

***FORT PICKENS FERRY SUPPORT FACILITIES AND SHUTTLE SERVICE
FLOODPLAINS STATEMENT OF FINDINGS***

**GULF ISLANDS NATIONAL SEASHORE
NATIONAL PARK SERVICE – US DEPARTMENT OF INTERIOR**

AUGUST 2015

**STATEMENT OF FINDINGS FOR EXECUTIVE
ORDER 11988 ("FLOODPLAIN MANAGEMENT")**

Fort Pickens Ferry Support Facilities and Shuttle Service
Environmental Assessment
Gulf Islands National Seashore
Escambia County, Florida

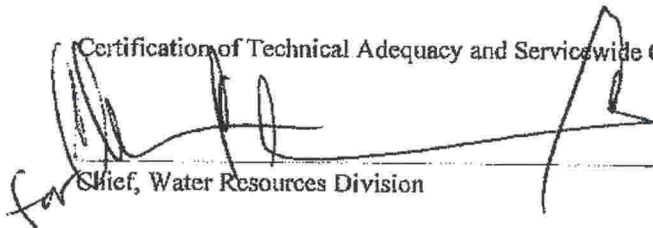
Recommended:



Daniel Brown, Superintendent, Gulf Islands National Seashore

8/14/15
Date

Certification of Technical Adequacy and Service-wide Consistency:



for Chief, Water Resources Division

19 August 2015
Date

Approved:



Director, Southeast Region

9/11/15
Date

Executive Order 11988, "Floodplain Management," and the National Parks Service DO-77-2: *Floodplain Management*, require an examination of impacts on floodplains and potential risk involved in placing facilities within floodplains. Most of the study area lies within the 100-year floodplain, and the remaining area lies within the 500-year floodplain. All proposed activities, except the construction of public restroom facilities at Battery 234, qualify as a Class I action under DO-77-2. The construction of public restroom facilities at Battery 234 would be a Class III action because it would be located within Zone VE, a coastal flood zone with velocity hazard.

INTRODUCTION

CLASS OF ACTION

Class I actions include location or construction of administrative buildings or other man-made features which by their nature entice individuals to occupy the site within the 100-year floodplain. Nearly all elements of the proposed action would meet these criteria. Class III actions include Class I or II actions located in High Hazard Areas including coastal high hazard areas and areas subject to flash flooding. The construction of public restroom facilities at Battery 234 would meet these criteria. Figure 1 provides the location of the floodplain and flood zones relative to the project area. This statement of findings provides precise reasoning as to why the proposed site was selected and why less flood-prone alternative sites were rejected. The statement of findings will include an accurate and complete description of the flood hazard assumed by implementation of the proposed action without mitigation in accordance with Section VI-F of DO-77-2 Procedural Manual.

PROPOSED ACTION

The National Park Service proposes to improve existing gateway facilities at the newly constructed Fort Pickens ferry pier to better serve as an arrival site for the passenger ferry service and to initiate a shuttle service to transport visitors to various location within the Fort Pickens Area. Improvements would largely be focused on facilities adjacent to the ferry pier and shuttle support infrastructure but could also include a new restroom facility near Battery 234. Under alternative 2 (the National Parks Service Preferred Alternative), the National Park Service would provide 11 programmatic elements for improved visitor services at Fort Pickens:

- Ferry departure queuing
- Landside orientation
- Restrooms
- Point of sale (tickets, rentals, sales, etc.)
- Rental equipment pick-up/return
- Shuttle stop
- Gathering areas
- Educational exhibits
- Food service



Fort Pickens Ferry Support Facilities and Shuttle Service

FIGURE 1
FEMA Flood Zone Map



- Concessioner storage
- Indoor and outdoor dining areas

The locations of these improvements are identified on figure 2.

Rehabilitation of Historic Buildings

Under this alternative, the three historic buildings adjacent to the ferry pier would be rehabilitated to accommodate new visitor services. As shown in figure 2, the engineer's shop, the mine loading building, and the mine storage building would be adaptively reused to support visitor services and concessioner operations.

The engineer's shop (building 17) would be used for concessioner storage. The existing telecommunications infrastructure would remain in its current location.

The mine loading building (building 15) would be used for exhibits on the historical significance of Fort Pickens, and there would be some changes to the structure. New, all-glass doors would be installed at both the eastern and southern entry points. The existing doors would remain operational but would not be used by visitors for entry into the mine loading building.

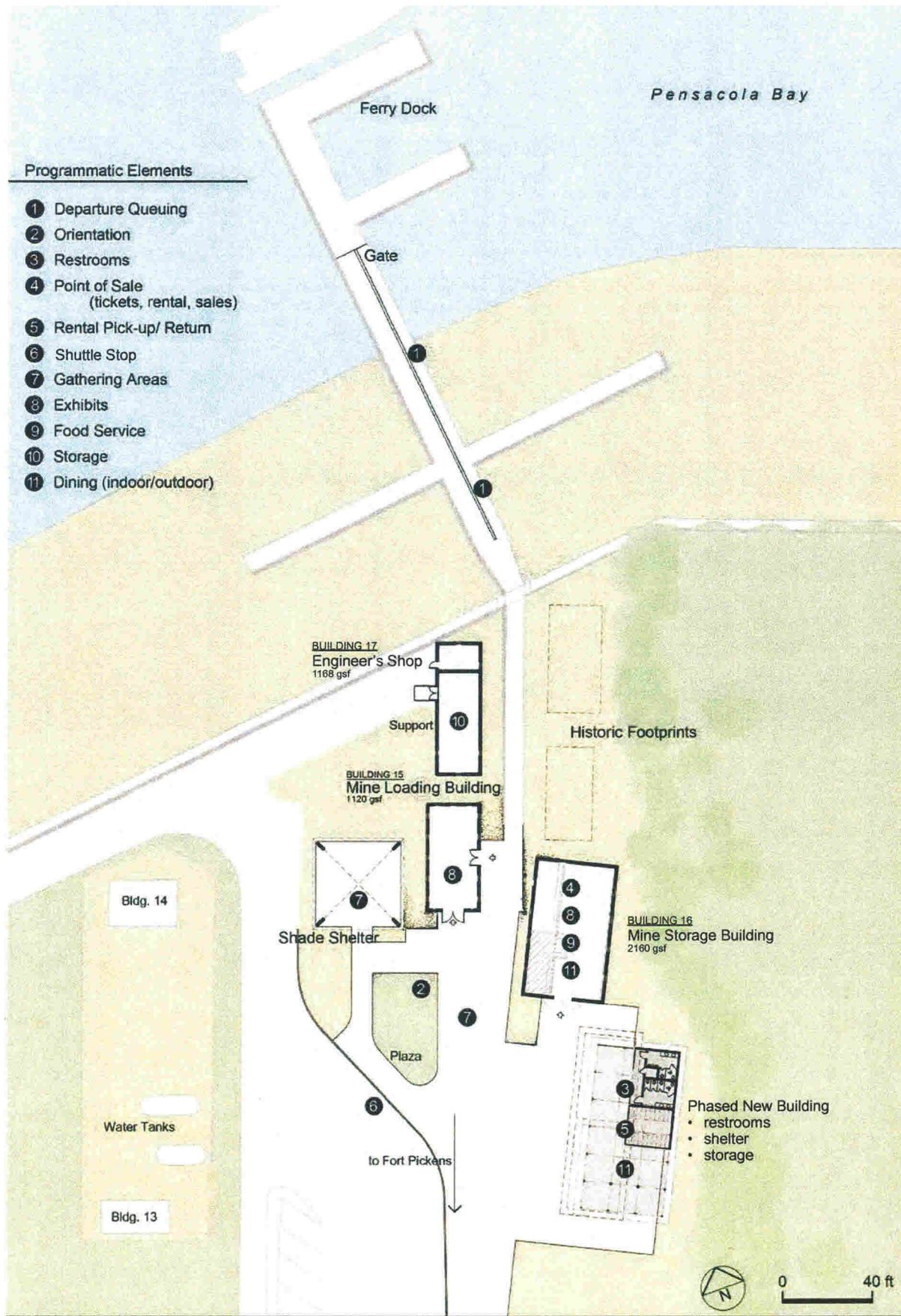
The mine storage building (building 16) would be used for several functions: concession sales, food service, dining areas, and exhibits, and there would be a few changes to the structure. The point of sale for food, ferry tickets, equipment rentals, and souvenirs could be designed for one concessioner employee. Additionally, a false floor would be installed 6–8 inches above the existing, historic floor in the mine storage building in order to make concession operations more resistant to flood damage. As in the mine loading building, new, all-glass doors would be installed at the southern entry point. The existing doors would remain operational but would not be used by visitors for entry into the mine storage building.

Construction of New Buildings and Structures

New Ferry Landing Area Building

The action alternative would include the construction of a new building, which would house restrooms and rental storage and would provide outdoor dining areas. This building would be built overlapping a historic foundation and would be elevated to minimize breaches in the historic foundation and to lessen the risk of flood damage. The restrooms would provide closer and more visible facilities for ferry passengers. The rental storage area would protect concessioner property when not in use. The new building would include a canopy under which picnic tables would be available for outdoor dining.

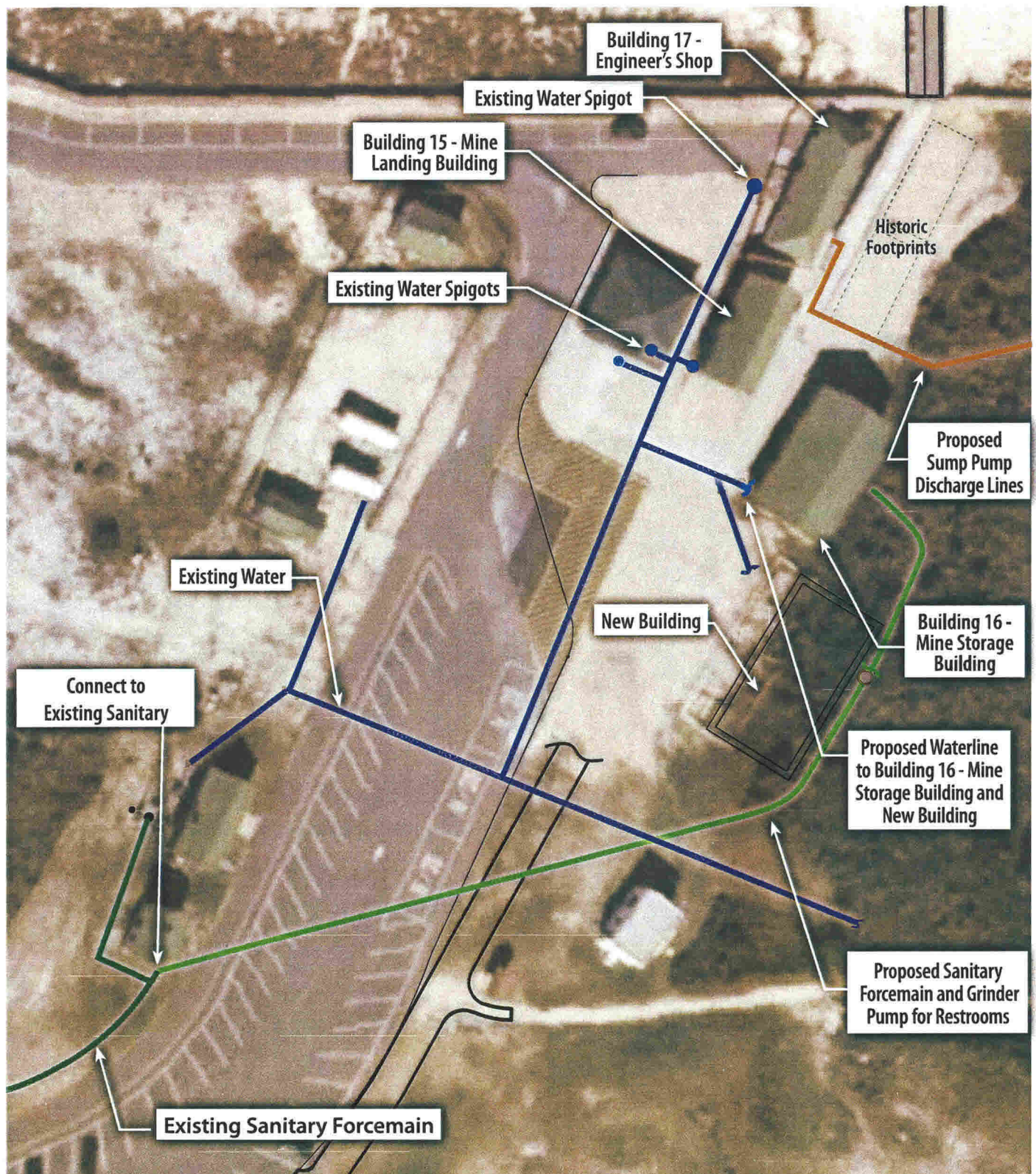
Utility services required to support the ferry service include electric, water, sanitary sewer, and drainage improvements (figure 3). There is currently electric service connected to all the existing buildings at the ferry landing. Therefore, improvements would be limited to upgrading panels and rewiring buildings to current codes. If new buildings are constructed, a new service would be connected from the nearby transformer.



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FIGURE 2
Alternative 2: Ferry Landing Area Improvements



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FIGURE 3
Alternative 2: Utilities Updates at the Ferry Landing Area



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Water service is also available at the mine loading and mine storage buildings. Water to the new restrooms would connect to an existing water line and be run around the building to a convenient point of entry into the building.

The restrooms would require a new grinder pump station be constructed, similar to the five existing grinder pumps located in the Fort Pickens Area. The grinder pump would be placed near the back of the restroom building and a 1.5-inch sewer force main run approximately 400 feet to the existing force main located across the parking lot (on the south side of the paint locker [building 10]).

Site drainage would be improved by grading, construction of concrete curb to direct stormwater, and construction of new drain inlets with a pipe outfall through the seawall. In addition, the mine loading building, mine storage building, and the engineer's shop would be equipped with sump pumps for removing water due to rain/storm events.

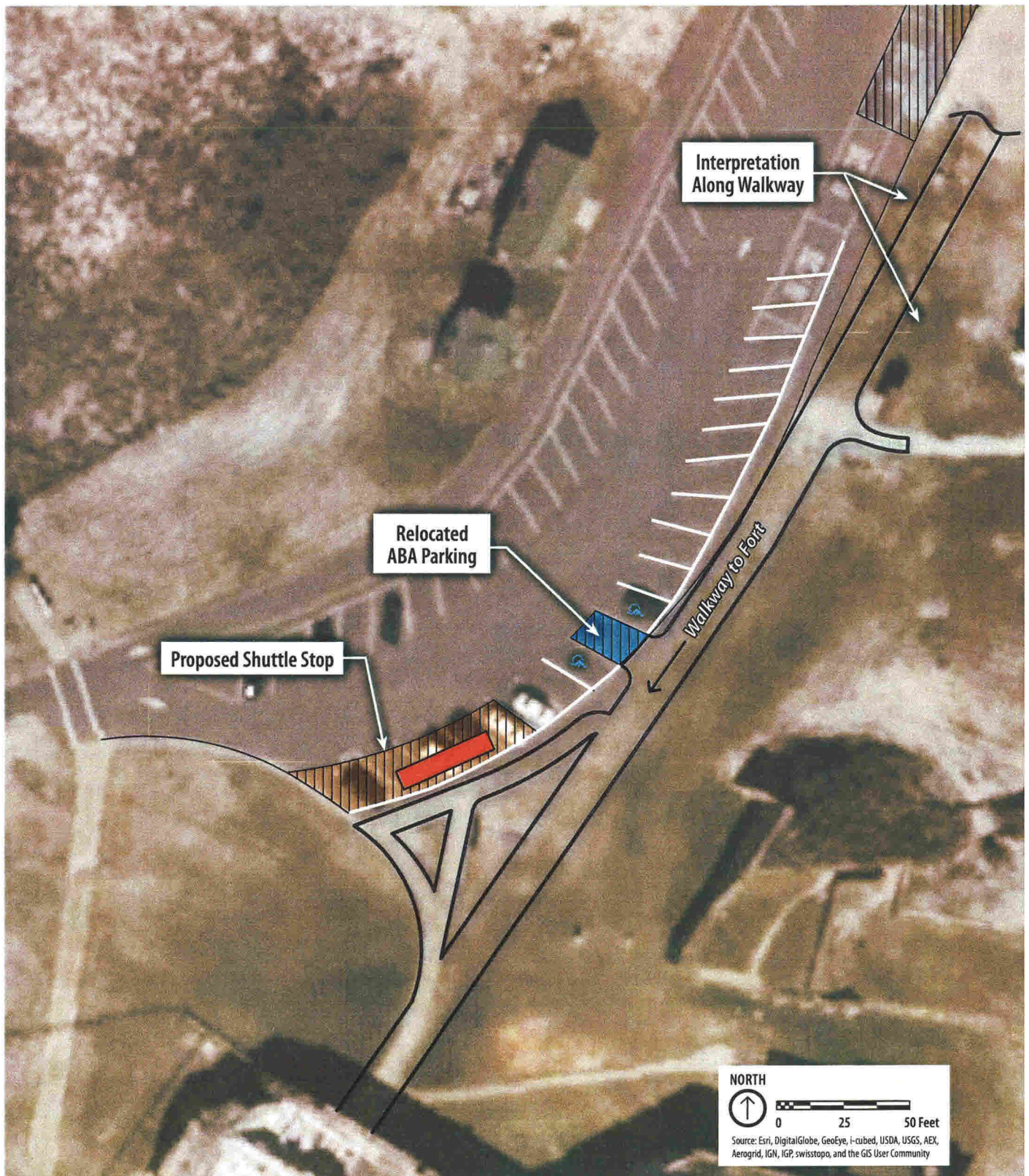
Interpretive Elements near Fort Pickens

The pedestrian walkway to Fort Pickens from the ferry landing would be a focal point of the site and connects the ferry landing ramp to the fort entrance. The walkway would be along the historic rail line that ran from the mine storage and mine loading buildings through the fort gate. The walkway would be modified to be 15 feet wide, approximately 10 feet wider than the historic rail line. The walkway would be constructed of a hardened surface designed to avoid damaging the historic fabric of the railroad and may be designed to express the historic rail lines. Along the walkway the National Park Service would place interpretive signs and displays such as weaponry (cannon, cannon balls, mines, ordinance, etc.) and benches.

Some of the existing vehicle parking along the pedestrian walkway would be reconfigured, including relocating the handicap accessible parking spaces near the fort in order to accommodate a shuttle stop at the fort, as depicted in figure 4.

Restroom near Battery 234

In the future, a new restroom facility could be constructed near the Battery 234 shuttle stop (figures 5 and 6). Under this alternative, the beach near Batteries 234 and Cooper would become a lifeguarded beach, and the new restroom facility would accommodate the anticipated increase in public use of this beach. The comfort station would consist of a basic men's and women's restroom with a single toilet and sink, and an outdoor shower column for beach goers. A frost-free water hydrant would be provided near the comfort station for visitor and maintenance staff use. The required utilities include water, sanitary sewer, and electric service to the comfort station. The proposed utilities would be routed along the west side of the Battery 234 and Battery Cooper loop road to the intersection at Fort Pickens Road. The water would be connected to the existing 6-inch waterline located on the south side of Fort Pickens Road. Both the sanitary sewer and electric would be bored under Fort Pickens Road with the sewer connected to the existing 3-inch sewer force main located on the north side of Fort Pickens Road. The electrical service would be connected to the nearest point of service, also on the north side of Fort Pickens Road.



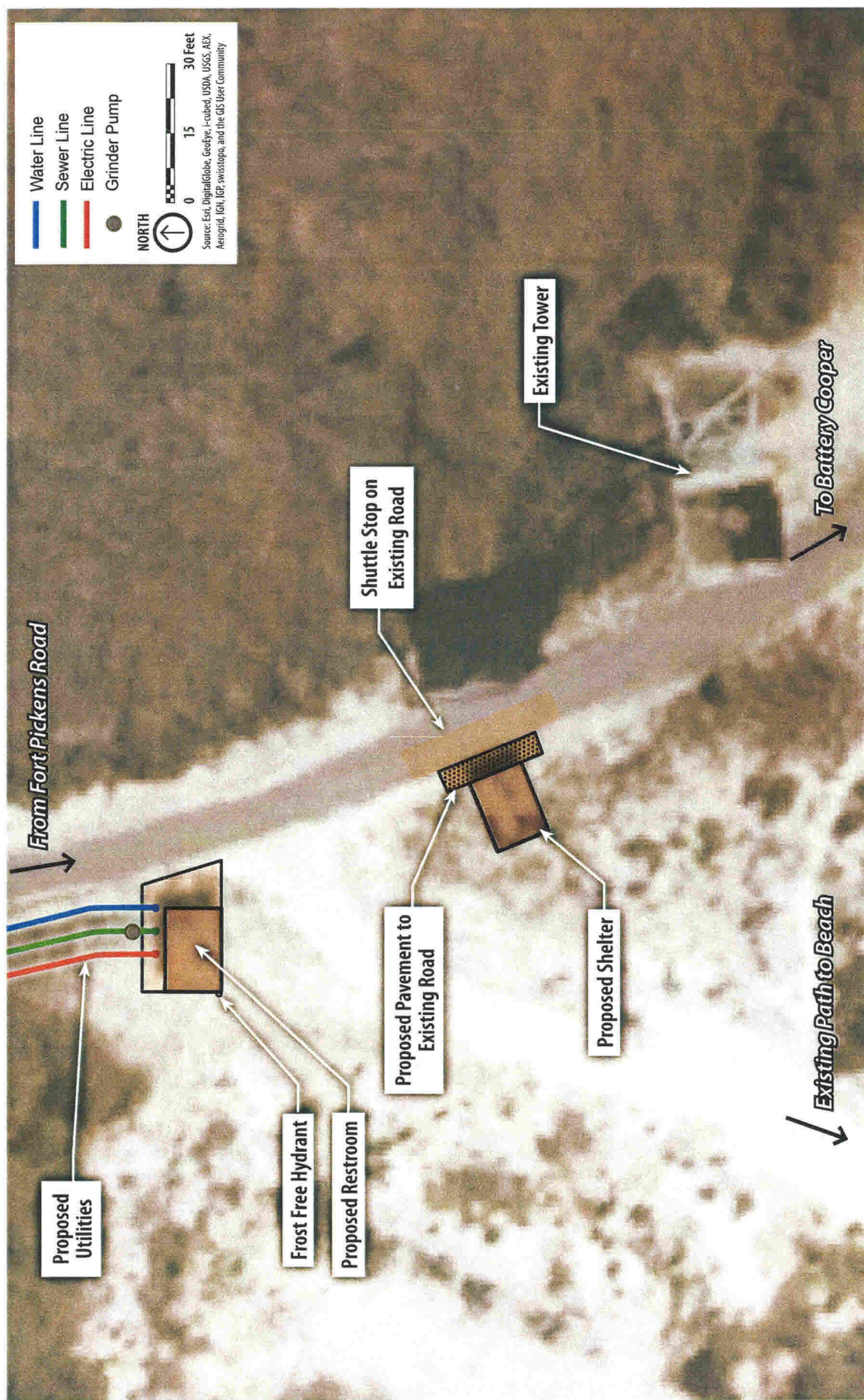
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FIGURE 4
Alternative 2: Proposed Reconfiguration of the Fort Pickens Parking Area



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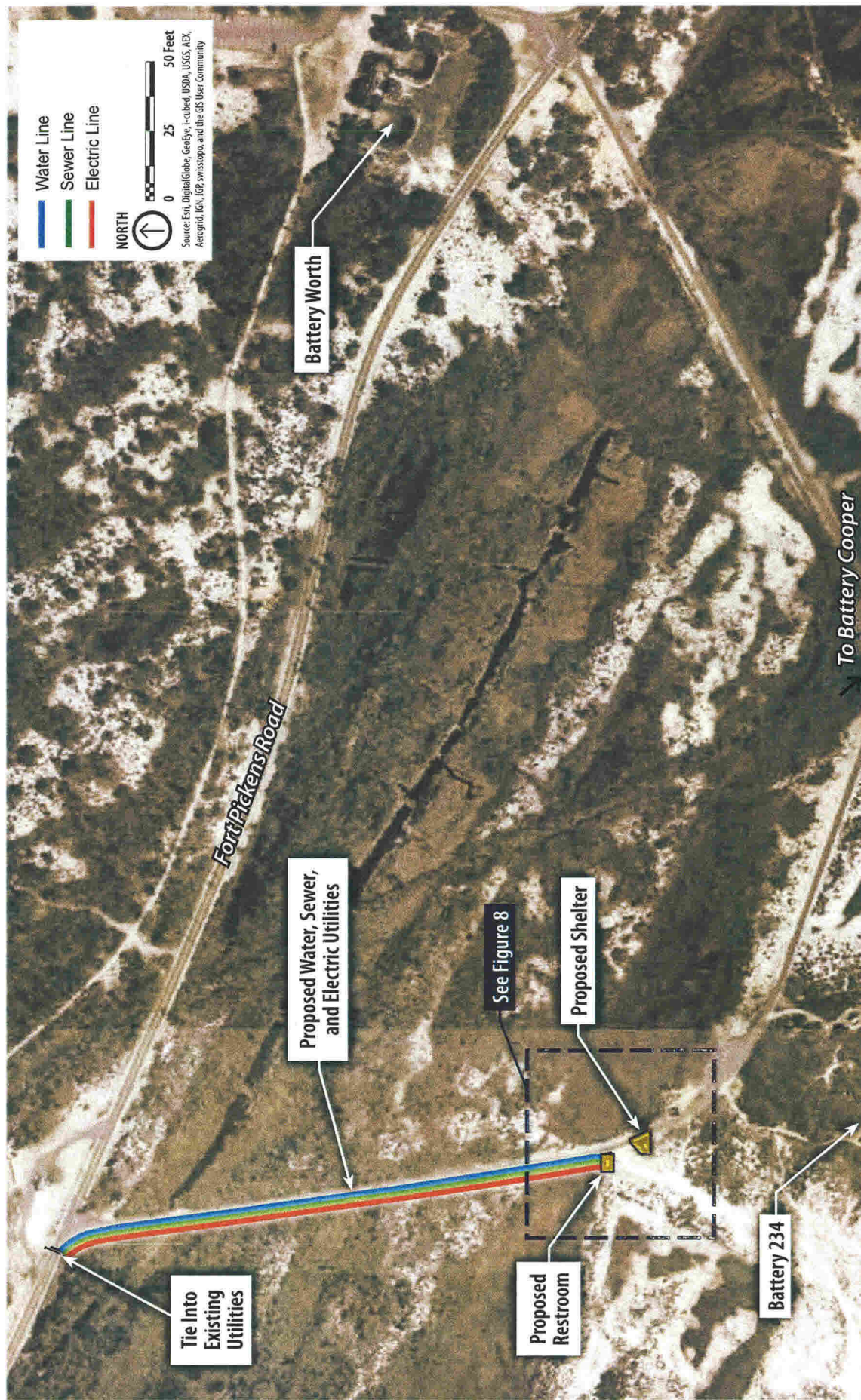
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FIGURE 5
Alternative 2: Proposed Restroom
at Battery 234





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FIGURE 6
Alternative 2: New Utilities for
Restroom at Battery 234



Campground Store Shade Shelter

A new shade shelter would be constructed at the western corner of the campground store (figure 7). The structure would have no walls and be 18 feet by 18 feet and would provide a waiting area for shuttle passengers.

SHUTTLE SERVICE

In addition to the improvements of the ferry landing area, the concessioner would provide a shuttle service within the Fort Pickens Area (figure 8). The seashore would purchase a fleet of five electric trams, and daily shuttle service would be provided by two trams, in 15-minute intervals, to eight stops in the Fort Pickens Area by:

- Passenger ferry pier
- Auditorium and museum
- Battery 234
- Battery Cooper
- Battery Worth
- Worth Beach access
- Campground store
- Fort Pickens

Shuttles would comprise a tram unit and a passenger trailer, which would together accommodate up to 27 passengers. Passengers would be permitted to bring personal belongings on the shuttle; as such, shuttle capacity could be less than 27 passengers.

The trams would be stored in Battery Langdon, specifically the east casemate chamber and the corridors leading to that chamber. The trams would enter via the existing concrete-paved driveway access to the rear (north) doors of the battery and exit through the doors facing the Gulf (south).

Routine maintenance for the trams consists primarily of checking battery water levels and tire air pressure. A room off of the corridor would be used to store spare batteries and tires. The charging would be done in-vehicle, using standard 110 volt power. A solar photovoltaics (PV) system would provide power. The solar PV system would be installed on a nearby picnic shelter.

Five tram sets would be stored in Battery Langdon. Four would typically be used each day—two during the morning and two others during the afternoon. In the morning, drivers would take out two of the tram sets in time for both to meet the first arriving boat. Because the electric trams do not have sufficient range to cover the entire day, a second shift of drivers/trams would work in the afternoon. The second-shift drivers/trams would go in service at the campground store where they would meet the morning drivers and transfer any passengers traveling back towards the fort.

At the end of each shift drivers would be able to wash off the trams, if necessary, and would then park the trams inside Battery Langdon and plug in each vehicle. Parking for driver's personal cars would be at the adjacent picnic pavilion or at the nearby maintenance facility.



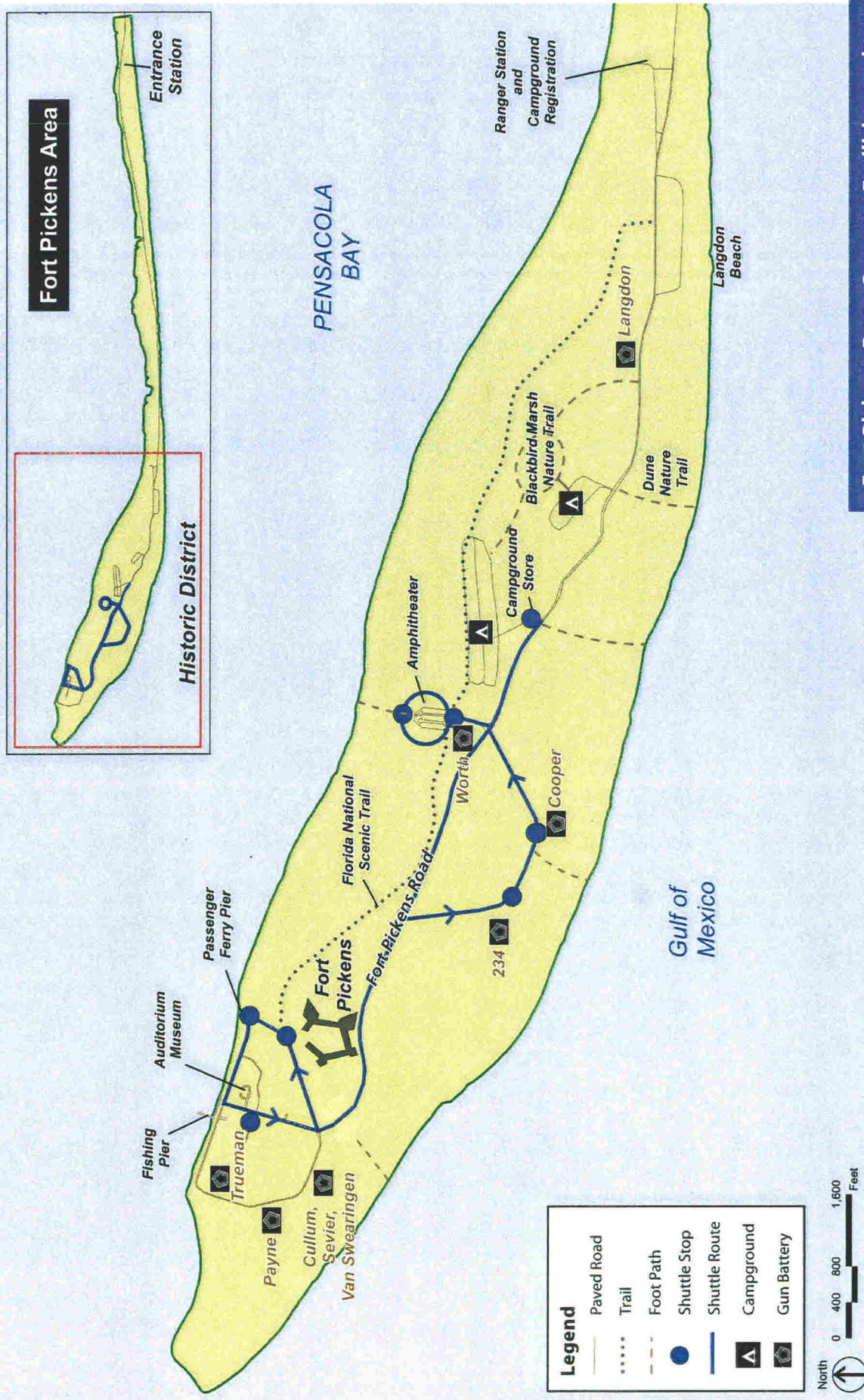
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FIGURE 7
Alternative 2: Proposed Shade Shelter
at Campground Store



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FIGURE 8

Alternative 2: Proposed Shuttle Route

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Renovation to accommodate the trams would include removal of debris inside the battery, upgrading the electrical service to accommodate the charging locations, modifying the non-historic doors to the casemate, and constructing a driveway from the front door to the parking lot on Fort Pickens Road. In addition, the concrete access road to the north doors of Battery Langdon would be repaired or replaced in kind. A water spigot connection would be provided at the edge of the pavement (figure 9) for washing the trams. The spigot would be connected via a 1-inch waterline to the existing 3-inch waterline located north of the road in the vicinity of the existing shelter.

SITE DESCRIPTION

Gulf Islands National Seashore's Fort Pickens Area is approximately 15 miles from Pensacola, Florida. The project area includes approximately 350 acres of the western end of Santa Rosa Island, a barrier island in the Gulf of Mexico, managed by the National Park Service (figure 10). The project area can be accessed by water, but public docks are not available within the national seashore. The majority of visitors access the national seashore on Fort Pickens Road by way of Pensacola Beach, Florida. Fort Pickens Road is closed an average of 10 to 12 times each year due to weather events that overwash the roadway with sand. In addition to the roadway, facilities in the Fort Pickens Area include many historic structures such as the brick fort and concrete gun batteries which were built between 1829 and the 1940s, as well as other historic structures which were associated with the fort and have been adaptively reused as the museum, restrooms, and residences.

The project area includes the following key facilities:

- Mine loading building (building 15)
- Mine storage building (building 16)
- Engineer's shop (building 17)
- Shade shelter(s)
- Fort Pickens
- Fort Pickens parking lot
- Museum
- Battery 234
- Battery Worth
- Campground Store
- Battery Langdon

FLOODPLAIN

The approximately 350-acre project area falls within the 100-year floodplain (Zones AE, AO, and VE) and the 500-year floodplain (Zone X), as categorized by the Federal Emergency Management Agency's Flood Insurance Rate Maps (FM12033C0533G and FM12033C0534G). The elevation of the 100 year floodplain varies between 10-16 feet, with the exception of Zone AO which is at a depth of 2 feet.



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FIGURE 9
 Alternative 2: Proposed Updates near Battery Langdon



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 Project Area (353.47 Acres)

NORTH



Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEI, Aerial, IGN, IGP, swisstopo, and the GIS User Community

PENSACOLA BAY



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FIGURE 10
Project Area



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The area of proposed improvements falls primarily within the special flood hazard area. All proposed structures are within the 100-year floodplain except for portions of the pedestrian walkway. New structures include the ferry landing area building (Zone AO), restroom facilities and shelter near Battery 234 (Zone VE), campground store shade shelter (Zone AE), and paving and crushed shell driveways at Battery Langdon (Zone AE). Some of these items, such as the ferry landing area building, can impede the flow of floodwaters during a flood event and reduce the capacity of the floodplain to store water.

Barrier islands are subject to natural forces, including wind, tides, wave action, and sedimentation, which continually reshape them. Inundation during flooding along the beaches and adjacent areas, especially along the Atlantic side of the island, experience the high velocity waves, as indicated by designation of Zone VE. Wave action is typically somewhat reduced inland of primary dunes; however, during major storms (i.e., tropical storms and hurricanes), high winds can cause additional wave action, even in inland areas, including areas designated as Zone AE.

Many factors can influence flooding on barrier islands. Much of the area consists of various wetlands including coastal strands, interdunal swales, and wet pine flatwoods. Long periods of heavy precipitation, which are common in summer, raise the water levels within these wetlands and can cause flooding in the adjacent upland areas. Also high flow volume in the Escambia, Simpson, and Sweetwater Rivers can raise water levels in Pensacola Bay causing increased flooding within the Fort Pickens Area. Because drainage is typically poor on barrier islands a single rain event can lead to flooding in low lying areas, especial during high tide.

The area within the seawall surrounding Fort Pickens is protected from wave action but is still subject to flooding, especially in Zone AO. In low-lying areas like Zone AO, heavy rainfall outside of major storms can cause standing water of a foot or two. Areas of Zone AE may also experience some standing water.



Buildings 15 and 16 were flooded during after the Pensacola area experienced an unusually heavy rainfall event during which the area received approximately 2 feet of rain in a period of 24 hours in April 2014 (photo credit: NPS)

The public is barred access from entering the area following this type of flooding. Although predicting this kind of flooding can be difficult, it does not pose a serious threat to safety and park facilities. More severe storms with high winds (and higher velocity wave action associated with those winds) and possible storm surge such as tropical storms and hurricanes typically form early enough that the park has at least a day or so to evacuate the area.

JUSTIFICATION FOR USE OF THE FLOODPLAIN

The Fort Pickens Area of the Gulf Islands National Seashore lies almost entirely within the 100-year floodplain. No other practicable alternative to the proposed action exists because of the need to improve accommodations for ferry passengers and operations through improvements to the existing facilities. Measures would be taken to minimize harm to life, property, and natural resources as mentioned in the “Mitigation” section below.

The protection of people and property is of high priority to Gulf Islands National Seashore. The majority of the proposed project would occur in disturbed or previously developed areas to minimize impact to wetlands and other natural areas and wildlife. The project would be designed to prevent or reduce flood damage. The park has developed plans to minimize risks to human health and safety and to minimize potential property damage during storm events including a hurricane evacuation plan (NPS 2014). Given these steps towards risk mitigation, the risk to life and property would be minimized. There would be no significant impact on natural or beneficial floodplain values.

INVESTIGATION OF ALTERNATIVE SITES

The purpose of the proposed action is to improve the gateway facilities at the ferry arrival site within the Fort Pickens Area and provide transportation alternatives to visitors. Criteria for selection of the project area includes federal ownership and control of the site, proximity to the ferry dock, and existing park infrastructure. The areas of proposed improvements include Fort Pickens, Battery Langdon, the campground store, and Battery 234. These sites have already been developed to some degree; therefore, improvements in these areas would greatly minimize environmental impacts associated with this project. Making improvements outside the 100-year floodplain would require all improvements to be located within a relatively small area immediately east of Fort Pickens itself. This would separate ferry operations from the gateway facilities and may cause confusion for many visitors who would expect ferry accommodations to be adjacent to the dock. The fort and associated structures would also block the view these facilities making them difficult to find. Additionally, one of the primary purposes of locating improvements near the ferry dock is to provide nearby restroom facilities to arriving visitors. Location of these facilities outside the 100-year floodplain would place them at least 700 feet away from the dock. The area east of Fort Pickens had been cleared and grassed; however, using this site would require new construction instead of the rehabilitation of existing structures. Battery Langdon, Battery 234, and the campground store are all located within the 100-year floodplain, so improvements could not be moved out of the 100-year floodplain. No other suitable project sites exist; improvement of the existing sites is the only practicable alternative.

SITE-SPECIFIC FLOOD RISK

As mentioned above, the proposed improvements are located within the 100-year floodplain, a special flood hazard area. Special flood hazard areas are subject to inundation by the 1% annual chance of flood. The 1% annual chance of flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. Flooding is a regular occurrence in the Fort Pickens Area. The natural processes that affect Santa Rosa Island have resulted in both short- and long-term closures of Fort Pickens Road. Short-term closures of the main access to the Fort Pickens Area occur 10 to 12 times each year when storm events overwash sand onto the roadway, making the road impassible until national seashore staff can clear sand off the road. Long-term closures result from severe storms such as the hurricanes in 2004 that damaged Fort Pickens Road so severely that it was closed until 2009.

Current technology offers advanced warning of potential flood events associated with major storms (i.e., tropical storms and hurricanes). Although the exact track of the storm may be unknown, park managers are provided with time to evacuate the site prior to flooding.

MITIGATION

Flood mitigation is offered by incorporating methods for preserving natural processes, protecting life and minimizing storm damage through appropriate procedures.

The structures that would be added to the site would be designed in such a way as to withstand flood events while impeding flow as little as possible. The area around the proposed building in the ferry landing area would be graded to elevate the new building out of the 100-year floodplain. While this elevation would displace a negligible volume of flood waters, the new building would have no impact on the floodplain drainage. To help protect life, no inhabitable buildings are located at the site and access to the site is closed when storm systems are approaching. Maintenance of a current hurricane evacuation plan is part of the management strategy in the national seashore's general management plan (NPS 2014). Structures and facilities would be designed to be consistent with the intent of the standards and criteria of the National Flood Insurance Program (44 CFR Part 60). Mitigation to minimize storm damage would include utilization of sustainable design principles and using best management practices during and after construction. The floor in the mine storage building would be elevated by 6–8 inches of poured concrete which would protect the interior of the historic building from the vast majority of flood events (GUIS [Halstead], pers. comm, 2015). The area around the proposed building in the ferry landing area would be graded to elevate the new building out of the 100-year floodplain, which would minimize storm damage on the new building.

These mitigation measures would be in accordance with the National Parks Service floodplain guidelines (<http://www.nature.nps.gov/rm77/floodplain.cfm>) and with EO 11988, Floodplain Management. Therefore, the proposed project would not have an adverse impact on the floodplain and its associated value.

COMPLIANCE

Installation of utilities for the restroom at Battery 234 will cause temporary impacts on a wetland. Temporary impacts will total less than 0.1 acres, and upon completion of utilities installation, the area will be returned to natural grade and revegetated with native species. An Environmental Resource Permit through the Florida Department of Environmental Protection and a Dredge and Fill permit through the US Army Corps of Engineers may be required pursuant to Part IV, Chapter 373, Florida Statutes and Section 404 of the Clean Water Act, respectively. Specific permit requirements will depend on the extent of dredge or fill work, construction methods, and other factors. Appropriate permits would be acquired during design phases prior to construction.

Design of the new sanitary sewage system associated with the new restrooms would comply with all applicable federal, state, and local requirements for development within a floodplain. This would include but not be limited to compliance with 44 CFR 60.3 (a)(6) in order to minimize or eliminate infiltration of flood waters into the systems and discharges from the system into flood waters.

The Coastal Zone Management Act of 1972 requires that a Federal agency provide the State of Florida with a Consistency Determination when a Federal agency proposes any activity inside or outside of the coastal zone that will have any reasonably foreseeable impact on any coastal resources or uses within the coastal zone. This Consistency Determination will be provided to the Florida Department of Environmental Protection and the Florida State Clearinghouse with the environmental assessment.

The Environmental Assessment, this Statement of Findings for Director's Order 77-2, and the "Finding of No Significant Impact", when signed, would complete the requirements for the NEPA for this project.

SUMMARY

The protection of people and property, including natural resources, is of high priority to the National Parks Service. The proposed project would occur in a currently disturbed area, and the National Parks Service concludes that no other practicable alternative exists for the proposed project. The project would be designed to prevent or reduce flood damage, and a hurricane evacuation plan would also be developed (NPS 2014). Given these steps towards risk mitigation, the risk to life and property would be minimized. Furthermore, no significant impact on natural or floodplain resources would occur from the proposed project. There is no risk of permanent adverse impacts on the natural and beneficial values of the floodplain.

Mitigation would include utilization of sustainable design principles, appropriate siting, and best management practices during and after construction. The National Parks Service finds the proposed project to be consistent with EO 11990 and Director's Order 77-2.

REFERENCES

Gulf Islands National Seashore (GUIS)

- 2015 Personal communication with VHB by Jeff Halstead, through Daniel Brown (National Seashore comments on draft EA). May 18, 2015.

National Park Service (NPS)

- 2014 *Final General Management Plan/Environmental Impact Statement*. Gulf Islands National Seashore. July 2014.