and cultural resources under their stewardship. The Secretary’s Standards provide guidance to stewards prior to and during the planning and implementation of project work. The revised Secretary’s Standards consist of four possible treatments for cultural resources: preservation, rehabilitation, restoration, and reconstruction. The decision of a specified treatment for a set of resources normally is made as part of the formal planning process. Rehabilitation was chosen as the specified treatment for the cultural resources associated with the District during the general management planning process in 1979 and 1990. The Secretary’s Standards state: “Rehabilitation is defined as the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values.”

General Management Goals

The specific rehabilitation actions associated with the Rehabilitation Alternative are described below. In addition to the goals stated in the GMP, the following goals have been identified for adaptive use and were prescribed in the August 1999 Request for Proposal for the Leasing of Historic Fort Hancock Properties.
• Program Goal: Create a year-round community of educational, research and recreational organizations sharing common goals and an appreciation of the District's historic history and unique shoreline setting, and return the District's historic structures and other landscape elements, to the greatest extent practical, to their original use as office and meeting space, transient lodging, and recreation and entertainment facilities.

• Historic Preservation Goal: Ensure the preservation of historic structures and other landscape elements that contribute to the National Historic Landmark District through the selection of compatible adaptive reuses. Establish and carry out appropriate preservation treatments for historic buildings and settings.

• Building Maintenance and Occupation Goal: Provide for the timely occupancy of the District's buildings and grounds, ensure adequate maintenance and preservation, and generate long-term revenues to support the District.

General Description of the Proposed Action

Introduction

As discussed above, rehabilitation was identified in both the park's 1979 General Management Plan and its 1990 GMP Amendment as the treatment for the District. Under the rehabilitation alternative, all treatment actions would conform to the Secretary's Standards. In accordance with the standards, all surviving historic elements that are determined to be contributing to the significance of the Landmark would be repaired and preserved in place. Features that are determined to not contribute to significance, or are deteriorated beyond repair, could be removed. New features necessary for safety and to support the adaptive use could be added. Also, the Secretary's Standards allow for two philosophically different approaches to replacement of severely deteriorated or missing elements, or addition of new elements. These are replacement with accurate replicas, or replacement with elements of contemporary design that are compatible with the historic character of the property.

The National Historic Landmark nomination that created the Fort Hancock and Sandy Hook Proving Ground NHL in 1984 identifies two important and very different stories associated with the cultural resources of the District. The first story is that of the Sandy Hook Proving Ground, where the nation's weaponry was tested from 1874 to 1919. The second is the story of Fort Hancock as a military coastal defense post to protect New York Harbor from 1895 to 1974. This EA presents two different treatment options for the cultural resources of the District. The selection of one of the following options would guide individual treatment decisions and would result in distinctly different appearances of the District. Descriptions of the two options follow, including examples of specific treatment actions that illustrate the difference between the options. Specific treatment actions that are common to both options are in a later section.

Also, there are cultural and natural resources located in the Hartshorne Drive Corridor that would be affected by actions proposed under this alternative. This corridor primarily is located in areas of heavy development, and the proposed actions are primarily installation and upgrade of utilities. For the purposes of this EA, the area of proposed action is divided into three zones: the Proving Ground zone,
the Fort Hancock zone, and the Hartshorne Drive Corridor zone (see Figures 2 and 13). These actions are common to both options and are also discussed in a later section.

Option 1

Treatment of cultural resources of Fort Hancock and the Proving Ground would emphasize the continuum of history throughout the period of significance of the entire National Historic Landmark District. No attempt would be made, through treatment actions, to distinguish the Fort Hancock zone from the Proving Ground zone.

The park would focus on protecting, maintaining, and repairing in place important cultural resources that contribute to the Landmark’s significance as defined in its National Register nomination. When it is necessary to replace important resources that are missing or deteriorated beyond repair, or to make alterations and additions to assure continued use, the new features would be contemporary in design yet compatible with character-defining features of the District. New features would not attempt to replicate historic features but would be differentiated in a way that does not create a false historical appearance. Features that do not contribute to the Landmark’s significance could be selectively removed.

The physical appearance of the site would provide visitors with an experience of how the landscape evolved during the entire period of significance. The interpretive program would be faced with the challenge of facilitating the visitor’s understanding of a complex and somewhat disjointed array of historic resources and new landscape elements. Interpretation of the Proving Ground would be particularly challenging since after its 45 year history it was incorporated into Fort Hancock and over the next 55 years lost much of its own characteristic identity.

Option 2

Under this option, there would be an attempt, through treatment actions, to distinguish the Fort Hancock zone from the Proving Ground zone. Treatment of cultural resources in the Fort Hancock zone would emphasize the continuum of history during the years of fort operation from 1895 through 1974. Treatment of cultural resources in the Proving Ground zone, while recognizing that the proving ground became a part of Fort Hancock in 1919 would emphasize the continuum of history during the years of its own operation from 1874 through 1919.

The park again would focus on protecting, maintaining, and repairing in place important cultural resources that contribute to the Landmark’s significance. However, when it is necessary to replace important resources that are missing or deteriorated beyond repair, or to make alterations and additions to assure continued use, the new features would replicate historic features present in each zone during its period of greatest significance. A trained eye would be able to differentiate new features from old; however, the overall appearance of the Landmark District would be consistently old. Features that do not contribute to the Landmark’s significance could be selectively removed.

The physical appearance of the site would provide visitors with an image and experience of how the two distinct military landscapes looked during their periods of greatest significance. The interpretive program would more easily facilitate the visitor’s understanding of those periods, while conveying an
understanding of the continuum of history. Interpretation under this philosophical approach would emphasize the differing characters and identities of Fort Hancock and the Proving Ground during their periods of greatest significance.

**Proposed Actions Specific to Option 1**

- The yellow paint and late additions on the Officers' Club (Building 114) would remain.
- Alterations to existing or construction of new walkways needed to accommodate adaptive use would be of one consistent contemporary design that is compatible with the character of the District.

- Only one historic street sign is extant. Existing non-historic street signs would remain in place or could be replaced by those with a contemporary design compatible with the character of the District.

- Streetlights deteriorated beyond repair, missing, or non-historic would be replaced with ones of contemporary design compatible with the character of the District. New streetlights required for adaptive uses would be of the same design (see Figures 6 and 7).

**Proposed Actions Specific to Option 2**

- The yellow paint and late additions on the Officers' Club (Building 114) would be removed to expose the original red brick and to permit the replacement of the original porch. Contemporary and compatible additions to replace lost square footage would be possible.

- Alterations to existing or construction of new walkways needed to accommodate adaptive use would not necessarily be consistent but would match materials and construction methods of surviving nearby walkways.

- Only one historic street sign is extant. Non-historic street signs would be replaced with replicas of the historical style.

- Streetlights deteriorated beyond repair, missing, or non-historic would be replaced with replicas used during the historic period of the Proving Ground and Fort Hancock districts. New streetlights required for adaptive uses would be replicas of historic designs (see Figures 6 and 7).

Where missing and where documentation of historic conditions exists, bollards required to protect fire hydrants and other structures would be reproductions of the historic railroad rail style.

**Proposed Actions Common to Both Options:**

Under the rehabilitation alternative, 100 historic buildings are located within the District and the rehabilitation zone. They would be considered for rehabilitation and adaptive use (see Table 1 and Figures 2 and 8). A detailed list of the buildings generally under consideration follows. Of the 100 historic buildings in the rehabilitation zone, 37 are slated for historic lease and 19 are used by park partners; the remaining 44 are used by the NPS for a variety of public use, maintenance, administrative, housing and education functions. NPS does not anticipate future changes in partners or to the numbers
of buildings allocated to NPS, partners or leased use. The American Littoral Society will be changing their building agreement from the current park partner permit to historic lease. The NPS anticipates that Brookdale Community College, who partnered with Rutgers University as part of the Sandy Hook Partners proposal, will move into a historic lease building. If in the future, the NPS was to identify a building or buildings that NPS would like to add to the lease, NPS would first complete compliance with the National Environmental Policy Act, Section 106 of the National Historic Preservation Act and the Endangered Species Act. Appendix A contains graphics illustrating typical treatment actions, for those building types currently proposed for rehabilitation and/or change of use.

Lighting installed for walkways, parking lots, security, roadways, and other requirements will be in accordance with NPS Management Policies (2001) that strives to preserve natural ambient lightscapes which are natural resources and values that exist in the absence of human caused light. Incorporating designs such as shielding, directional lighting, timing, limiting the height of lights, and using only the intensity needed to assure public safety would minimize any impacts of light to natural areas.

In general, the rehabilitation alternative would include the following actions:

• All rehabilitation work would be completed in compliance with the Secretary's Standards (a copy of the standards are included in Appendix B).

• All existing buildings would be rehabilitated to comply with current accessibility codes. Work would provide for universal accessibility access to the first floor of all buildings. In most locations, access would be provided at grade or by the installation of a code compliant accessible lift.

• All existing buildings would be upgraded to comply with current building codes in accordance with 40 USC Section 619. These include National Electric, Plumbing, and National Fire Protection Association Codes and may include the New Jersey Rehabilitation Sub-code.

• All hazardous materials including lead paint and asbestos will be remediated in accordance with applicable codes and regulations.

**Buildings and Structures**

• Exterior and interior surviving character-defining features as identified in the “Fort Hancock Rehabilitation Guidelines,” and as amended in consultation with the New Jersey State Historic Preservation Office (Appendix A), would be preserved to the greatest degree possible. All character-defining features would be repaired unless the feature is deteriorated beyond repair in which case it would be replaced in kind. In general, the character-defining features include:
Exterior masonry
Exterior wood trim
Exterior metal cornices
Built-in gutters
Exterior porches
Exterior doors and windows (installation of interior storm windows)
Interior millwork and cabinetry
Interior doors
Interior stair assemblies
Interior pressed tin ceilings
Interior fireplace mantels
Configuration of floor plan

• Rehabilitation of the Post Chapel (Building 35), including reconstruction if its steeple. The installation of new utilities within the buildings such as electrical, telecommunications and air conditioning would be concealed. All fabric would be repaired where required by the installation.

• Construction of a new maintenance building by the NPS would be a garage or shed to store park maintenance vehicles and equipment during the winter season. This would include beach cleaners, trucks, boats, lawn mowers and lifts. Today, most of the equipment valued at $2.34 million is stored outside exposed to the elements. The building would be located within the park's north maintenance area and constructed by the NPS and used for park operations. The building would be located in proximity to the site of three historic warehouse structures associated with the Sandy Hook Proving Ground that are no longer extant, and would be comparable in size and scale. The location, design, materials and scale of the building would be compatible with adjacent buildings at the National Park Service Maintenance Area in conformance with the Secretary of Interior Standards and in consultation with the State Historic Preservation Office.

• Replacement of a missing historic structure on the site of the former Post Hospital. The hospital building, located along Sandy Hook bay at the south end of the parade ground, was lost to a fire in 1985. This structure is an important element of the cultural landscape because it completes the enclosure of the Parade Ground on the bay side. A replacement structure could, in part, provide an opportunity to construct efficient marine laboratory space associated with the NJDEP salt water supply system. Currently, the NJDEP and NOAA need greater salt water volume and are evaluating expansion of the system. The design of the building would conform to the Secretary of Interior Standards and would be of contemporary design or an accurate reconstruction. The building would be limited to the hospital's 1902 footprint of approximately 23,369 square feet. The objective of the rehabilitation plan is to preserve and protect surviving historic features. Therefore, new construction on the hospital site would only occur after the NPS is assured that rehabilitation of all buildings will be complete in the Area of Proposed Action. Prior to construction, NEPA and NHPA compliance would be undertaken.
Figure 3

Existing Streetlights

- Non-historic
- Historic Proving Ground Gooseneck
- Historic Exposed Aggregate Concrete
- Roads
- Structures
Proposed Streetlights
Option 1
(as needed replacement)
Figure 5

A. 1950s Exposed Aggregate Concrete
B. 1930s Walter Reed
C. 1912 Fort Hancock Gooseneck
D. 19th Century Proving Ground Gooseneck

Roads

Structures

Proposed Streetlights
Option 2
(as needed replacement)
Figure 6 Streetlights Option 2
Figure 7  Streetlights Option 2
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<td>315</td>
<td>19401</td>
<td>Kitchen/Dining</td>
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<td>19401</td>
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<td>NCO Quarters</td>
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<td>Day Care Center</td>
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<td>Morgue</td>
<td>326</td>
<td>1905</td>
<td>Morgue</td>
<td>Restroom</td>
<td>NPS Restroom</td>
<td></td>
</tr>
</tbody>
</table>

* Actual uses of buildings may vary within the proposed mix and ratio of uses
Figure 8: Buildings in Rehabilitation Alternative
Circulation and Parking

The 1979 General Management Plan (GMP) committed to implementing no proposals “that would increase automobile use at Sandy Hook on summer weekends.” The GMP further commits to “no overall increase in the number of parking places provided at the developed operating areas of Gateway National Recreation Area.”

The visitor use projections that were the basis for the parking needs assessment in the General Management Plan specifically excluded the Fort Hancock Gateway Village. The plan however, recognized that the ultimate development of the Gateway Village would result in a significant increase in weekday visitor use at Fort Hancock. The 1990 GMP Amendment for Sandy Hook set the number of beach parking spaces at 4,300. It also identified the need for an additional 100 auto and 5 bus parking spaces (5 bus spaces equals 10 auto spaces) at Fort Hancock to accommodate the park Visitor Center that would be relocated to the fort area. However, neither the GMP nor the Amendment quantified existing or proposed limits on parking in Fort Hancock.

A physical inventory conducted in 1999 counted 4218 parking spaces at beach and bayside developed areas and 708 spaces in Fort Hancock for a park-wide total of 4926 parking spaces on Sandy Hook. This plan proposes to maintain the number of spaces that existed in 1999 and to add the 110 automobile spaces identified as needed for the Fort Hancock visitor center in the 1990 GMP Amendment.

Fort Hancock currently has 708 parking spaces. The adaptive use program requires 665 additional parking spaces in Fort Hancock that will result in a new Fort Hancock total of 1378 parking spaces. In order to maintain the approved park-wide level within Sandy Hook, 665 spaces will be removed from parking area K and elsewhere and relocated to Fort Hancock.

All new or expanding parking areas would be located on previously disturbed land and parking area K would be returned to nature. So as not to unfairly penalize the beach going public, 665 of the 1378 Fort Hancock spaces would be made available to beach goers on weekends. Fishing access and other recreation would continue to be permitted at existing beach and bay lots.

“Building Owners and Managers Association.” (BOMA) standards indicate a need for 2105 parking spaces based on the total number of square feet used by current tenants plus new tenants and existing park operation. The existing 708 plus the proposed 665 total number of 1378 parking spaces proposed for Fort Hancock would be 85% of the BOMA industry standard (the correct number is 85%, this was previously published as 65% which was incorrect).

The following table summarizes parking space numbers in the Park:

<table>
<thead>
<tr>
<th></th>
<th>Existing (in 1999)</th>
<th>Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beach &amp; Bayside</td>
<td>4218</td>
<td>3658</td>
</tr>
<tr>
<td>Developed Areas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fort Hancock Area</td>
<td>708</td>
<td>1378</td>
</tr>
<tr>
<td>Total</td>
<td>4926</td>
<td>5036</td>
</tr>
</tbody>
</table>
Figure 9: Existing Fort Hancock Parking
Figure 10: Proposed Changes to Fort Hancock Parking
At present there are eighteen parking lots dispersed throughout Fort Hancock. Six of these eighteen would be redesigned to increase capacity and accommodate new uses. Six new lots would be constructed for a total of twenty-four dispersed parking lots (see Figure 9). Generally, parking for buildings will be located in the parking area(s) closest to the building.

Parking Area K will be restored as an area of successional grassland that, in connection with areas to the north and east, will create a cohesive and significant natural zone of high value ecological habitat.

Alternatives that would widen roadways and allow on street parking or construct a large central parking lot with shuttle bus service were considered but rejected. It was determined that the alternative to provide for parking dispersed around the perimeter of the historic district was the only one that would meet the needs of current and prospective tenants and visitors.

Gateway is also developing a park-wide system of ferry docks to provide alternative and emergency access. The dock at Sandy Hook may be operational by 2006 and it is expected that the improved ferry service will provide additional alternative access for beach-goers and other park visitors without an increase in traffic congestion or pollution within Sandy Hook. Neither the ferry service nor the facility would be used for commuters.

Additional actions related to parking and circulation would include:

- All new and redesigned lots would be constructed to prevent pollution from petroleum product runoff through the use of best practice drainage structures or porous pavement. (NJAC 7:7E-8.7, NJAC 7:8)

- All buildings would have adjacent, universally accessible parking spaces.

- On-street parking would not be allowed, nor would any streets be widened to accommodate any increase in vehicle circulation.

- Street, parking lot and walkway lights would be installed where needed for safety.

- The intersection of Kearney Road and South Bragg Drive would be reconfigured for safety. The island would be removed, and South Bragg Drive at Building 36 would be shifted to the south.

- Buses would use the Fort Hancock Lot, the South Parade Ground Lot, and the Chapel Lot for drop-off; and would then move to the south end of Knox Road, North Beach or Gunnison Beach lots for parking and staging.

- Crosswalks between buildings and parking lots would be improved for safety.

- Existing historic walkways would be maintained. Additional walkways to accommodate new circulation patterns created by the adaptive use activities will be added where needed for safety. These will be primarily to connect new parking areas with existing walkways.
Primary proposed actions for the cultural landscape are as follows:

- Approximately 150 street trees that once existed throughout the Fort Hancock and Proving Ground zones and are now missing would be replanted. A planting plan that identifies specific locations and species will be developed based on the *Historic Landscape Assessment for Fort Hancock* (NPS 1994) and in accordance with the *Guidelines for the Treatment of Cultural Landscapes* (NPS 1996). (see Figure 11)

- Turf and foundation plantings may be irrigated using tertiary treated wastewater from the park’s treatment plant.

- Turf management and ornamental plantings would include drought resistant species where appropriate to the cultural landscape, in order to reduce reliance on irrigation, pest control, and fertilizer.

- Turf management may include using a combination of weed control and fertilizer in accordance with applicable laws, regulations, and procedures.

- Foundation plantings would be located in close proximity to historically residential buildings. "Island" planting beds between buildings would not be permitted.

- Buildings that were historically service oriented would not have any foundation plantings.

- The height of foundation plantings at the front of Officers' Row Buildings 1-21 would remain at or below the level of the porch floor. Plantings at the sides, corners, and rear may be slightly higher.

- Foundation plantings around other residential buildings with porches could be slightly higher than the height of the bottom of the front door. Plants would be chosen and maintained to be in scale with the building.

- The planting of ornamental annuals and perennials at residences as foundation material was a cultural tradition at Fort Hancock. This practice could continue with only limited restrictions.

- Plant materials used for foundation plantings and utility screening at residences would be chosen from a palette that conforms to current NPS policy for cultural landscape management (see Appendix D).

- Historically, climbing vines, probably Hedera, or possibly Parthenocissus, existed on many Officers' Row buildings. These could be replaced in a way that would not cause future deterioration of the masonry.
Note: Historic tree locations determined from 1941 Army landscape plan and aerial photos.

- Existing Historic Tree
- Missing Historic Trees
- Structures
- Roads

Figure 11

Historic Tree Replacement
Fort Hancock and Proving Ground Zones
Small Scale Features

Primary proposed actions for small-scale features are as follows:
• Planting boxes may be installed on the porch railings at Buildings 1-21. The maximum size of these boxes would be 3 feet x 1 foot x 1 foot.
• New utility boxes would not be located in open-spaces between buildings; rather, they would be located very close to buildings. Whenever possible, utility boxes existing in the middle of open spaces between buildings would be relocated to less intrusive locations close to buildings.
• All dumpsters and trash cans would be located at the rear of buildings, and may be screened using shrubs from the foundation plant palette or other suitable material that is compatible in appearance and character with existing character-defining landscape features.
• The flagpole in front of Building 102 would be removed as a non-historic intrusion. Bollards required by new uses to block vehicles, delineate roadways, and to guide pedestrians would meet the highway specifications and reflect the historical character of those that existed in large numbers on Barracks’ Row, of which two are extant.
• The non-historic and incompatible 4” x 6” wood bollards at the South Parade Ground parking lot would be removed as part of the design of the South Parade Ground Lot.
• Rehabilitation of the tennis court adjacent to the Officers Club (Building 114).
• Missing displays of military guns and equipment from earlier eras that are determined to be character defining features of the landscape may be returned.
• Existing historic manhole covers would be preserved and repaired. Covers required for new uses would be differentiated from the historic covers, but would be compatible with the historical character of the district.

Signage

• The park would implement a comprehensive sign system for the purpose of providing information to the visitor about the functions or occupants of all buildings in the area of proposed actions. These functions and occupants include the National Park Service, leasing program tenants, and other park partners. This sign system, required to accommodate new adaptive uses, would be a new landscape feature of the district; it does not have historical antecedents. The system would provide a uniformity of design throughout the district, would limit proliferation of signs, and would provide a design scheme that is compatible with the historic character and identity of an Army post.
• The basic design elements of the system would be as follows:
  • frames to be wood, 4 x 4 inches, with chamfer cut ends, painted white
  • backing to be plywood
  • background color to be white
  • text and logo would meet the needs of the building occupant
  • four sizes, dependent on the size of the building
  • two signs per building, one each at front and rear
  • evening operations may illuminate one sign using a simple spotlight in the ground
• For details, see Figure 12.
• For locations of the signs, see Figure 13.
• Directional signs would not be permitted except under special conditions. If a historic leasing program or other partner strongly think a permanent directional sign is warranted, the partner may request such a sign under a waiver process.
• Regulatory signs to define travel and parking would be permitted with special approval of the park, and would follow standards of “Manual on Uniform Traffic Control Devices” and the “Americans with Disabilities Act.”
• Temporary, short-term signs for special events and partner identification would be permitted with special approval of the park.
• Long-term portable signs would be permitted with special approval of the park.
• The historic system of identifying buildings, a small numbered plaque on the exterior corner of buildings, would remain. Missing numbers would be replaced with historical replicas.
Figure 12

Building Identification

Sign Location
Note: three proposed sign sizes are approximate:
2 feet by 9 feet
1 foot 6 inches by 3 feet three inches
1 foot by 2 feet

Typical Building Identification Sign
Utilities

Electrical Utilities

In order to provide adequate and reliable electrical service to Fort Hancock, existing overhead lines would be placed underground. Installation of approximately 14,000 feet of underground electrical and telecommunications conduit (primary/secondary loop) in the southern section of the park would upgrade the electric service (See Figure 14). These feeds would be installed in conduit and laid in a trench 36 inches deep by 36 inches wide. The majority of the trench would be located in the northbound shoulder of the Hartshorne Drive Corridor zone. For approximately 2000 feet, where the trench would impact dunes at the side of the roadway, it may be located under the roadway asphalt. These conduits would originate at the main transformer pad at the southern end of the peninsula, and extend north to the Fort Hancock zone (see Figures 14 and 15). The trench would be dug within twelve feet of the edge of the roadway, and as close to the roadway as possible. Approximately 3500 feet of electrical conduit currently exists in this zone of the park.

All required modifications to upgrade the electrical and telecommunications service in the District would use existing utility corridors. A preliminary review indicates that existing transformers serving buildings throughout the Fort may be sufficient for the proposed adaptive uses. However, a more thorough examination would be needed to check transformers for proper line size and service load needs.

Communications Utilities

• Fiber optic cables would be installed the entire length of the peninsula in the same trench as the new electric lines. The trench would be 36" wide and 36" deep, would originate in the vicinity of the Route 36 overpass, and would terminate within Fort Hancock. These new cables would extend to each building using existing utility corridors. Approximately 3500 feet of telecommunications conduit currently exists in the Hartshorne Drive Corridor.

Utility Service Entry into Buildings

• Utility lines near buildings would be brought into buildings by placing the utility lines in existing conduit; by installing new conduit in existing utility corridors at existing entrance locations; or by using sub-surface directional drilling.

Water and Wastewater

All rehabilitation activities will employ the best water conservation technology available. Upgrades to the potable water system now underway will increase water volume and pressure needed for sprinkler systems and firefighting. Increased consumption of water resulting from the rehabilitation of buildings would fall well within available capacity and NJDEP permitted primary and secondary source levels. The NPS currently operates under a NJDEP allocation permit that allows withdraw of 91 million gallons per year from the aquifer. NJDEP, USGS, and the NPS monitor the NPS well for salt-water intrusion and all regulated contaminants.
Further analysis of water use and waste water treatment has led NPS to conclude that the estimate used in the February 2002 EA of 75 gallons of water per day (gpd) for each additional Fort Hancock worker was an over estimate. For example, water use at the American Littoral Society offices averages 16.25 gpd with historic fixtures. Rehabilitation with low flow fixtures should significantly reduce that amount.

NPS has obtained the following estimates through the U.S. Environmental Protection Agency from Water Management Incorporated (WMI). WMI designs and implements water efficiency programs for multi-unit residential properties, public housing authorities, federal and state facilities, military complexes, hotel industrial commercial and institutional properties. WMI indicate that the average office uses 8-20 gpd per employee; if the employee eats a meal at a conventional sit down food service facility, add an additional 8-10 gpd. Assuming a very high use scenario of 30 gpd and an anticipated influx of 800 additional people per day, Sandy Hook water production and waste water treatment would increase 24,000 gpd. The existing summer demand for waste water treatment is approximately 110,000 gpd (winter average is approximately 60,000 gpd). The sewer plant can accommodate this increase under its current permit to treat 189,000 gallons per day. The design capacity of the plant is 280,000 gallons per day.

A contract that is underway, and scheduled to be completed in 2003, will reline manholes and sewer lines to reduce ground water infiltration, which has placed a significant burden on the plant. Daily water out – water in measurements show that ground water infiltration following a rain can add as much as 40,000 – 100,000 gpd into the system. This work, coupled with the low flow code requirements and park service policy of requiring low flow fixtures, will significantly reduce flows to the sewer plant.

Each of the eight percolation ponds is of sufficient capacity to handle the maximum design flow of 280,000 gallons per day from the sewer plant. The ponds are located in one of the higher elevations of the park and are surrounded by approximately 3.5 feet concrete containment walls. If a storm were to flood the ponds, the entire Fort Hancock area as well as large portions of surrounding coastal communities would be underwater.

Effluent from the sewer plant is discharged to the percolation ponds. They provide additional filtering before the effluent is recharged to groundwater. As far the additional plant flows affecting ocean water quality, we are required to test and comply with all NJDEP regulations. The current limit for ocean bathing is 200 fecal coliforms per 100 milliliters of water, while the maximum plant effluent limit is 4 fecal coliforms per 100 ml.

**Natural Gas**

•A natural gas pipeline would be installed. Because the alignment of this gas line will follow the alignment of the Sandy Hook Multi-use Pathway (construction beginning summer 2003), compliance with federal regulations and NPS policies for this proposed gas line has been completed as part of the Pathway EA.
Renewable Energy and Sustainable Design

Interest in promoting a sustainable design particularly in energy utilities has led to the research in future development of renewable sources of producing energy. Engineering studies for the redevelopment of Fort Hancock will incorporate investigations for supplementing electric power through the use of photovoltaics (solar collection).

Project Schedule

Actions proposed for the Rehabilitation Alternative would commence upon completion of compliance with federal regulations and NPS policies, and upon execution of legal agreements for the historic leasing program. The actions would be implemented over a five-year period.

D. PROPOSED ACTIONS CONSIDERED BUT ELIMINATED FROM DETAILED ANALYSIS

As noted above, this EA evaluates two alternatives. The Action alternative describes proposals for implementing the concept of adaptive use at Fort Hancock and the Sandy Hook Proving Ground. The No Action alternative establishes a basis for comparison and describes a continuation of the status quo. The Action alternative does not re-evaluate any of the five alternatives that were evaluated in the 1979 DEIS/GMP, nor does it evaluate the park’s historic leasing program, which is excluded categorically from compliance with NEPA and other federal regulations. This EA describes and evaluates actions proposed for the rehabilitation (as defined by the Secretary’s Standards) of features that contribute to the status of the park’s National Register properties.

The following rehabilitation actions were considered for incorporation into the Rehabilitation Alternative for the adaptive use of the Fort Hancock historic district, but were eliminated from further consideration for the reasons described below.
Note: Existing electrical service is above ground radial feed. The proposed action is to upgrade electrical service to more reliable loop feed, move lines underground, and install telecommunications service in same trench.
Note: The proposed action is to upgrade existing electrical and water lines as necessary, using existing underground locations, and install telecommunication lines in these same existing locations.

Existing Underground Electrical Loop Feed System to be Upgraded

Typical existing underground electrical corridors from loop feed to existing transformers to bldgs; water distribution lines similar

Existing and Proposed Utilities
Fort Hancock
and Proving Ground Zones

Figure 15
Circulation – Street--widening and on-street parking

Careful surveys and experiments were conducted to see if widening some streets and providing on-street parking spaces could satisfy the parking needs of the adaptive use program. These actions were rejected for two primary reasons: (1) widening certain streets, such as Kessler Drive and Hudson Road, would have a major adverse impact on the historic character of Fort Hancock’s road system that could not be mitigated, and (2) parking several hundred cars on Fort Hancock’s roads would have a major adverse impact on the visual quality of the park and the historical character of the cultural landscape.

Circulation – Intercept lot with shuttle

This action would eliminate vehicle traffic, including park staff, tenants, and partners, but not visitors, from the district. It would require a new ± 1400 space parking lot located outside the district, and require the use of a shuttle bus for transportation. This system would not meet the needs of park operations, nor would it accommodate the needs of existing partners or new adaptive uses.

Signage – Commercial style signs

A system to meet the needs of the historic leasing program that was more commercial in nature and with less uniformity was considered, but was eliminated because it would not be compatible with the historical character and identity of an Army post.

IV. AFFECTED ENVIRONMENT

A. CULTURAL RESOURCES

National Register Properties

As described in the National Register of Historic Places inventory nomination form, the Fort Hancock and Sandy Hook Proving Ground Historic District is bounded by the Route 36 bridge to the south, the Atlantic Ocean to the east, Sandy Hook Bay to the west and Lower New York Harbor to the north. With the exception of Skeleton Hill Island, and South Island, the entire Sandy Hook peninsula, including Ft. Hancock, the Proving Ground, the Coast Guard Station, the Nike Missile site and the Hartshorne Drive Corridor, are in the District. The District is included on the Secretary of the Interior’s List of Most Threatened National Historic Landmarks (sixty landmarks are on the list).

In addition to the District, there are three other properties in the park listed on the National Register: The Sandy Hook Lighthouse (landmark status), the Spermaceti Cove Life-Saving Station, and the Cove House Historic District.

There are 228 items listed on the NPS List of Classified Structures, most of which contribute to the National Register properties. The area of proposed action includes 100 buildings, as well as a number of other structures and landscape elements. Two cultural landscape assessments, dating from 1994 and 1999, conclude that the area retains a high level of historical integrity.
Components of the District

Archeology

Years of archeological evaluation, testing in response to various construction projects, and unexpected finds during construction and park maintenance operations have established that the archeological record of Sandy Hook is highly varied in terms of its cultural association, location, nearness to ground surface, degree of preservation, and significance.

Two factors are important when considering the potential for archeological sites in the area of proposed actions. One is the effect of geomorphological history on this dynamic barrier island. Sandy Hook grew northward from the 16th through the 20th centuries. In 1764, the tip of the Hook was only 500 feet north of the lighthouse. Since there was no Native American Presence on Sandy Hook after 1754, no Native American sites of any period should be present above sea level anywhere north of the 1764 limits of Sandy Hook.

The second factor affecting archeological resources is the extensive earth moving accomplished to create, out of rolling sand dunes, the level areas now occupied by the Sandy Hook Proving Ground and Fort Hancock National Historic District. Earth moving and other construction activities undertaken by the 19th and early 20th century military in the process of creating and operating facilities for which the landmark district was created, caused extensive damage to, and burial of, earlier historic and prehistoric sites. The degree of effects on earlier sites ranged from obliteration, through simple exposure and minor disturbance, to unintentional, but protective burial.

Archeological evidence of the military activities conducted since the mid-19th century are to be found virtually everywhere within the core leasing area. These include building foundations, privy and cistern pits, trash deposits, railroad beds, traces of fence lines and walks, landscape plantings, the ground contour and the very topsoil on the site today. Some archeological evidences are not old (e.g. foundations of mid-20th century structures removed by the military in their last years or more recently by the NPS), yet their historical record is incomplete or not fully researched.

Traces of earlier sites also lie within the same area. Many represent activities quite different from those for which the Landmark District was nominated. The most intact found to date are the 18th and 19th century remains associated with the Sandy Hook Lighthouse, including foundations and middens that contain debris reflecting the function of the lighthouse, the domestic activities of the operators and families, and the military occupations during the Revolutionary War and the War of 1812. No other intact early sites have been found within the core leasing area, but traces, by way of artifacts, have been found of two prehistoric sites and of military occupation during the War of 1812. Additional evidence may yet be found of Native American land use (not much north of the Lighthouse), shipwrecks (buried and near and below sea level), additional early Lighthouse and Life Saving service operations (including burials) and the British military occupation during the Revolutionary War. One can also postulate a variety of other small sites relating to privateers, fisherman and travelers, among others.

Sandy Hook’s long history as an army weapon’s testing site and as a coastal defense site has left a legacy that includes threats to public safety from unexploded ordnance (UXO). These are
archeological artifacts that reflect experiments and common practices of the Sandy Hook Proving Ground and of the defensive works erected on Sandy Hook. The Department of Defense (DOD) has conducted surveys to detect and remove UXO from public areas. Additional UXO likely remain on Sandy Hook, however all of Fort Hancock and most of the project area lies outside the weapon's testing zone.

Buildings and Structures

Currently, the park has plans for the rehabilitation and treatment of approximately thirty-seven of the 100 buildings located within the area of proposed action through leasing (see Table 1).

The majority of the buildings under consideration for adaptive use are located in the Fort Hancock zone. With few exceptions these buildings were constructed in the Colonial Revival style using buff colored brick with white mortar joints. Most of these buildings date from the 1898-1910 period and were constructed to meet a variety of needs: housing, administration, supply, recreation, etc. The newest structures, including the Chapel, were constructed by 1941 in preparation for World War II.

Almost all of the buildings in Fort Hancock remain intact and retain their original fabric and many character-defining features. Alterations to the buildings have been few and include the following:

• Replacement of the original slate roofs with asbestos shingles.
• The addition of garages to most of the Officers' Row houses around 1941.
• Small additions to the bakery building, the gas station, firehouse and others buildings.
• The enclosure of some porches on the residential buildings as illustrated on the two-family Officers' housing, Building 21.

The Chapel has undergone extensive alteration. In its current configuration many of the character-defining features are missing. The building is devoid of a steeple, the exterior walls are covered in asbestos siding, and asbestos shingles replaced the original roof. Information about each building type being considered under a lease agreement may be found in Appendix A. The information includes: name, number, date of construction, a brief description of the building, and a list of the character defining features. The list of character defining features was taken from the Fort Hancock Rehabilitation Guidelines, prepared in March 1999 by the NPS and jointly amended by the New Jersey State Historic Preservation Officer during a site walk-through in January of 2001.

Three buildings under consideration for adaptive use are located within the Proving Ground zone and built prior to 1919. These structures, built of red brick, are in sharp contrast to the yellow brick Colonial Revival style buildings of Fort Hancock. The oldest of these structures is the Second Empire style Officers' Quarters, Building 114, which was painted yellow when it became the Officers' Club. In addition to the color change, the Officers' Club has undergone the greatest number of alterations. These alterations include the removal of a porch and the construction of four additions, several of which may have styles incompatible with the original Second Empire style of the building. Despite these changes, the Officers' Club retains individual integrity, and contributes to the overall integrity of the District.
The red brick warehouses of the Proving Ground (Buildings 124 and 125) have been slightly altered since the end of the period of significance. While they are in need of repair, in particular the slate roof on Building 125, the windows are in place and the original forms are intact. In some locations remnants of the early railroad system in the form of tracks remain.

Cultural Landscape

The long history of military association and maritime use has created a cultural landscape that encompasses most of the Sandy Hook peninsula. The Cultural Landscape of Fort Hancock is highly developed. Character defining vegetation features (as identified in Fort Hancock Rehabilitation Guidelines, 1999) include over 100 extant historic shade trees along road edges, foundation plantings and personalized garden space confined to within four feet of buildings.

Other character defining features include streetlights, concrete and bluestone walkways. Other landscape features include bollards, signs, utility boxes, and militaria. There are also historic views and vistas along the Parade Ground, the Athletic Field, and the Sandy Hook Bay.

The Cultural Landscape along the proposed utility corridor has been impacted by construction of recreational facilities such as beach centers and parking lots. This is particularly true in the southern portion of Sandy Hook.

Circulation

Roads and walkways in the Fort Hancock and Proving Ground zones have changed little since the end of World War II, and are important contributing elements to the historic district. Character defining features still extant from both the pre-and post-World War II periods include: alignment, width, bluestone curbing, manhole covers, drain covers, and blue-stone and brick paving materials.

Approximately 708 parking spaces exist in the area of proposed actions. Only a few buildings have adjacent universally accessible parking spaces. There is no on-street parking. Some parking lot surfaces are non-porous, and some are porous. The zone around Buildings 53 and 60 currently consists of parking and roadway. When nearby Building 25 becomes the Visitor Center current safety measures to protect visitors would be inadequate.

Traffic congestion is not a problem in the Fort Hancock and Proving Ground zones. Some walkways are deteriorated and need repair or replacement. Historic bluestone walkways exist on Officers’ Row; historic brick walkways exist on Barracks’ Row and Sergeants’ Row. The Hartshorne Corridor zone has been altered extensively since the Army left in 1974. The major impact was the construction of new beach recreation centers, and upgrading of parking lots to serve them. Other alterations include the widening and repaving of Hartshorne Drive, improvements to bayside erosion control structures, and the installation of underground utilities along the road.

The level of historical integrity in the Fort Hancock and Proving Ground zones is high. The integrity of the Hartshorne Drive Corridor zone is low.