HISTORIC FORT ADAMS MASTER PLAN

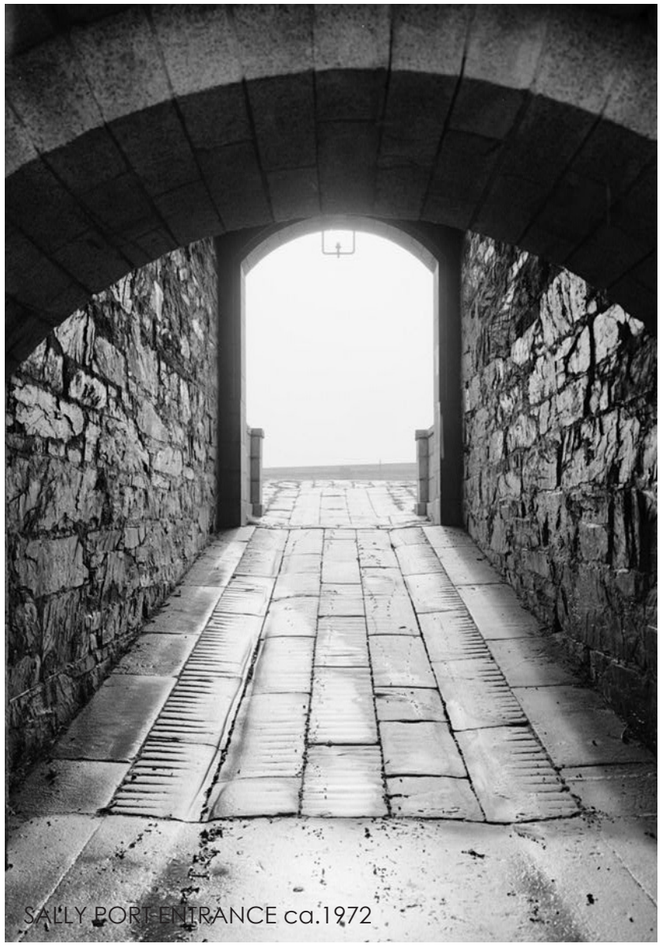
FINAL REPORT
September 30, 2010







ACKNOWLEDGEMENTS



SALLY PORT ENTRANCE ca.1972

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PROJECT BACKGROUND

The Fort Adams Trust, founded in 1994, is a nonprofit organization that partners with the Rhode Island Department of Environmental Management to operate Historic Fort Adams as a public historic site. The Trust raises funds from a variety of sources and activities to stabilize and restore the Fort, and to keep it open for daily tours, educational and cultural activities. To date, almost $7 million has been spent on restoration of the northern and eastern walls of the Fort, which comprise approximately 20% of the area of the main fortification.

Over the past 15 years, the Trust has sought other public or private sector partners that could fund and implement a compatible adaptive reuse for the balance of the main fortification—the southern and western walls, as well as the extensive outer works. To date, this strategy has not met with success and the Fort has continued to deteriorate. This situation, and the decreasing likelihood of major public or private investment in the current economic climate, led the Trust to commission a Schematic Master Plan that would reconsider how the organization can best meet its stewardship responsibilities.

In the summer and fall of 2009, the Trust conducted an open solicitation for interdisciplinary teams qualified in:

- Structural evaluation and design of historic masonry structures including fortifications;
- Landscape design and site master planning for large historic sites and public parks;
- Interpretive design for historic sites;
- Business planning for heritage tourism attractions/organizations; and
- Designing the visitor experience for large and complex historic sites.

Following a review of qualifications, a short list of firms was invited to prepare proposals and present their credentials in person. The team led by Ann Beha Architects of Boston was selected to complete the work.



AERIAL VIEW FROM THE NORTH ca. 2000

METHODOLOGY

The interdisciplinary Master Plan team began work in December 2009 and completed the following tasks:

- Review of historical background materials, previous planning documents and completed work.
- Assessments of the physical conditions of landscape, structure and architectural elements, followed by non-destructive testing of key structural elements.
- Analysis of budget information, visitor surveys, tourist data and other materials related to the business plan.
- Participation in guided tours and a workshop with interpretive staff and advisors.
- Meetings with representatives of the Newport Convention & Visitors Bureau, Sail Newport, International Yacht Restoration School/Museum of Yachting to discuss and identify opportunities for synergies.

A series of workshops were held in January through May 2010 with the Project Steering Committee, which included representatives from the Fort Adams Trust Board of Trustees, the Rhode Island Department of Environmental Management, the Rhode Island Historical Preservation and Heritage Commission and the National Park Service. Initial sessions presented preliminary findings and analyses and invited participants to help define a vision for "The Open Fort." Later sessions proposed options for treatment of the Fort and its landscape, organized in discrete phases that could be implemented together, separately, and in various sequences. The report on the following pages summarizes the team's findings and recommendations.

PROJECT TEAM

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OVERVIEW



NORTH GATE 2009

Fort Adams is the largest and most complete 19th century coastal fortification in the United States, with walls 40 feet high, a perimeter nearly one mile long, and multiple landward defenses extending one half mile from the main fortification. Constructed at the approach to Newport Harbor between 1824 and 1857, the 125-acre installation uniquely illustrates American military engineering and technology, as well as the strategic importance of Narragansett Bay to East Coast defenses. Today, it offers not only the chance to discover an important chapter in the county's history, but a unique visitor experience, from sweeping views of the open ocean and the Bay to dark and narrow underground listening tunnels.

The main fortification at Fort Adams is exceeded in size only by two other Third System Forts - Fort Jefferson and Fort Monroe - though with 468 cannon mounts, Fort Adams exceeds both in armaments. The double-casemates at Fort Adams accommodate two cannons, a configuration which appears elsewhere only at Fort Pickens. The West Curtain features cannon mounts on two levels en casemates and one level en barbette, totaling three tiers of cannons strategically positioned to defend the East Passage. Spanning two centuries of warfare and military engineering, Fort Adams represents the pinnacle of American fortifications.

When the State of Rhode Island acquired the Fort from the Federal government in 1965, it had already suffered from decades of deferred maintenance and vandalism. The fortification was open to the public in the 1970's, but closed from 1985 to 1995 because of dangerous conditions. The Fort Adams Trust was formed in 1994, and began conducting guided tours the following year. In addition to tours offered hourly from May through October, The Trust maintains an active program of activities which include military reenactments, antiques fairs, concerts, auto shows, the increasingly popular "Fortress of Nightmares" at Halloween and private rentals for weddings and other functions.

Fort Adams State Park offers a wide range of activities including sailing, swimming, fishing, boating, soccer, rugby, and picnicking. Since 1981, the Fort has hosted the Newport Jazz and Folk Festivals, held on three stages outside the walls and bringing hundreds of thousands of people to the city and the site.

With a mission "to direct and support the stabilization, restoration, maintenance and operation of Fort Adams as a public historic site," the Trust developed a Strategic Master Plan in 1998 which proposed to restore key features and partner with private developers to reuse the remainder of the Fort. Creative suggestions included a hotel and conference center in the Southwest Barracks, but consultation with a variety of developers over the past ten years has indicated that the costs of intensive renovations outweighed potential income.

In 2000, the Fort held a series of workshops with the Newport community to identify key components of a partial restoration. Between 2001 and 2009, the Trust completed restoration of significant areas in the northeast quadrant of the Fort under the direction of Newport Collaborative Architects: restoration of the North Casemates, repair and re-roofing of the North and East Terreplein; re-use of officers quarters on the East to provide overnight accommodations for groups; and re-construction of the East Redoubt Jail for Trust headquarters. Beginning in 2004, the Naval War College Museum has been an important partner with the Trust, preparing exhibits on topics including the defenses of Narragansett Bay and the history of the Navy in Rhode Island which are on display in an area of the North Casemates.

Despite this significant progress, more than 80% of the Fort remains untouched. Conditions have deteriorated to a point where sections have collapsed, and annual funding from the State of Rhode Island remains limited. Therefore, in 2009, The Fort Adams Trust engaged an interdisciplinary team led by Ann Beha Architects to produce a Schematic Master Plan which would provide an updated assessment of the condition and operations of the Fort . The goal was to create a new vision that integrated preservation of the physical structures with new ideas about interpretation, marketing and revenues. Key tasks were to:

- Identify preservation treatment strategies for the Fort that do not require complete restoration or rely on private development for funding and implementation
- Explore a new presentation of the Fort, based on free and safe public access to the entire site and integration of the fortifications into the surrounding state park
- Provide the Fort Adams Trust with a revised business and marketing plan to reflect the change from a fee-for-entry arrangement to an "open" Fort.

The fundamental aim of the initiative is to expand the public and private base of support for the Fort through increased visitation and by a re-positioning of the Fort as a premier heritage tourism destination among Newport's many attractions.

Following assessments of current conditions, the Design Team produced options for treatment of the entire Fort and its landscape, organized in discrete phases that could be implemented together, separately, or in various sequences. The core initiative is to "Open the Fort" by providing free public access to the Parade Ground and the Outerworks, followed by preservation and re-use of all remaining sections of the fortifications. The planning and construction costs associated with these initiatives were estimated, and a business plan was formulated to balance the economic impact of projected increases in visitation and revenues, with the costs of preservation and expanded operations. Findings and recommendations are summarized on the following pages, with more detailed information provided in the separate appendices volume.

History, Significance and Preservation







HISTORY AND SIGNIFICANCE

Fort Adams was the second fort begun under the Third System, after Fort Monroe in Virginia, and the third fortification to be built on the site. The site's importance for defensive purposes stretches back to the founding of Newport in 1639, when the peninsula formed part of the holdings of Colonial Governor William Brenton. Construction of the current fortification began in 1824 to the designs of French military engineer Simon Bernard, supervised and modified by Joseph G. Totten, one of the first engineers trained at West Point. Completed in 1857, the Fort was modified throughout its long service life in response to advances in warfare. It served as headquarters for defense of the North Atlantic coastline from Martha's Vineyard to Long Island during WWII and became the summer White House during the Eisenhower administration in the 1950's.

Fort Adams was listed as a Historic District on the National Register of Historic Places in 1971 and documented by the Historic American Buildings Survey (HABS) over several summers, from 1971-1974. It was designated a National Historic Landmark District (NHLD) in 1976. The NHLD nomination encompasses 80 acres on Brenton's Point and acknowledged that the Fort "uniquely illustrates American military engineering and technology as it developed throughout the nineteenth century." The nomination established the Fort's national importance on multiple levels—architecture, engineering and military history.

As part of the Master Plan, further research was carried out to clarify the significance of experiments in building materials and technology carried out by Totten during his ten years at the Fort. These experiments included studies on the strength and stiffness of wood beams and the expansion of stone and its effects on masonry assemblies. The results, which were widely published, influenced not only military construction but engineering and design throughout the U.S.

Since completion of the NHLD nomination, cultural and historic landscapes have gained greater recognition as both integral parts of historic landmarks and worthy of protection in their own right. Fort Adams can also be considered a "fortified landscape," a legacy of 17th century French engineering and design that generated both the remarkably complex gardens at Vaux-le-Vicomte and Versailles and the geometric fortifications of Sebastien de Vauban.



PARADE GROUND ca.1908



AERIAL VIEW FROM SOUTHEAST ca. 1956



AERIAL VIEW FROM SOUTHWEST ca. 1920



PRESERVATION PHILOSOPHY

The NHLD nomination and the initial preservation plans formulated by the State of Rhode Island in the 1970's were completed at a time when the Fort had already suffered from decades of deferred maintenance. The arches forming the casemates and the inner wall of the enceinte were intended to be open during time of war. They were later filled with windows and doors to permit adaptive use as barracks, hospital, library, etc. Time, weathering and vandalism had heavily damaged the wood elements by the end of the 20th century, as well as interior finishes in the officer's quarters and barracks buildings. However, the masonry elements which are the principal character-defining features remain largely intact.

To guide the future stewardship of Fort Adams, a Preservation Philosophy is proposed that outlines priorities for stabilization and standards for ongoing use. The philosophy is based on the criteria for Preservation established by Secretary of the Interior, and establishes three levels of architectural and historic significance within and outside of the Fort complex. The areas are designated on the site plan shown on the following pages and described below. Detailed recommendations are included in an outline Scope of Work for each area in the Stabilization and Restoration section of this report.

The Preservation Philosophy establishes overall strategies for Preserving, Restoring, Rehabilitating and Interpreting different areas of the Fort, and it observes the following recommendations for treatment:

1. Acknowledge the evolution of the site. The rich history of the site should be accepted in future treatments as well as interpretive and educational materials on site, rather than attempting to return the Fort to its mid-19th century appearance. Recent acts of vandalism and deterioration (fire damage to timber structure in the West Casemates and masonry collapse in the southeast corner) can be used to demonstrate to visitors how elements were constructed as well as how independently supported structures ensured the ability to withstand damage.

2. Restore key features essential to the visitor experience and ensure compliance with Americans with Disabilities Act. Key spaces include: the North Casemates (restored in 2002), East Barracks (restored in 2006), Northeast Officers Quarters, Northeast Bastion, Northwest Bastion and portions of the Terreplein.

3. Preserve and stabilize all remaining features to the degree possible. Future work should integrate new lighting, mechanical systems and other elements appropriate for new and ongoing uses. New elements should not attempt to appear historic, unless there is photographic, written or physical evidence to guide their selection.

4. Remove intrusive elements. Remove a number of Beech trees on the eastern coverfast adjacent to the parking lot to improve visibility of the Fort. Control of vegetation on the outerworks is critical to preservation of their structure.

5. Interpret but do not reconstruct major elements that have been removed, such as earthworks north and east of the Fort, and the caponnier near the southeast tenaille.

6. Rehabilitate areas to serve new uses where there has been substantial loss and/or there are sufficient, well-preserved examples of similar construction: Southwest and Southeast Barracks, West Casemates and Southeast Quarters. Any remaining historic features should be preserved to the extent possible, but these may be altered to suit new needs.

Research at the National Archives carried out for this Plan has confirmed that much valuable historical material remains to be integrated with the overall history and interpretation of the Fort. As each section of the Fort is stabilized and brought into public access, and particularly as areas such as the Southwest Barracks are rehabilitated, Historic Structure Reports for those areas should be completed to detail their evolution and preservation priorities.

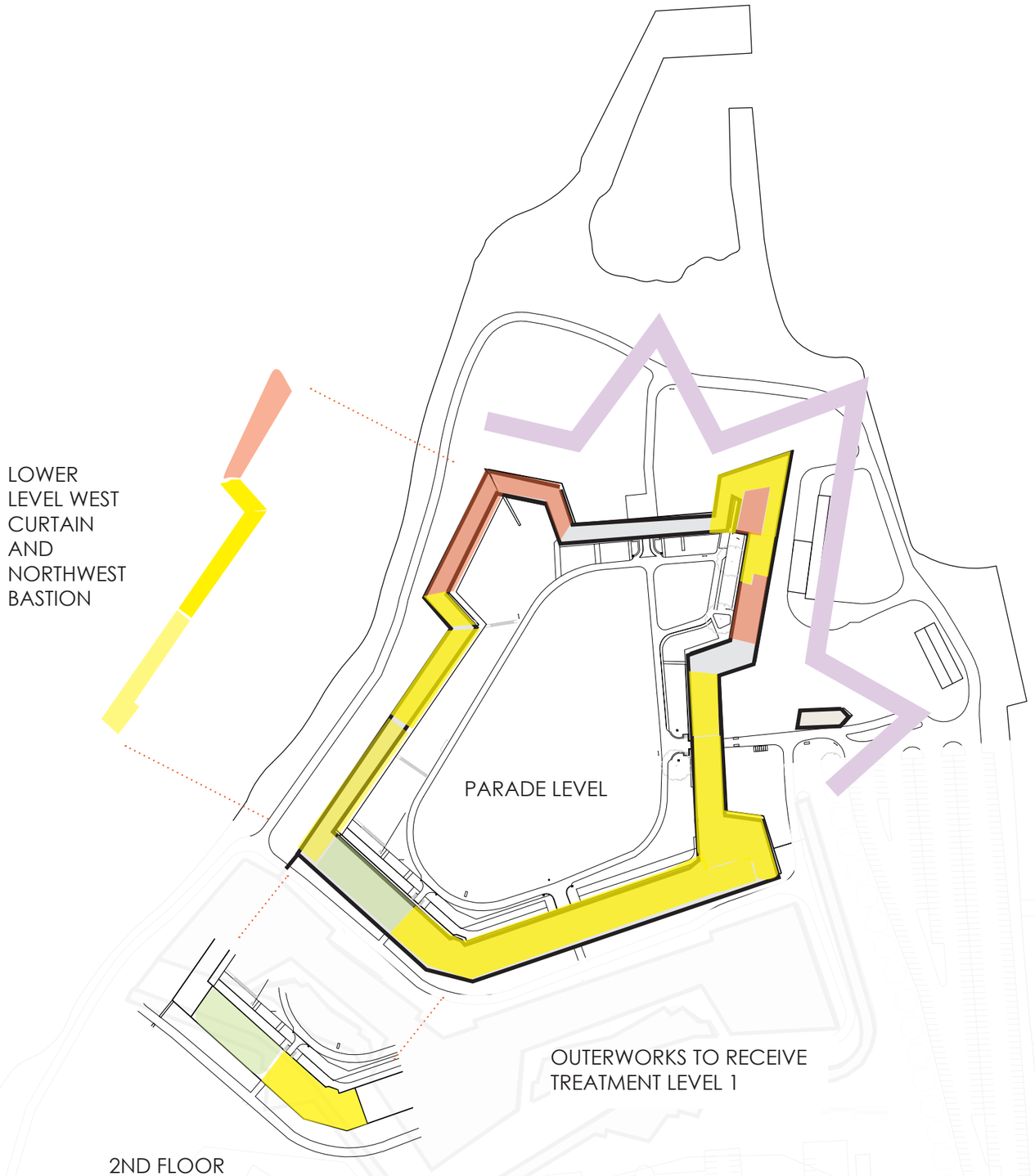
Remaining Historic Fabric
Proof of the Fort's successful design and resilience, much of the original structure remains today. Unlike many other fortifications in the U.S., the parade is much as it was in the 19th century. Since the Fort was constructed, most additions and modifications were made outside the Fort walls. The remaining exceptions are the upper level barracks which were built upon the south curtain in 1908. Earthworks protecting the north and east gates of the Fort were removed in the early part of the 20th century, as were two wood buildings outside the east gate in 1974.

As the Fort evolved and was adapted to house officers and soldiers, the open casemates were enclosed with wood windows and doors, and the interiors were finished with plaster on wood lath. Today, persistent loss of fabric is mostly limited to wood elements and plaster finishes. The overall structure shows localized loss of surface masonry, and brick vaults have collapsed in some areas. The deterioration in the masonry and wood appears to have two main causes: fire and water. The upper level barracks on the east side of the south curtain were destroyed by fire in 1947, and wood floors and structure were lost in fires throughout the West Casemates. The rest of the deterioration in the Fort can likely be attributed to the infiltration of water through the roofing and exposure to moisture and weather.

Never needing the full capacity of armaments, the West Casemates were adapted for other purposes, and remaining mechanical equipment and toilet partitions show the different uses at the Fort over time.

TREATMENT LEVEL DEFINITIONS
(See Overview For More Information)

- Treatment Level 1: Preserve
- Treatment Level 2: Restore
- Treatment Level 3: Rehabilitate
- Interpret
- Restoration Complete



State of the Fort







INTRODUCTION

Despite its age, the harsh exposure and nearly a century of limited maintenance, the Fort site is in good condition—a testament to the high quality of the original construction. Since the Fort was turned over to the State in 1965, a number of surveys and studies of the Fort have been undertaken:

- 1978 Master Plan for the Development & Use of Fort Adams State Park by Willard Robinson
- 1984 Structural Report by the Maguire Group
- 1995 Structural Report update by the Maguire Group
- 1998 Strategic Facilities Master Plan for Restoration
- 2001 Rehabilitation Plan by Newport Collaborative Architects

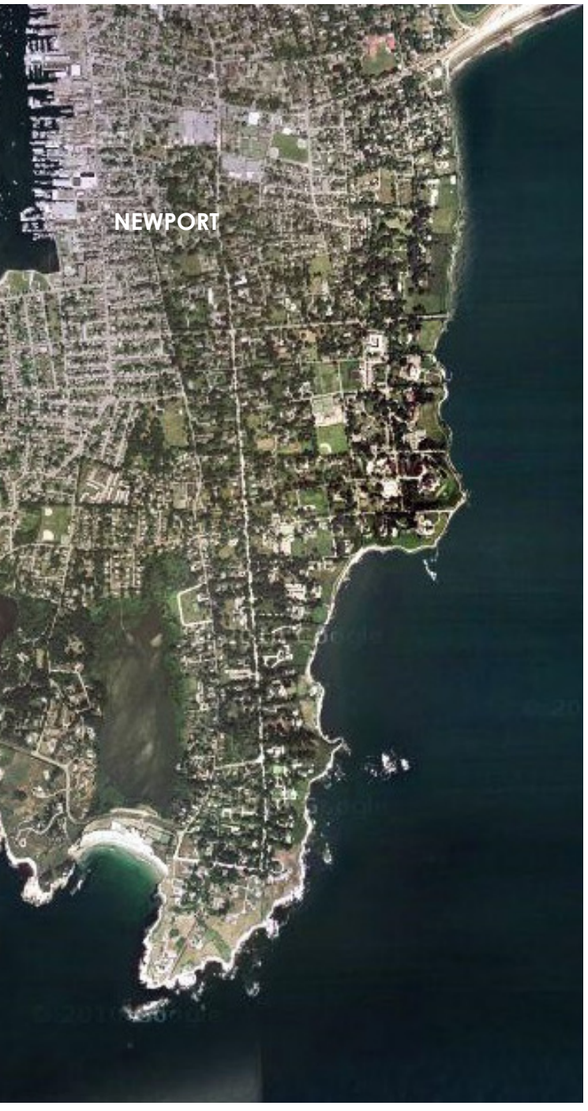
The 2001 Rehabilitation Plan has been almost fully implemented with the following recent projects:

- 2002 North Casemates Restoration
- 2005 East Terreplein Repairs
- 2006 Youth Overnight Barracks Restoration
- 2009 Trust Headquarters Restoration (Redoubt Jail)

Detailed evaluations of the Fort and its operations are included in the Appendix of this report. Brief summaries of the assessments follow.



2010 AERIAL VIEW





1956 VIEW FROM SOUTHWEST

SITE AND LANDSCAPE

Evolution of the Parade
The parade ground has changed through different time periods, uses and fort occupants. An 1886 plan shows a wide path following the perimeter of the parade, allowing access to the casemates. In early 20th century photos, the parade was used for recreation and cannonballs were stacked into pyramids throughout the parade. In a 1936 photo, a grid of tents occupied the parade ground, freshly erected on top of the baseball diamond. Photos from the 1950's indicate that the gravel path system had been paved with asphalt and gravel paving in the northwest bastion had been replaced with lawn.

Evolution of the Outerworks
A few significant features of the Fort landscape have been removed including:

- North place of arms (large earthwork protecting the northern face of the Fort).
- East place of arms (large earthwork protecting the eastern face of the Fort).
- Southeast capponnier.
- Pas de Souris (stairs in the outer ditch).
- Removal of the two earthworks particularly impacts the visitor's understanding of the many layers of protection originally featured in the Fort.

Vehicular Circulation and Parking
While the Fort is only a short distance from downtown Newport and other heavily visited attractions, the road system leading to the Fort is circuitous. New signage directs visitors to the Park, but even after arriving at the gates, the Fort is nearly a mile away and hidden by the earthworks.

The existing parking lot has the capacity for approximately 375 cars and is used by visitors of Fort Adams, the State Park, boaters and users of the Block Island Ferry. The parking lot is a large expanse of asphalt, sized to meet the highest usage events, rather than every day visitation or use of the State Park.

Paving
Brick, concrete and asphalt paving dates from various periods. It is generally in fair condition.

Vegetation
Historic photographs indicate that specimen trees were planted along the eastern and southern edges of the parade, though only three remain. The "volunteer" vegetation in the Outerworks includes a variety of shrubs and trees. It is not historic and has caused damage to the masonry. Large expanses of lawn cover the six-acre parade ground and areas within the inner ditch and crownworks.

Drainage
Forts from this period were typically constructed with extensive drainage networks consisting of pipes, tunnels, cisterns; and systems here likely discharged to the Bay. Several areas of ponding were observed throughout the parade grounds and the Outerworks, which appeared to be a result of limited catch basins, grading problems, and/or poorly draining soil conditions.

A properly functioning drainage system from terreplein to the lowest ditch is important to control water and to preserve the masonry and other Fort features. Drainage systems of this age consisting of large scale masonry storm sewers and a network of clay pipe often have collapsed portions, blockages, or may have been altered by later construction.

Areas of ponding may be resolved through minor re-grading and minor landscape improvements. Additional historic research is recommended to determine the locations and arrangement of the existing drainage and utility systems, supplemented with the use of video-inspection equipment to identify pipes and infrastructure that may be plugged, deteriorated, or collapsed.

Areas identified for selective restoration should incorporate new stormwater management systems to manage runoff from the associated rooftops, including sub-surface infiltration systems and/or storage cisterns.

Maintenance
Maintenance of the site is a collaboration between Rhode Island Department of Environmental Management (RI DEM) and the Fort Adams Trust. RI DEM contracts with a private landscape contractor to mow the parade, the inner ditch, the southwest bastion of the crownworks and occasionally some portions of the outer ditch. The Trust augments this, and often mows the remainder of the crownworks and carries out brush clearing, removal of vegetation from walls and the eastern ramparts.



VIEW OF PARADE



VIEW OF OUTERWORKS



TREES NEAR OFFICER'S QUARTERS



DEMI-BASTION & EAST GALES



ARRIVAL AREA



VIEW OF POSTERN FROM PARADE GROUNDS

ACCESS AND SAFETY

Access
Planned for protection and defense, access in the Fort is inherently difficult for both vehicles and pedestrians. Many areas do not comply with the Americans with Disabilities Act (ADA), such as:

- The slope of pavement at the eastern gate, at approximately 13%, is well over the 5% slope allowed by ADA without handrails or 8.3% with handrails. The pavement has wide joints, rough texture and deep ruts caused by wear.
- The North Gate has slopes that are compliant or nearly compliant (8% to 9%), but no handrails have been installed. The paving surface has been replaced with a smooth thermal finish granite.
- The Southeast Postern has a 15% slope and a rough pavement. The Southwest Postern has a brick pavement with handrails at a 9% slope.
- In the Outerworks, there is limited pavement which provides a firm, stable path. The four sloped ramps that lead to the upper level of the crownworks all exceed allowable slopes.
- There is no elevator to provide access to the upper level Observation Deck or Terreplein.

Proposed stabilization and restoration efforts described later in this report typically include making each section of the Fort accessible as it is opened to the public. In the interim, guided public tours to many areas, including the Terreplein, are proposed. Videos of these tours with a place for disabled visitors to view them can provide an equivalent experience in the interim.

Safety
A safe visitor experience at the Fort is currently ensured by restricting access only to guided tours. The State Park public pathway passes by the outside of the west curtain, which has potentially unstable masonry, and this should be a priority for stabilization.

If free public access is provided, areas of concern include:

- Unrestored casemates are full of debris and unstable in many areas with loose elements overhead.
- Open stairs to the Terreplein and edges of the Terreplein need guard rails.
- Unprotected vertical grade changes in the Outerworks vary from 3 feet to 20 feet, with edges overgrown with vegetation and unstable coping stones on site walls.
- Low headroom (less than 6'-6") exists at many openings.

Many of these conditions are shared by other local, State and National Parks throughout Rhode Island and the region. The Trust will be reviewing appropriate steps for risk management with RI DEM staff as the recommendations are implemented.



13% SLOPE - EAST GATE



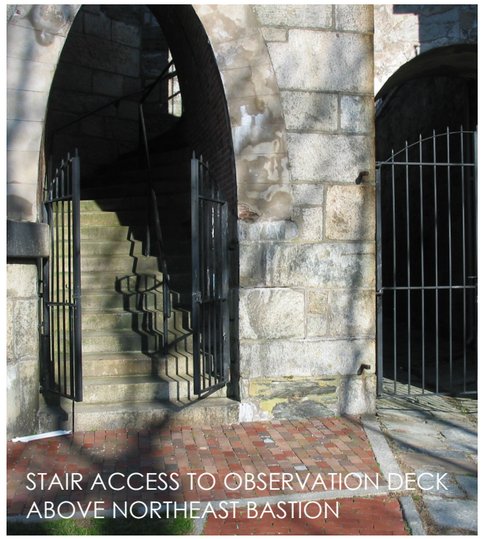
STEP INTO OFFICER'S QUARTERS



UNPAVED PATHS IN TENAILLE



UNSTABLE STRUCTURE AT NORTHEAST BASTION



STAIR ACCESS TO OBSERVATION DECK ABOVE NORTHEAST BASTION



UNPROTECTED WALLS IN DEMI-BASTION



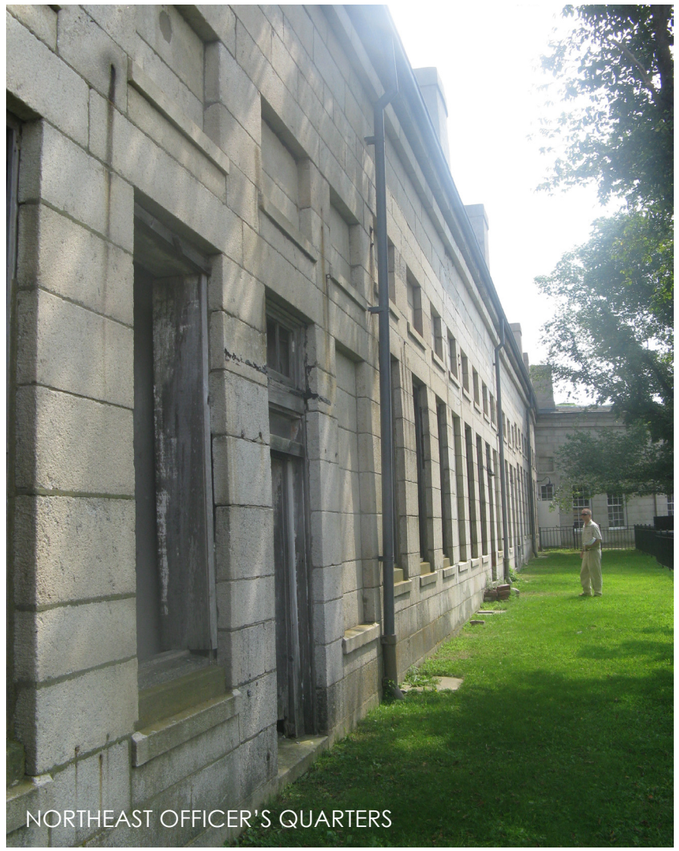
LOW CLEARANCE IN TENAILLE



UNSTABLE CORDON STONES

ARCHITECTURE

Despite adaptations to suit many different uses over the last two centuries, and deterioration from neglect and exposure to the elements, much of the original structure of the Fort remains today. Degrees of masonry loss throughout the Fort vary from superficial to instances of complete structural failure, but the greatest losses have occurred to interior finishes and wood elements. This has been caused by vandalism, as well as infiltration of water through failed roofing systems and exposure to weather through the exterior wall openings.



NORTHEAST OFFICER'S QUARTERS

Roofing
Historically, in some areas of the Fort, water was diverted to be collected internally in cisterns. Still, moisture was a problem in the soldier's quarters from the time they were first constructed. As the original 'roofing' has failed, water infiltrates through the terrepleins, or runs down the interior face of the parade facades, contributing to loss of mortar, surface masonry, and the masonry back-up walls and anchors to the granite veneer at the south curtain. Ongoing deterioration of timber and wood are advancing at a faster rate than the masonry because of exposure and trapping of moisture. Recent repairs have stemmed water infiltration, but high levels of moisture remain within spaces, as water migrates from saturated masonry backup through accessible interior surfaces.

Masonry
Much of the original masonry is stable, though there have been superficial losses of brick and stone. Loss of the masonry back-up walls on the interior parade façade at the south curtain has left the granite veneer unsupported. Since the Fort's structural systems were designed to be independent of one another, the interior vaults and the outer wall would remain intact even if the interior parade face were to collapse. Brick embrasures at the west curtain have spalled as a result of moisture saturation and freeze-thaw cycles, and they require repair or temporary support.

Wood
Original wood floors and heavy timber structure remain in the north and south ends of the west curtain. At the south end of the curtain, the wood floor on the parade side of the casemate has been lost. Wood flooring and timber in the middle west casemates has been damaged by fire.

Doors/Windows
All original exterior doors and windows are lost or beyond repair. Some original interior doors remain, but are in very poor condition.

Metalwork
The most visible examples of remaining metal work includes a small section of the cast iron porch and columns in the second story of the Southwest Barracks structure, both later additions to the Fort and in fair condition. Original metalwork includes smaller wrought iron elements, such as the metal ties supporting the granite veneer stones on parade facades.

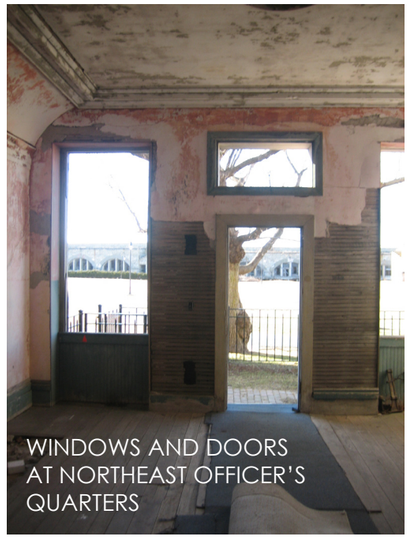
Finishes
As casemates in the east curtains were adapted to soldier's quarters, embrasures and gun openings were enclosed with windows, and the interiors were finished with plaster on wood lath. Most of the plaster and lath have fallen off, though some Greek Revival details remain in the officer's quarters.



MASONRY AT NORTHEAST BASTION



WOOD FRAMING AT NORTHEAST BASTION



WINDOWS AND DOORS AT NORTHEAST OFFICER'S QUARTERS



TERREPLEIN AT WEST CURTAIN



SOUTH BARRACKS



OFFICER'S QUARTERS

EXISTING SPACE USE AND NEEDS

Orientation, Ticketing and Gift Shop
Redoubt Jail 480SF
Activities were moved from the Fort Adams State Park Visitor Center to the first floor of the reconstructed Redoubt Jail in Spring of 2010. The entrance is not visible from the parking lot, but most visitors naturally go to the Redoubt. Refreshment sales are limited to bottled water per agreement with RI DEM and other concessionaires in the Fort.

Classrooms
Youth Barracks Dining Hall 480sf
The space is heated and accommodates approximately 40 people at tables. Long-term, it would be ideal to have flexible space for several busloads (about 80) students, as well as Elderhostel and other groups, for orientation and activities.

Program Areas
Fort Adams offers several locations to accommodate 20 – 600+ guests:

- North Lawn, outside the walls of the Fort, is the site of the Newport Folk and JVC Jazz Festivals and provides panoramic views of Narragansett Bay and Newport Harbor.
- Parade Field, a 6.25 acre field inside the walls of the Fort is surrounded by unique 19th century architecture.
- North Casemates, comprised of three vaulted chambers with arched, brick ceilings and granite walls. The only enclosed space within the Fort, it accommodates 120 people for receptions, and 75 for dinner.
- Tents are erected in the Parade or North Lawn for larger events.

Restrooms
Youth Barracks – 4 single fixture toilet rooms
Facilities in the Youth Barracks are typically locked, and only open during private rentals. The State Park Visitor Center, located about 100 yards from the East Gate, provides 20 fixtures and is open from 10 a.m. to 5 p.m., from May to October. Facilities within the Fort would encourage visitors to spend more time there and support more activities.

Overnight Facilities
The Youth Barracks offers accommodations for up to 38 people, including toilet rooms, a kitchenette and dining rooms. This space is also used to support rental activities, offering a bride's changing room for weddings, etc.

Exhibit Space
North Casemates 1600SF
Because space is not climate controlled and subject to dampness, exhibits are limited to reproduction materials mounted on display boards. The space is not currently open to the public except as part of the guided tours. Long-term, a more stable, secure space that is fully open to the public would enable the Trust to mount a greater range of exhibits, including historic artifacts. Changing exhibits could target different audiences, and attract repeat visitors. Collaborations with the nearby U.S. Naval War College, which has an outstanding collection, have long been encouraged, but a condition of any loan from the College is that the exhibits and objects be accessible to the public 363 days per year.

Collections Storage and Exhibit Preparation
None
Because there is no climate controlled exhibit space, the Fort does not actively collect artifacts. If such space were available, then space for storage and preparation of exhibit materials should be provided.

Administration and Support
Redoubt Jail 1170SF
The second floor of the Redoubt contains 5 workstations for staff, a conference room (accommodating about 16 people), an accessible restroom and a kitchenette. It can be accessed via an elevator from the lower level. If year-round staff expands with the Open Fort and visitation grows as expected, then additional support space, such as locker rooms for volunteers and guides, will be required.

Loading, Trash Removal, and Emergency Access
Currently, the size and height of the East and North gates limit vehicle access to the Parade to cars and small trucks. The inner ditch along the South Barracks could provide access for emergency vehicles and deliveries, if openings and freight elevators are installed.

Maintenance
Northwest Bastion 1032SF
Limited secure storage for equipment is provided in a partitioned casemate in the Northwest Bastion. As the entire complex is more heavily used, dedicated weather tight space for service vehicles, equipment, and a workshop should be provided.



VISITOR CENTER



NAVAL WAR COLLEGE EXHIBIT AT NORTH CASEMATES



CLAMBAKE AT PARADE GROUND



OVERNIGHT BARRACKS



CURRENT MAINTENANCE AREA



EVENT AT PARADE GROUND



OVERNIGHT BARRACKS

STRUCTURAL SYSTEMS

Excluding the areas of the Fort that have been restored (Youth Overnight Barracks and North Casemates), the condition of the concrete, iron, masonry, and timber portions of the Fort and Outerworks – what could be considered the structural elements of the Fort – is generally fair to poor. In addition, at several areas, particularly the West Casemates and the Southeast Demi-Bastion, failure of the weatherproofing at the roof and parade facades have resulted in collapse of significant structural elements. At the West Casemates, the failure has been in heavy timber construction; at the Southeast Demi-Bastion, failure has occurred at the spring of several of the masonry vaults.

Masonry
Masonry is defined to include all of the granite cladding at the exterior face or curtain of the Fort and Outerworks, the local shale used to build "in-fill" walls, and all of the brick vaults.

There are local failures in the exterior cladding along the West Casemates and at the Inner Ditch elevations of the Outerworks. The parade facades at the southeast, single-story section of the South Barracks are also failing. There are areas where the granite cladding has collapsed from the deterioration and failure of metal masonry anchors, and others where brick back-up has failed or is failing, resulting in several neutrally stable sections of facade. While slightly less visible (and less accessible) the cladding at the magazines at the Northeast Bastion has also failed at several locations.

Bearing or infill walls have failed at the Southeast Demi-Bastion. Here the failure is likely the result of deterioration of the water-proofing at the Terreplein (and not alteration of the structure). At the South Barracks, bearing walls have been removed to create passages between vaults or windows. Condition at these areas is generally poor (or worse). The locally quarried shale is not as sound or durable as the granite cladding used at the exterior and exposed parade elevations and has eroded or deteriorated from exposure to water and/or freeze-thaw cycling.

Brick vaults and arches are generally in fair condition. In most of the brick structures, pointing is eroded, leaving the structures in fair condition. Large cracks, loss of a wythe (or layer) of brick, and other failures have been observed in all of the unrestored areas of the Fort and Outerworks. While alarming, the cracks are not necessarily precursors to a larger failure – or collapse – of the affected structure. The arches and vaults were designed to support substantial loads and loss of, typically, small portions of the brick will not immediately lead to catastrophic loss of the full arch or vault. That said, these areas should generally be considered to be in poor condition; local failures will be large enough to be considered a threat to life safety.

Wood (Lumber and Timber)
While many of the parade-level floors at the casemates and barracks are (or were) originally framed with wood joists over a very shallow crawl space, failure of these floors is not considered "structural." The condition of the floor joists – whether in place and collapsed or rotten or missing – does not affect the overall stability of the adjacent structure. At the West Casemates, failure of the timber floor framing, which spans the lower casemates, also does not affect the stability of the adjacent masonry structure. But, because the timber spans an occupiable space, the failure of the timber in these instances is "structural."

Iron
Iron elements appear to be largely limited to the balconies along the South Barracks and "lintels" installed at openings created between vaults at the South Barracks. The remaining section of the parade-side balconies is in fair condition; most of the cast iron and steel (or wrought iron) elements are intact, but paint coatings are failing. The ferrous materials used as "lintels" are in poor (or worse) condition. The iron or steel is generally severely corroded and the members themselves are generally deflected more than appropriate for a structural element of this type. In most cases the "lintels" – which may originally have been underdesigned (or un-designed) – have been shored.

Concrete
Structural concrete appears at the Spotting Towers at the northwest and southwest corners of the Fort, as well as in several locations over the casemates along the West Curtain and South Barracks. Condition of the concrete varies from fair to poor, with the worst conditions appearing at the southwest Spotting Tower. Non-structural concrete, which largely consist of overlayments at the Terreplein and the trabeated walkway along the West Casemates, is also in fair to poor condition.

At the southeast, single-story section of the South Barracks the concrete is in fair – even good – condition, but the detailing at the edge of the slabs is poor and allowing water to enter the structure. At the Southeast Demi-Bastion the slab has failed in several locations; in areas where the slab hasn't failed it is generally in poor condition, with failure at the joints between flags, cracking, and erosion of the concrete matrix. Similar conditions exist at the West Casemates, where growth of vegetation at the concrete is also a significant factor in the deterioration.

The concrete at the walkway along the West Casemates appears to be largely unreinforced, which may be the reason it is in fair (or better) condition. Here, the concrete is the wearing surface on the walkway and is typically placed over fill sitting on the stone slabs. It is not clear when



DAMAGED REINFORCED CONCRETE AT SPOTTING TOWER



CAST IRON PORCH REMAINS AT SOUTHWEST BARRACKS



SPALLED AND MISSING BRICK ARCHES AND VAULTS



SHALE AT TYPICAL BEARING WALLS



FAILED GRANITE FACADE AND SPALLED MASONRY BACKUP AT PARADE FACADE



TEMPORARY SHORING AT MODIFIED BEARING WALL

STRUCTURAL SYSTEMS
CON'T

this concrete was installed, whether it is an original detail or a modification of an earlier assembly.

Stabilization
Recommendations for stabilization have been approached with the following philosophy:

- Limited funds should be spent to achieve the best long-term performance of the structure
- Loss of historic fabric is unacceptable
- Stabilization measures should not significantly affect access to and interpretation of the Fort or Outerworks

In keeping with this approach, we have recommended shoring and bracing; tagging, disassembly, and storage; and repair as options for stabilization. Restoration – which takes the concept of "repair" to another level – may also be appropriate where programmatic considerations dictate a level of intervention that produces a more finished product.

Shoring and bracing are recommended where this is the only option for maintaining original fabric. Where removal and storage or repair could create a safe, stable structure at a cost lower than shoring and/or bracing or where the long-term performance of the structure would be better, these approaches have been suggested as alternates to shoring and bracing.

The extent of stabilization required to address immediate life safety and structural stability concerns are contained in the appendix. In brief these areas are:

General
- Repointing
- Brick replacement
- Vents and chimneys

West Casemates
- Timber framing
- Embrasures at casemates
- Trabeated walkway
- Parade facade
- Parade wall (south west corner)

South Barracks
- Openings between vaults
- Modified vaults
- Parade facade

Southeast Demi-Bastion
- Vaults at collapsed arches

Outerworks
- Southwest Magazine
- Vents
- Embrasure openings at Tenailles
- Cordons and copings

Probable Work
- Postern Tunnels
- Listening Tunnels

Priority Structural Concerns

I. Phase One Scope -
We are assuming this work will be done in the first phase of work and will be completed in the next few years. All of these items are first priority.

West Casemates -- Shore stone porch
West Casemates -- Repair or shore embrasures
South Barracks -- Remove and store Parade facade stones

II. Other Phases -
Timeline for this work has not been established, but it represents work that must be done to minimize loss of historic fabric. Work is grouped by priority. Timber and roofing are first priority, copings and cordons are second, etc.

Timber -- Maintain a clean, dry environment for the timber framing along the West Casemates and Northwest Bastion.
Roofing, Fort -- Provide new roofing from the Southeast Demi-Bastion to the Northwest Bastion (west from southeast to southwest to northwest).
Roofing, Outerworks -- Provide new roofing / waterproofing at the casemates, rifle galleries, and Tenailles.

Copings and Cordons -- Remove and reset copings and cordons protecting the top of masonry walls. Missing copings and cordons should be replaced.

Southeast Demi-Bastion -- Repair collapsed arches and damaged vaults.
Outerworks, Southwest Magazine -- Repair cheek walls at entry to magazine.
Outerworks, Rifle Galleries, Casemates and Other Openings -- Repair masonry openings facing the Inner Ditch.
Southwest Corner (between Barracks and Casemates) -- Repair masonry wall.

Outerworks, Inner Ditch Tunnels -- Remove pipes, repair vault, waterproof, and replace dewatering equipment.
Northeast Bastion -- Repair damaged arches (currently shored) and adjacent vaults.

Spotting Towers (Terreplein) -- The Spotting Tower at the southwest corner will collapse if not repaired. The roof of the Spotting Tower at the northwest corner is missing; walls will continue to deteriorate if the roof structure is not replaced.



TIMBER FRAMING



OUTERWORKS COPING STONES



WEST CASEMATES FIRE DAMAGE



SOUTH BARRACKS FACADE FAILURE



COLLAPSED VAULT AT SOUTHEAST BASTION



MASONRY DAMAGE AT WEST CURTAIN EMBRASURE

EXISTING SYSTEMS

Self-sufficiency has long been a hallmark of fortifications, and long-range planning for Historic Fort Adams has an opportunity to serve as a benchmark for sustainable design. Careful location of program elements and selection of building systems can provide opportunities for use of renewable resources, not only reducing operating costs, but providing a new layer of understanding for its historic systems while also appealing to funders and visitors.

Today, the only operational mechanical, electrical, or plumbing (MEP) systems in the Fort are those which have been added as part of recent renovations in the North Casemates and the Youth Overnight Barracks. Mechanical ventilation was not added to the North Casemates or the Youth Overnight Barracks except in the bathrooms, but operable windows provide passive ventilation when spaces are occupied during the summer months.

Sanitary Sewer
A 3" force main that extends beneath the visitor's parking lot to a sewer pump station located adjacent to the Visitors Center. Design plans for the Youth Overnight Barracks show a new 4" polyvinyl chloride (PVC) gravity sewer main connection to the pump station from the Fort's northeast Officer's Quarters.

Water
Two parallel water mains extend beneath the parking lot, parallel to Fort Adams Drive, toward the Visitors Center. It is assumed that one line is fire service and one line is domestic water service and the main provides water/fire service to the Visitors Center and Maritime Museum. With the Youth Overnight Barracks, a new 3" water service was extended from the northeast Officer's Quarters to the water service main.

Electric
An electric ductbank extends toward the Visitors Center and Maritime Museum along the eastern edge of Fort Adams Drive and continues past the Maritime Museum in a westerly direction and extends through the Fort at the area of the northeast Officer's Quarters. The electric service is extended around the inner walkway of the parade grounds to feed the Fort's lighting. Electric lines run underground in the Inner Ditch.

Events on the parade field use power from the above ground boxes scattered around the parade field, or from a power distribution center in the "mechanical room" in the northwest bastion, created with the North Casemates Restoration in 2002. Functions or events on the North Lawn are supported by power outlets along the north wall of the Fort, and events in the Crownworks are supported by another transformer and distribution box in the inner ditch near the Southeast Postern.

Telecommunications
In the Outerworks, an overhead communications line extends over the Tenaille and Southeast Counterscarp. This leads to a utility pole located in the southeast Inner Ditch between the Southeast Scarp and the Southeast Counterscarp and extends along the eastern and northern faces of the exterior of the Fort. A 2" telephone conduit runs along the western edge of Fort Adams Drive, past the eastern face of the Visitors Center and extends through to the Fort at the area of the northeast Officer's Quarters.

New Systems
Increasing access to the Parade and Outerworks will not require significant development of mechanical or plumbing systems at the outset. Electrical service, lighting, air conditioning, and plumbing would be added as each individual project requires. In areas where full or partial restoration of interior finishes is proposed, such as in the east Officer's Quarters, protection from the elements and a minimum temperature of 55 degrees during the winter season will be required to stabilize the moisture content of the plaster. Electric heat with a combination of electric baseboard and cabinet unit heating would be the most efficient and easiest to implement, though electric heat is more costly to operate.

SUSTAINABILITY

Preserving and re-using the Fort is inherently a sustainable endeavor. In the early phases of the Master Plan, there are limited opportunities for energy conservation - simply because opening the Fort does not require much energy consumption. However, strategies for preserving materials, conserving resources, using passive means for drainage and ventilation, and minimizing negative impacts to the environment can be incorporated in every project, regardless of its size and scope. Potential sustainable strategies include:

- Specify new site lighting to be full cutoff fixtures to minimize light pollution. If existing lights are not full cutoff, they should be replaced or retrofitted.
- Incorporate porous asphalt for new asphalt paths, or use warm-mix asphalt, which uses less energy in production than hot-mix.
- Identify a seed mix for lawn areas that requires less frequent mowing.
- Address stormwater management for the entire park, with the parking lot being the highest priority. Strategies could include retaining stormwater in underground retention basins, adding a sediment separator, changing the pavement to porous pavement, or incorporating vegetated retention basins.
- Upgrade systems to provide the appropriate level of water quality treatment, recharge, and/or detention required to conform to standard, responsible engineering practices and current local/state regulations.
- Provide alternative means of transportation to the site to reduce passenger car travel and reduce on-site parking.
- Ensure that debris from demolition and vegetation clearing are diverted from landfills, by recycling, chipping and composting.
- Design mechanical, electrical and plumbing systems for optimal efficiency and ease of use; reduce water use on site by using low-flow plumbing fixtures, composting toilets in new restrooms, and by harvesting rainwater.
- Use salvaged materials, materials with high recycled content, and regionally produced materials; use Forestry Stewardship Council certified wood products; specify low-emitting (low percentage of volatile organic compounds) finishes and composite wood products.



DRAINAGE PROBLEMS AT NORTHWEST BASTION



COMMUNICATIONS LINE AT OUTER DITCH

THE VISITOR EXPERIENCE AND INTERPRETATION

Overview
This interpretive resources report is based on several site visits that occurred in the fall and early winter of 2009-2010. Matt Kirchman of objectIDEA participated in three public tours during three separate months (with three different tour guides), and conducted two days of interviews and discussion with the Fort Adams Trust, their stakeholders, guests, and advisors. At these meetings, the existing public experience at the Fort was evaluated, and future possibilities were discussed. Both the quality of the experience and key aims for the interpretive content were addressed. Benchmarks (best practice models) were researched before and after these meetings and shared to solicit discussion and reaction.

This report presents an analysis of the existing interpretive programs offered at the Fort and the content that visitors engage on guided tours and through fixed signage and exhibitions. In doing so, this report provides a quality analysis of the overall visitors' experience. This report also includes a new interpretive plan for future programs based on a series of phased architectural and landscape renovations.

Existing Interpretive Programs
Fort Adams sits within the context of Fort Adams State Park, an expansive, 105-acre public park that offers exceptional views of Newport Harbor, including the east passage of Narragansett Bay. The park is replete with green spaces that are appropriate for diverse activities like strolling, soccer and rugby, picnicking and exploring history. Water access and a public beach invite fishing, boating and swimming. With ample parking, Fort Adams State Park is very well known as the host for Newport's summer jazz and folk music festivals. These events draw thousands to the park and to the perimeter wall of Fort Adams.

If one chooses to visit the interior of Historic Fort Adams, there are 4 key interpretive destinations and attractions:

- The Fort Visitor Center and Gift Shop
- Guided tours of stabilized and improved locations
- A system of outdoor interpretive signs
- The North Casemates Gallery

The Fort Visitor Center and Gift Shop, located in the restored Redoubt Jail, serves as the official entrance point for formal encounters of Fort Adams. From here, visitors can purchase tour tickets, souvenirs, and short publications about local history.

In the State Park Visitors' Center, several large display cases permit the Fort Adams Trust (and like-minded partners) to present short-term, object-based displays on a variety of special interest topics, such as the recent installation developed in collaboration with the Museum of Newport Irish History and Fort Sumter National Monument. The closest public restrooms to the entrance of the Fort are located in the State Park Visitors' Center.

As a park visitor, guided tours are the only way inside historic Fort Adams proper. Tours are conducted daily – weather permitting – mid-May through October. They depart from the Visitors' Center every hour, on the hour between 10am and 4pm. With a guide, visitors can view the stabilized and improved areas of the Fort. Key destinations that are advertised include the officers' quarters, the lofty terreplein (literally: earth-filled roof) of the Northeast Bastion, the restored North Casemates, the Parade field, the complex Outerworks, and the listening tunnels.

Throughout the tour route, guides and guests may refer to exterior-grade, weather-resistant graphic panels (waysides). They are installed at the following locations:

1. Fort Adams Overview: at the north end of the parking lot, near the Redoubt/Jail
2. A Giant Among Forts: at the top of the east gate entrance ramp
3. Building a Fortress: at the corner near the overnight barracks
4. Life at Fort Adams: at the entrance to the overnight barracks
5. Defending the Bay: at the base of the Northeast Bastion
6. Great Guns: inside the North Casemates
7. Three Tiers of Fire: at the north end of the west wall
8. The Changing Role of the Fort: at the midpoint of the west wall
9. Between the Wars: on the south end of the West Wall
10. The Southwest Battery: at the bottom of the ramp
11. Defense from Land: in the Inner Ditch

Tour guides use the waysides and a Tour Script and Supplement (included in the Appendices) to learn the historic material. The script is written as a narrative tour and roughly recommends a counter-clockwise tour of the Fort within the timeframe of one hour. There is much supplemental and anecdotal information in the script, and it includes more material than one can convey in a single hour. This leads tour guides to construct their own tours using the material that strikes them, and choose destinations based on their own interests and what works for them. They often use the waysides as visual aids. As standard practice, guides often ask their tour participants about their interests and expectations and then customize their tours in order to meet their clients' expectations.

Per the Tour Script, most guided tours include the following destinations and interpretive messages. These are popular tour components due to their directly observable and/or demonstrable ideas:

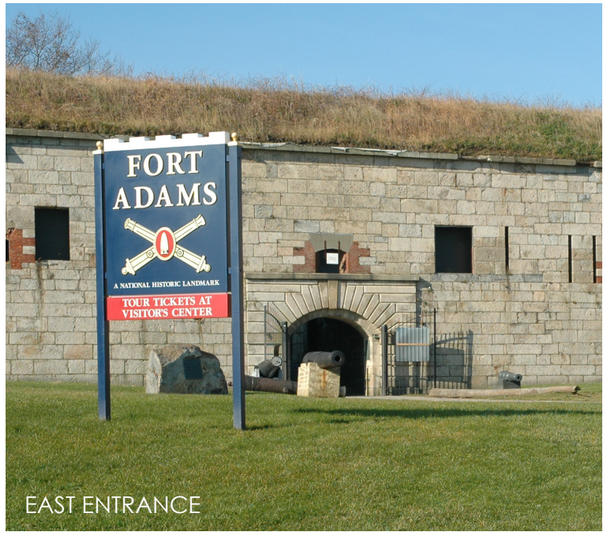
- Outside the East Gate: Guides point out the four cannons that are original to Fort Adams and describe the re-construction of the Redoubt/Jail.
- The East Gate passage: Here, one can easily see the three materials that were used to construct Fort Adams. The intersection of granite, brick and shale are visible as one passes through the East Gate.
- 6 ¼ –acre Parade Grounds: Fort Adams is one of the largest and most complex forts in the United States. Following the War of 1812, the US felt a need for coastal fortification. The construction of the Fort was a 33-year effort. Guides compare the size of Fort Adams to other famous forts: Sumter, McHenry and Ticonderoga. From here, guides also provide an overview of the general layout of the Fort's functions: housing officers and their families, defense from the sea (north and west walls), enlisted men's barracks, and the land defenses beyond the barracks.
- The designer, construction manager, and builders of Fort Adams: The US Government hired Simon Bernard, a French fort designer, to design Fort Adams. Lieutenant Colonel Joseph G. Totten served as the construction manager between 1824 and 1838. 500 Irish laborers seized the employment opportunities offered by the project and relocated to the Newport area. It is estimated that the Fort used 4,000,000 bricks.
- Life in the Fort: Depending on whether the US was at war or in peacetime, the residents of the Fort varied in numbers. At one time (1900) there were 535 residents. At full tilt, the Fort could house 2,400 men. Famous residents include Major General Ambrose Burnside.
- The Commanding Officers' Quarters: Rooms were assigned according to rank and size of an officer's family. They were quite fancy with fireplaces and interesting plasterwork. Few details remain.
- Northeast Bastion Terreplein: Views of Newport Harbor from the highest accessible point in the Fort. It's a great location to gain an understanding of the geography and the nuances of coastal defense and land defense. It is noted that when one is up on the Terreplein, the main powder magazines, where gunpowder was stored, are located directly beneath.
- The North Casemates Gallery: Presently, this is the most gallery-like of the destinations on the tour. Guides primarily use this space to conjure up a picture of the fully armed Fort. The north and west walls (those that face the channel) could accomodate 468 cannons and, during drills, the casemates undoubtedly filled with noise, smoke, the smell of burning powder, and the commotion of eight men per gun. The ingenious design of the casemates helped alleviate the smoke and facilitate the re-positioning of the cannons for reloading and firing. Here as well, guests gain an appreciation for the intricacy of the brick laying.

In addition to restored interior details, the North Casemates Gallery includes an exhibition provided by the Naval War College. It chronicles the history of the defenses of Narragansett Bay from colonial times to modern day. Special focus is placed on the technologies (such as torpedo design) that have been developed since the Navy developed stations here.

- The West Wall: On the edge of the west wall ditch, tour guides usually remind visitors that during the Fort's heyday, the threat was from wooden – not steel hulled – ships, and the main course of attack would have been through the east passage of the Narragansett Bay. On the west wall, three tiers of firepower could attack ships, as they would have been forced to parade through the channel toward Newport. With canons on the roof, in the center of the wall, and below grade (hence the ditch), the Fort could fire on the rigging, deck and hulls of the ships respectively. At its height (1855), there were a total of 117 cannons installed along the west wall. Some could fire a distance of two miles.
- Between the Wars: From 1900 on, with the armament obsolete and removed from Fort Adams, the Army renovated the Fort more for stationing and training than for defense. Between WWI and WWII, amenities like a bowling alley, movie theater and men's club crept into the Fort's building program.
- Southwest Postern (passage): Among the Fort's most extraordinary features are its land defensive Outerworks – the most complex defenses of their kind in all of North America. A number of tunnels permitted troops to travel underground in order to position themselves in the Outerworks. Fort Adams has many of these tunnels, and every soldier had to learn to navigate them.
- Southwest Battery: From here, visitors can imagine the artillery of the late 19th century: the giant Rodman cannons that possessed a range of over 2 ½ miles. Guides often use this vantage point to share the ingenuity of the anti-submarine nets that stretched across the Bay. They were designed to prevent the approach of German submarines.
- Land Defenses: The only way that Fort Adams could have come under



1943 COAST ARTILLERY



EAST ENTRANCE

THE VISITOR EXPERIENCE AND INTERPRETATION
CON'T

attack from land was from the south. As a result, all of the land defenses are concentrated in the south Outerworks. An intricate configuration of ditches, doors and sloped earthworks are designed to channel and concentrate enemy troops into firing range.
- The Tunnel System: The designers of Fort Adams foresaw the potential for attack via underground tunneling. They therefore designed three systems of underground "listening tunnels" that branch beneath the south Outerworks. From these dark and narrow tunnels, US soldiers could listen for the underground approach of the enemy, dig toward them, and set explosives to deter them. Today, guides reward adventurous visitors with a badge of courage – a Tunnel Rat sticker – if they brave this portion of the tour.

When special public events are staged in or near the Fort (such as Family Day) the interior of the Fort is not typically open to the public in any manner outside of routine public tours. Rental agreements (like weddings or family reunions) can incorporate access to the Parade Grounds and the North Casemates Gallery if renting parties would like to experience some sense of the "Open Fort."

The tour schedule is suspended entirely for Re-enactment Weekend and the Music Festival weekends as all staff attention turns to staging these events.

An Evaluation of the Quality of the Visitors' Experience at Fort Adams
The quality of the visitor experiences offered at Fort Adams has been evaluated on four basic aspects:

- Comfort
- Engagement
- Reinforcement of Message
- Meaning

Visitor Comfort
An excellent interpretive experience helps the visitor feel comfortable, physically and psychologically. Good comfort opens doors to other positive experiences; lack of comfort prevents them.

Arrival to the Fort is a complex issue, for once potential visitors have traveled north enough on the peninsula to encounter the orientation and ticketing facility, the Fort is looming large and is actually distracting visitors away from the desired visitor sequence and protocol. Fort guides indicate that most guests begin to approach the Fort before realizing that it is not open without escort. With many competing entry points and unclear signals for orientation and sequence. Though many visitors naturally approach the Redoubt Jail where they can purchase gifts and entrance tickets, it can still be difficult to capture the visitors' attention and equip them with physical and conceptual orientation devices. This can be an uncomfortable experience for visitors.

Once ticketed and engaged in a guided tour, the experience is quite comfortable. The guides we experienced were very friendly, accommodating, entertaining and informative. Most guides assumed that the visitors had some grasp of the antecedent events that led to the construction of Fort Adams and some understanding of the local geography. Either way, these are two of the least visible aspects of the history of Fort Adams, so it is likely that some orientation aids would help to illuminate these two specific communication aims. Ideas that were discussed at the workshops with the Project Steering Committee include:

- An orientation film that illuminates the need for coastal fortification
- A large map or model of the peninsula that provides geographical context.

Once inside the Fort, the guided experience is appropriate in length and shade or shelter is often close at hand.

Some visitors may feel uncomfortable at the inability to explore on their own, although it is clear that this is what they signed up for when they purchased a ticket. Some might feel "under the watchful eye" of the guide as they explore the North Casemates exhibits or pause to read the wayside panels. Dwell time is often very short in duration at these locations. Visitors probably feel rushed so as not to impact the pace of the tour and the experiences of other visitors.

One last point regarding visitor comfort: It is worthy to note that because Fort Adams is nestled within the interior of the State Park peninsula, people are expecting an expansive, outdoor, on-foot experience. The subject matter of the tour is interpreted from a third person, historic and architectural perspective. There are few if any interjections of oral history, popular culture or myth. In this way, the experience, interpretively speaking, is not very "layered" in order to accommodate those persons who wish to explore different ideas and details.

Engagement
Engagement is the first step toward finding meaning.

The guided tours work extremely well to engage their audiences. Conditions and ability permitting, guides take their visitors on tours of the Parade grounds, the elevated walkway of the North Terreplein, through the south wall and into the Outerworks and listening tunnels.

Along the tour, there are many opportunities to learn from the Fort – how it bears weight, how it vents smoke, how it has stood and collapsed over time, etc. However, currently, there are few moments where guides are able to pause and demonstrate aspects of the science of the Fort with teaching tools. Ideas that come to mind include:

- Scale models of vaults and other fort features to interpret engineering technology;
- Real cannonballs to demonstrate the heft of the projectiles; and/or
- Material samples of brick, granite and shale rock to show how each fractures under fire.

The majority of the interpretation on the tours is about the directly observable features of the Fort – an outstanding and memorable encounter with a charismatic artifact. It is difficult, however, to imagine what is not there: the people. While there are historic photos of the Fort patrolled and populated, they are of small scale and are inanimate. There is a strong desire, on the side of the client group, to interpret the lived experiences that historically played out on the property. Ideas that were discussed in the workshops include:

- Simple graphics or theatrical projections, at full scale, in situ, to bring specific technologies and moments to life; and
- Audio tours or recorded soundscapes (broadcast and/or localized) to provide a sense of lived experience and personal voice to Fort Adams.

Reinforcement
Do components provide visitors with abundant opportunities to be successful and to feel intellectually competent, beyond the "wow" of engagement? In addition, do the elements reinforce each other, providing multiple means of accessing similar bits of information that are all part of a cohesive whole?

The scale of the site and the circuitous route of the tour accounts for some disjointedness in the tour narrative. The communication jumps around a bit in theme, time and place. At times, a sense of "unified story" is overshadowed by disconnected facts based on where one is on the loop of the tour. Further, under the structure of the narrated, guided tour, there are few moments for visitors to experiment or test ideas for themselves or learn through discovery and investigation.

Obviously the proposed idea of an Open Fort, wherein visitors can explore and pretend, imagine and play, will offer this missing aspect of reinforcement. More ideas aimed at intellectual accessibility include:

- Themed audio tours or podcasts: architectural tour, restoration in action tour, military history tour, etc., and
- Privileged access tours (offered after the Fort becomes "open") to concentrate ideas and themes, e.g. a restoration-in-progress tour or a flashlight-led tour of the listening tunnels.

Meaning
Do the exhibitions provide personally relevant experiences for visitors? Beyond being engaged and feeling competent, visitors can find themselves changed, mentally and emotionally, in immediate and long-lasting ways.

The wayside signs located throughout the parade grounds do a fine job in putting people in the presence of the "celebrity qualities" of Fort Adams: it's scale, its one-of-a-kind architectural and engineering innovation, and the indelible impact it had on Newport, the eastern seaboard, and the nation.

These kinds of interpretive messages need to be boosted in importance so visitors are left with a long-lasting impression of Fort Adams. It is extremely memorable for its sensual character; less so, at this time, for its intellectual and historical importance.

Once again, when the Fort is opened for self-guided tours and lingering visitation, visitors will find more visceral reasons to remember the Fort. Some ideas that were solicited and shared in the workshops included:

- Art installations that recall the lived experiences at the Fort.
- Personal (picnic and lounging) areas in shaded and secluded locations within the walls of the Fort.
- A unique vantage point to get close to the water and watch the sun go down.
- A place where history is the setting for recreational learning.

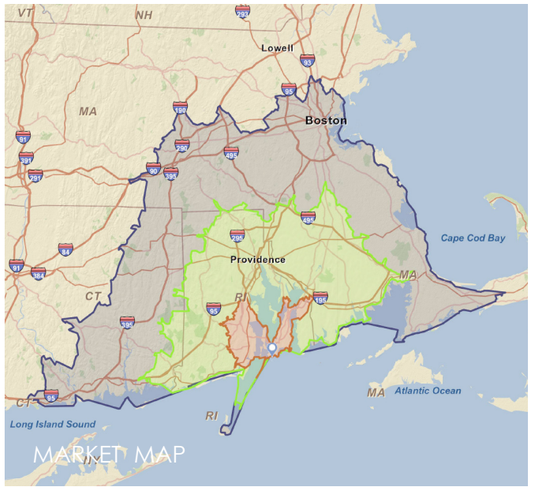


GUIDED TOUR



WAYSIDE SIGNAGE

MARKETING AND BUSINESS OPERATIONS



MARKET MAP

Fort Adams is Newport's "hidden gem." The central goal of the Master Plan is to open Fort Adams to the public free of charge, which will expose the Fort to new audiences. Currently, the only way to access the interior parade ground and Outerworks is by participating in a tour. By opening the Fort, Fort Adams will be enhanced as a community resource and tourist destination.

Market Context
Fort Adams has the potential to draw from both resident and tourist markets, which are deeply intertwined. Newport drew an estimated 2.9 million tourists in 2007. About 1.7 million of those come from less than 50 miles away. The total Resident Market Area population (living within a 90-minute drive time) was estimated at 5.36 million in 2009. This group is projected to grow to 5.40 million between 2009 and 2014 and is important because they are often repeat visitors or become members of an institution.

Local Attractions
Heritage attractions are among Newport's most popular destinations. In general, visitors to Newport were more educated and had higher incomes than the national average. Newport visitors are also representative of all age groups, which indicates the destination's broad appeal. Visitors travel frequently and regularly enjoy house tours and going to museums. The 11 mansions owned and operated by the Preservation Society of Newport County are the most highly-visited attraction, with a reported 780,000 annual attendance. The 3.5-mile Cliff Walk adjacent to the mansions is second in popularity, with an estimated 750,000 visitors annually. Fort Adams, which combines the history of the mansions and the adventure of the Cliff Walk, was cited as a reason for visiting Newport by about 10 percent of visitors to the Newport Visitor Center, yet only attracted 15,000 visitors in 2009.

Fort Adams State Park Visits
There were an estimated 329,000 visits to the State Park during May through October in 2009, based on vehicle counts and after accounting for residents, employees and volunteers, and activities at Sail Newport. While many park visitors are repeat visitors, there is potential to engage these visitors and expose them to Fort Adams.

Case Studies of Heritage Attractions
There are hundreds of historic forts across the United States that range in size, scale and levels of programming. The historic forts that achieve high levels of visitation tend to offer daily living history experiences and extensive exhibits and interpretation. Like other living history museums and historic sites, they require substantial operating budgets that are supported by significant public and private contributions in addition to earned revenue. This business model for historic forts is not appropriate for Fort Adams, given the level of capital improvement and operating funds required to develop and sustain this type of operation.

While there is no perfectly comparable heritage attraction to Fort Adams, case studies of historic forts and other heritage attractions provide insights into the future operating potential of Fort Adams. Four attractions were profiled: Fort Concho (San Angelo, TX), Fort Independence (Boston, MA), Fort Knox (Prospect, ME) and the Eastern State Penitentiary (Philadelphia, PA).

Facilities and Programs
There is a wide range of historic structures at the profiled historic sites, from building ruins to building interiors and exteriors restored to historic periods. In some cases, heritage sites include a visitor center with orientation information, historical exhibits, small gift shop, small theater, and restrooms. Some of the profiled historic sites are single purpose devoted to heritage interpretation whereas others have other facilities or programs that enhance the site's operational sustainability. Fort Knox has the Penobscot Narrows Observatory, which offers a unique and popular recreational component. Fort Concho manages an office building and receives rental income to support this management function. Eastern State Penitentiary features art installations. Perhaps most similar to Fort Adams is Fort Independence, which is located in a park setting, with similar recreational amenities. Fort Adams can continue to operate with a small organizational profile, as it has in the past, or expand its operating budget to introduce activities that might be outside of its existing focus on heritage interpretation. Moreover, as in case studies, these additional activities have the potential to draw on new and different audiences, such as young people and families.

Visitor Experience and Events
Guided and self-guided tours are the primary visitor experience at the profiled sites, though many of the sites offer a diverse calendar or heritage and non-heritage related events. Fort Concho offers guided and self-guided tours, lectures, educational programs, historical exhibits and demonstrations, living history reenactments, concerts, and festivals. In particular, Halloween events were critical activities at several of the sites, especially because it occurs in the off-season. Starting with guided tours, Eastern State Penitentiary has expanded to offer a wide variety of programs and events including their highly successful multiple-day Halloween event. Fort Knox reports a similar experience with programming appealing to a wide audience range, and focus on educational events that are entertaining rather than didactic.

Admission Pricing
Ticket pricing varied considerably from no charge at Fort Independence to $12.00 at Eastern State Penitentiary. The other profiled historic forts charge $3.00 and $4.50 for adult admission. Guided tours, special events, and festivals can include an additional or different admission charge. Fort Adams' ticket price is high compared to the forts profiled, but is in line with prices in the Newport marketplace.

Attendance and Visitor Characteristics
Attendance at the profiled heritage attractions ranged from an estimated 31,000 to 200,000. A significant portion of attendance at all profiled attractions was due to special events and community festivals. Eastern State Penitentiary nearly doubled its attendance through its Halloween event. Most visitors to historic forts are adults and are tourists from outside the local area. However, events tend to draw different audiences than the typical heritage-oriented visitor. The profile of visitors at Fort Adams is similar to that of the heritage attractions profiled.

Operating Budget and Staffing
The operating expenses at the profiled historic forts ranges widely. At the low end, the Castle Island Association had a budget of $57,000 and relies entirely on volunteers to provide guided tours of Fort Independence. At the high end, the Eastern State Penitentiary had an operating budget is $2.1 million. Like the attractions profiled and in addition to permanent staff, Fort Adams relies on a mix of part-time staff to accommodate seasonal variations in visitation and volunteers for events.

Sources of Revenue
Earned revenue at the profiled attractions is primarily drawn from a mix of admissions, gift shop sales, and special events. All sites rely on a mix of public and private contributions to sustain operations, as earned revenue alone cannot sustain cost of operations, with the possible exception of the Eastern State Penitentiary. The Eastern State Penitentiary's Halloween event is a blockbuster that generated a significant amount of income after expenses. Fort Concho and Fort Knox have a consistent base of public support every year. Fort Adams does not have the significant sources of public and private contributions that other heritage sites have and so may have the opportunity to expand in these areas.

New Business Model
The proposed business plan for Fort Adams is built on the current organization and operations and assumes that Opening the Fort will attract more visitors and earn more revenues. In addition, the conservation and preservation activities and enhanced visitor experiences, especially Opening the Fort, will create a higher and better profile for Fort Adams in Newport and in Rhode Island as a whole. Opening the Fort will and engender deeper community relevance, support overall success, and enhance capital and ongoing fundraising efforts.

Marketing Opportunities
Fort Adams Trust marketing should focus on the entire place, including the State Park and other attractions. Targeted marketing should include group tour visitation, special events, and facility rentals. To the extent possible, the Fort should focus on co-operative marketing opportunities with other site partners and the Newport and Bristol Counties Convention and Visitors Bureau. Fort Adams has the "Best Sunset in Newport" because it faces west over the bay. This would





MARKETING AND BUSINESS OPERATIONS
CON'T

be an important part of a new "Bay Walk" that circumnavigates the State Park. This "Bay Walk" might tie into the "Cliff Walk," arguably the most popular destination in Newport, thereby creating an opportunity for cross promotion.

Fort Visitation
Opening the Fort will increase fort visitation, potentially substantially, as casual state park visitors take the opportunity to see the Fort in addition to those whose primary trip purpose is the Fort. The current baseline of tour visitors is 15,000. There were an estimated 329,000 visits to the State Park in May through October 2009, after accounting for regular State Park traffic such as residents, employees and volunteers, and Sail Newport activities. State Park visitation is stable. A reasonable assumption is that 104,000 people, or 33 percent of park visitors, may enter the Fort once it is opened.

Regular and Group Tours
All visitors to the Open Fort are tour prospects. In order to attract the widest possible audience and encourage repeat visitation, the Fort will offer a menu of three regular tours and specialty behind-the-scenes tours of the restoration process. A total of 20,000 tours are estimated in a stable year of Open Fort operations; 30 percent, or 6,000 tours of which are assumed to be group tours.

Gift Shop
Fort visitors who do not join a ticketed tour will still create new revenue opportunities for gift shop merchandise. The relocation of the shop and ticketing to the Redoubt for the 2010 season will enhance its visibility to Fort visitors as well as increase the space available for merchandise. Gift shop revenue is estimated at $1.50 per capita for tour visitors and at $0.25 per capita for open Fort visitors in current dollars.

Facility Rentals
The Open Fort will maintain the Fort's ability to host facility rentals and events and may increase rentals through greater exposure. The business plan assumes that facility rentals will continue at historic levels and prices. For planning purposes, this plan assumes 29 rentals per year at an average rental rate of $3,100 in current dollars.

Earned Revenue
Total estimated earned revenue is $319,000 in a stable year in current dollars, a potential increase of 58 percent in earned revenue from 2009.

Contributed and Other Revenues
By opening the Fort, Fort Adams Trust will have a higher profile within the community and have more projects that would be attractive to potential funders. The Master Plan, and the projects identified within it, create the rationale for ongoing donor opportunities. In addition to fundraising for ongoing stabilization and restoration projects, the Trust will have to increase contributed and other revenues for ongoing operations. Visitors should also be encouraged to contribute, through displays that document completed and proposed restoration efforts, membership flyers and contribution boxes at key locations within the site.

Each capital project should include allowances to increase endowment in order to support ongoing maintenance of capital improvements. Contributed revenue would need to increase about 10 percent and other revenue would need to increase four percent in current dollars over the baseline 2009 amounts in order to support the planned operating expenses.

Open Fort Operating Expenses
The total estimated operating expenses required for the Open Fort are $459,000 in a stable year in current dollars. The largest increases are found in personnel, maintenance and visitor services, due to the expanded wear and tear on Fort grounds and need for tour attendants to maintain constant presence in the Open Fort.

Five Year Ramp-Up in Operations
Many new or expanded attractions have a surge in visitation in early years that decline to a stable year of visitation in Year three or four. In the case of Fort Adams, the Trust is expanding its operations by offering a new, free experience to people, as well as enhancing its visitor experience. Due to the modest advertising and marketing budget planned for opening the Fort, awareness of the Fort is likely to build slowly over time within the marketplace. Therefore, Fort visitation is likely to ramp up to a stable year three years after opening the Fort, which is Year five (2014) as a part of this Master Plan.

Conclusions
The improvements proposed as a part of the Fort Adams Master Plan will create substantial quality of life benefits to residents and visitors alike. The recreational and educational benefits will enhance the knowledge of and interest in Newport's heritage and will expand the recreational and tourist attraction base in the City. As a unique recreational park and heritage site, Fort Adams contributes to community self-esteem, pride and identity. Master Plan improvements will augment these feelings by improving Newport as a place to live, work and play, thus affecting all aspects of the local economy and community.

Precedents and Prototypes







PRECEDENT AND PROTOTYPES

Ann Beha Architects and their team analyzed a number of comparable sites and building, focusing on typologically similar buildings, such as forts and jails, as well as sites which had been converted from ruin or extensive decay to public open spaces. A brief overview of the selected precedents follow. A market analysis of theses sites is included in the "Market and Visitor Research" report in the Appendix.



Fort Independence, Boston, Massachusetts

- Operated by the Massachusetts Department of Conservation and Recreation.
- 34,000 visitors.
- Free seasonal self guided and guided tours sponsored by the Castle Island Association in partnership.
- All-volunteer operated.



Gas Works Park, Seattle, Washington

- Operated by the City of Seattle.
- 19.1 acre public park on the site of the former Seattle Gas Light Company gasification plant, on the north shore of Lake Union, containing remnants of the sole remaining coal gasification plant in the US Incorporates numerous pieces of the old plant, some standing as ruins, while others have been reconditioned, painted, and incorporated into a children's "play barn" structure.
- Site of summer concerts, Fourth of July fireworks and other events. Incorporates a major bicycle and foot trail.



Fort Concho, San Angelo, Texas

- Owned and operated by City of San Angelo.
- 85,000 visitors.
- Roughly 30% is paid attendance, at $3.00 adult ticket price.
- City provides direct operating support, in addition to rental income from on-site office building.
- Location of large-scale community events, which accounts for significant attendance and sponsorship revenue.
- Other regular events, including volunteer living history program.



Eastern State Penitentiary, Philadelphia, Pennsylvania

- 175,000 visitors
- Site owned by the City of Philadelphia, operated by a non-profit entity
- National Historic Landmark, operational from 1829 until 1971. Site is severely deteriorated, with portions restored over the past 15 years.
- Open to the public as a museum for tours seven days a week, 12 months a year 10am to 5pm. Guided tours are offered during the winter, and during the warmer months, self-guided audio tours (included with admission price) are also available.
- Active public art program, with changing exhibits each year. Funding is $7,500.00 per project
- "Terror Behind the Walls," operates mid-Sept – early November, is ranked the"#1 Haunted House in America." Tickets are $20-30 per person.



The High Line, New York, New York

- 1.45-mile New York City park built on a section of the former elevated freight railroad of the West Side Line, along the lower west side of Manhattan.
- Expected to attract 2 million visitors by the end of its first year, ranging from neighborhood residents to international tourists.
- Design was sponsored by the non-profit Friends of the High Line. City funding was allocated to complete the first section in 2004.
- Public art installations relate to artists, gallery owners and art collectors in the vicinity.
- School tours include:
  Native Plants on the High Line
  Trains, Shipping, and Cargo Zipping—History on the High Line
  Abandoned to Embraced—Designing a Park on the High Line

Stabilization and Restoration Plan







Project Overview

Open the Parade

Open the Outerworks

1 Northeast Bastion

2 Northeast Officer's Quarters

3 East Officer's Quarters

4 Southeast Demi-Bastion

5 South Barracks

6 Southwest Barracks

7 West Curtain

8 Northwest Bastion

9 Terreplein

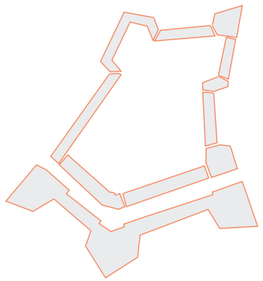
10 Crown Works Access

11 North Outerworks Interpretation





Open the Parade Ground



PROJECT SUMMARY:
Allow open, public access to Parade Ground and provide increased visual access to the Outerworks

Architectural

- Provide security in existing openings to allow for viewing of spaces

Structural

- Temporary shoring for only the most critical areas:
  - West Curtain Embrasures
  - West Curtain Porch
  - Northwest Bastion
- Dismantle and store unstable facing stones adjacent to Parade
- Dismantle concrete balcony on Northwest Bastion and West Curtain

Landscape

- Remove fencing in Parade Ground, and relocate fence to West Curtain ditch
- Relocate/extend fencing and gates to permit visitors to view more of the Outerworks
- Re-configure north end of parking lot to provide handicapped parking and define visitor gathering space
- Remove Beech trees and other vegetation on Eastern Glacis and the West Casemate slope

Interpretive Plan

- Provide orientation area outside East Gate
- Install "Bay Walk" interpretive panels
- Open exhibit in North Casemate to the public (coordinate with Naval War College)
- Separate existing guided tour into different tours:
  - "Fortification Tour"
  - "Design Marvel"
  - "Stories of the Fort"

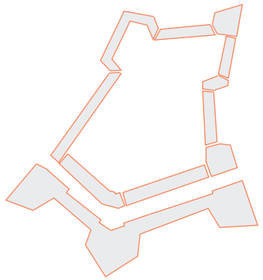
Operations

- Open Hours: 9:00 – 5:00, May - October, with potential for longer hours on weekends or associated with special events
- Increase overall visitation into the Fort - estimated 100,000 visitors (33% of Park visitors)
- Tour staff increase from current level of two, to three or four, allowing one staff to roam Parade, one to guide, one to rest and assist in shop.





Open the Outerworks



PROJECT SUMMARY:
Allow public access to the Inner Ditch and Outer Ditch of the Outerworks.

Building and Landscape Scope

- Add security grilles to all accessible openings
- Open access to Inner and Outer Ditches and southwest gate
- Prohibit access to the Crownworks, top of Glacis, Tenaille, and place of arms (except by guided tours)
- Repair loose capstones

Interpretive Plan

- Supplement existing interpretive panels in Outerworks

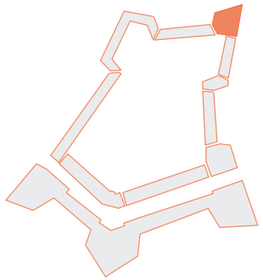
Operations

- Potential special tickets for events in Outerworks
- Staff stationed for security and interpretation





1 Northeast Bastion



PROJECT SUMMARY:
Northeast Bastion to be stabilized to allow for conversion to potential multipurpose / exhibit space. The powder magazine will be restored

Building and Landscape Scope

- Restore one magazine (wood floor, walls, ceiling)
- Provide electricity
- Repair/ Replace spalled masonry
- Repair vault separation at west wall
- Repair collapsed arches
- Repair temporarily shored arches

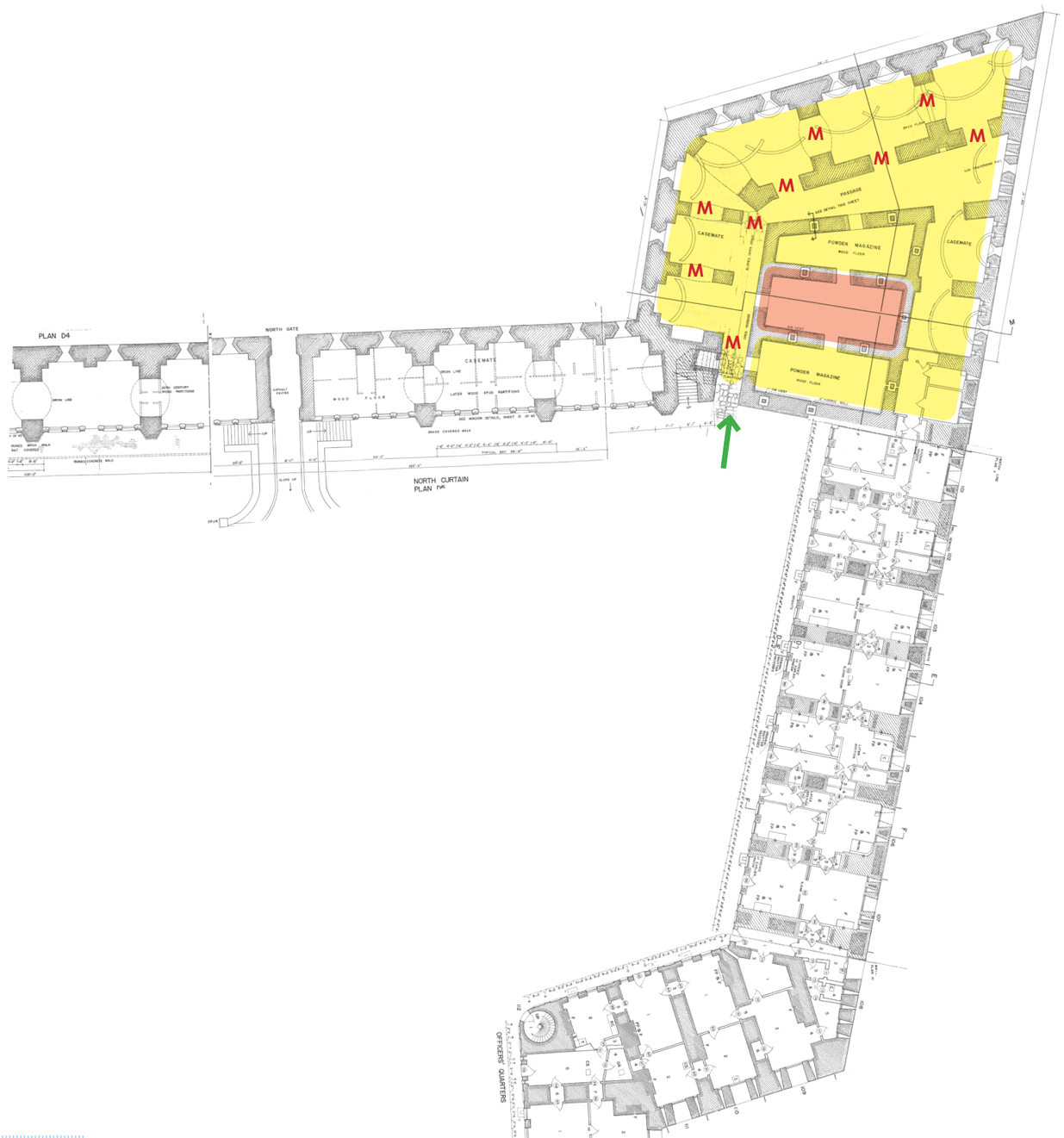
Interpretive Plan

- Signage and exhibits interpreting the construction and role of the Powder Magazines

Operations

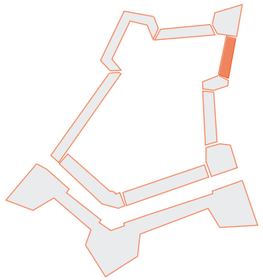
- Admission with special tours
- Potential space rental





Level 1 : Preserve
Level 2 : Restore
Level 3 : Rehabilitate
Level 4 : Interpret
New Construction
No Public Access
Path or Deck
Access
M Masonry Repair
S New Support
Floor Repair

2 Northeast Officer's Quarters



PROJECT SUMMARY:
Northeast Officer's Quarters are to be restored to different levels to allow for a new exhibit highlighting the different uses of the structure over time

Building and Landscape Scope

- Selective restorations to show use and decay
- Full restoration in Commandant's quarters and south most room
- Repoint masonry and brickwork in all locations
- At restored areas:
  - New windows and doors
  - New millwork (assume base and crown)
  - Patch, repair plaster and lath (assume 50%); new plaster and lath for remaining
  - Rebuild fireplaces
- Full lighting and electrical service [Fire alarm, some utility outlets, utility and exhibit type lighting]
- Heating and ventilation
  - Active ventilation only at Northeast Officer's Quarters and East Officer's Quarters
- Provide columns to re-support embrasures converted into windows

Interpretive Plan

- Stories of the Fort: Lives of particular officers
- Evolution of casemates and uses

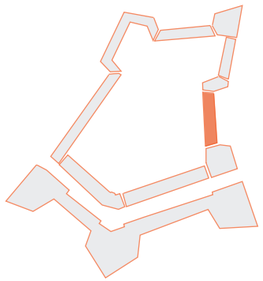
Operations

- Admission with special tours
- Limited impact on staff





3 East Officer's Quarters



PROJECT SUMMARY:
East Officer's Quarters are to be stabilized to allow for future administrative use or for expanded programing. These spaces will not be open to the public

Building and Landscape Scope

- Stabilize and clean all spaces

Interpretive Plan

- Reserve as potential expansion space

Operations

- Reserve as potential expansion space



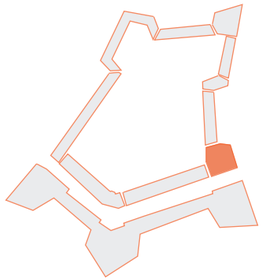


Level 1 : Preserve
Level 2 : Restore
Level 3 : Rehabilitate
Level 4 : Interpret

New Construction
No Public Access
Path or Deck Access
M Masonry Repair
S New Support
Floor Repair

5 10 40'

4 Southeast Demi-Bastion



PROJECT SUMMARY:
Southeast Demi-Bastion is to have extensive structural repair work done in advance of potential interpretive exhibits

Building and Landscape Scope

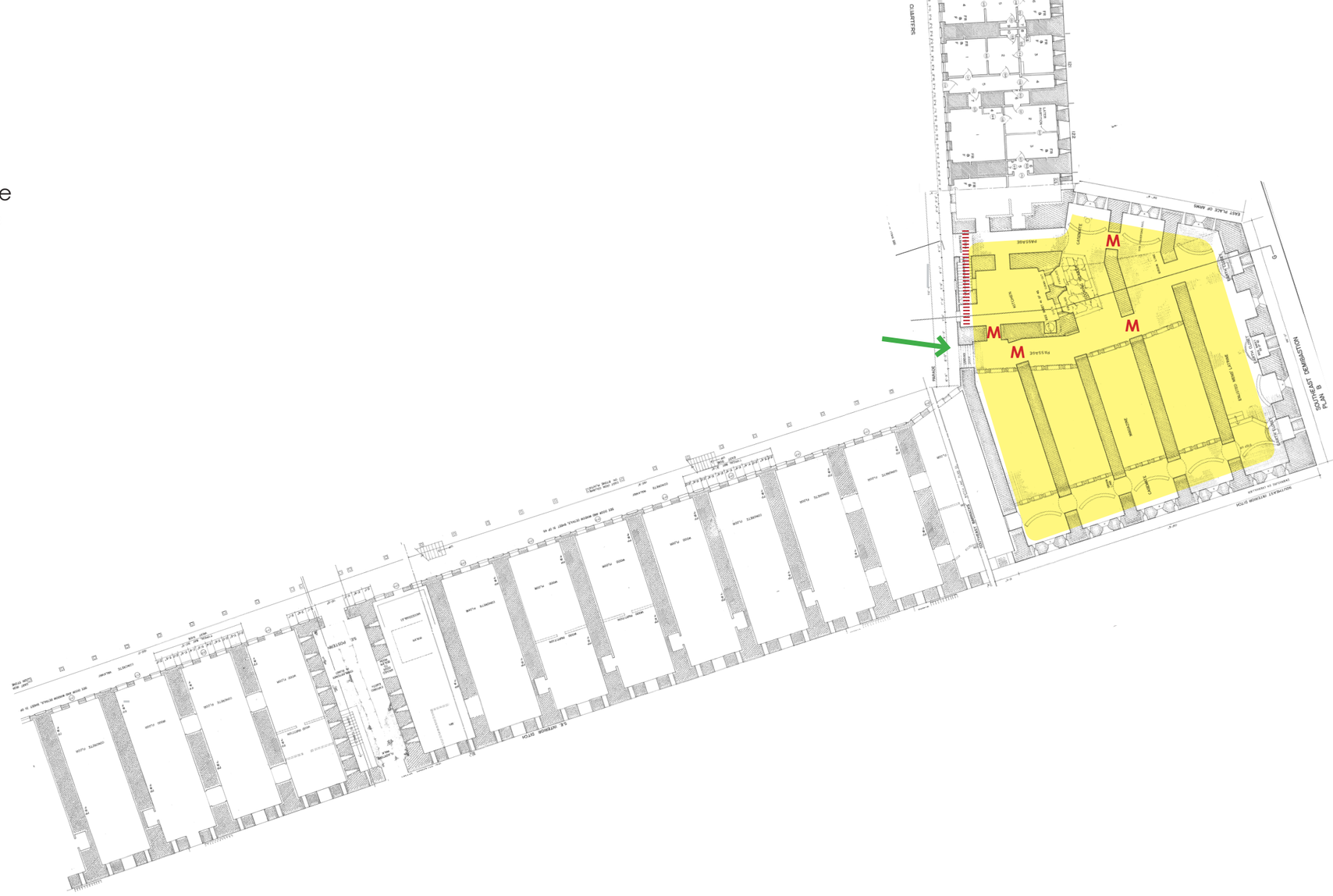
- Extensive brick repair
- Provide new roof (include rampart)
- Provide site drainage connection
- Repoint all brick
- Repair brick floor (assume 25%)
- Repair collapsed arches
- Repair collapsed roof

Interpretive Plan

- Stories of the Fort: Interpret structure and construction, bakery and food production

Operations

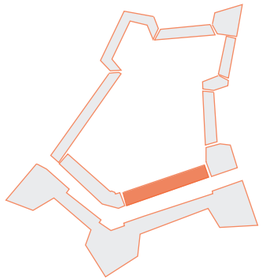
- Admission with special tours





Level 1 : Preserve
Level 2 : Restore
Level 3 : Rehabilitate
Level 4 : Interpret
New Construction
No Public Access
Path or Deck Access
M Masonry Repair
S New Support
Floor Repair
5 10 40'

5 South Barracks



PROJECT SUMMARY:
South Barracks to have failed facades removed in order to allow for use as a picnic and program space. Spaces to the west of the postern will not be accessible to the public



Building and Landscape Scope

- Remove all wood on grade flooring at public spaces, and provide new concrete slab on grade (4 bays)
- 2 bays reserved as maintenance storage and shop area
  - Provide with electricity and water
- Provide storage for removed facades in non public barracks
- Repoint all brick
- Provide new roof on existing concrete deck
- Provide site drainage connection
- Remove granite face at selected areas
- Repair shored openings

Interpretive Plan

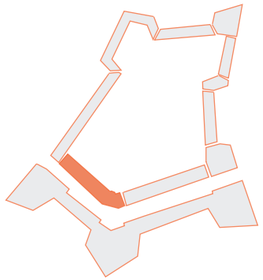
- Stories of the Fort: Lives of enlisted men

Operations

- Free admission
- Additional rental area close to East Gate

Level 1 : Preserve
Level 2 : Restore
Level 3 : Rehabilitate
Level 4 : Interpret
New Construction
No Public Access
Path or Deck Access
M Masonry Repair
S New Support
Floor Repair

6 Southwest Barracks



LEVEL 1 PROJECT SUMMARY:
At the Parade Ground level, the Southwest Barracks will be converted to a new visitor welcome hall and museum space. In addition, there will be new accessible restrooms and an elevator to the Terreplein. The preserved armory will be open to the public

Building and Landscape Scope

- Renovation and exterior restoration to provide new visitor services (restrooms), exhibit space, collections storage, exhibit preparation, offices and/or multipurpose space
- New floors and subfloors
- New roof
- New wood windows and doors. Grills remain at non restored areas
- Stairs and elevator to provide access to second floor and terreplein deck (immediately adjacent to building only)
- New two-story porch with exterior stair access to Terreplein
- New restrooms
- Repair masonry vault penetrations

Interpretive Plan

- Changing exhibits and/or exhibits with artifacts on first floor
- Potential for multi-media audio and film

Operations

- Free admission with potential to charge fee for special exhibits or multi-media presentations
- Year-round program space
- Additional rental space



NOTE: SEE DETAILED PLAN IN APPENDIX

RECONSTRUCTED PORCH WITH STAIR TO TERREPLEIN

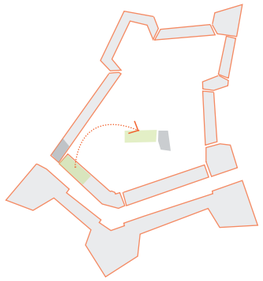
NEW EXHIBIT SPACE, STORAGE , RESTROOMS AND ADMINISTRATION AREA

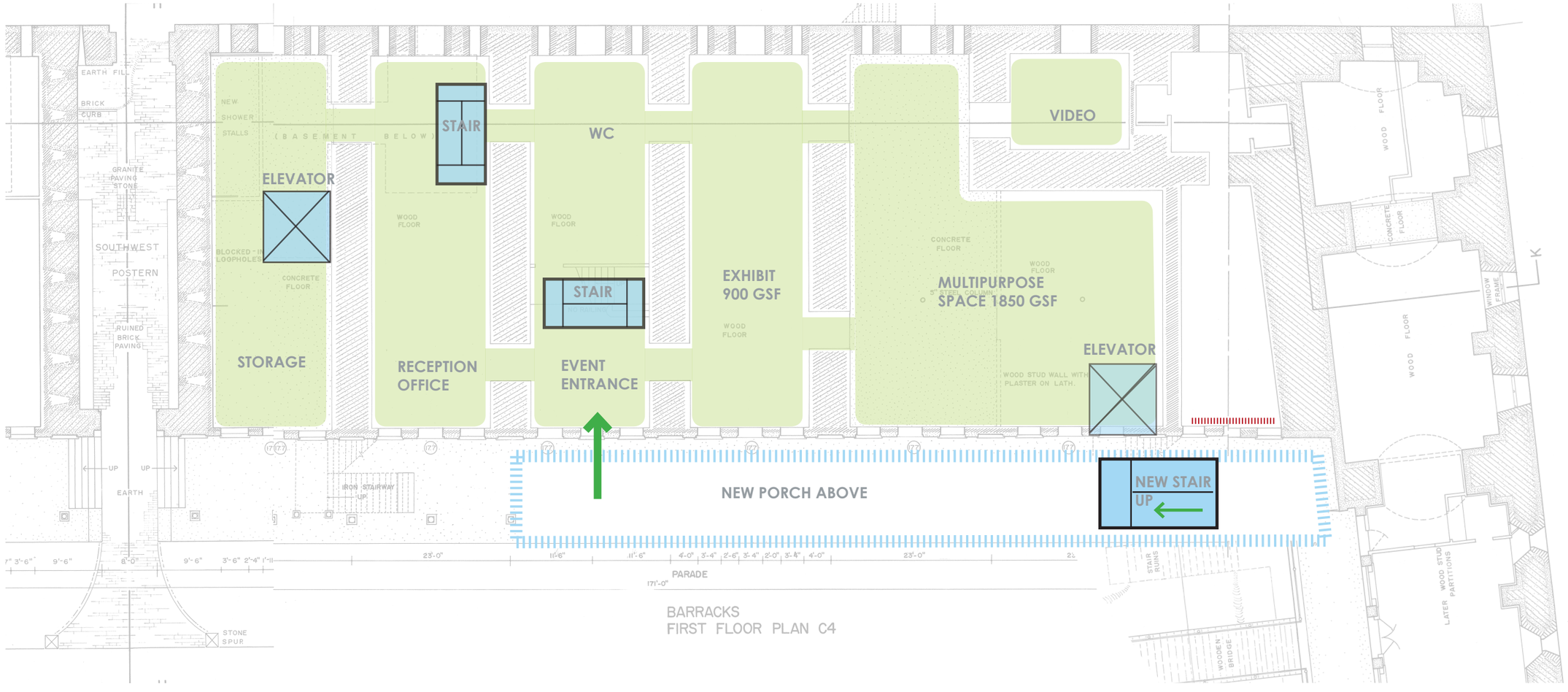
ARMORY OPEN



Level 1 : Preserve
Level 2 : Restore
Level 3 : Rehabilitate
Level 4 : Interpret
New Construction
No Public Access
Path or Deck Access
M Masonry Repair
S New Support
Floor Repair
5 10 40'

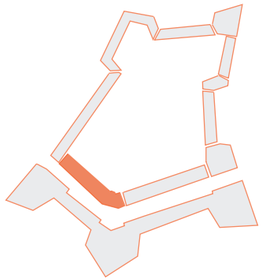
6 Southwest Barracks LEVEL 1 PROGRAM DETAIL





Level 1 : Preserve
Level 2 : Restore
Level 3 : Rehabilitate
Level 4 : Interpret
New Construction
No Public Access
Path or Deck
Access
M Masonry Repair
S New Support
Floor Repair

6 Southwest Barracks



LEVEL 2 PROJECT SUMMARY:
At the second floor, the former barracks will have multi-purpose spaces, as well as access to the Terreplein. A portion of the former porch will be rebuilt providing views of the parade ground. In addition, there will be office space and exhibit storage.

Building and Landscape Scope

- Complete renovation and exterior restoration to provide new offices, multi-purpose space, exhibit storage and catering kitchen
- New two-story porch structure with exterior stair
- New windows and doors at restored areas; window grills remain at preserved areas
- Stairs and elevator to provide access to second floor and Terreplein deck.
- See additional notes on Level 1 summary
- New floor framing and finished floors
- New roof
- New deck on Terreplein

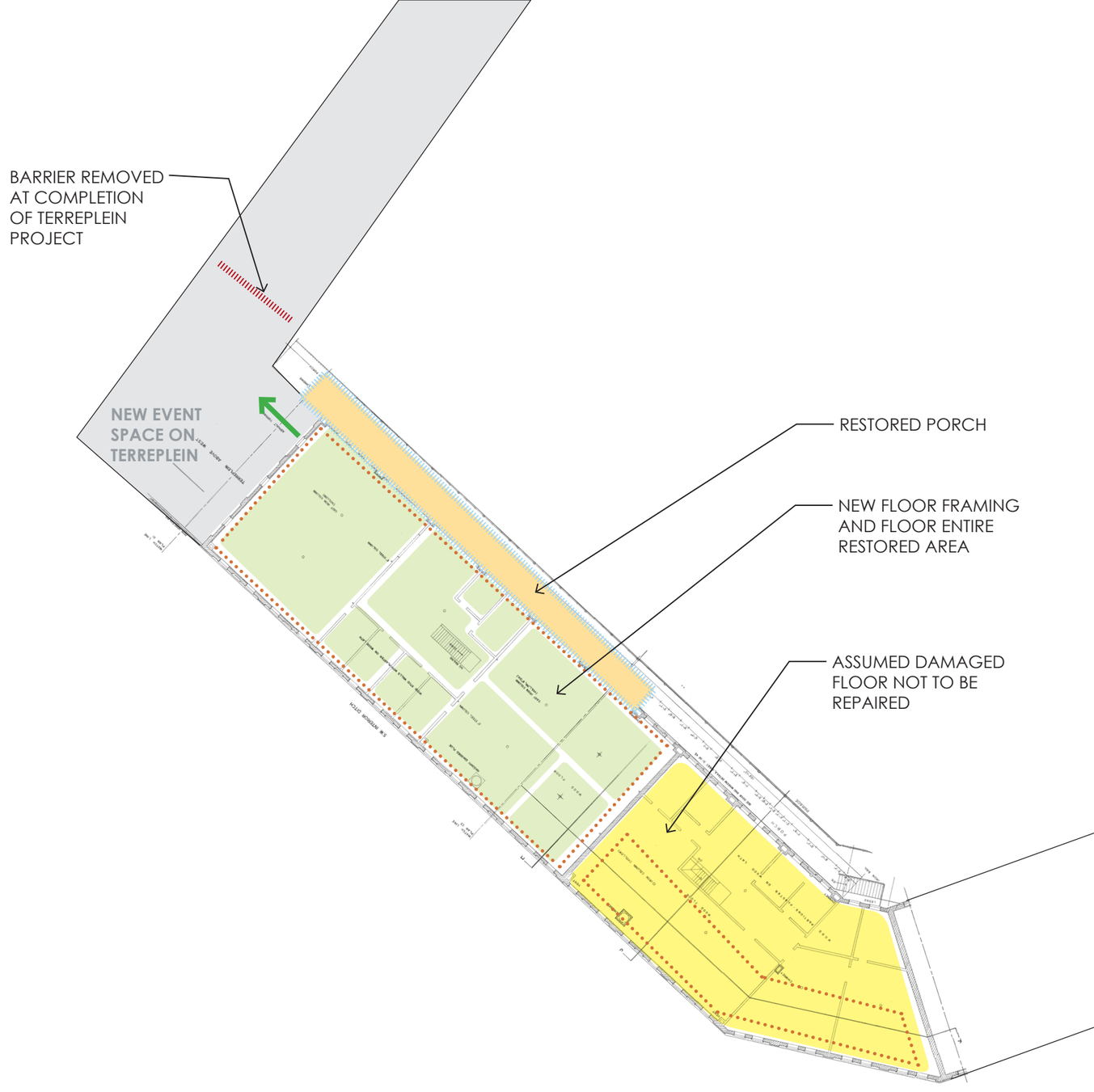
Interpretive Plan

- Photos and similar interpretive exhibits in second floor multi-purpose space

Operations

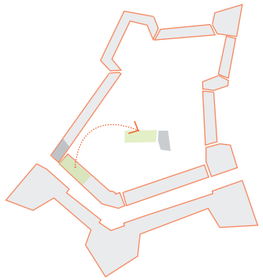
- Year-round program space
- Additional rental space





Level 1 : Preserve
Level 2 : Restore
Level 3 : Rehabilitate
Level 4 : Interpret
New Construction
No Public Access
Path or Deck Access
M Masonry Repair
S New Support
Floor Repair
5 10 40'

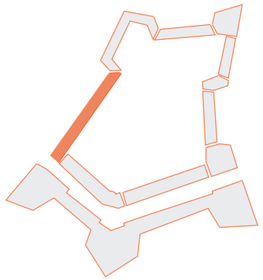
6 Southwest Barracks LEVEL 2 PROGRAM DETAIL





Level 1 : Preserve
Level 2 : Restore
Level 3 : Rehabilitate
Level 4 : Interpret
New Construction
No Public Access
Path or Deck
Access
M Masonry Repair
S New Support
Floor Repair

7 West Curtain



PROJECT SUMMARY:
West Curtain will be partially restored to provide space for interpretation of the Casemates and use as a space for hosting antique fairs. The ruined spaces to the north will be stabilized for viewing from a new viewing platform and from below at the ditch level

Building and Landscape Scope

- Restore Casemates to original open air configuration
- Remove all windows, doors and wood trim
- Repoint all brick
- New steel observation stair for viewing ruins
- Repair embrasures as indicated
- Restore trabeated porch
- New floor framing
- Restore steel bridge (2)
- New roof

Interpretive Plan

- Sound and light show interpreting artillery and defense tactics

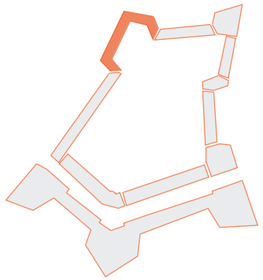
Operations

- Admission with special tours
- Space for use as a seasonal open air market place or event rental





8 Northwest Bastion



PROJECT SUMMARY:
The North Curtain will be restored to its original configuration, with the exception of the fire damaged southern end which will be stabilized but off limits. The historic bridge and trabeated porch will be rebuilt to provide access

Building and Landscape Scope

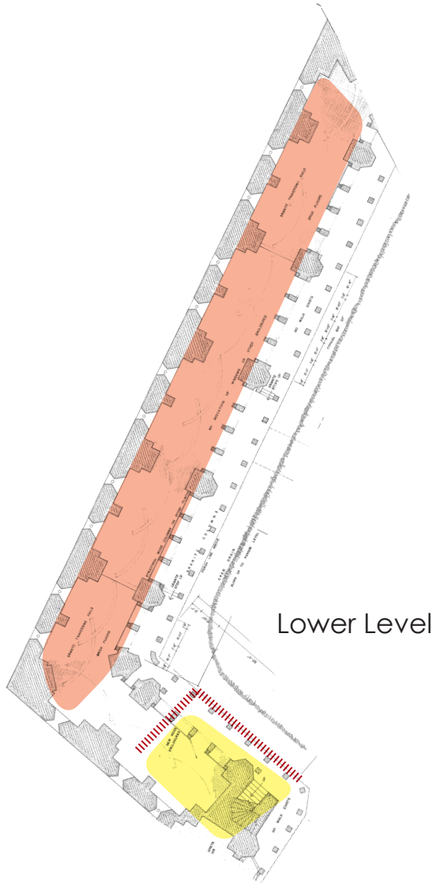
- Restore Casemates to original open air configuration
- Remove all windows, doors, and wood trim
- Replace damaged wood beams as required
- Repoint all brick
- Repair embrasures as indicated
- Restore trabeated porch
- New floor framing
- Restore steel bridge
- New roof

Interpretive Plan

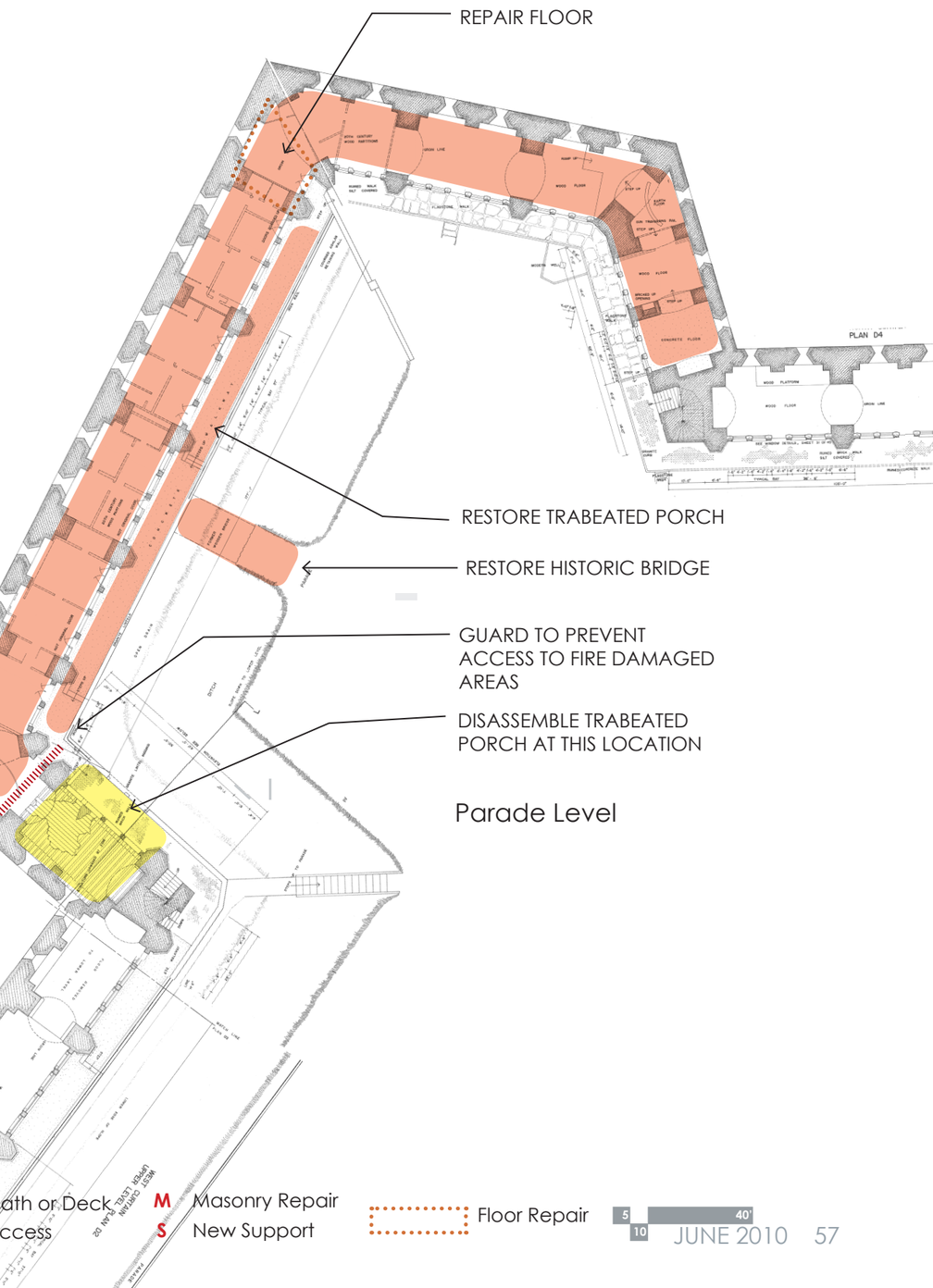
- Design Marvel: Exhibits describing construction of Fort

Operations

- Admission with special tours



Lower Level

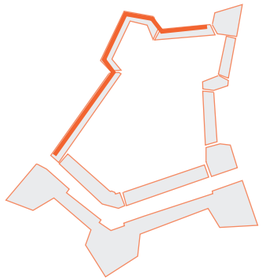


Parade Level



Level 1 : Preserve
Level 2 : Restore
Level 3 : Rehabilitate
Level 4 : Interpret
New Construction
No Public Access
Path or Deck
Access
M Masonry Repair
S New Support
Floor Repair

9 Terreplein Deck



PROJECT SUMMARY:
Provide access to Terreplein from Northeast Bastion to Southwest Barracks

Architectural, Structural, Landscape

- New 10' wide wood deck from Northeast Bastion to Southwest Barracks.
- Elevator access (from renovated multipurpose space in Southwest Barracks)
- Stair access at Northeast Bastion stairs and new rebuilt Southwest Barracks porch

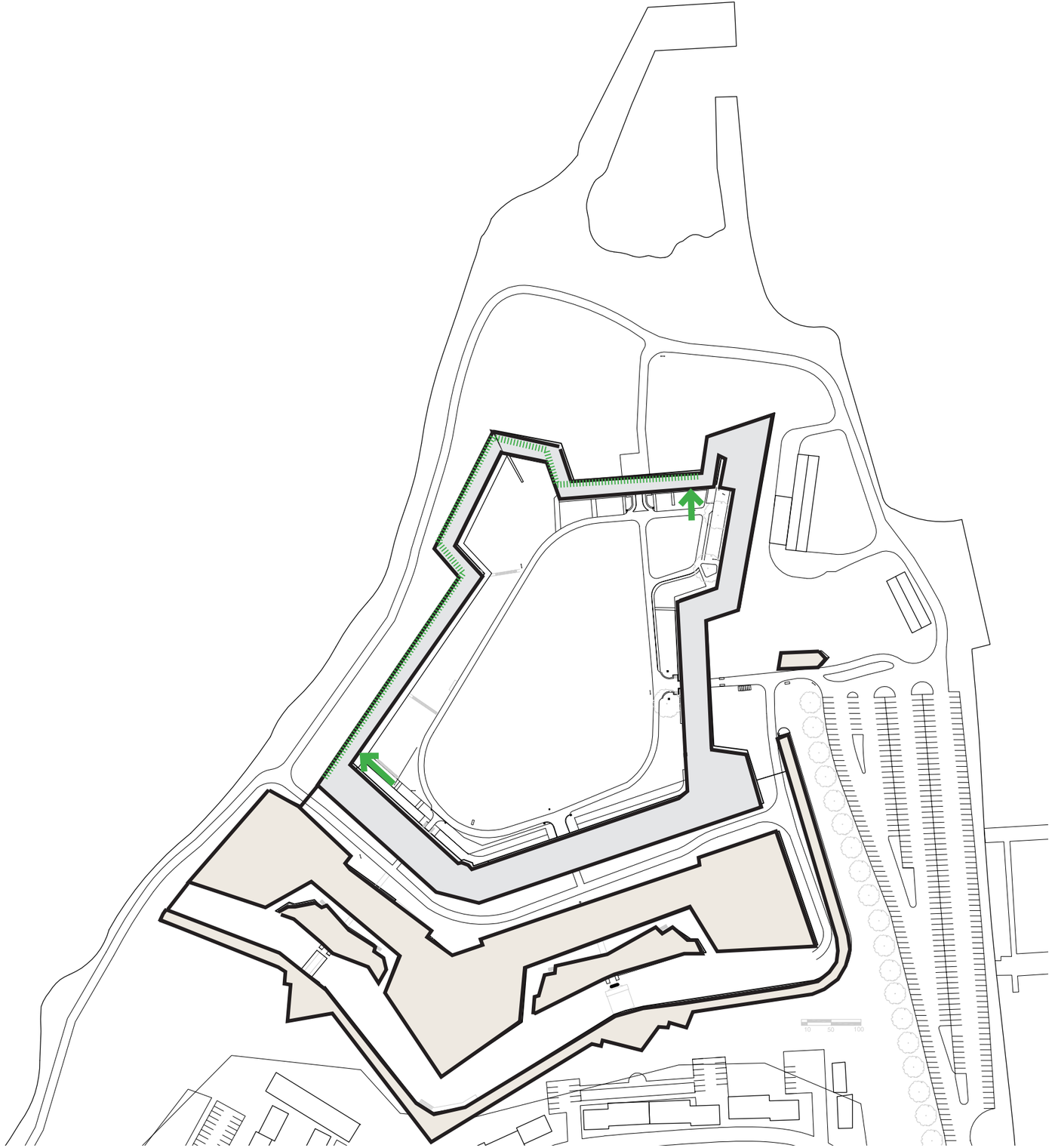
Interpretive Plan

- The Fortification Tour: Interpretive panels along deck

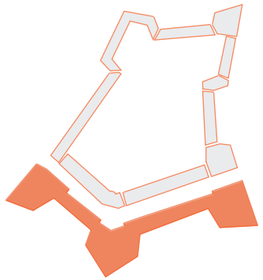
Operations

- Admission with special ticket only
- Rental for special events





10 Crownworks Access



PROJECT SUMMARY:
Provide access to the Crownworks

Building and Landscape Scope

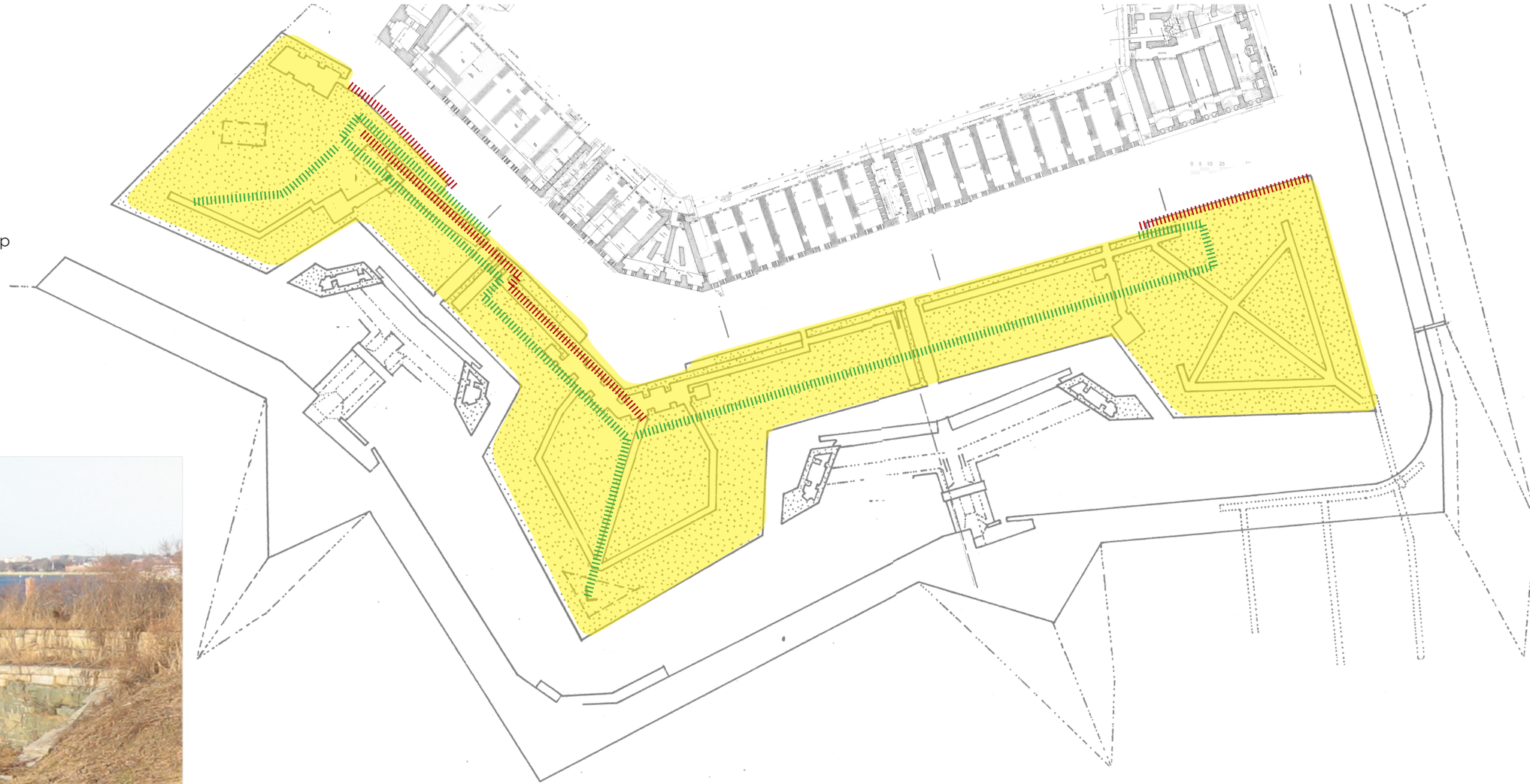
- Clear all vegetation
- Add paved path
- Reset damaged cordon stones
- Add barriers to protect the vertical drop

Interpretive Plan

- Interpretive trail and maps

Operations

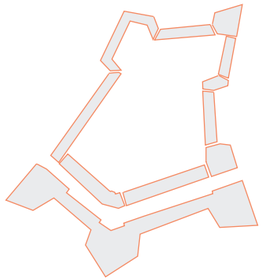
- Admission with special ticket only
- Rental for special events





Level 1 : Preserve
Level 2 : Restore
Level 3 : Rehabilitate
Level 4 : Interpret
New Construction
Guardrail/ Barrier
Path or Deck Access
M Masonry Repair
S New Support
Floor Repair
10 50 100

11 North Outerworks Interpretation



PROJECT SUMMARY:
Provide landscape treatment to interpret the removed Outerworks on North Side of Fort

Architectural, Structural, Landscape

- New flush paving or gravel to outline exterior wall of the Outerworks

Interpretive Plan

- Interpretive panels along path

Operations

- No admission required





Interpretive Plan







INTERPRETIVE PLAN

Interpretive Approach
The interpretive treatments described in this report are directly related to the phased architectural improvements proposed for Fort Adams. In the architectural portion of this Master Plan, varying degrees of conditioned, "interpretable" space have been created. These range from newly opened outdoor venues; to stabilized (habitable though unconditioned) indoor spaces that are wonderfully suggestive of historic ruins; to fully-restored and conditioned, formal, gallery-like space. This report has both informed and reacted to a new architectural program for Fort Adams.
In newly opened outdoor venues, the interpretive plan is aimed at augmenting guided tours and serving a new program of self-guided visitation. Outdoor treatments include updated signage; demonstration-based and robust outdoor elements; a map and self-guided trail of portions of the Outerworks; and sculptural treatments that humanize spaces where people used to work, sleep, dine, and drill their defensive strategies.

In stabilized and "lightly restored" indoor spaces, the aim is to provide a tier of interpretation that mainly augments guided tours and provides a sense of privileged access for having purchased a ticket. In these spaces, innovative audio and audiovisual programs bring architectural settings to life with minimal intrusion of physical props, displays and graphics.

In fully restored, conditioned areas of the Fort, the interpretive program is the most permanent and formalized. Exhibition installations will feature instructive films, evocative scenic treatments and artifact displays – all housed within museum-quality space.

Overall, the interpretive program is intended to do three things:
1. Shift the experience one has at the Fort to something more engaging, more memorable, and more distinctly marketable for the Newport area;
2. Humanize the Fort — that is, underscore the intersection of living and working at Fort Adams by diverse people young and old, enlisted and civilian people, male and female, local and not, famous and not, etc.
3. Dovetail the interpretive experience with other uses for the Fort: rental functions, festivals and special program events, and educational programs for school groups and special interest group visitors who come en masse.

Specific tenets that underpin these goals include:
1. Provide context of place – Interpret the Fort as a local attraction with national significance.
2. Structure the storytelling – The story of Fort Adams can be told narratively (like a novel) or anecdotally (like a collection of short stories).
3. Acknowledge Fort Adams as an artifact – the building can be interpreted as a ruin and imagined as a re-creation.
4. Recognize the many motivations of visitors – They may wish to be guided by an authority, or may choose to guide themselves. They may choose no guide at all.
5. Distinguish visitors and users – Users may come for a once-in-a-lifetime event while visitors may choose to come repeatedly – for day use.
6. Plan an experience that is informative and fun – This place could be seriously entertaining.

Phase One: Open the Parade Ground
Phase one permits visitors to enter the Fort from the east and north gates, and offers them free circulation throughout the formal parade grounds and select (stabilized) interior spaces. Newly positioned gates permit long views into the Outerworks. These views will pique visitors' interest in taking an adventurous tour of the Fort and help them appreciate the scale of the fortification.
With the opening of the Fort Adams interior, permanently affixed, interpretive offerings should be meaningful yet minimal for the sake of maintenance, and so as to make the guided tours most attractive and profitable.
The primary goals with any installed interpretive enhancements at this time are to:
- Provided a powerful sense of historic place;
- Whet the visitors' appetites, provoking them to participate in guided tours; and
- Support the tour guides' programs by providing visual aids like models, pictures, exploded views, demonstrations, etc.

Recommended Initiatives: Arrival and Orientation
With the Open Fort, visitors are more likely to make an immediate beeline to the Fort entrance so it is important to anticipate this and support this visitor behavior with arrival and orientation information.

Once inside the Fort, tourists (whether they're guided or not) need a sense of the "lay of the land." It is helpful – essential – to have an understanding of Newport's place on the eastern seaboard, and the Narragansett Bay's configuration with regard to Newport, Boston and New York. These ideas are hard to grasp without a good map. Orientation maps can be simple, flat graphics or more elaborate sculptural elements.

It is helpful to have a means of posting a tour schedule and other events that may be happening that day. Something of this nature says: "start here!"
Recommendations include:
- Exterior arrival kiosks, placed on the outside of the perimeter wall, will welcome visitors to the Fort and offer them the following information:
- A map of the entire Fort so that visitors may comfortably plan their visit and anticipate the times and distances of paths within and around the Fort. Interpretive encounters (both indoors and out), restrooms, gift shopping, and open picnic areas should be highlighted to boost the sense of interpretive and recreational value and provide ease of navigation. People need to know what they're investing in. An inset map of the east coast from Maine to New York will allow this map to be used by interpreters to highlight the contour of the eastern seaboard.
- A tour package "menu" graphic that includes times and ticketing information
- A Today's Programs announcement board such as a write-on/wipe-off surface or a corkboard that is covered. It's a simple solution that works for educators and docents, and implies that the Fort is a very dynamic place.
- An interior arrival kiosk (a duplicate of the exterior arrival kiosk) should be placed within the parade grounds so that visitors do not have to exit the Fort to be reminded of events. Hand-held maps may be offered here in a pick-up/return box, and a posted URL could permit people to download a park map or narrated tour onto their smartphones.
- Interpretive wayside panel about the Outerworks, placed at the view to the inner ditch (to be re-positioned when the Outerworks is opened to the self-guided public).

Recommended Initiatives Inside the Fort

The existing signage trail is providing ample coverage of the Fort's overarching interpretive messages. With the opening of the parade grounds, these signs will finally be living up to their fullest potential. The locations of these signs should be highlighted on the afore-mentioned map (and any other hand-held items) so that visitors may construct their own self-guided tour if they choose.

A new menu of live-guided tours will be offered. They are each aimed at a specific visitor interest, and therefore have a distinct interpretive "slant." Each features a key destination. Without joining one of these tours, these destinations are inaccessible. They may be offered on foot (as they are today) or upgraded to include transportation options like electric tram or Segway Scooter.

Recommended tours include:

1. The Fortification Tour: Marketed to the history enthusiasts, this tour features the story of Fort Adams as a necessary tool in the protection of America's coast. Highlights include: Why the Fort was built, it's national significance, and the need for coastal fortification. Key stops on the tour include the overlook from the existing Terreplein deck with its awesome views of Narragansett Bay, and the North Casemates with its restored interior and inventories of cannons, guns and projectiles. In the maze of the Outerworks and Tenaille, guests may be asked to play out some of the many "what-if" scenarios of attack by land and by sea. The privileged access feature is the North Terreplein Overlook.
2. The Design Marvel Tour: This tour will feature the Fort as architecture — the Fort deconstructed. Interpretation will center on how the Fort was designed and built, the ingenuity that went into its design, the configurations of its layout and the functions of particular places. Guests will don hard-hats to come into close proximity of the restoration efforts. As restoration reveals more and more design intent and ingenious construction, (and opens up more safe touring opportunities within the buildings) it is anticipated that this tour will be updated quite frequently. It could be marketed as having this kind of "breaking news" feature. Key stops on the tour will include the brickwork of the Northeast Bastion, the Northwest Curtain (where three tiers of canons were once poised), and the North Casemates Gallery, where the recovered canon is featured. Here, we can imagine the operation and see the ingenious details for moving such heavy artillery and venting the interior casemates of smoke. The privileged access feature is the Northeast Bastion.
3. The Stories of the Fort Tour: This tour features the human side of the Fort. Who lived here; for how long; and for what purpose? The stories of children and women, immigrants and locals are among the narrative. Feature destinations include the exterior of the North Scarp, where we can imagine the delivery, by sea, of the raw materials like bricks and granite, the Officers' Quarters (in various stages of restoration), the Barracks (as we pass through the south gate), and the Listening Tunnels in the Outworks. Here especially, a local audio recording (as simple as a hand-held boom box) could recount some of the oral histories of what it was like to be stationed in such a dark and cramped space. The privileged access feature is the interior of the Officers' Quarters.

Each of the tours will be preceded by a time-and-place orientation that places the fortification into historical and geographical context. This portion of the tour will make use of the orientation maps that are placed within the parade grounds proper. There should be major upgrades to directional and branding signage as part of the first phase. Self-guided visitors need guidance. Additionally, several of the wayside graphic stations may be outfitted with demonstration elements like building blocks that reveal the marvelous strength of a build-it-yourself catenary arch, or a touchable reproduction of bar shot of the type that was once hurled from Fort Adams' West Curtain.



A scale model of the city of London, which visitors can appreciate in the round, gives visitors the comfort of seeing the lay of the land.



A replica of the State Capitol dome in Texas uncovers hidden structures and reveals the marvels of the dome's design



Life-scaled images, printed on multiple curtains of scrim, give a layered and fleeting feel to the history of the Demi-Bastion. (Smithsonian Institution: Museum of American History)



"Lightly restored" spaces are evocative and provide a sense of heightened encounter or privileged access.



High impact demonstration elements needn't be overly complex.

INTERPRETIVE PLAN
CON'T

Phase Two: Open the Outerworks
Opening the Outerworks permits visitors to explore the labyrinth of shaded passageways that were designed to concentrate, direct and confuse an enemy attack from the south. The Outerworks have the feeling of a series of cool corridors and "outdoor galleries" that might offer comfortable respite during hot summer days. Visitors might find a sense of seclusion and privacy if they choose to spread out a picnic blanket or sit on a bench in the shade of sloping earth and towering granite walls. And of course, these areas are ripe with opportunities for historic interpretation.

Because these galleries may prove difficult to patrol, any permanently installed interpretive elements may be subject to misuse or vandalism. There are, therefore, few elaborate recommendations made here.
The primary goals with any installed interpretive enhancements are to:
- Assist visitors' navigation of the Outerworks;
- Help visitors imagine a "by land" assault scenario; and
- Support the tour guides' programs by providing visual aids like models, pictures, exploded views, demonstrations, etc.

Recommended Initiatives: Way-finding and Interpretation Trail
As stated above, the Outerworks were designed to confuse people. With the opening of the west gate (directly into the inner ditch) and two passageways through the south wall (into the inner ditch), visitors will experience a free circulation into a very thrilling, albeit confusing, area of the fort.
Recommendations include:
- An arrival kiosk, placed on the outside of the perimeter wall at the west gate. Similar to those recommended for phase one, the kiosk will welcome visitors to the Fort and offer them a map of the entire Fort so that they may comfortably plan their visit and anticipate the times and distances of paths within and around the Fort.
- An interior arrival should be placed within the parade grounds just prior to the southwest passage into the parade. Hand-held maps may be offered here in a pick-up/return box, and a posted URL could permit people to download a park map or narrated tour onto their smartphones.
- A system of numbered interpretive stops will work alongside the hand-held maps to escort visitors on a logical self-guided tour of the Outerworks. The maps will provide both plan (map) view and a cross section of the Outerworks and main Fort. Key stops/ ideas include the following:

1. The Outerworks of Fort Adams is the most complex system of land defenses of their kind in all of North America.
2. Attack by Land: identified as the "killing zone" by the Fort's designer for its impenetrable configuration and the concentration of armed men at post. Beginning with the posterns and wooden doors of the interior ditch, visitors are essentially reversing the probable sequence order of attack from the south.
3. Cannons (flank howitzers) trained on the doorway of the posterns; riflemen at the loopholes of the main Fort and crossfire from the counter scarp; and canister shot from the crown works.
4. The Fort's exterior ditch: rifle and howitzer crossfire.
5. Listening Tunnels
6. The Glacis: a long sloping (and exhaustive) approach to the southern front of the Outerworks.
7. The Redoubt, one mile to the south.

Interpretive artists programs have proven successful and engaging in other outdoor historical venues. These kinds of outdoor installations can help to recall lived-in and worked-in spaces and may assist tourists in constructing their own associations and memories. Such installations provide attractive photo opportunities. People use them to document their visit and use them to share their experiences with others.

Future Phases: Interpretive Initiatives for Select Restorations

1. Northeast Bastion
In the Northeast Bastion, outdoor grade signage and dramatic lighting will interpret the specialized location, construction, and role of the powder magazines in storing munitions. In addition to serving tours, the Northeast Bastion is a unique space with appeal for rental functions. Guests to functions that are staged in the Northeast Bastion will be able to linger and contemplate many historic, photographic reproductions of this area of the Fort (or other forts for comparison). As this area features some of the most interesting brickwork and some of the riskiest activities of the Fort, there may be a small cross-section model of the magazine, and a sculptural interpretation of what was stored here (similar to the cannonballs stacks seen earlier).

2. Northeast Officer's Quarters
The Officer's Quarters and West Curtain Wall of the Fort (see item 7) are among the most highly specialized locations within the architecture and will be used to interpret several important aspects of living and working at Fort Adams: military leadership, the transition of the Fort over time, the defense of Newport from attack by sea, and the Fort's innovative defense tactics as tied to architecture.
The primary goals for these interpretive installations are to:
- Expand the interpretive media to large-format projection and audio;
- Augment tours with a lively and memorable experience that no other fort offers, i.e. create a signature experience at Fort Adams; and
- Use non-graphic means to showcase the intersection of architecture, technology and personnel in the workings of the Fort.

The Officer's Quarters will be restored to different degrees to represent three distinct time periods in the Fort's history. One section will represent the most original configuration of the Fort: when granite walls and slot-shaped loopholes protected men with small arms (1855). In another section, fine Officer's Quarters – to house the likes of notable Generals – are finely detailed with relatively smooth plaster walls, decorative ceiling rosettes, ornate moldings, and homey seating areas with fireplaces (1875). Finally, one of these fine Officer's Quarters will have been "advanced" to that of efficient office space (for the time) and living quarters for enlisted men (1950).

Recommended Initiatives for the Officer's Quarters
Within each of these restored rooms are mounted several audio spotlights and an audio server. Audio spotlights, as their name implies, "beam" sound to very specific locations and do not produce any sound spill. One must be "in the light" to hear the

audio program. Visitors will be able to roam the restored spaces and enter into several of these audio hotspots. The program is as if the memories of enlisted men and officers still occupy the spaces. It is truly an "if these walls could talk" kind of experience. The voices of notable officers and visiting presidents will feature in the program. The technology is very non-invasive.

3. East Officer's Quarters
The East Officer's Quarters will be stabilized. There is no immediate plan for additional programming.

4. Southeast Demi-Bastion and
5. South Barracks
Kitchen, food stores and mess halls were located in the southeast corner of the Fort, making these locations very unique and personal. All visitors – military buffs or not – can appreciate the need for creature comforts like hot food, restful privacy, and camaraderie. Through graphics, projected shadows and life-sized images on scrim material (hung in the lofty spaces), these activities will be brought to life. The scrim technique is mysteriously translucent and emotively ethereal. Timed lighting controls may dissolve the images into each other, creating a feeling of overlapping histories and full occupancy in the mess hall. Tour guides will interpret the ongoing restorations of the Southeast Demi-Bastion.



Audio spotlights create a unique sound environment for each person in this gallery.

Large format projection and static props bring a ruinous landscape to life. (WWI Museum)



A classic arrival kiosk: map and information available immediately upon arrival.

6. Southwest Barracks
With the restoration of the Southwest Barracks, Fort Adams will be home to a true museum with conditioned and secure exhibition spaces. Additionally, a multipurpose room, perched above the museum, will be home to interpretive elements aimed at heightening the historic context of the space.

On the parade level (ground), visitors will find a 900 square foot Welcome Gallery. Directly adjacent to it, one finds an 1800 square foot Fort Adams Museum space. The collective goals for these spaces are to:

- Welcome and orient visitors most formally
- Process and dispatch paid tours of the Fort
- Provide a home for long-term exhibition installations
- Heighten the potential for the Trust to collaborate with other museum partners
- Give the Trust the means through which to borrow and display important and compelling (though potentially sensitive) historic material
- Increase the value of the paid experience at the Fort

Above the museums, a multipurpose room is offered for business meetings and formal parties and functions. Guests to these functions will be able to view historic photographic reproductions and step out onto a portion of Terreplein deck for views of the Fort and surrounds. The overlook views are interpreted with simple exterior-grade signage and outdoor lighting.

Recommended Initiatives for the Southwest Barracks
The Welcome Gallery is an ideal venue for a classic orientation film and orientation exhibits. With the opening of the Parade and Outerworks, visitors could be encouraged to start their tours from the Southwest Barracks and enjoy the Welcome Gallery exhibits prior to their departure. It is a moderately conditioned, relatively small space (with a door to the



Robust outdoor stacks of cannon balls give these visitors the engaging inspiration to fill in the story by using their imaginations



Savvy visitors appreciate newer interpretive technologies.

outside), and it is suited for a ticketing desk, a small sculptural model of the Fort, an informal A/V presentation with bench-style seating, story graphics, and simple casework to house robust objects. The interpretation within this gallery will answer some of the most basic visitor questions:

- Why was Fort Adams built?
- What's so special about it? Who lived and worked here?
- What can I do here with the time that I have?

Gifts and souvenirs can be sold from this space as it is permanently staffed. One staff person can facilitate the cash transactions of tours and gift sales. The larger gallery, with its set of controlled interior doors, and being more conditioned and secure, will house semi-permanent exhibits lasting upwards of five to eight years. It is anticipated that these will be built from collaborative partnerships between the Fort Adams Trust and other agencies and institutions including, but not limited to, the US Naval War College, The Department of Environmental Management, and other local and national agencies. The quality of the space is such that uniforms, wooden items, photographic material, even ephemeral items – the most sensitive of paper documents, posters, and personal letters – can be displayed safely under controlled environmental conditions. This space is adjacent to a collections storage facility.

The Welcome Gallery and gift shop will be open free of charge. The Museum may be offered with a paid admission and/or "piggybacked" onto any of the tour packages, i.e. tours would conclude with a self-guided visit to the museum. When these museum spaces open, the gallery in the North Casemates could either remain as it is (with outdoor-grade exhibits housed in unconditioned space), or be turned over to the facility rentals program for banquet seating. It is not in the Trust's interest to try to maintain or staff two separate museum venues on site.

Recommendations include:

- Staffed information and gift shop sales desk operated by a single staff person
- Table-top model of the Fort and the state park peninsula with supporting graphics. Used by guides to set up their tours, and by visitors to identify points of interest
- Orientation film and bench seating to set up the historical narrative of Fort Adams
- Tour package and membership signage
- 1800 square feet of semi-permanent history exhibits
- Outdoor reading rails – graphics that compliment directly observable features.

7. West Curtain

The West Curtain wall will be stabilized and cleared of rubble. Where the ceiling has collapsed, visitors will be able to enter on the ditch level. Where the floor remains intact, they may be given access via a suspended bridge-platform from the parade level. This is a dramatic space with given darkness and echoing acoustics. It is a naturally occurring cross section of the West Curtain – a fitting place to interpret what kinds of fortification tactics were designed and drilled on the three levels of the western wall.

Recommended Initiatives for the West Curtain

The West Curtain will serve as a dramatic venue for projected visual imagery. The program, when activated by the tour guide, brings the space to life by recreating scenes from the past.

Multiple projectors will "fill in" the ruins of the building and recall the numerous cannons and military men that drilled the process of loading, firing and reloading. Through the use of projected imagery and a few simple, well-lighted props, the walls of the Fort will melt away to reveal the harbor channel beyond and then reappear, as if by magic, to show the three tiers of firepower that once stood here. The shouts of men and the sound of cannon fire will be the main source of audio. Smoke will fill the air. Pauses in the program will permit the guide to narrate the scene that unfolds before visitors that are perched on the restored bridges and seated upon the stabilized floorplanes. This experience could be offered as a timed event.

8. Northwest Bastion

Upon restoration, the Northwest Bastion (the only full bastion facing the bay) will be returned to a most authentic condition with its original open casemates and hardwood floors. Here, the construction effort of the Fort may be interpreted most effectively and feature demonstration exhibits of raw and finished materials, and the intersection and joinery of wood, stone and shale. The immigrant labor story may be housed here as well. The Northwest Bastion will be open to guided tours and able to be propped with exhibition elements (both permanent and temporary) that can withstand fluctuations in temperature and humidity.

9. Terreplein

A boardwalk-like deck will afford visitors the opportunity to "patrol" the Terreplein that runs between the Southwest Barracks to the currently installed Terreplein deck that now exists over the powder magazine of the Northeast Demi-Bastion. This is an un-interrupted run of just under 1000 feet.
The configuration of west and north facing views (given by the straight curtains and faceted Bastions) offer unparalleled views of Narragansett Bay and the channel into Newport Harbor.

Overlook graphics, totaling five in number, will be installed with this new decking and at the existing deck at the Northeast Bastion. Each will address one of the following subjects respectively and when possible, identify sites on the opposite shoreline:

1. A Need for Coastal Defense – with great views of the channel and harbor, one can appreciate and imagine the arrival of enemy ships by sea. The position of Fort Adams on the peninsula proves its strategic position.
2. A Web of Defense – from Rodman Canons mounted on the West Curtain, to the first anti-submarine nets that were laid across the harbor like a pair of giant doors, to the other gun sites on Conanicut Island and the western shore of Naragansett Bay, Fort Adams is at the hub of a web of defense.
3. The Arrival of Granite, Bricks, Shalestone and Lumber – with a view of the lagoon on the northern tip of the park, one can imagine the cargo sloops that delivered raw materials to the worksite between 1824 and 1857.
4. A Lofty View from a Low-profile Fort – although the view from the Terreplein may feel very high in the air, the Fort was actually built with quite a low and less visible profile. This panel will feature views of Fort Adams as seen from the water, from varying distances and perspectives, and under varying environmental conditions.
5. A Fort of All Sorts – a showcase of photos that features the Fort in its contemporary role: host to festivals, vantage for yacht races, the best view of the sun setting over Newport.

10. Crown Works Access

Restoration of ramps and installation of safety barriers will permit the opening of the Crown Works to the general public. With these improvements, interpretation of the elaborate Crown Works will be via the interpretive trail and hand-held map described for the Outerworks.

11. North Outerworks

If the Fort eventually interprets the North Outerworks via some form of landscape element, one wayside sign, at the location where the landscape treatment first crosses the footpath (from the parking lot), will be necessary. This may be interpreted through live tours as well.

Project Renderings







Open the Parade



EXISTING CONDITIONS

Open the Outerworks with Crownworks Access Shown





EXISTING CONDITIONS

2 North East Officer's Quarters



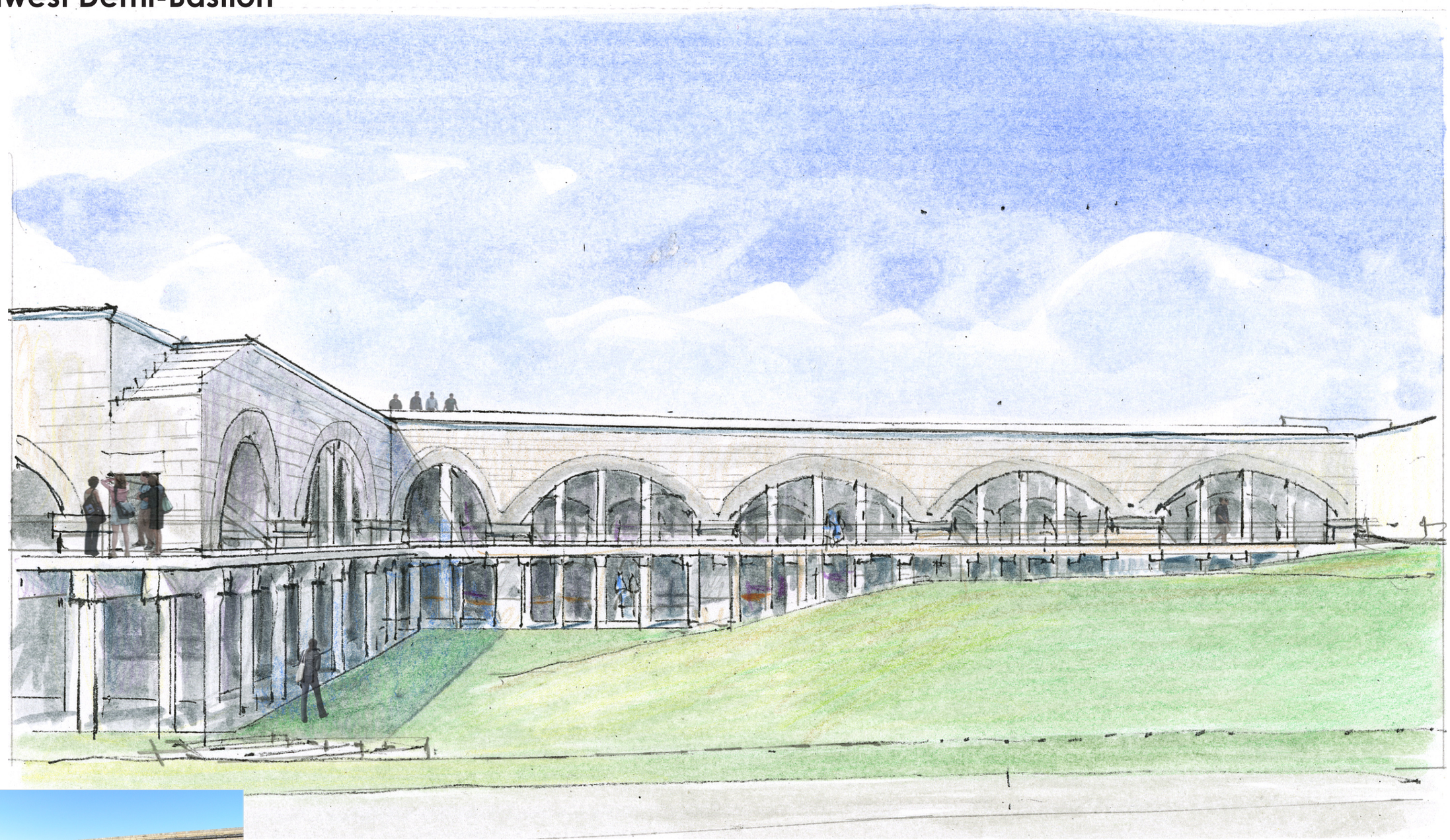

EXISTING CONDITIONS

6 Southwest Barracks




EXISTING CONDITIONS

8 Northwest Demi-Bastion



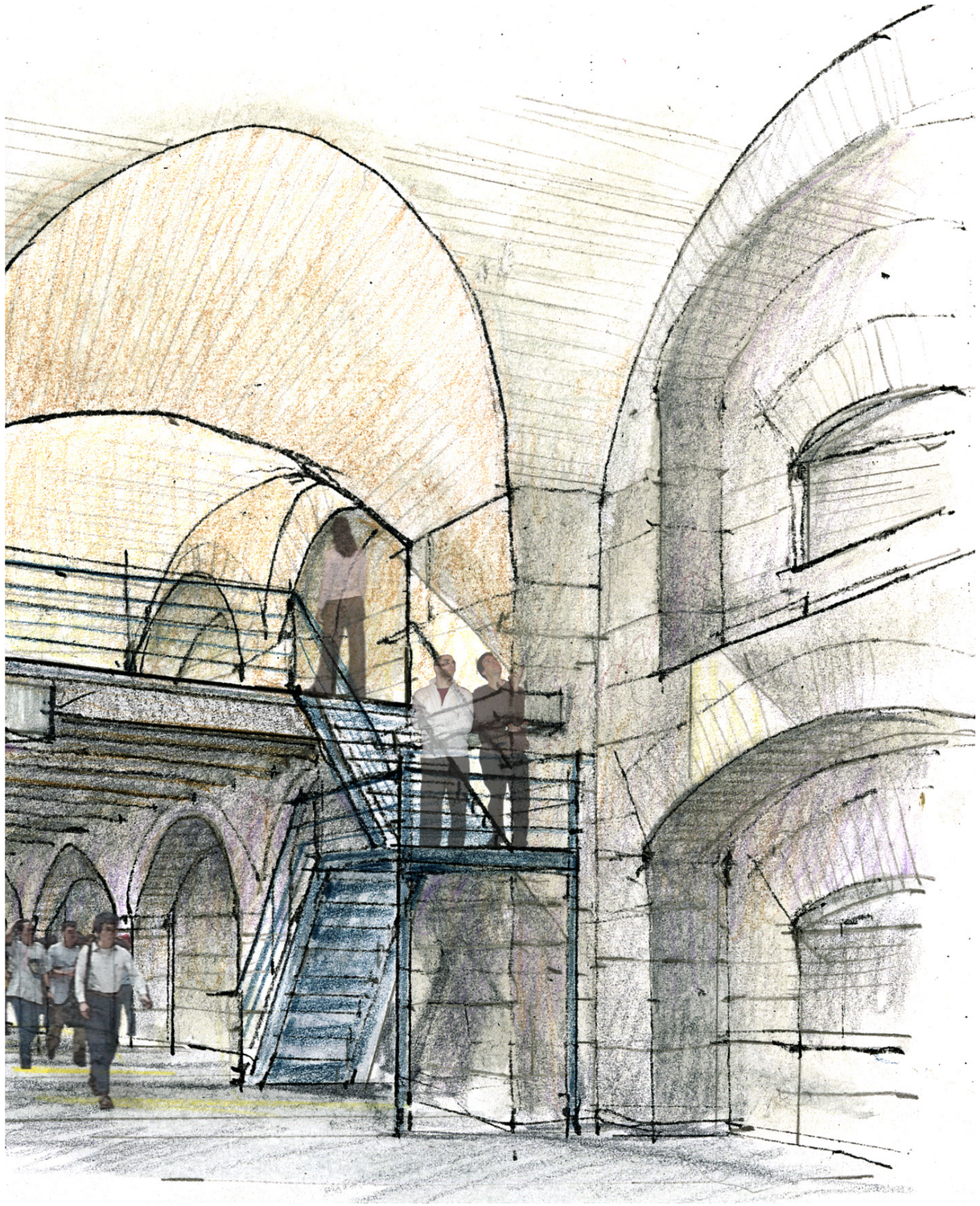


7 West Curtain





7 West Curtain





Project Budget and Implementation







PROJECT BUDGET

Construction cost estimates for Opening the Parade Ground, the Outerworks, and the individual stabilization and restoration projects were provided by Davis Langdon, and were based on the site visits and the assessments, drawings, and project descriptions developed by the design team and provided in this report. Construction costs have been calculated from historical records and/or discussion with contractors and reflect current bid costs in the area. Estimates were also informed by actual cost data provided by the Trust from the recent North Casemates and Youth Overnight Barracks projects.

All costs relevant to subcontractor work include the subcontractor's overhead and profit unless otherwise stated. The mark-ups cover the costs of field overhead, home office overhead and profit and range from 15% to 25% of the cost for a particular item of work.

Pricing reflects probable construction costs obtainable in the project locality on the date of this statement of probable costs. This estimate is a determination of fair market value for the construction of this project - it is not a prediction of low bid. Pricing assumes competitive bidding for every portion of the construction work for all subcontractors and general contractors.

The estimates are based on prices which are current to a construction start date at the time of this report (May 2010). Escalation should be added to the estimated costs (approximately 2%-3% per year) to the mid-point of the actual construction period. The estimate assumes that the general contract will be competitively bid with a General Contractor and subcontractors, and the Contractor will be required to pay prevailing wages. Experience indicates that a fewer number of bidders may result in higher bids, conversely an increased number of bidders may result in more competitive bids.

Construction and Exhibit costs are referred to in this budget as "hard" costs. Budgets for fees and other non-construction related costs are referred to in this budget as "soft" costs and have been estimated by the design team. There may be additional soft costs not delineated in this budget, but major soft costs have been included.

A Total Project Budget (hard + soft costs) has been estimated for the first "Open the Fort" Phase. For the subsequent individual projects, only hard costs (construction + exhibits) have been estimated.

The last item listed in the Future Initiatives, "Exterior Fort Repointing," is an estimate for the complete repointing of the masonry on the exterior of the Fort. While this restoration work is not required immediately, the future work is of such a scale that an estimate was prepared for long term planning.



RECENTLY RESTORED NORTH CASEMATE



RECENTLY RESTORED NORTH CASEMATE

"Open the Fort" Project Costs

Hard Costs		
Open the Parade Ground Construction Cost		$1,094,811
Exhibit Budget (includes exhibit design fee)		$39,000
Construction Contingency (10% of Construction Cost)		$113,381
Total "Hard" Costs		**$1,247,192**
Soft Costs		
Owner's Consultants		$100,000
Testing and Research	$25,000	
Base Drawings	$20,000	
Lighting	$15,000	
Historic Preservation Consultant	$20,000	
Additional survey	$20,000	
Architect/Engineering Team		$200,000
Architect		
Structural		
MEP		
Landscape		
Civil		
Marketing & Branding		$160,000
Fundraising (fee depends on amount to be raised)	***TBD***	
Marketing Consultant	$45,000	
Advertising	$50,000	
Website Development	$25,000	
Temporary Staff	$25,000	
Merchandise Stock for Gift Shop	$15,000	
Consultant Expenses (10% of design fees)		$46,000
Grand Opening Events		$35,000
Soft Cost Contingency (10% of all "Soft" costs)		$54,100
Total "Soft Costs"		**$595,100**
"Open the Fort" subtotal (Hard + Soft costs)		$1,842,292
Owner's Project Contingency (10%)		$184,229
"Open the Fort" Total Project Cost		**$2,026,521**

Future Initiatives

*** Construction costs exclude design and other "soft" costs.**
**** Exhibits / Interpretation includes exhibit design fees.**

Open the Outer Works		**$1,644,456**
Construction - Inner Ditch *	$267,853	
Construction - Outer Ditch *	$730,265	
Construction - Otherworks *	$476,142	
Exhibits / Interpretation **	$20,700	
Construction Contingency (10% of Construction Cost)	$149,496	
Northeast Bastion		**$753,088**
Construction *	$675,625	
Exhibits / Interpretation **	$9,000	
Construction Contingency (10% of Construction Cost)	$68,463	
Northeast Officer's Quarters		**$1,277,052**
Construction *	$1,130,956	
Exhibits / Interpretation **	$30,000	
Construction Contingency (10% of Construction Cost)	$116,096	
East Officer's Quarters		**$70,540**
Construction *	$64,127	
Construction Contingency (10% of Construction Cost)	$6,413	
Southeast Demi-Bastion		**$1,444,179**
Construction *	$1,312,890	
Construction Contingency (10% of Construction Cost)	$131,289	
South Barracks		**$3,221,313**
Construction *	$2,928,466	
Construction Contingency (10% of Construction Cost)	$292,847	
Southwest Barracks		**$11,276,992**
Construction *	$9,387,811	
Exhibits / Interpretation **	$864,000	
Construction Contingency (10% of Construction Cost)	$1,025,181	
West Curtain		**$3,590,965**
Construction *	$3,084,514	
Exhibits / Interpretation **	$180,000	
Construction Contingency (10% of Construction Cost)	$326,451	
Northwest Bastion		**$2,244,953**
Construction *	$2,028,866	
Exhibits / Interpretation **	$12,000	
Construction Contingency (10% of Construction Cost)	$204,087	
Terreplein Deck		**$1,293,100**
Construction *	$1,160,545	
Exhibits / Interpretation **	$15,000	
Construction Contingency (10% of Construction Cost)	$117,555	
Crownworks Access *		**$318,779**
Construction *	$289,799	
Construction Contingency (10% of Construction Cost)	$28,980	
Outerworks Interpretation *		**$389,962**
Construction *	$354,511	
Construction Contingency (10% of Construction Cost)	$35,451	
Exterior Fort Repointing *		**$1,740,237**
Construction *	$1,582,034	
Construction Contingency (10% of Construction Cost)	$158,203	

PROJECT IMPLEMENTATION

Implementation Schedule
A preliminary project schedule was developed for the first phase – Opening the Fort – showing timelines for further testing and research, organizational activities, design, and construction. The project schedule assumes that State funding (disbursed in July of each year) will be matched by private fundraising on a schedule which aligns with the planning work.

Further research and testing is followed by the beginning of the design for Opening the Fort. The project schedule assumes that construction will begin at the end of the Fort's season October 2011, and conclude by Spring/Summer of 2012.

Organizational activities would run parallel to design and construction, preparing to reposition the Fort among Newport's many attractions, and preparing for the change to prepare for hiring, training, and implementing new organizational scale which would be in place by the 2012 Opening.

Fort Adams Implementation Schedule

Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

2010 2011 2012

0. PRE-DESIGN

- Materials Testing and Research
- Base drawings - Survey and Documentation
- Workshops

I. OPEN THE PARADE

Schematic Design

- Design for barriers & dismantling
- Stabilization design
- Parking lot redesign, ADA modifications
- Cost Review
- Workshops

Design Development

- Architectural Design
- Engineers/Consultant Design
- Cost Review
- Regulatory Review & Approvals
- Workshops

Construction Documents

- 50% Review
- Bid Documents complete

Bidding / Negotiation

- Bidding
- Final Contract

Construction Administration

- Construction

Interpretation

- Schematic Design
- Design Development
- Construction Documents
- Contracting
- Fabrication
- Installation

Marketing & Branding

- Marketing Plan
- Website
- Public Relations
- Advertising

Fundraising

- State Funding
- Capital Campaign

GRAND OPENING

- Organization Ramp Up
- Grand Opening

Construction

Client Workshops

Document Release