ALTERNATIVE C: A SUSTAINABLE, HISTORIC CAMPUS FOR PUBLIC SERVICE (PREFERRED ALTERNATIVE)

The following actions would be in addition to those described as common to all alternatives. For additional information on all alternatives see Table 8.

Alternative Emphasis

The primary focus of the preferred alternative is to create a dynamic, sustainable, public service campus where the history of the East and South Barracks is preserved and interpreted, and to provide a model in integrating sustainability with historic preservation and rehabilitation. Education is a key part of this alternative, with an emphasis on interpreting the history of military occupation and the HBC in different locations throughout the barracks. This alternative is in keeping with Federal Management Regulations (41 CFR 102-79.55), which in part state, "Federal agencies must assume responsibility for the preservation of the historic properties they own or control. Prior to acquiring, constructing or leasing buildings, agencies must use, to the maximum extent feasible, historic properties already owned or leased by the agency." This alternative also emphasizes educating the public on environmentally sustainable practices, while at the same time remaining financially sustainable.

Adaptive Reuse

For Use by National Park Service and Partners

Under the preferred alternative, the National Park Service will have the option to move administrative functions to either building 991 or building 993, based upon future management and staffing options (Figure 10). Building 991 is well suited to be used in this function, with ready-made offices on the main floor, adequate storage in the basement, and a large meeting space on the second floor. Building 993 is equally suited for this function, with the added benefit of allowing a substantial portion of the building to be devoted to interpretation of early military history for the public. Currently, over 600 volunteers and staff use the costumes to portray fur trade and soldiers in the premier living history program in the Pacific Northwest. No static or hands-on military history exhibits currently exist on the VNHR. Building 993 provides an appropriate location for these critical NPS functions.

A portion of either building 991 or building 993 could also accommodate the park's living history, special events, cultural demonstrations, and costume collections, numbering over 4,000 items and growing by approximately 15% each year. The costumes and accessories are essential props for interpretive programs that include living history events, cultural demonstrations, and educational training programs. These collections represent a substantial investment of both federal and private funds, and require secure storage with controlled access and use. The costume department also has a substantial workforce of volunteers who fabricate and repair clothing and accessories, fit costumes to individuals, administer the costume loans, catalog new acquisitions, and conduct research to increase authenticity of the collection. Therefore, the space for the costume department would include secure costume and accessory storage, workrooms for fabrication and repair, office space for cataloging and recordkeeping, lockers, and changing rooms.

Building 400 would become the primary NPS maintenance facility, and building 401 would be retained for associated NPS maintenance use and storage. Building 753 may also be suitable for NPS maintenance storage.

As in alternative B, building 405 would be rehabilitated as a regional museum management facility for the National Park Service, partners, and the public.

Buildings 402 and 404 could be used for maintenance or storage use by the Fort Vancouver National Trust, U.S. Forest Service, or other partners.

For Use by Other Tenants

Under the preferred alternative, the National Park Service would seek to attract public agencies and organizations with compatible missions to the National Park Service to occupy office spaces. In addition to office use, a mix of other uses would be encouraged that integrates well with the rest of the VNHR. These uses may include nonprofit and community functions and limited commercial uses like retail shopping, restaurants, and a daycare. Overnight accommodations may be provided to support conferences, environmental field schools, school groups, and elder hostel groups. General residential use by the public is not anticipated under this alternative.

Cultural Landscape Treatment

Overall

Over time, the cultural landscape would be rehabilitated to support the multi-agency campus concept and increased visitation. Major objectives of landscape rehabilitation would include the depiction and interpretation of historic conditions, with a focus on HBC history in the South Barracks, and early to late military history in the East Barracks.

East Barracks

The military landscape in the East Barracks would be preserved, rehabilitated, and interpreted. Where feasible, restoration of the Oregon white oak Woodland Priority Habitat would be in accordance with recommendations from Washington Department of Fish and Wildlife. For example, the National Park Service would explore revegetating the MASH site with Oregon white oaks. National Park Service staff will approach this action with caution, given the potential for future archeological discoveries in this area.

To improve resource conditions, visitor experience, building conditions, and public safety, the National Park Service would also choose not to replace diseased or damaged Douglas-firs along the southern edge of the Parade Ground, which are noncontributing landscape features.

The National Park Service would also remove the gravel parking lot at the HBC Cemetery and replace it with turf or other materials in order to create a contemplative, park-like setting.

Throughout the East and South Barracks, the plant palette would emphasize water-wise, historic species dating to late military historic periods, as well as some compatible native plant species where appropriate.

As in alternative B, the National Park Service would seek to adjust park boundaries to include the western side of Fort Vancouver Way so that the National Park Service would own and be responsible for all HBC Cemetery grounds.

South Barracks

To allow extended restoration of the HBC cultural landscape into the South Barracks, building 422 would be proposed for demolition subject to appropriate compliance clearances. As feasible,

this robust landscape rehabilitation would include expanding the HBC Garden and Orchard, reconstructing the Summer House and the historic Maple Allée, and establishing an interpretive loop trail that connects visitor areas to various aspects of the historic site. The Maple Allée would be integrated with the screening and fencing of the maintenance yard.

Under the preferred alternative, the Fort Vancouver Village would continue to be a focus for interpretation and archeological investigation. In accordance with the site's *Long-Range Interpretive Plan* and the *Village Development Concept Plan*, particular emphasis would be placed on reestablishing landscape features and on interpreting the following sites:

- houses representing the diverse, multi-cultural population of the Village, and
- the sites and roadway between buildings 405 and 404 in the northern portion of the Village.

Interpretive activities or projects for this area may include reconstruction, living history events, exhibit panels, talks, tours, demonstrations, educational programs, and park-sponsored special events. Interpretation of the historic "Crossroads of the Pacific Northwest" would also be provided at the former MASH site or within the northern portion of the Village. Historic maps of the HBC and U.S. Army period both show a major intersection of historic roads, generally where East 5th Street and Alvord Road meet with Fort Vancouver Way. It appears that this intersection was in place at least by the early 1840s, and maybe as early as 1829. This intersection helped to define the landscape of the HBC and the U.S. Army and it is suggested that its importance could be demonstrated by interpreting it as, the "Crossroads of the Pacific Northwest." Interpretive activities could also occur on a pedestrian trail along a converted stretch of Alvord Road.

Development Character

Newly designed features such as shuttle stops, crosswalks, plazas, lighting, benches, street trees, picnic facilities, bike racks, and other site furnishings would be permitted and designed in accordance with accessibility standards and the historic setting. In keeping with the preferred alternative's emphasis on sustainable practices, the National Park Service would explore the use of cisterns for rainwater capture, solar panels, geothermal heat sources, and other technologies in ways that do not intrude on the cultural landscape but still provide opportunities for educating the public on these practices.

As in alternative B, East Barracks buildings would be repainted consistent with the paint scheme used at Officers' Row and the West Barracks. However, pending further research, NPS staff may explore restoring one or two East Barracks buildings to a historic paint scheme for interpretive purposes. Where allowed by policy and code, temporary and non-historic changes to buildings made by the U.S. Army would likely be reversed under this alternative, such as fire escapes and temporary access ramps. For plantings throughout the site, historic plant species would be preferred, with an emphasis on species that are water-wise. Some flexibility would be granted to include native species where appropriate.

As in alternative B, the National Park Service would implement the preferred alternative in the *Schematic Design Report for Fort Vancouver National Historic Site East and South Barracks Utility Upgrades* (2010).

Construction Activity

Subject to additional compliance, three contributing historic structures (buildings 422, 749, and 750) and three noncontributing structures (buildings 409, 710, and 787) would be demolished. At this time, all other buildings are slated to remain on site and be rehabilitated as appropriate

tenants and funding are secured. Rationale for removal relates to conflicts with HBC cultural landscape restoration and visitor access, as well as the poor condition of many of the structures as reported in the *Conditions Assessment*. For example, building 422 undermines the experience and restoration of the HBC cultural landscape south of East 5th Street. It is also in poor condition, the cost of repairs is estimated to be more than the current cost of replacement, and the building restricts access between Fort Vancouver and the future site of visitor parking.

New building construction will be limited, and proposed only if it is essential to support public use, enjoyment, and understanding. For example, construction of new buildings in the South Barracks would be limited to historic reconstructions and covered storage for NPS maintenance functions in the westernmost portion of the South Barracks.

As in alternative B, the National Park Service would proactively maintain envelopes of remaining buildings to maximize resource protection, energy efficiency, and water conservation, as feasible. In addition, NPS staff would seek to model and interpret these and other sustainable construction and maintenance practices for the public.

Visitor Use and Experience

The National Park Service would attempt to create visitor experiences that foster a sense of interconnectedness with other park and VNHR resources.

Public access would be increased under the preferred alternative as a larger number of buildings would be rehabilitated for occupancy and visitor use in comparison to the no action alternative. Visitors would enjoy opportunities to learn about the work of agencies on campus, because tenants of buildings along the Parade Ground would be encouraged to provide public access, interpretive exhibits, and public restrooms in building foyers. Visitors would also have opportunities to learn about sustainability, and how it may be achieved in a historic context. Sustainable practices and technologies would be located and demonstrated in ways that educate the public.

Public spaces in rehabilitated historic buildings would be refurnished to recreate the historic appearance of U.S. Army barracks buildings. For example, a prominent interpretive exhibit could be located in the park headquarters building (in either building 991 and/or building 993) and would be rehabilitated to a more historic appearance. This key visitor attraction would enable the National Park Service to better interpret early military history, which is part of the park's legislated purpose.

In order to complement the direct, person-to-person interpretation occurring elsewhere in the Fort Vancouver NHS, the National Park Service would provide interpretive opportunities primarily through non-personal services such as interpretive waysides, self-guided walking tours, personal media, and modest displays within foyers such as interior interpretive panels. The design of the interpretive exhibits and spaces would follow sustainable design and accessibility standards and would emphasize environmental sensitivity in constructing the exhibits: using nontoxic materials, conserving resources, and recycling materials.

The National Park Service would also host public demonstration events related to cultural heritage, such as American Indian history and culture, as well as educational events on sustainability. Programs and media would also be developed to interpret the trail associated with the restored Maple Allée in the South Barracks.

As in alternative B, the rehabilitation of building 405 as a regional museum management facility would provide the public with increased opportunities to appreciate and learn about the region's archeological and museum resources. The National Park Service would also promote retail use of building 410 in order to serve as a central gathering place for the high number of visitors to building 405, the Discovery Trail, and Fort Vancouver. Public restrooms would be made available in building 410, as well as in key buildings throughout the site.

Healthy food options and the local use of food grown in the HBC Orchard and Garden would be encouraged, as well as themed dining opportunities in keeping with historic U.S. Army traditions.

As in alternative B, special events would also be accommodated.

Access, Circulation, and Parking

Pending future design and study, circulation for pedestrians and motorists would be enhanced over time throughout the site to create a welcoming, safe, and sustainable environment (Figure 11). The National Park Service would reduce paving, largely remove barricades and fences, and structure a safer, more coherent and legible experience for motorists and pedestrians. As part of all changes to the road network, the National Park Service would explore the use of sustainable stormwater management approaches, such as porous pavements, in a manner that respects the cultural landscape.

As in alternative B, physical gateways would be installed to help revitalize the urban interface and improve wayfinding. Sidewalks would be repaired and extended, and a new interpretive trail would be added through the reconstructed historic Maple Allée. Trail improvements would be coordinated with similar efforts in the surrounding areas pursued by the VNHR and other partners.

Parking for visitors to Fort Vancouver would be relocated to the area east of building 405 and west of building 410. The National Park Service would also ensure that future site design of this area integrates parking with new pedestrian connections between the Discovery Trail, building 405, and Fort Vancouver, as well as with the adjacent restoration of the HBC Orchard and Garden.

Internal roads would selectively be redesigned to improve circulation, safety, drainage, and appearance. For example, McClellan Road may be extended along a historic alignment to connect with the Park Road, pending further study. This new connection would weave together the East Barracks with the rest of the park and create convenient circulation among park destinations (e.g., the Fort, visitor center, and new NPS administration located in either building 991 or building 993). As in alternative B, Alvord Road may be realigned at the southern end to meet East 5th Street to improve pedestrian and vehicular safety. Under the preferred alternative, the existing southern portion of Alvord Road from building 733 to East 5th Street would be converted to pedestrian use only to provide for interpretation of the "Crossroads of the Pacific Northwest."

The National Park Service may also selectively remove extraneous roads and parking areas throughout the site (e.g., spur to building 710, minor drives between buildings 721 and 722, and between 752 and 753). In order to create a more contemplative, reverent setting, and in close consultation with affiliated tribes, NPS staff would seek the removal of extraneous parking lots laid on top of the HBC Cemetery, such as the gravel lot and the small lot west of building

721. The National Park Service would also enhance the authenticity of the historic setting by removing asphalt at the bases of buildings 987, 989, 991, and 993, where appropriate. Parking in this area would be limited to a small number of close-in handicap parking spaces, drop-off areas, and service access.

The need for additional parking and changes to traffic patterns would be further evaluated. To the extent possible, the National Park Service may limit the expansion of new surface lots in order to minimize damage to resources, yet new lots may be added with final locations determined by specific building needs and occupation levels. National Park Service staff would also pursue collaborative parking solutions with the City of Vancouver and other partners, including but not limited to shared parking on sites external to the project area.

Preferred parking for carpools and vanpools would also be considered. Most fleet parking would be located in the western portion of the South Barracks to accommodate expanded restoration of the HBC Village. Parking for tour buses, recreational vehicles, and trailers would be accommodated in the new Fort visitor parking lot, located east of building 405 in the South Barracks.

Park Operations

The National Park Service would need to increase staffing levels to accommodate expanded operations and needs. For example, a business manager would handle leases or other agreements possibly through property management companies and work with government Contracting Officers. Under this alternative, the National Park Service would strive to attract long-term tenants, with an emphasis on federal and other public agencies, which may help support this effort. This alternative would also require additional facilities and grounds maintenance staff, as well as several positions dedicated to the rehabilitation and reuse of the historic barracks buildings. Maintenance and cultural resource employees would ensure that all buildings and grounds are properly maintained and strive to increase use of sustainable maintenance practices. Attracting federal agencies to become long-term tenants would help further these efforts, as federal agencies are bound by executive orders on sustainability that require reduced resource consumption and increased use of sustainable technologies and practices.

As in alternative B, this alternative would require curatorial and cultural resources staffing for building 405, as well as other locations throughout the Barracks. Additional positions would be needed to address increased workload in the areas of resource management, maintenance, and law enforcement.

As in alternatives A and B, NPS staff would seek to defray costs to the government with income generated through lease agreements from tenants and would work with its partners as they consider the various options available to accomplish this work. It is intended, and expected, that future maintenance costs for any building not directly used or occupied by the National Park Service for operational or visitor use would be fully supported by revenue derived from the lessee.

Figure 10. Building reuse and site improvements for alternative C.

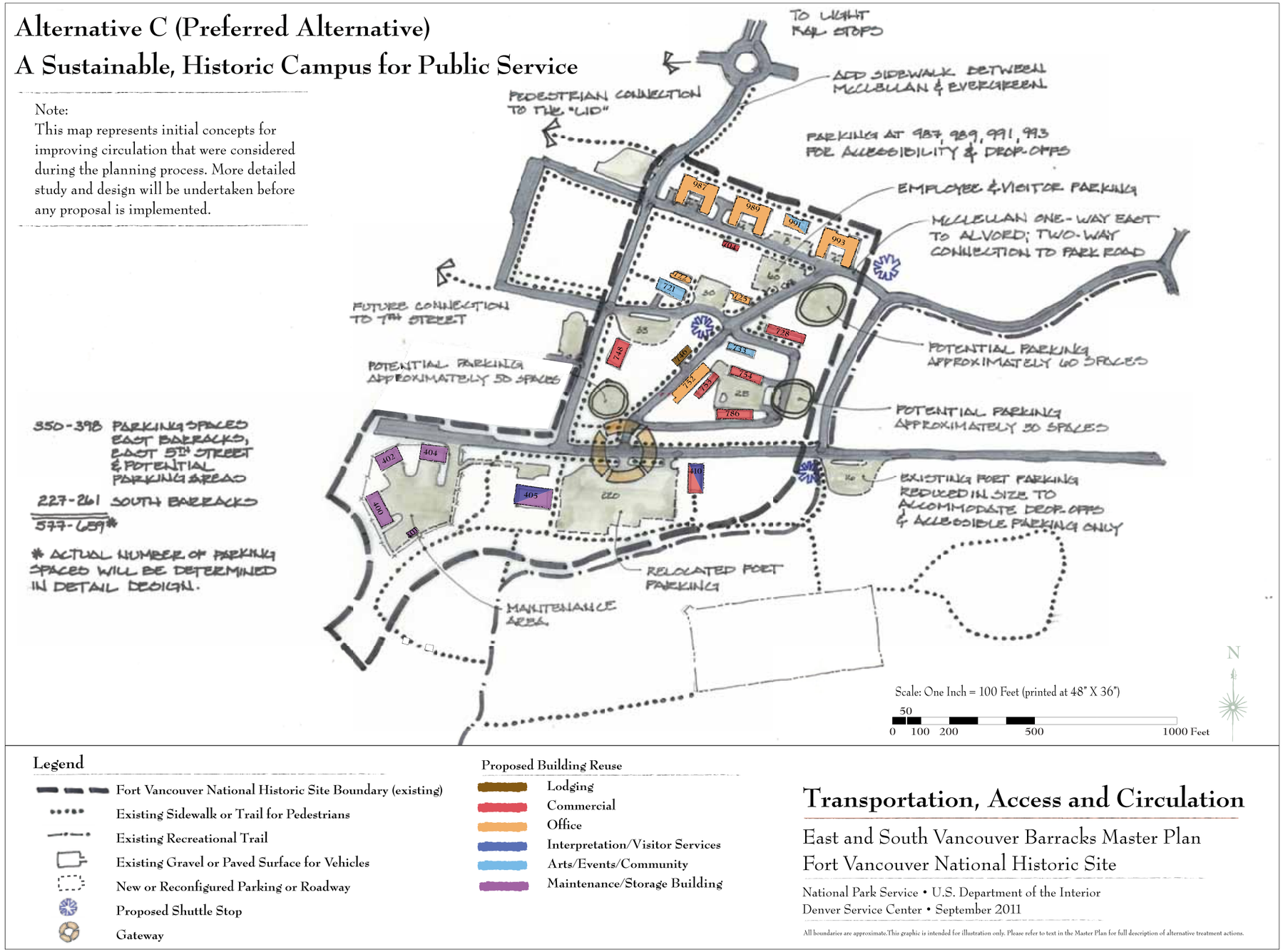

Figure 11. Transportation, access and parking recommendations for alternative C.

ALTERNATIVE D: A HISTORIC, EDUCATIONAL CAMPUS FOR ALL

The following actions would be in addition to those described as common to all alternatives. For additional information on all alternatives see Table 8.

Alternative Emphasis

This alternative places a heavy focus on educational, community and nonprofit uses that support the focused interpretation of site-specific history, including HBC history (1829-1860) south of East 5th Street and military history (1901-1948) north of East 5th Street. Buildings would be rehabilitated to serve as offices, classrooms, community spaces and a limited amount of complementary commercial services.

Adaptive Reuse

For Use by National Park Service and Partners

As in alternative B, park headquarters, NPS costume storage, and other NPS administrative uses would be relocated to building 993. A portion of building 993 would also be devoted to interpretation of early military history.

Building 404 would become the primary NPS maintenance facility, and other South Barracks buildings may be retained for associated NPS maintenance use and storage. Buildings 749, 750, 753, and 787 would also be retained for these purposes.

Similar to alternatives B and C, building 405 would be rehabilitated as a regional museum management facility.

Building 991 could be rehabilitated for Fort Vancouver National Trust offices, as well as for special events. Buildings 400 and 402 could be used for maintenance or storage by the Fort Vancouver National Trust or other partners.

For Use by Other Tenants

The National Park Service would encourage uses such as classrooms, offices, and community spaces through partnerships and other arrangements with educational institutions, nonprofits, and community organizations. Limited commercial services would also be allowed that support the primary functions of the site, such as a café, art gallery, or other functions. Overnight accommodations would be provided to support conferences, educational field schools, school groups, and elder hostel groups. General residential use by the public is not anticipated under this alternative.

Cultural Landscape Treatment

Overall

Major objectives of landscape rehabilitation would include the depiction and interpretation of historic conditions, with a focus on HBC history in the South Barracks, and early to late military history in the East Barracks.

East Barracks

The military landscape in the East Barracks would also be preserved, rehabilitated, and interpreted. Limited expansion of the Oregon white oak savanna community may occur, and Douglas-firs along the southern edge of the Parade Ground, which are noncontributing landscape features, would be removed to restore open views of building facades across the Parade Ground. Throughout the East and South Barracks, the plant palette would include

historic species only. Small-scale features such as bollards and flags may be reconstructed. Historic roads may be resurfaced per the *Cultural Landscape Report*, in order to reinstate historic conditions of the military landscape. As in alternative C, the gravel lot on the HBC Cemetery may be converted to turf to create a more contemplative park-like setting.

As in alternatives B and C, the National Park Service would seek to adjust park boundaries to include the western side of Fort Vancouver Way.

South Barracks

Robust cultural landscape restoration would include full restoration of the HBC Orchard and Garden to their full extents, as well as reconstruction of the Summer House. The Orchard and Garden would extend north to East 5th Street and encompass the area extending east from building 405 to the existing garden north of Fort Vancouver. As in alternatives B and C, the National Park Service would also reinstate the historic Maple Allée and establish an interpretive trail through that area. Later U.S. Army structures south of East 5th Street (i.e., buildings 410, 422, 409) would be removed to accommodate HBC cultural landscape restoration.

As in alternative C, landscape rehabilitation may be expanded to include reconstruction of historic houses and topographical features west of building 405 in the South Barracks that are reflective of the historic HBC Village. Interpretation of the historic "Crossroads of the Pacific Northwest" would be provided at the former MASH site, along with parking for visitors to Fort Vancouver.

Development Character

Newly designed features such as shuttle stops, crosswalks, plazas, lighting, benches, street trees, picnic facilities, bike racks, and other site furnishings would be most limited in this alternative and would be designed in accordance with accessibility standards and the historic setting (Figure 12). The plant palette would include historic species only. Historic methods of

Figure 12. An example of an existing building information sign in the West Barracks, which can be used as a model for similar site furnishings in the East and South Barracks. (National Park Service)

irrigating and maintaining the landscape would be employed in select locations for interpretive purposes. As in alternative C, temporary and non-historic changes to buildings made by the Army would likely be reversed.

As in alternative C, East Barracks buildings would be repainted; one or two East Barracks buildings may be repainted to a historic paint scheme for interpretive purposes.

As in alternatives B and C, the National Park Service would implement the preferred alternative in the *Schematic Design Report for Fort Vancouver National Historic Site East and South Barracks Utility Upgrades* (2010).

Construction Activity

Subject to additional compliance, two contributing historic structures (buildings 410 and 422) and three noncontributing structures (buildings 401, 409, and 710) would be removed. These structures conflict with HBC cultural landscape restoration and visitor access. For example, building 410 would be removed to accommodate full restoration of the HBC Garden, Summer House, and Orchard. Building 422 is in poor condition, the cost of repairs is estimated to be more than the current cost of replacement, and the building restricts access between Fort Vancouver and the future site of visitor parking.

New building construction would be limited, and proposed only if it is essential to public use, enjoyment, and understanding. For example, construction of new buildings in the South Barracks would be limited to historic reconstructions and covered storage for NPS maintenance functions in the westernmost portion of the South Barracks.

As feasible, the National Park Service would proactively improve building envelopes and fixtures in remaining buildings to maximize energy efficiency and water conservation.

Visitor Use and Experience

Public access would be increased under this alternative as a large number of buildings would be rehabilitated for occupancy and visitor use (Figure 13). Visitors would enjoy opportunities to learn about the history of buildings in the East Barracks because tenants would be encouraged to provide public access, interpretive exhibits, and public restrooms in building foyers. Public spaces in rehabilitated historic buildings would be refurnished with original, reproduction, or similar furnishings to recreate the historic appearance of Army barracks buildings. An interpretive exhibit in keeping with historic Barracks themes would be located in the park headquarters building.

As in alternative C, the National Park Service would provide non-personal interpretive services such as interpretive waysides, self-guided walking tours, personal media, and modest displays within foyers. The design of the interpretive exhibits and spaces would follow accessibility standards. The rehabilitation of building 405 as a regional museum management facility would provide the public with increased opportunities to appreciate and learn about archeological and museum resources. The National Park Service would also partner with outside organizations to offer additional museum spaces.

Educational and interpretive events would also be accommodated and encouraged, such as environmental learning camps, lectures, and other activities. The National Park Service would also host public demonstration events related to cultural heritage, such as American Indian

history and culture, and would promote themed dining opportunities in keeping with historic Army traditions.

Access, Circulation, and Parking

The National Park Service would reduce the amount of asphalt on-site and use pervious surfaces where feasible (Figure 14). Physical gateways and connections between the Barracks, the city, and the rest of the VNHR would reflect the historic scene and announce its distinctiveness to visitors. Sidewalks would be repaired and extended, providing linkages with existing and proposed trail networks. A new trail would be added through the reconstructed historic Maple Allée.

Internal roads would selectively be redesigned to improve circulation, safety, drainage, and appearance. For example, McClellan Road, Hatheway Road, and the southernmost east-west road in the East Barracks would all be reconnected to the Park Road along historic routes. McClellan Road would be narrowed across the HBC Cemetery and limited to pedestrian use only. East of the HBC Cemetery, McClellan Road would be widened to accommodate two-way traffic. South of Hatheway Road, Alvord Road would be converted to pedestrian use only, and Hatheway Road would be realigned where it meets Alvord Road.

As in alternative C, the National Park Service would selectively remove extraneous minor drives and parking areas throughout the site. In close consultation with affiliated tribes, NPS staff would seek the removal of parking lots lying on top of the HBC Cemetery, such as the gravel lot and the small lot west of building 721. As in alternatives B and C, the National Park Service would selectively remove asphalt near building foundations and limit the expansion of new surface parking lots.

Full restoration of the HBC Orchard and Garden south of East 5th Street would encompass the area designated for relocated Fort parking under alternatives B and C. Therefore, under alternative D, parking for visitors to Fort Vancouver would be relocated to the MASH site. Fleet parking would be limited to the westernmost portion of the South Barracks to accommodate expanded restoration of the HBC Village. The National Park Service would work with the City of Vancouver to accommodate parking for tour buses, recreational vehicles, and trailers in existing lots in the West Barracks, and in relocated Fort visitor parking.

Park Operations

The National Park Service would increase staffing levels to accommodate expanded operations and needs. This alternative will require a business specialist to deal with the anticipated partner-related workload. It would also require additional interpretation and education staff to provide programming and educational services. As in alternative C, this alternative would require curatorial staffing for building 405, as well as other locations throughout the Barracks. Additional positions may include staff for resource management and grounds and facility maintenance. Maintenance and cultural resource employees would regularly maintain all buildings. See Table 5 for a summary of staffing estimates by alternative.

As in alternatives B and C, NPS staff would seek to defray costs to the government with income generated through lease agreements from tenants and would consider the various options available to accomplish this work.

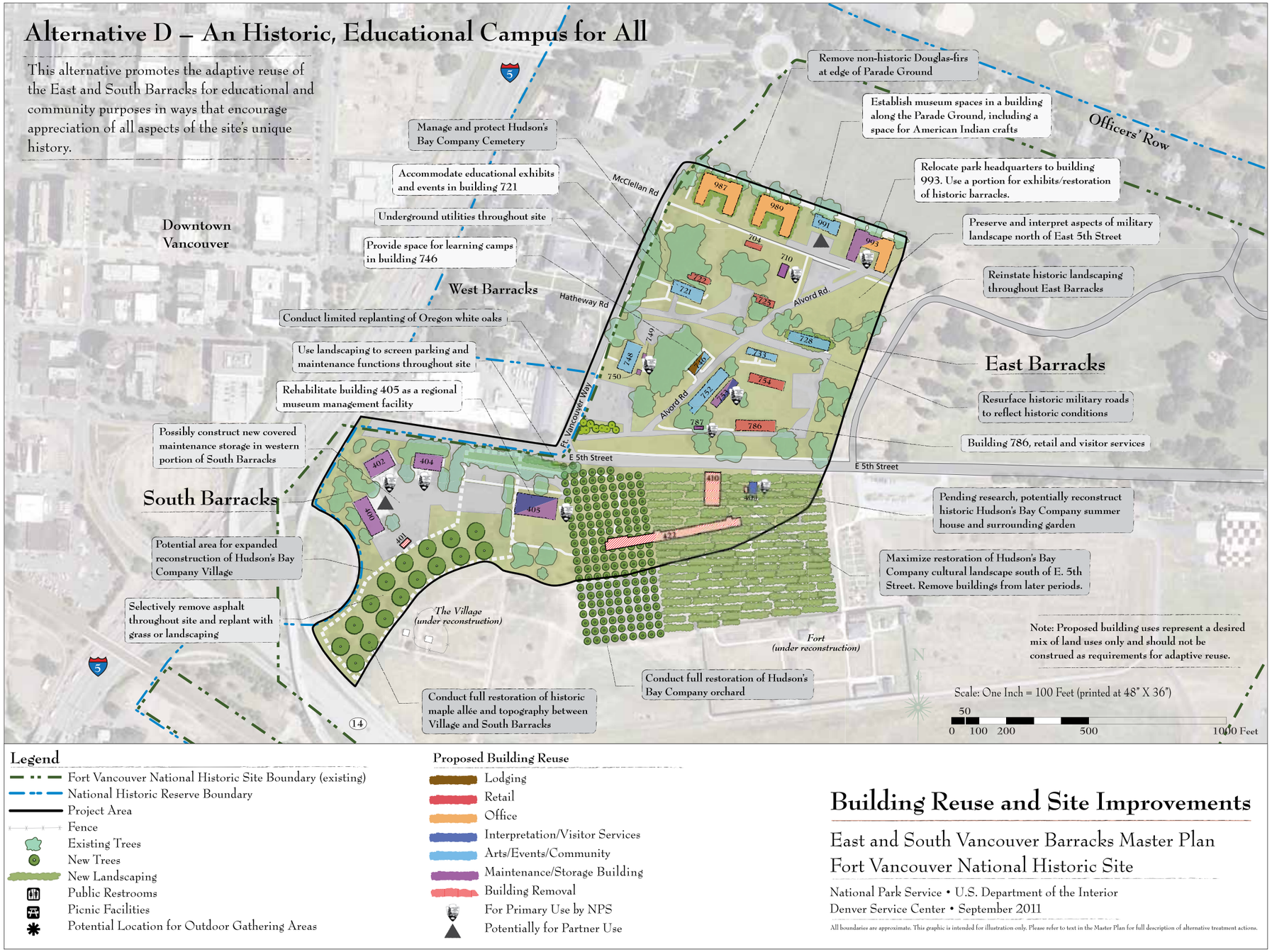

Figure 13. Building reuse and site improvements for alternative D.

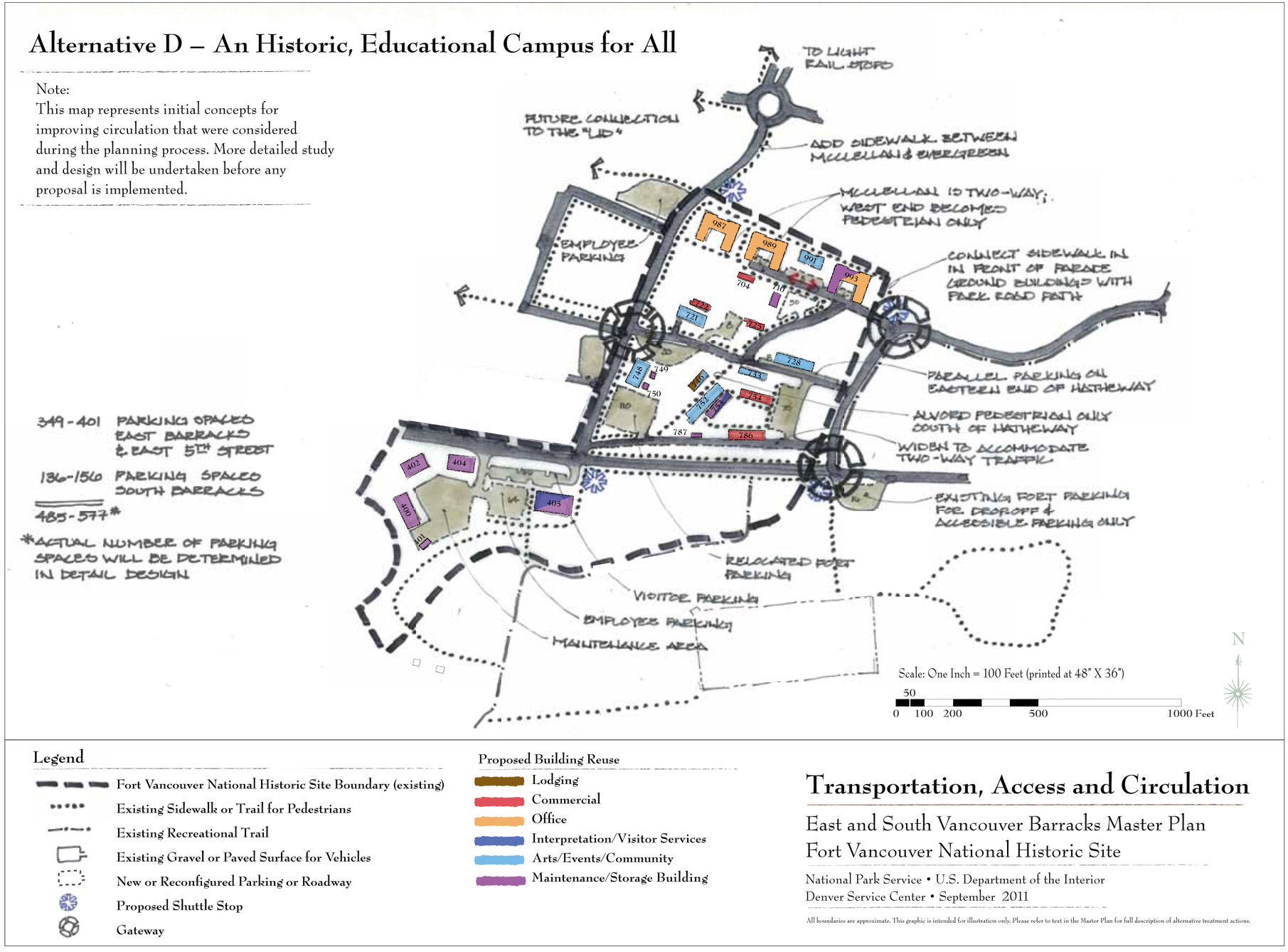

Figure 14. Transportation, access and parking recommendations for alternative D.

ALTERNATIVES ACTIONS CONSIDERED BUT DISMISSED

As stated in NPS Director's Order #12: Handbook for Environmental Impact Analysis (National Park Service 2001b), the National Park Service generally eliminates alternatives from further study because of (a) technical or economic infeasibility; (b) inability to meet project objectives or resolve need; (c) duplication with other, less environmentally damaging or less expensive alternatives; (d) conflict with an up-to-date and valid park plan, statement of purpose and significance, or other policy such that a major change in the plan or policy would be needed to implement; and (e) too great an environmental impact. In accordance with this guidance, the following actions were considered, but dismissed from further analysis:

REMOVING BUILDINGS AND INFRASTRUCTURE WITHIN THE HUDSON'S BAY COMPANY CEMETERY

Earlier in the planning process, NPS staff attended a meeting with the Affiliated Tribes of Northwest Indians, which was held outside the official public scoping period and was not considered a formal tribal consultation meeting. Participants at that meeting expressed a variety of concerns, ranging from a general desire to preserve remaining sub-surface elements of the HBC Cemetery *in situ*; to some level of commemoration of the HBC Cemetery; to in at least one instance, the desire to see all buildings, trails, roads, infrastructure and the Clark County War Veterans Memorial currently located within the HBC Cemetery removed to restore a park-like setting to the area.

The planning team discussed these concerns and decided that removing historic buildings on the NRHP – especially those that act as contributing resources to the historic district – runs counter to national laws and policies. Buildings 987 and 721, which are located on HBC Cemetery grounds, help establish the historic character of the whole district. Therefore, their removal would negatively affect the interpretation and visitors' experience of this intact, historic military landscape. It is important to state, however, that this decision was not made lightly. It is recognized that the HBC Cemetery is of high significance to the historic district, and as the resting place of people from many nations, including American Indian Tribes and Native Hawaiians, requires a respectful and thoughtful approach to management. It is expected that consultation with the direct descendants of people buried in the HBC Cemetery and appropriate Indian tribes and Hawaiian groups will be ongoing.

Partial solutions to these challenges were explored, such as removing parking and the portions of Fort Vancouver Way that are on top of the HBC Cemetery. In order to expand the park-like setting of the HBC Cemetery, alternatives explore removing asphalt and gravel parking areas on HBC Cemetery grounds. In all cases, the National Park Service will also maintain full responsibility for management of HBC Cemetery grounds.

In addition, recent documentary and archeological discoveries revealed that the Cemetery extends into the western side of Fort Vancouver Way. Therefore, in order to protect the integrity of human remains, this *Environmental Assessment* explores the expansion of park boundaries to include that portion of Fort Vancouver Way so that the National Park Service will own and be responsible for all HBC Cemetery grounds.

The replacement of utilities was also discussed prior to and during the planning process for the East and South Barracks. The utilities serving the barracks are failing and in need of replacement if barracks buildings are to adequately serve future tenants. In preparation for, and in support of, this planning process, the National Park Service developed several alternative alignments for

utility corridors in order to study various ways of minimizing impacts to human remains in the HBC Cemetery, while still providing much needed upgrades for future tenants of the barracks buildings. In consultation with tribes, NPS staff selected a preferred alternative that established the preliminary schematic design for utility upgrades. This schematic alignment would follow the existing utility corridor through the HBC Cemetery along Fort Vancouver Way. Through this process, it was determined that in accordance with the NHPA, replacing utilities along an existing corridor would likely not disturb intact graves and cause the least damage to the HBC Cemetery. Additional future work on design and engineering will evaluate this issue further.

These competing resource issues will continue to require ongoing and timely consultation with the tribes. In all cases, the National Park Service will consult with tribes to further define treatment and management of HBC Cemetery grounds. Cultural resources staff at the park will continue to consider and evaluate potential solutions to these issues, and will thoughtfully and respectfully consult with tribes.

MANAGEMENT OF THE SITE AS A MUSEUM

Previous approved plans—such as the *Fort Vancouver National Historic Site General Management Plan (2003)*, as well as the *Cooperative Management Plan (2000)* and the *Cultural Landscape Report for the Historic Reserve (2005)*—established adaptive reuse as the overarching preservation strategy for historic structures. These plans recommend a mix of public and private uses for Barracks buildings. Therefore, the National Park Service will adhere to these previous plans and pursue reuse as part of a long-term strategy for the preservation and interpretation of the site's nationally significant resources. The National Park Service will not preserve the entirety of the East and South Barracks for the purposes of interpretation only.

COMPARISON OF ALTERNATIVES

In order to develop the preferred alternative, each of the draft alternatives was compared according to estimated building occupancies, estimated parking requirements, financial feasibility, conceptual costs of capital development and ongoing maintenance, and potential environmental impacts. The environmentally preferable alternative was also determined by comparing the alternatives to the goals listed in the NEPA. In the summary comparison tables and text below, alternative C represents the preferred alternative. The alternatives are shown in detail in Table 7.

ESTIMATED BUILDING OCCUPANCY

In order to understand the extent to which new building uses may affect regular and recurring use of the site, the planning team developed estimates of maximum occupancy for each building based on proposed uses. The team used Table 1004.1.1 from the 2006 International Building Code, *Maximum Floor Area Allowances per Occupant*, as a guide. These occupancy estimates reflect the gross maximum number allowed for fire safety codes, and do not provide a real-world estimate on the number of people likely to inhabit and use these buildings on a regular and recurring basis. However, these numbers were useful in understanding what the maximum use of buildings under each alternative may generate in terms of traffic.

Table 1 summarizes the total maximum occupancy for the entire site under each alternative.

Table 1. Estimated Maximum Occupancy of the East and South Barracks Allowed by Code by Each Alternative

	Alternative A	Alternative B	Alternative C	Alternative D
Estimated Maximum Occupancy	234	2,972	3,208	4,414

Overall, the no action alternative shows the lowest occupancy estimate. Estimated occupancy levels for the three action alternatives are similar, with alternative D accommodating slightly more due to increased educational and community programming. These estimates take into account proposed demolitions. Because estimated building occupancy estimates provide a maximum possible number, these numbers should not be understood as requirements for regular use parking.

ESTIMATED PARKING CAPACITY

Using requirements under the City of Vancouver Municipal Code, Chapter 20.945-Section 20.945.070, *Minimum Off-Street Parking Requirements*, estimates were developed for maximum parking requirements under each alternative. In most cases, the gross square footage of buildings was used in order to determine Vancouver Municipal Code requirements, which vary according to building uses. However, for live performance space proposed for building 721, estimated maximum occupancy for that building was used.

In general, these estimates vary under each alternative, based on differences in building uses and potential building demolitions (Table 2). In addition, the amount of parking that the barracks can accommodate varies in each alternative according to the extent and nature of treatments to the cultural landscape. Therefore, the alternatives vary in terms of how well and in what location estimated parking needs may be accommodated. Parking estimates assume complete implementation of the plan, and therefore, represent maximum expected parking numbers. In order to address any parking shortages and reduce the amount of surface parking needed, the National Park Service may explore a shared parking strategy with the City of Vancouver and other partners. For a more in-depth analysis of estimated parking needs and capacities, please see Chapter 4.

Table 2. Estimated Parking Capacity Based Upon Vancouver Municipal Code (VMC)

	Alternative A VMC/ITE Report	Alternative B VMC/ITE Report	Alternative C VMC/ITE Report	Alternative D VMC/ITE Report
South Barracks	410	266-306	227-261	136-156
East Barracks	323	443-509	350-398	349-401
Totals	**733**	**709-815**	**577-659**	**485-557**

Note: The actual amount of parking that will be provided will be dependent on resource considerations (archeology/cultural landscapes) and site conditions (slope, walkway location/size, etc.). These specifics will not be known until later in the design process. Because of this variability, the National Park Service has estimated the parking numbers will vary approximately 7% over or under the numbers originally derived from using the 2011 study results.

ESTIMATED COSTS

The National Park Service considers projected initial improvement costs and long-term costs in its decision making. The cost figures presented in the following tables enabled the planning team to compare the magnitude of representative costs across alternatives. These costs were developed using industry standards to the extent possible with the best information available at the time of analysis. Nevertheless, the costs are preliminary, Class C estimates, and should not be used for budgetary purposes. More precise costs will be determined at a later date, considering the design of facilities, detailed resource protection needs, and other factors.

Again it should be noted that while the costs shown here are intended to indicate the full costs of ownership, the expectation is that most of the financial investment by the government would be recouped over time through leasing agreements.

Capital Improvement Costs

National Park Service personnel—including planning staff from the Denver Service Center and facility management personnel from the Pacific West Region—developed the following one-time cost estimates for major components of the draft alternatives (Table 3). A variety of methods and materials were used, including RS Means and the National Park Service current replacement value (CRV) calculator. Initially, the estimates were prepared for the preferred alternative Workshop that took place in January, 2011. Following the workshop, the team refined the estimates to more fully reflect anticipated costs. One change involved the application of a substantial markup to cover project level "soft costs," including pre-design, design, environmental compliance, supplemental services, construction management, and contingency. These one-time costs do not include annual staffing costs.

Note that deferred maintenance costs for buildings do not reflect the full costs for rehabilitating those structures. Instead, they reflect the necessary maintenance activity needed to stabilize and protect buildings and to correct utility and code deficiencies (Figure 15). Current cost estimates to rehabilitate 17 buildings based on the planned redevelopment uses as decided in the Preferred Alternative are shown in Table 3. Cost estimates for one-time expenses are presented by alternative in Table 4.

Figure 15. The west facade of building 728, showing distressed paint as one example of maintenance activities needed to stabilize and protect buildings in the East and South Barracks. (National Park Service)

Table 3. Estimated Costs to Rehabilitate 17 Buildings in the East and South Barracks
(For Planning Comparisons Only)*

Building Number		GSF	$ per SF	Base Cost	Contractor Gross Construction
410	Training Classrooms to Retail/Public Visitor Center	7,081	$184.25	$1,304,676	$2,235,954
704	USAR Center to Office	1,282	$98.49	$126,621	$217,003
721	Gym/Auditorium to Public Use	11,171	$184.70	$2,063,317	$3,536,113
722	Administrative Offices to Office	2,030	$178.47	$341,416	$585,119
725	Administrative Offices to Office	1,950	$178.47	$341,416	$585,119
728	Administrative Office to Retail	5,040	$193.46	$975,051	$1,671,042
733	Administrative Office to Retail	2,400	$196.56	$471,756	$808,495
746	Band Training to Residential	4,720	$196.63	$928,081	$1,590,545
748	NPS Storage and Parking to Retail	6,280	$145.17	$911,664	$1,562,410
752	Post Exchange to Office	12,080	$170.30	$2,057,272	$3,525,753
753	National Guard Storage to Retail	2,640	$177.94	$469,765	$805,083
754	Grocery Store to Grocery Store	5,040	$187.14	$736,584	$1,262,358
786	Carpenter Shop to Retail & Office	10,080	$172.47	$1,738,478	$2,979,404
989	Administrative Offices to Office	32,292	$144.50	$4,666,302	$7,997,108
989	Administrative Offices to Office	32,292	$144.50	$4,666,302	$7,997,108
991	Administrative to Public Use	12,804	$163.70	$2,095,986	$3,592,101
993	Administrative Offices to Office	32,292	$144.50	$4,666,302	$7,997,108
				$28,560,989	48,947,823

*This table reflects cost estimating information recently developed for the project area based on the planned redevelopment uses as described in the Preferred Alternative. Costs for these buildings as well as other rehabilitation and redevelopment costs will continue to be revised over time.

Table 4. One-Time Cost Estimates (For Planning Comparisons Only)*

	Alternative A (No Action)	Alternative B	Alternative C (Preferred)	Alternative D
Building Demolition	$15,937	$179,644	$303,256	$415,690
Deferred Maintenance & Code Deficiencies (does not include costs to operate and maintain)	$59,527,914	$57,465,237	$56,340,906	$53,694,043
New Construction (e.g. historic reconstructions, outdoor gathering spaces, picnic facilities)	$307,430	$112,760	$180,993	$495,925
Landscape Improvements (e.g. cultural landscape restoration, streetscape improvements, plantings, interpretive signage)	$28,915	$511,759	$733,070	$846,554
Infrastructure, Transportation & Access (e.g. new sidewalks, trails, parking lots, road construction, road closures, utility upgrades)	$6,769,843	$8,505,765	$7,997,867	$7,562,184
TOTAL	$66,650,040	$66,775,165	$65,556,092	$63,113,277
Difference from the No Action Alternative		+ $125,125	- $1,093,948	- $3,536,763

*Costs are reported in 2011 dollars using the best information available at time of writing.

Total Cost of Facility Ownership and Costs for Buildings

In addition to the one-time costs reported above, the National Park Service considered the anticipated annual facility lifecycle costs associated with buildings. Another consideration is that all major improvements—such as roads, parking, utilities infrastructure, and landscape treatments—would require upkeep and therefore incur expenses for the National Park Service and its partners. In particular, facility ownership costs for the Barracks structures would generate substantial costs.

As discussed above, the National Park Service contracted the financial consulting firm Booz Allen Hamilton to prepare an economic feasibility study. A representative from this firm was present at the preferred alternative workshop to explain the findings of this study. The representative also assisted the National Park Service to prepare informal and preliminary estimates for annual facility costs for building assets. These estimates were intended merely to inform discussion at the workshop.

To generate these estimates, Booz Allen Hamilton applied a modified version of the outputs from the TCFO model to the alternatives. Booz Allen Hamilton originally developed the TCFO model for the National Park Service in 2010. This model uses industry standard required facility costs, including recurring maintenance, preventive maintenance, facility operations, component renewal, and unscheduled maintenance to present an informed and comprehensive preview of facility ownership costs. These costs also include estimated staffing dedicated to maintenance in order to achieve the abovementioned aspects of facility ownership. The modified costs contained herein reflect adjusted costs, based on the NPS assumption that the actual amounts spent will be less than the required industry standard costs. The adjusted costs reflect a percentage adjustment downward according to anticipated standards of care, based on "priority bands."[1] Based on consensus reached at the preferred alternative Workshop, the estimates below use NPS priority band 2[2] in order to reflect the level of maintenance that the National Park Service typically invests in these types of assets, given limited funding and other constraints.

The development of property management strategies is at an early stage. At present it is unclear whether the National Park Service would self-perform operations and maintenance and other facility costs for all buildings within the project area on a reimbursable basis—or perhaps for only those buildings that the agency would occupy for its own purposes. However, in order to understand the magnitude of costs under each alternative, it was assumed that the National Park Service would be responsible for facility costs for all buildings proposed for NPS use.

The figures in Table 5 address only those buildings that the National Park Service would use under each alternative—for instance NPS maintenance shops, administrative headquarters, and other NPS storage or office buildings. Therefore, cost estimates vary based on the number and size of buildings that would be retained for NPS use under each alternative. Differences in proposed uses for those NPS buildings also affect cost estimates for each alternative. The costs contained herein are not reflective of non-building assets such as roads, parking, and landscapes, nor do they include buildings that are planned for lease by non-NPS entities.

Table 5. Estimated Annual TCFO Costs for Buildings (for Planning Comparisons Only)*

	Alternative A	Alternative B	Alternative C	Alternative D
Total TCFO costs	**$175,320**	**$263,315**	**$366,146**	**$7,608**

*These cost estimates include annual costs for facility maintenance activities as described above for only those buildings retained for NPS use under the different alternatives. They do not include facility costs for roads, sidewalks, or grounds. These estimate do include the cost of maintenance staff; however, they do not include additional staffing costs beyond those related to maintenance.** Figures are reported in 2011 dollars and for "priority band 2" only (see above).

1 Priority bands are based on the average planned spending levels reflected as servicewide average planned spending as a percentage of required spending.

2 Based on available average servicewide park asset management plan data, as a percentage of industry "required" costs, priority band 2 represents: (a) 36% of recurring maintenance costs, 34% of required preventive maintenance costs, and 59% of required operations for building assets, and (b) 47% of recurring maintenance costs, 50% of required preventive maintenance costs, and 75% of required operations for housing assets.

Booz Allen Hamilton and the National Park Service also used the modified TCFO model to generate a preliminary estimate addressing every existing building within the project area. The Park Asset Management Plan priority band 3 percentages of required spending were applied to approximate a "caretaking" strategy—which would involve simply maintaining the buildings and operating them at minimum level, rather than using the buildings to capacity on a regular basis. This figure does not represent any one alternative, although this strategy would align most closely with the no action alternative. This estimate illustrates that even maintaining the buildings at a very basic level would still involve substantial annual costs. It is higher than the TCFO costs presented above, because under this scenario, the National Park Service would be responsible for the great majority of these costs – rather than leasing out certain buildings to other entities that would share the costs (Table 6).

Table 6. Estimated Annual Costs to Maintain Every Building in the Project Area at a Minimum Level of Care*

	Maintain All 22 Buildings Now Standing at a Minimum Level
Total TCFO costs	**$905,011**

** Assumes no demolition of any existing structures. Priority band 3 was selected to represent a lower standard of maintenance (see above).*

The National Park Service will continue to investigate TCFO costs as better information becomes available.

Staffing Estimates

Across all alternatives, the National Park Service would have to increase staffing levels to a certain extent in order to accommodate expanded operations and needs. The military post, which consists of 27 buildings, will add roughly 242,000 square feet and 33 acres to the park asset portfolio. However, each alternative emphasizes different aspects of visitor experience, interpretation, resource management, and park operations. Therefore, the amounts and types of staff needed would vary under each alternative according to those emphases. For example, alternative D involves the greatest amount of interpretive and educational activities, as well as an emphasis on partnering with local or nonprofit organizations. Therefore, more staff would be needed for archiving, collections management, and interpretation. The amount of expected redevelopment would also affect estimated staffing needs. For example, alternative A would involve the least amount of additional staffing because NPS staff would not proactively seek redevelopment opportunities. It is expected that over time tenants would directly offset 50% of the facility maintenance costs ($256,000) and that the National Park Service would cover much of the remaining costs over time through lease revenues.

In order to develop realistic staffing needs and the annual costs associated with staffing, NPS staff from the Washington Office guided park staff through a thorough group exercise meant to separate desired positions from real and expected staffing needs. Park staff discussed anticipated workloads under each alternative and collectively decided on new position types needed, the number of new employees needed, and the annual costs of additional staff necessary to achieve the intent of each alternative. Table 7 below summarizes these estimates.

Table 7. Additional Staffing Needs by Alternative

Alternative	New or Modified Positions	Additional Full-time Employees Needed Costs	Additional Annual Staffing
A: No Action or Extension of Current Management Practices into the East and South Barracks	• Maintenance Worker • Maintenance Carpenter • Existing Maintenance Staff taken off furlough • Facilities Services Assist • Grounds Worker • Site Manager	4.9	$240,474
B: A Vibrant Urban District in an Historic Setting	• Barracks Project Manager • Bring 2 Current Archaeologists up to Full Time • Business Manager • Park Safety & Environmental Specialist • Maintenance Worker • Historical Architect • Maintenance Carpenter • Maintenance Mechanic • Facilities Services Assist • Existing Maintenance Staff taken off furlough • Grounds Worker • Collections Registrar • Archivist • Archeology Lab Director • Business Specialist	13.2	$1,210,134
C: A Sustainable, Historic Campus for Public Service (Preferred Alternative)	• Barracks Project Manager • Business Manager • Bring 2 Current Archaeologists up to Full Time • Park Safety & Environmental Specialist • Maintenance Worker • Historical Architect • Maintenance Carpenter • Maintenance Mechanic • Facilities Services Assist • Existing Maintenance Staff taken off furlough • Grounds Worker • Collections Registrar • Archivist • Archeology Lab Director	12.2	$1,118,911

Table 7. Additional Staffing Needs by Alternative (cont.)

Alternative	New or Modified Positions	Additional Full-time Employees Needed Costs	Additional Annual Staffing
D: A Historic, Educational Campus for All	• Barracks Project Manager • Bring 2 Current Archaeologists up to Full Time • Business Manager • Park Safety & Environmental Specialist • Maintenance Worker • Historical Architect • Maintenance Carpenter • Maintenance Mechanic • Facilities Services Assist • Existing Maintenance Staff taken off furlough • Grounds Worker • Collections Registrar • Archivist • Archeology Lab Director • Business Specialist • Park Ranger (Interpretation) • Park Guide	15.2	$1,306,351

Under all alternatives, the National Park Service would consider the various options available to accomplish this work such as through partnering, contracting out, or managing the work in-house, based on policy, efficiencies gained, and cost. In any case, it is recognized that there are certain functions that are inherently governmental, and those responsibilities would remain with park service employees.

ENVIRONMENTALLY PREFERABLE ALTERNATIVE

The environmentally preferable alternative is the alternative that promotes the national environmental policy expressed in the NEPA (Sec. s101(b)). This alternative would fulfill the following six goals:

(1) Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;

(2) Attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences;

(3) Preserve important historic, cultural, and natural aspects of our national heritage and maintain, wherever possible, an environment that supports diversity and variety of individual choice;

(4) Achieve a balance between population and resource use that would permit high standards of living and a wide sharing of life's amenities;

(5) Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources (National Park Service DO-12 Handbook, Section 2.7D); and

(6) Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources (National Park Service DO-12 Handbook, Section 2.7D).

The environmentally preferable alternative is the alternative that causes the least damage to the biological and physical environment and the alternative that best protects, preserves, and enhances historic, cultural, and natural resources. After considering the environmental consequences of the alternatives, including consequences to the human environment, the National Park Service has concluded that the preferred alternative is also the environmentally preferable alternative. This alternative best realizes the full range of national environmental policy goals as stated in section 101 of the NEPA.

For the purposes of this *Environmental Assessment*, goals 2, 3, and 4 are the most relevant to this planning process. Alternative C, the preferred alternative, was selected as the environmentally preferable alternative. The justification for this selection follows below.

Goal Two

To varying degrees, all alternatives would slow down the deterioration of historic barracks structures within the Fort Vancouver NHS, thereby improving public health and safety as well as the appearance of aging historic structures. However, the preferred alternative includes the greatest extent of restoration of the Oregon white oak ecosystem, thereby improving and diversifying the aesthetic and cultural aspects of the site. Extensive cultural landscape restoration and educational activities would also interpret American Indian history and culture to the greatest extent under the preferred.

Goals Three and Four

The actions outlined in all alternatives preserve important historic and cultural aspects of our national heritage by preserving and rehabilitating historic structures and restoring aspects of the cultural landscape (Tables 8 and 9). However, the no action alternative neither supports diversity nor inhibits it. It does not provide a variety of individual choices for the visitor or encourage a wide range of uses. Alternative B provides a diversity of visitor experiences; however, it does the least to preserve historic and cultural resources. For example, under alternative B reconstruction of the historic HBC village would not extend into the South Barracks to the area west of building 405. While alternative D, on the other hand, provides the greatest amount of cultural landscape restoration and interpretation of the site's resources, it also reduces the diversity of activities available on-site by focusing on educational programming. For example, it limits the amount of commercial activity that may take place on site by focusing on educational uses. The preferred alternative, however, would allow the visitor to experience the Fort Vancouver NHS's resources through a variety of means, and would actively encourage demonstration and interpretation of American Indian history and culture. The preferred alternative also supports diversity by encouraging office use by public agencies whose policies often require attention to equal employment opportunities. The preferred alternative also preserves important historic, cultural, and national aspects of our American heritage regarding development of the Pacific Northwest. Therefore, the preferred alternative best meets goals 3 and 4.