

**ENVIRONMENTAL ASSESSMENT
REUSE OF THE US DISCIPLINARY BARRACKS
FORT LEAVENWORTH, KANSAS**

**US Army Corps of Engineers
Kansas City District**



November 2003

Draft
Finding of No Significant Impact
Reuse of US Disciplinary Barracks
Fort Leavenworth, Kansas

Pursuant to the Council on Environmental Quality Regulations (40 CFR Parts 1500-1508) for implementing the procedural provisions of the National Environmental Policy Act (42 U.S.C. 4321 et seq.) and Army Regulation 200-2 (Environmental Analysis of Army Actions), an Environmental Assessment (EA) was prepared by the US Army Corps of Engineers, Kansas City District, for the US Army Combined Arms Center and Fort Leavenworth, to evaluate the potential environmental and socioeconomic effects associated with the reuse of the old US Disciplinary Barracks (USDB) at Fort Leavenworth, Kansas. Construction of a new USDB complex in 2002 resulted in the Army looking for alternative reuses for the old USDB complex. The old USDB complex consists of 11 historic buildings, perimeter stone wall, 12 guard towers, and 9 other buildings.

Proposed Action

The Army conducted an Alternative Reuse Study (ARS) for the old USDB complex. The results of the ARS were that no viable reuse was identified for the main prisoner domicile. The Army proposes to demolish the main prisoner domicile (Building 475), known as the Castle, Power Plant (Building 474), Mental Health Clinic (Building 450) and miscellaneous metal shop buildings within the old USDB Complex. The Power Plant would not be demolished until the remaining buildings in the USDB complex are renovated with individual heating systems. Building 450 would be demolished to create a main front entrance. The existing prison walls and guardhouses would be left intact and preserved as historic elements. Buildings 463, 464, 465, 466, 467, 472, 473, and 487 would be maintained in good condition until a specific reuse is identified and the appropriate renovations completed. All renovations would occur in compliance with the Advisory Council of Historic Preservation (ACHP) guidelines. The reuse potential for these buildings is likely administrative or educational uses, connected to the mission of the installation. Building 470 would continue to serve as a light industrial use facility. Green space will replace the existing buildings in the northern portion of the complex.

Alternatives Considered

The EA considered five alternatives developed during the Alternative Reuse Study (ARS) (2002) that was completed for the USDB complex. The ARS involved numerous parties in developing potential reuse scenarios for the USDB complex. The five most likely reuse alternatives that resulted from the screening process of all alternatives considered were the Proposed Action – Partial Demolition and General Use, Alternative 1 – Conference Center/Guest Housing, Alternative 2 – Military Operations and Urban Training Center, Alternative 3 – Military/Government Archival & Records Center, and the No Action. These five reuse alternatives were evaluated in the EA.

Alternative 1 would convert the Castle into a conference center and guest lodging facility. Buildings 469, 471, 485, 486, 496 and 498 would be demolished and a new parking area constructed to support the redevelopment of the Castle. Building 474 would be rehabilitated to continue to serve the facilities within the prison walls for steam heat. Building 450 would be

demolished to create a main front entrance. The remaining buildings would be modernized for administrative/educational uses. The existing prison walls and guardhouses would be left intact and preserved as historic elements. Two additional entrances/gates would be required for better vehicular traffic flow, access for pedestrians and access for emergency vehicles.

Alternative 2 would convert the Castle into a Military Operations and Urban Training (MOUT) Center. Buildings that make up the USDB prison complex and the auto shop and metal buildings to the north of the castle would be the actual setting for training exercises. Buildings 463, 464, 465, 466, 467, 472, 473, and 487 would be renovated according to ACHP guidelines for modern administrative/educational use. Building 450 would be demolished to create a main front entrance. Building 470 would continue to serve as a light industrial use facility. The existing prison walls and guardhouses would be left intact and preserved as historic elements. Two additional entrances/gates would be required for better vehicular traffic flow, access for pedestrians and access for emergency vehicles.

Alternative 3 would convert the Castle to an archival and records processing and storage facility. Buildings 469, 471, 485, 486, 496 and 498 would be demolished and a new parking area constructed to support the redevelopment of the Castle. Buildings 474 would be rehabilitated to continue to serve the facilities within the prison walls for steam heat. Building 450 would be demolished to create a main front entrance. Buildings 463, 464, 465, 466, 467, 472, 473, and 487 would be renovated according to ACHP guidelines for modern administrative/educational use. Building 470 would continue to serve as a light industrial use facility. The existing prison walls and guardhouses would be left intact and preserved as historic elements. Two additional entrances/gates would be required for better vehicular traffic flow, access for pedestrians and access for emergency vehicles.

The CEQ regulations prescribe including a No Action alternative, which serves as a benchmark against which proposed actions can be evaluated. The No Action alternative assumes the Army would not demolish, renovate, or occupy the buildings within the USDB complex. There would be maintenance and repairs expended to prevent neglect of the buildings and maintain the integrity of the structures.

Factors Considered in Determining that No Environmental Impact Statement is Required

The EA, which is incorporated by reference into this Finding of No Significant Impact, examined potential direct, indirect, and cumulative effects of the Proposed Action, Alternatives 1, 2, and 3, and the No Action alternative for 15 resource areas of environmental and socioeconomic concern. The Army found that certain environmental and socioeconomic resources and conditions (air space, environmental justice, and protection of children) would not be affected by the Proposed Action. Implementation of the Proposed Action would result in short-term minor adverse effects on land use, infrastructure, air quality, noise, geology and soils, water resources, hazardous waste and biological resources. The Proposed Action would have a significant adverse effect on the Castle and Power Plant, since both are National Register of Historic Places (NRHP) eligible structures. The National Historic Landmark District (NHL) would also be impacted by the proposed action. These adverse effects will be mitigated through actions specified in a Memorandum of Agreement

(MOA) mutually developed by the installation, the National Park Service (NPS) and the State Historic Preservation Officer (SHPO). The MOA has been negotiated, accepted and signed.

Conclusion

Based on the results of the ARS, the analysis of the EA, and the mitigation defined in the MOA, it has been determined that implementation of the Proposed Action will have no significant direct, indirect or cumulative effects on the quality of the natural or human environment.

Although the demolition of the castle will have an adverse effect on the historic resources of the NHL, the inability to find a feasible use for the building and the agreed to mitigation efforts resolve these effects so that a FNSI is appropriate. Therefore, an Environmental Impact Statement is not required and will not be prepared.

Public Comment

Interested parties are invited to review and comment on this FNSI and EA within 30 days of publication of the Notice of Availability in the Kansas City Star and Leavenworth Times. Copies of the EA are available on the Internet at <http://www.leavenworth.army.mil/dis/> and at the Leavenworth Public Library, the Combined Arms Research Library and Directorate of Installation Support, Environmental Division. Comments should be addressed to either of the following:

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**US Army Corps of Engineers
Kansas City District**

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ACRONYM LIST

ACHP	Advisory Council on Historic Preservation
ADA	Americans with Disabilities Act
ARS	Alternative Reuse Study
BMP	Best Management Plan
CFR	Code of Federal Regulations
DIS	Directorate of Installation Support
DIS ENV DIV	Directorate of Installation Support, Environmental Division
DOD	Department of Defense
DRMO	Defense Reutilization and Marketing Office
EA	Environmental Assessment
HVAC	heating, ventilation, and air conditioning
INRMP	Integrated Natural Resources Management Plan
MOA	Memorandum of Agreement
MOUT	Military Operations and Urban Training
NEPA	National Environmental Policy Act
NHLD	National Historic Landmark District
NPS	National Park Service
NRHP	National Register of Historic Places
SHPO	State Historic Preservation Officer
SWPPP	Stormwater Pollution Prevention Plan
ft ²	square feet
TPHs	total petroleum hydrocarbons
USACGSC	US Army Command & General Staff College
USDB	US Disciplinary Barracks
USFWS	US Fish and Wildlife Service
USTs	Underground Storage Tanks
VOC	volatile organic compounds

EXECUTIVE SUMMARY

Fort Leavenworth's wealth of architecture and landscapes represents its long and distinctive history. This history encompasses the themes of exploration and settlement, education, architecture, community planning and development, and ethnic heritage. In continuous military occupation since the time of its establishment, Fort Leavenworth has been identified as perhaps the most significant military post in the Trans-Mississippi West. With a period of significance spanning the years 1827-1945, the richness of Fort Leavenworth's history is represented in its variety of architectural styles, how they relate to each other, and how their changing use over time contributes to that history.

Fort Leavenworth's military mission includes the confinement and rehabilitation of military criminals. The US Disciplinary Barracks (USDB) at Fort Leavenworth is the only maximum security prison in the Department of Defense (DOD) and is the oldest penal institution in the Federal system. Construction of a new USDB complex resulted in the Army looking for alternative reuses for the old USDB complex. An Alternative Reuse Study was completed in October 2002 and four alternatives were developed. This environmental assessment (EA) evaluates the following alternatives in detail:

- 1) No Action
- 2) Proposed Action – Partial Demolition and General Use
- 3) Alternative 1 – Conference Center/Guest Housing
- 4) Alternative 2 – Military Operations and Urban Training (MOUT) Center
- 5) Alternative 3 – Military/Government Archival and Records Center

Of the 20 buildings comprising the USDB complex, Building 475, better known as the "Castle," is the most challenging for appropriate reuse opportunities (See Figures ES-1 and ES-2). According to several seismic/structural studies conducted between 1991 and 1998, the Castle would require a major reinvestment (\$60 million) to bring the building up to code for use as a prison. Additional detailed seismic/structural studies would be necessary to implement any proposed reuse of the Castle. The Proposed Action calls for demolition of the Castle, eliminating the expensive seismic upgrading and rehabilitation costs. Alternatives 1, 2, and 3 focus on the reuse of the Castle, which consists of eight wings radiating from a tall center rotunda structure and is constructed of primarily unreinforced masonry.

The four reuse alternatives also include renovation of the remaining historic buildings within the USDB complex for general use as administrative offices and educational facilities.

The following sections provide a brief description of each alternative and identify beneficial and adverse impacts resulting from implementation of the alternative. Table ES-1 provides an evaluation of the alternatives for the affected resources.

No Action Alternative

Implementation of the No Action alternative would require continued maintenance of the existing facilities; no demolition, renovation, or occupation of the USDB buildings would occur. Utilities (electrical, water, gas) would remain in place but be used to a lesser degree. An established maintenance crew would handle the necessary maintenance and repair efforts.



Figure ES-1 USDB Complex



Figure ES-2 USDB Main Facility, the "Castle"

The Army, according to their regulations, must maintain the facilities at a level that retains the features that made the property eligible for listing on the NRHP. Historically, structures that are not occupied have, over time, a tendency to suffer accelerated deterioration. A minimal temperature would be maintained to prevent water and fire protection lines from freezing. Structural deficiencies of the Castle would not be corrected and it would not meet current seismic structural requirements.

Proposed Action – Partial Demolition and General Use

The Proposed Action is the demolition of the Castle, Power Plant (Building 474), Mental Health Clinic (Building 450) and miscellaneous metal shop buildings (Buildings 469, 471, 485, 486, 496 and 498). This would provide open space to support the proposed uses for buildings in the southern portion of the USDB complex. The remaining buildings would be renovated in accordance with the Advisory Council on Historic Preservation (ACHP) guidelines and reserved for general use. This alternative adds green space and landscaping for the property.

Demolition of the Castle would cause an adverse environmental impact. As a cultural resource, the Castle is a contributing resource to Fort Leavenworth's NHL and is eligible for listing on the NRHP. According to 36 CFR 800.5 any modification, renovation, and/or demolition not in accordance with the Secretary of the Interior's Standards for Rehabilitation is considered an adverse impact. A MOA has been negotiated between Fort Leavenworth, the Kansas SHPO, and the ACHP to mitigate the adverse effect of the Proposed Action. Other short-term impacts during the proposed demolition would include increases in air emissions from dust, increases in noise, traffic and solid waste from removal of debris. Short-term beneficial impacts would include increased expenditures for demolition and renovation, local goods and services, and employment.

Long-term beneficial impacts of the Proposed Action would include increasing the green space within the USDB complex, reduction in utilities, reduced levels of structures requiring fire protection and waste disposal; and improved aesthetics.

Alternative 1 – Conference Center/Guest Housing

Alternative 1 would create a large (200,000-square foot) conference facility to be used primarily for military purposes. Buildings 471, 485, 486, 496 and 498 would be demolished and a new parking area constructed to support redevelopment of the Castle. Building 450 would also be demolished. The remaining buildings would be renovated and reserved for general use. Because of the security features of the facility, the conference facility could be used for high level conferences and summits related to DOD activities.

Rehabilitation of the Castle could cause some adverse environmental impacts. As previously stated, the Castle is a contributing resource to Fort Leavenworth's NHL and is eligible for the NRHP. According to 36 CFR 800.5 any modification, renovation, and/or demolition not in accordance with the Secretary of the Interior's Standards for Rehabilitation is considered an adverse impact. A MOA could be required for this alternative.

Other environmental impacts include potential land use changes to adjacent properties to accommodate additional parking for the conference center, increases in solid waste and increases

in required utilities. Short-term beneficial impacts would include increased expenditures for construction and renovation, local goods and services, and a minor increase in employment.

Alternative 2 – Military Operations and Urban Training Center

The MOUT would be used to train soldiers for combat in an urban setting. The Castle and auto shop metal buildings to the north would be the setting for training exercises. The south general use buildings would be reserved for general office, storage, and educational use. Only exterior restoration and stabilization items would be implemented for the Castle; no seismic retrofitting would be implemented.

Restoration of the Castle and training exercises could cause adverse environmental impacts. As previously stated, the Castle is a contributing resource to Fort Leavenworth's NHLD and is eligible for the NRHP. According to 36 CFR 800.5 any modification, renovation, and/or demolition not in accordance with the Secretary of the Interior's Standards for Rehabilitation is considered an adverse impact. A MOA could be required for this alternative to mitigate the adverse effects.

Other environmental impacts include incompatibility with adjacent land use. The MOUT could adversely affect the adjacent housing and administrative activities within the USDB complex and neighboring buildings, requiring restrictions for noise and night activities. Short-term beneficial impacts would include increased expenditures for construction and renovation, local goods and services, and a small increase in employment.

Alternative 3 – Military/Government Archival & Records Center

This alternative would create an archival and records processing and storage facility. Construction of a multi-floor structure within the Castle's historic masonry shell for each of the four prison wings eliminates the need for expensive seismic upgrading. The new construction would be connected to the existing masonry construction, providing lateral/seismic support for historic masonry. This alternative also provides for the large amount of floor space necessary for a high volume archival and records storage facility.

Buildings 471, 485, 486, 496 and 498 would be demolished and a new parking area constructed to support the redevelopment of the Castle. Building 450 would also be demolished. The south general use buildings would be renovated and reserved for general office, storage, and educational use.

Rehabilitation of the Castle could cause some adverse environmental impacts. As previously stated, the Castle is a contributing resource to Fort Leavenworth's NHLD and is eligible for the NRHP. According to 36 CFR 800.5 any modification, renovation, and/or demolition not in accordance with the Secretary of the Interior's Standards for Rehabilitation is considered an adverse impact. A MOA could be required for this alternative.

Other environmental impacts include increases in required utilities and solid waste generated. Short-term beneficial impacts would include increased expenditures for construction and renovation, local goods and services, and a minor increase in employment.

Table ES-1 Alternatives Impact Evaluation

Resource Category	Alternatives				
	No Action Alternative	Proposed Action—Partial Demolition and General Use	Alternative 1—Conference Center with Guest Housing	Alternative 2—Military Operations and Urban Training Center	Alternative 3—Military/Government Archival and Records Center
Cultural Resources					
Historic Structures	N	SA	A	A	A
Historic District	N	A	N	A	N
Archaeological Sites	N	N	N	N	N
Buildings	A	BLT	BLT	A	BLT
Land Use	N	AST BLT	A	A	N
Socioeconomic					
Population	N	N	B	N	B
Economy	N	N	B	N	B
Housing	N	N	N	N	N
Infrastructure					
Utilities	N	B	A	N	A
Transportation	N	AST BLT	A	A	A
Solid Waste Disposal	N	AST BLT	A	AST NLT	AST NLT
Law Enforcement Services	N	N	N	N	N
Fire Protection Services	A	B	B	A	B
Geology and Soils	N	N	N	N	N
Aesthetics	N	B	N	N	N
Water Resources	N	N	N	N	N
Air	N	AST NLT	N	N	N
Noise	N	AST NLT	AST NLT	A	AST NLT
Hazardous Waste	N	AST NLT	ALT NLT	N	ALT NLT
Biological Resources	N	N	N	N	N

B Beneficial

SB Significant Beneficial

ST Short-term Impact

N Neutral

A Adverse

SA Significant Adverse

LT Long-term Impact

1.0 INTRODUCTION

The Combined Arms Center and Fort Leavenworth evaluated potential reuses for the old US Disciplinary Barracks (USDB) located on Fort Leavenworth, Kansas. A new USDB has been constructed at Fort Leavenworth and was occupied in September 2002, vacating the old USDB. The old USDB consists of the main inmate domicile, known as the “Castle,” 11 miscellaneous buildings, the perimeter stone wall and guard towers, plus several smaller buildings and sheds (Figure 1-1). *Wherever USDB is used in this Environmental Assessment the reference is to the old USDB unless otherwise noted.*

Fort Leavenworth completed an Alternative Reuse Study (ARS) for the old USDB complex that considered a wide range of potential reuse options. The ARS evaluated four reuse alternatives in detail. This Environmental Assessment (EA) analyzes the environmental effects associated with the four alternatives presented in the ARS, and the No Action alternative. This EA has been prepared in accordance with the National Environmental Policy Act (NEPA) and Army Regulation 200-2, Environmental Analysis of Army Actions.

1.1 HISTORICAL BACKGROUND

Fort Leavenworth, established as a frontier outpost in 1827, provided protection to the northwest fur trade and developing trade with Santa Fe. The Fort became a depot for supplies headed for all military installations farther west and served as headquarters for numerous military campaigns during the Mexican and Indian Wars. After the Civil War, Fort Leavenworth increased in size and importance and became the headquarters for the Department of the Missouri and the School of Application for Cavalry and Infantry. In 1881, General Sherman established the School at Fort Leavenworth to address the technological, organizational and tactical changes occurring in warfare. Throughout the 20th century, officer education became the installation’s primary mission and it is now the Army’s center for advanced tactical education plus combat development and training.

Fort Leavenworth’s military mission also includes the confinement and rehabilitation of military criminals. The USDB began operation at Fort Leavenworth in 1874 and continues today. The new USDB is the only maximum security prison in DOD and is the oldest penal institution in the Federal system. The new USDB is carrying on Fort Leavenworth’s mission of confinement and rehabilitation of military criminals. The first buildings used for USDB were part of the Quartermaster Depot that supplied all military installations, camps and stations in the Indian Territory to the west, via the Santa Fe and Oregon Trails. Three of the Quartermaster Depot buildings, constructed in 1840, were used as part of the military prison.

The USDB complex consists of 12 guard towers (Buildings 451-462), 11 historic buildings including the Castle, 9 non-historic buildings and 3,300 linear feet of prison wall surrounding an area of approximately 12.5 acres. Also included is a 5-acre recreation field surrounded by a double chain-link fence to the north of the prison stone wall. The majority of the buildings were constructed between 1863 to 1878; however, 11 date back to 1840. The main inmate domicile, known as the “Castle,” was constructed between 1913 to 1921. Table 1-1 lists the 20 buildings within the USDB complex, their current and historical use, and date of construction.

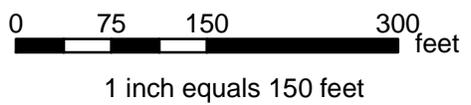
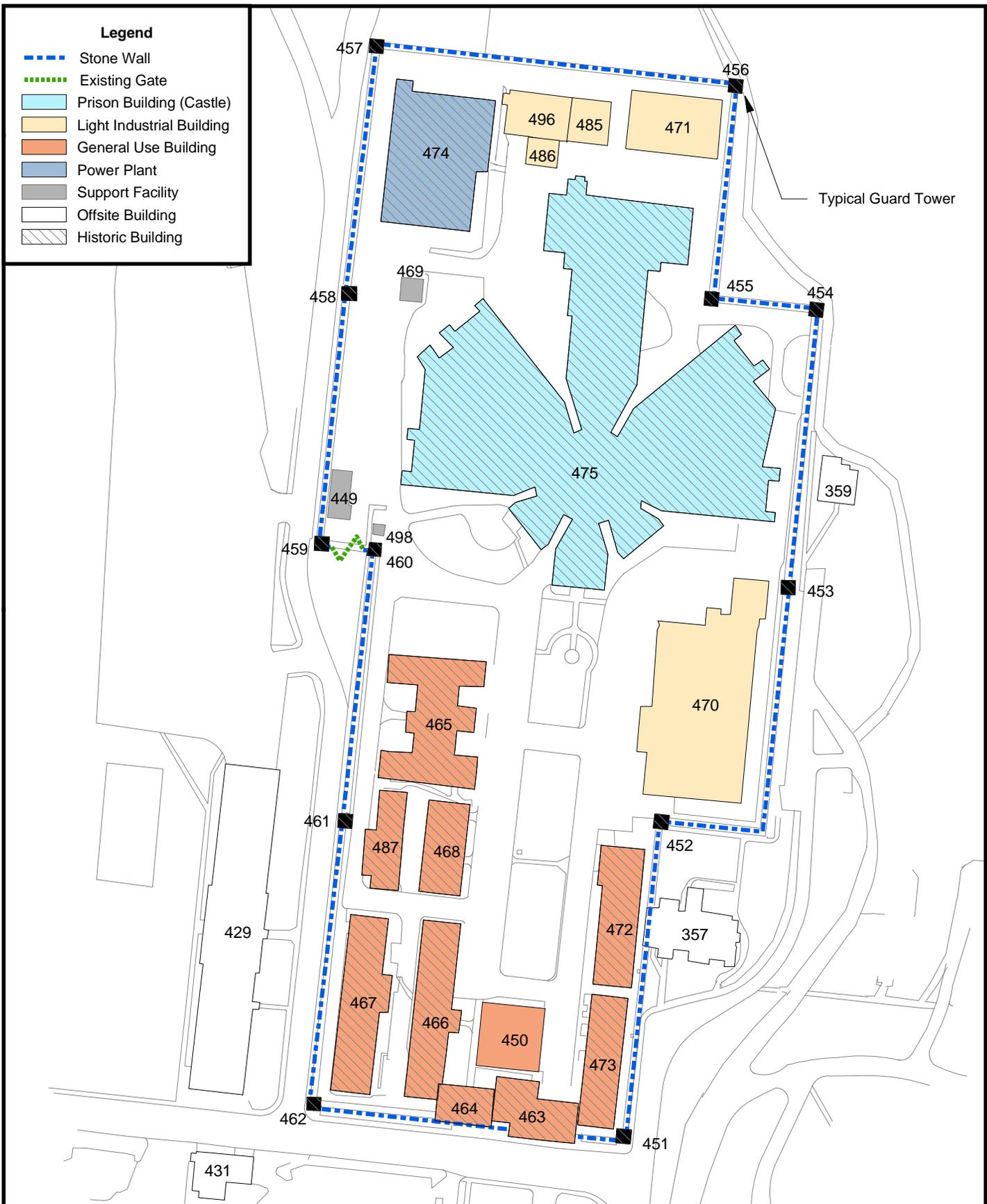


Figure 1-1
Fort Leavenworth
Existing Site Plan

Source: Fort Leavenworth GIS Department.

Table 1-1 Current and Historical Use of Buildings Within USDB

Contributing elements of the Fort Leavenworth National Historic Landmark District are shaded in grey.

Building No.	Current Use	Historical Use	Date of Construction
449	Custody Facility	Custody Facility	1986
450	Mental Health Clinic	Mental Health Clinic	1972
463	Administration Building	Administration Building	1877
464	Administration Building	Administration Building	1878
465	Clinics/Barracks	Prison Hospital	1930
466	F.E. Maintenance Shops/Barracks	Quartermaster Warehouse Military Prison	1840
467	Administrative/Crafts/F.E. Shops	Cell Block	1887-92
468	Machine Shop	Blacksmith Shop	1878
469	Storage Shed	Storage Shed	1934
470	Pope Hall – Vocational Training	Pope Hall – Vocational Training	1963
471	Auto Repair Shop	Auto Repair Shop	1967
472	Education/Print Shop	Prison Hospital/Cell house	1878
473	Visitor/Administration	Quartermaster Warehouse Cell house	1863
474	Power Plant	Prison Heating Plant	1911
475	Castle – Main prison building	Castle – Main prison building	1913-1921
485	Auto Body Shop	Vocational Training	1932
486	Auto Body Paint Shop	Auto Body Paint Shop	1982
487	Dry Cleaning Plant	Prison Laundry	1921
496	Auto Body Repair & Metal/Welding Shop	Auto Body Repair & Metal/Welding Shop	1968
498	Transit Shed	Transit Shed	1972
451-462	Elevated Guard Houses	Elevated Guard Houses	1943

The USDB Castle follows the general 19th century philosophy of prison design. It requires a high guard-to-inmate ratio for supervision and limits efforts of inmate rehabilitation. The cell blocks are of considerable height, causing temperature stratification making it difficult to properly ventilate the facility and inefficient for heating. Additionally, structural analyses of the Castle and the other buildings of the USDB have uncovered deficiencies in the steel, concrete, and masonry structural elements. These conditions prevent the existing USDB facilities from meeting Seismic Zone 2 structural requirements, making the facilities potentially dangerous should an earthquake occur.

1.2 PURPOSE AND NEED

Fort Leavenworth has been the home to the USDB since 1874. With the construction of the new USDB on Fort Leavenworth, the installation initiated a process to determine reuse alternatives. Since adequate facilities exist on the installation to fulfill the Army’s current mission, the old

USDB is vacant. Relocation of the inmates and guards to the new prison facility has resulted in some surplus buildings within the historic USDB complex.

Potential uses for the USDB were explored as a part of an ARS completed in October 2002. The ARS noted that any new use for the USDB must be compatible with the mission of the installation and with the historic nature of Fort Leavenworth. The USDB lies within the Fort Leavenworth National Historic Landmark District (NHLD) and is a contributing element of that district. The NHLD designation provides guidelines and restrictions for any building modifications in order to maintain the historical integrity of the district.

A majority of the buildings within the USDB complex require some measure of utility or structural upgrading for any potential reuse. The Castle, constructed of unreinforced brick masonry, is considered very vulnerable to seismic activity. These seismic deficiencies have been documented and evaluated in several studies since 1991. They are: 1991 Finney & Turnipseed Study, 1992 Kansas City District Corps of Engineers Study, 1993 Kuhlmann Design Group Study, 1995 URS Blume Baseline Study, and the 1998 TapanAM Associates/Dames & Moore Study. Fort Leavenworth is located within a Zone 2A seismic area, which is a moderate earthquake zone compared to other areas of the country (Los Angeles and San Francisco are located within Zone 4 representing the highest seismic risk). Structural deficiencies prevent the existing USDB facilities from meeting Seismic Zone 2 requirements, and make the facilities potentially dangerous should an earthquake occur. If upgrades to the USDB are not implemented, the facilities would deteriorate and become increasingly expensive to maintain and operate.

Prior to implementing any alternative that involves the reuse of the Castle, a comprehensive seismic evaluation must be performed taking into account the facility's new use and extended design life. Previous studies only evaluated the Castle for use as a prison.

1.3 ALTERNATIVE REUSE SELECTION PROCESS

The ARS analyzed realistic alternative uses for the USDB complex and resulted in several preliminary concepts. To arrive at potential reuses of the USDB complex a team of professionals, with a wide variety of backgrounds, were involved early in the process. The backgrounds included historic preservation, environmental studies, structural engineering as well as officials from the National Park Service (NPS), the US Army, the Kansas State Historic Preservation Officer (SHPO) and local communities. The process was initiated without any pre-determined ideas and involved brainstorming sessions that identified many potential reuse options.

The reuse concepts were grouped into four categories: Military Use, Government Use, Institutional Use, and Private Commercial Use. Screening criteria were developed and a screening process applied by a multidisciplinary team. Each of the criteria was evaluated according to a point system. The assigned points were multiplied by a weighting factor (based on the importance relative to other criteria) for each criterion. From those potential reuses scoring the highest, four alternatives were developed. They were:

1. Conference Center/Guest Housing
2. Military Operations and Urban Training Center

3. Military/Government Archival and Records Center
4. Partial Demolition and General Use

The alternatives were analyzed as stand-alone alternatives, with no mixing among alternatives. In addition to the reuse alternatives, the No Action alternative was presented as the baseline against which to evaluate the reuse alternatives. Key assumptions used in completing the development of alternatives included:

- Property should be redeveloped in accordance with the Secretary of Interior Standards for the Rehabilitation of Historic Property and 36 CFR 800 in order to maintain the historic integrity of the property and the NHLD.
- Property should be redeveloped in accordance with the Americans with Disabilities Act (ADA) accessibility standards.
- Buildings should be brought up to current and applicable health, safety and environmental building standards.

Three alternatives focused on the reuse of the Castle. The Castle was the inmate housing building and posed the most challenging reuse consideration. The Castle consists of eight wings radiating from a tall center rotunda structure and is constructed of primarily unreinforced masonry. All four reuse alternatives also include complete renovation for the remaining historic buildings within the walls for general use as administrative offices and educational facilities. The fourth alternative includes complete demolition of the Castle and ultimately the Power Plant (Building 474) to provide for more open space within the USDB prison walls for landscaping and to support renovation of the remaining buildings.

This EA is based, in part, on the information contained in the ARS. The ARS includes documentation of coordination efforts, development of the preliminary alternative reuse scenarios considered, a description of the alternative reuse screening process, and preliminary cost estimates for each of the reuse alternatives.

2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

Each of the reuse alternatives affects four distinct areas of the USDB complex: 1) the Castle, 2) noncontributing facilities, 3) contributing buildings and 4) prison walls and guard houses. The following sections describe the proposed action and alternatives with respect to these four areas.

2.1 DESCRIPTION OF THE NO ACTION ALTERNATIVE

This alternative represents no action taken to demolish, renovate and/or occupy the buildings within the walls of the USDB. However, this does not mean that there is no activity with regard to these buildings. There would be minimal maintenance and repair efforts to prevent neglect of the buildings and maintain the integrity of the structures as required by 36 CFR 800.

Utilities (electrical, water, gas) would remain in place but be used to a lesser degree. Heating would be kept at a temperature level to prevent water lines and fire protection lines from freezing. Fort Leavenworth has an established maintenance crew for the USDB complex for minimal maintenance and repair. For public safety, limited security would be maintained to prevent unauthorized personnel from entering the facility.

2.1.1 Costs

Costs for this No Action alternative are approximately \$500,000 annually. This alternative leaves this historic facility intact, but does not provide for upgrading the property to current standards for seismic safety and modern building systems. The prison walls, combined with limited security forces, should protect the facilities from unauthorized occupation.

2.1.2 Advantages of This Alternative

- Avoids the cost to seismically retrofit and renovate the Castle.
- The historic USDB would be preserved to historic preservation standards and the historic setting within the NHLD would be maintained
- Lower maintenance and operational costs

2.1.3 Disadvantages of This Alternative

- No upgrading of the property to current standards for seismic safety and modern building systems
- Cost of annual maintenance and repair for empty/unusable buildings.

2.2 DESCRIPTION OF THE PROPOSED ACTION – PARTIAL DEMOLITION AND GENERAL USE

Of the four alternatives presented in the ARS, Alternative 4 Partial Demolition and General Use is the Army's proposed action and is described in the following paragraphs. Henceforth Alternative 4 will be called the Proposed Action.

The Proposed Action would include the complete removal of the Castle, Power Plant, Mental Health Clinic (Building 450) and miscellaneous metal shop buildings to the north of the Castle. This would provide open space to support the newly renovated USDB buildings to the south and add to the green space and landscaping for the property (see Figure 2-1, Proposed Action Facilities Layout).

The Proposed Action provides for the following:

- Complete demolition of the Castle, Power Plant, Auto Shops, and Mental Health Clinic (approximately 355,000 square feet (ft²) of building construction) to provide for site improvements
- 162,100 ft² of general use space suitable for administrative offices, educational facilities, etc.
- 45,700 ft² of space for light industrial use and power plant
- Restoration of 3,300 linear feet of prison walls

2.2.1 Costs

The estimated total project cost to implement the Proposed Action is \$29.9 million. This alternative eliminates the Castle and the expense of seismic retrofitting the structure. The remaining structures and added green space, while different, would more closely resemble the USDB as it existed between 1874-1909. The general use buildings on the south portion of the USDB complex are easily adaptable to a variety of uses, including office and administrative space, educational use, storage, etc. Open space would be added providing for the addition of landscaping and future expansion.

2.2.2 Castle Demolition (Building 475)

Removal of the Castle eliminates the challenge of finding an appropriate and economical use for this facility that requires a substantial reinvestment to meet current seismic structural requirements. The removal eliminates a large portion of the maintenance costs associated with the Castle and Power Plant preventing their deterioration. The Castle and Power Plant demolition provides additional green space. The remaining general use buildings are adaptable for many purposes and provide the installation with options for buildings that meet the future needs of Fort Leavenworth and the US Army.

2.2.3 Noncontributing Buildings

Building 449

Building 449, constructed in 1986, is the Security Office for the main gate on the west side of the USDB and consists of a relatively new building. Because of access to this facility and its age and function, no renovations would be necessary.

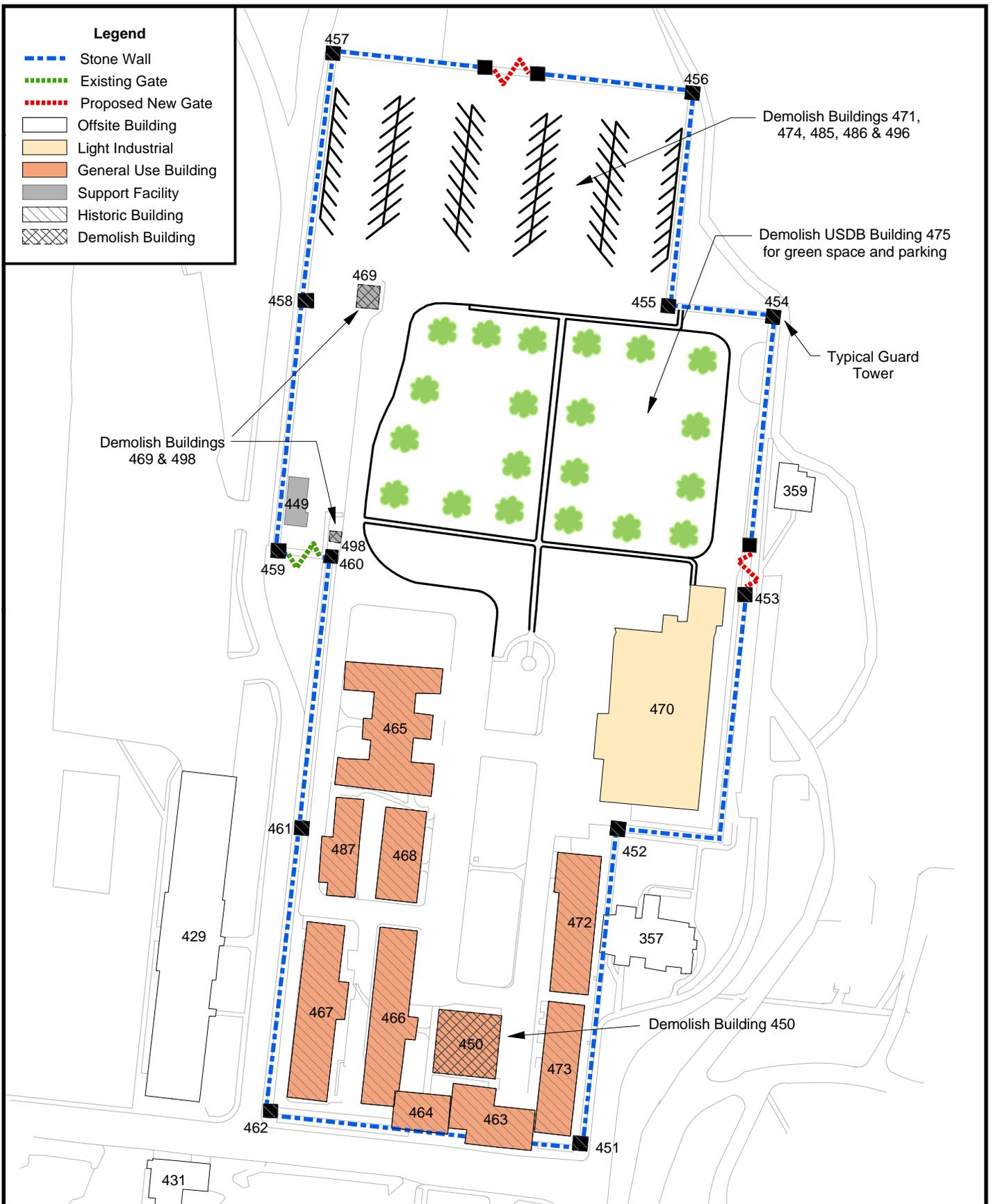


Figure 2-1
Proposed Action
Partial Demolition & General Use
Facilities Layout

Source: Fort Leavenworth GIS Department.

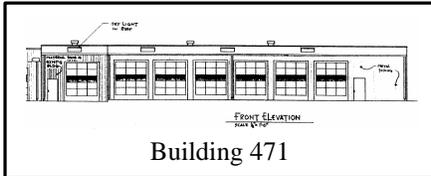
Building 469



Building 469

The existing Storage Shed would be demolished. This circa 1934 building is not historically or architecturally significant. Its location and small size (625 ft²) make its rehabilitation neither feasible nor appropriate.

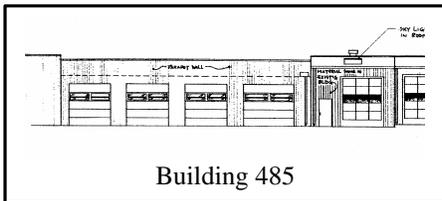
Building 471



Building 471

This building, the former Auto Repair Shop, would be demolished. This circa 1967 metal building is neither historically or architecturally significant.

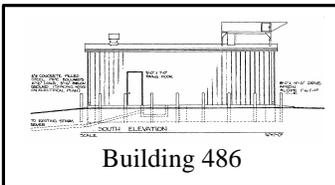
Building 485



Building 485

The Auto Body Shop is a circa 1932 metal and masonry tile building. The structure is in poor condition with many of its original elements, i.e., personnel doors and overhead doors, missing. Building 485's current state of disrepair and small scale, along with its location, makes demolition the most reasonable approach to redevelopment of the USDB site.

Building 486



Building 486

The Auto Body Paint Shop, a circa 1982 metal building, does not contribute to the historical or architectural environment of the USDB or NHLD and would be demolished. Building 486's current state of disrepair, along with its location, makes demolition the most reasonable approach to the redevelopment of the USDB site.

Building 496



Building 496

The former Auto Body Repair and Metal/Welding Shop building, a circa 1968 metal building, does not contribute to the historical or architectural environment of the USDB or NHLD and would be demolished. Building 496's current state of disrepair, along with its location, makes demolition the most reasonable approach to redevelopment of the USDB site.

Building 498

This building, the Transit Shed, would be demolished. This circa 1972 metal building is neither historically or architecturally significant.

Building 450

This structure is not considered historic or architecturally significant and is actually located within the historic rectangular-shaped parade grounds of the original military and USDB prison

complex. Demolition of the building would open up the original parade grounds for added green space and landscaping.

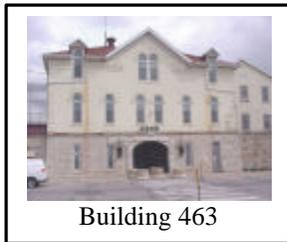


Building 450

Building 450 is a two-story building constructed of plain concrete masonry without ornamentation and does not match any of the other historic buildings. From a site planning perspective, this building restricts access to the adjacent buildings by fire-fighting equipment. Considering the number of buildings available and the need for additional open space within the walls, this appears to be the best alternative to an expensive rehabilitation.

2.2.4 Contributing Buildings

Building 463



Building 463

The existing Administration Building, constructed in 1877 and located east of the main gate of the USDB, is historic and would be rehabilitated into modern administrative/educational use for future requirements of the installation. The building's location on the south edge of the complex and its link to the historic limestone prison walls makes it easily accessible from both sides of the wall. Its three floors of usable space appear easily adaptable to administrative/educational use.

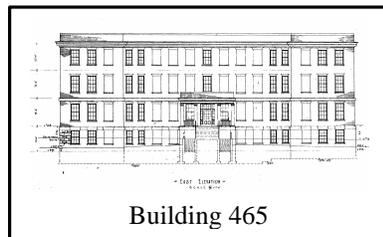
Building 464



Building 464

The existing Administration Building, constructed in 1878 and located west of the USDB main gate, is historic and would be rehabilitated into modern administrative/educational use for future requirements of the installation. Like Building 463, its location on the south edge of the complex and its link to the historic limestone prison walls makes it easily accessible from both sides of the wall. Three floors of usable space appear easily adaptable to administrative/educational use.

Building 465



Building 465

The existing Clinics/Barracks Building, constructed in 1930 and located in the west central area of the USDB, is considered historic and would be rehabilitated into modern administrative/educational use for future needs of the installation. The circa 1930 building is constructed of fire-proof reinforced concrete and masonry with rated floor capacities predicted to be compatible for office, classroom, or light storage. The front (east) sidewalk entrance is placed between the ground/basement floor and the first floor. There is an elevator system centrally located in the building surrounded by the main stairs.

Building 466

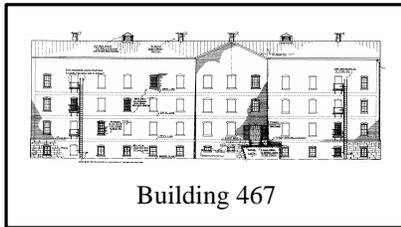
The existing Facility Engineer (F.E.) Maintenance Shops/Barracks Building located near the front gate and connected to Building 464 appears to be the oldest building within the USDB complex. This circa 1840 building would be rehabilitated into modern administrative/educational use for the future space requirements of the installation. Floor space

on each of the floors is primarily open, with no interior bearing walls, making the space flexible for the addition of partitions for offices or classrooms.



The main portico entrance on the east side of the building has a set of stairs for access to the second (main) floor. Portions of the ground floor are below grade with an entrance near grade at the north end of the building. A secondary steel-framed stair tower is on the east side (not original construction).

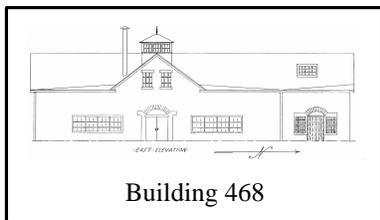
Building 467



The existing Administration/Crafts/F.E. Shops Building is located near the front gate and is parallel to Building 466. This circa 1887 building would be rehabilitated into modern administrative/educational use for future requirements of the installation. Floor space on each of the floors is primarily open, with no interior bearing walls, making the space flexible for the addition of partitions for offices or classrooms.

The main entrance on the east side of the building is near grade at the south end. There is a basement level entrance on the north side. A secondary steel-framed stair tower is on the east side (not original construction).

Building 468



The existing Machine Shop located in the west central area of the USDB is historic and would be rehabilitated into modern administrative/educational use for future needs of the installation. This circa 1878 single-story building is accessible from the east sidewalk at the front of the building. Its clear span wood roof trusses provide for column-free space and flexibility for use of the building.

Building 472



The existing Education/Print Shop Building is located parallel to the east prison wall. This circa 1878 three-story building would be rehabilitated into modern administrative/educational use for future needs of the installation. Floor space on each of the floors is primarily open with one row of interior columns in the center of the building. The third floor is column free. The first floor is only accessible by stairs on the south end.

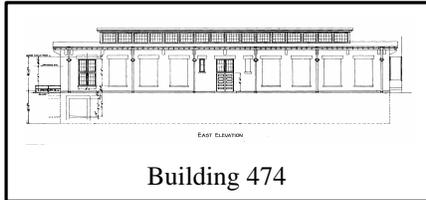
Building 473



The existing Visitor/Administration Building is located parallel to the east prison wall. This circa 1863 three-story building would be rehabilitated into modern administrative/educational use for future space needs of the installation. As in Building 472, the structure has a center row of columns except on the third floor.

The first floor of Building 473 is near sidewalk elevation. The building is connected to Building 463 on the south end; however, floor elevations do not appear to match. The third floor has a four-step rise through the access door into Building 463.

Power Plant – Building 474



The existing Power Plant would be demolished after the remaining buildings in the complex have been renovated and individual heating, ventilation, and air conditioning (HVAC) systems installed. This is a long-term goal since need for the historic building is not yet determined. With the demolition of the Castle, it would not be economically feasible to maintain the large central heating plant for the general use

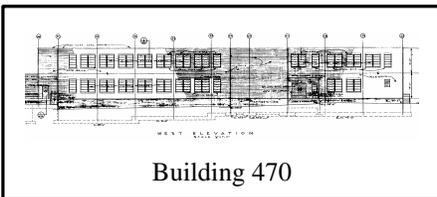
buildings south of the Castle. The new HVAC systems would be designed so as not to detract from the integrity and historic significance of the existing structures.

Building 487



The existing Dry Cleaning Plant Building would be rehabilitated into modern administrative/educational use for future needs of the installation. This circa 1921 building located near the west prison wall appears to have interior bearing/structural masonry walls that may limit usage of the space. Its small scale may also limit its use. Access from the east side of the building is from the sidewalk level.

Building 470



Pope Hall would serve as a warehouse for the new USDB until a comparable structure is built at the new facility. In the future, it would serve the installation as a light industrial use or storage facility. Constructed in 1963, its reinforced concrete construction with high load-rated floors, loading dock, freight elevator, and high volume ventilation system are well suited for this type of application.

2.2.5 Prison Walls and Guard Houses (Buildings 451-462)

The existing limestone and concrete masonry prison walls (circa 1874, 1921), along with the guard houses (circa 1943), would be left intact and preserved as historic elements of the newly developed property. It is assumed that two additional entrances/gates would be necessary for the new facilities within the walls to improve traffic flow, pedestrian and emergency vehicle access. A security study and plan is recommended to determine if existing built-in security features, such as the wall and guard houses, are necessary with respect to the proposed operations and tenants within the walls. This construction is not only historic but could be an asset for protecting high-security activities and/or administrative functions.

2.2.6 Advantages of This Alternative

- Avoids the cost to seismically retrofit and renovate the Castle.
- Open space would be added to the site for landscaping and to support the renovated south buildings.
- The historic general use buildings to the south would be preserved, upgraded and available for education, office and administrative use, and storage.
- Avoids the cost of maintaining the Castle and the Power Plant making more funds available to maintain and restore the remaining structures.

2.2.7 Disadvantages of This Alternative

- Removal of the Castle and Power Plant is, as defined by 36 CFR 800, an adverse effect as both structures are eligible for the NRHP and are part of the NHL. A MOA between Fort Leavenworth, the Kansas SHPO, and the ACHP has been prepared to define mitigation for the adverse affect.
- Estimated relatively high demolition costs.

2.3 DESCRIPTION OF THE ALTERNATIVES

The following discussion focuses primarily on reuses of the Castle. Alternatives 1 and 3 would require extensive modifications to the Castle. Alternative 2 requires minimal modifications to the Castle.

2.3.1 Alternative 1 – Conference Center/Guest Housing

This alternative creates a large conference center and guest lodging facility at the Castle to be used primarily for military purposes. The remaining buildings would be renovated as in the proposed action and reserved for general use, e.g., administrative offices and instructional use. Because of the security features of the facility, the conference facility could be used for high level conferences and summit meetings related to DOD activities. See Figure 2-2 for a facilities layout of Alternative 1.

Alternative 1 provides for the following:

- 200,000 ft² of full-service, Conference and Guest Housing Center created within the shell of the Castle.
- 162,100 ft² of general use space suitable for administrative offices, educational facilities, etc.
- 89,600 ft² of space for light industrial use and power plant.
- Demolition of 25,100 ft² of primarily non-historic structures to support site improvements.
- Preservation of 3,300 linear feet of prison walls.

2.3.1.1 Costs

The estimated total project cost to implement Alternative 1 is \$99 million. The development of a Conference Center/Guest Housing facility at the existing USDB represents the most expensive alternative. Seismic retrofitting of the Castle structure is the most expensive of all the alternatives because the assembly halls are open spaces and lack the support of columns or intermediate floors. This means the unbraced and tall masonry walls would be reinforced in order to meet seismic codes.

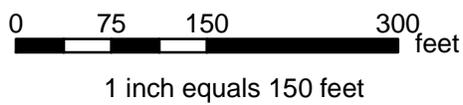
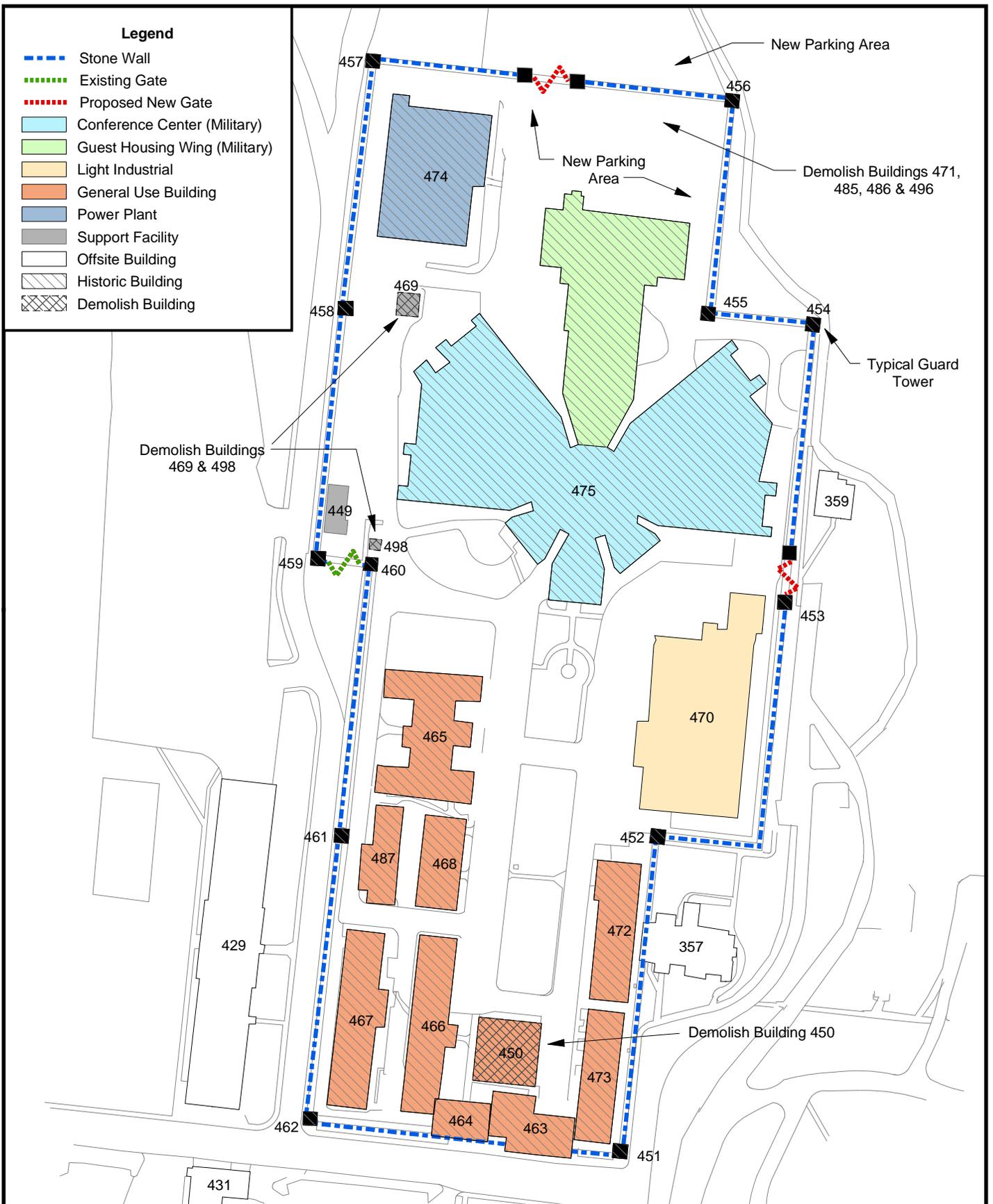


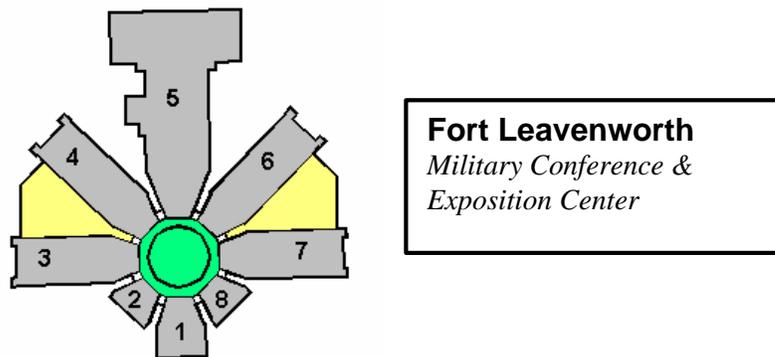
Figure 2-2
Alternative 1
Conference Center/Guest Housing
Facilities Layout

Source: Fort Leavenworth GIS Department.

2.3.1.2 Castle Rehabilitation

The Castle has the capacity to serve the military as a large conference center and guest housing complex with approximately 200,000 ft² of useable space. It is assumed that all basement and sub-basement areas (except for Wing 5) would be reserved for mechanical and electrical systems, storage, or maintenance services so that limited tenant finishing would be necessary and would not be included in the square-foot accounting of renovated space. All cell block structures above the first floor, i.e., concrete partition walls, steel cage structures, gates, stairs, and miscellaneous elements, would be demolished leaving each of the four cell wings (wings 3,4,6, and 7) open rooms with high ceilings (Figure 2-3).

The following floor usage plan was assumed in the development of this alternative:



- WING 1** – Small Meeting Rooms and Conference Support Services (16,400 ft² on 4 floors)
- WING 2** – Complex Administrative Offices (9,000 ft² on 4 floors)
- WING 3** – Conference Room/Exposition Space (7,650 ft² on 1st floor)
- DINING ADDITION 3/4** – Dining Facility & Kitchen (7,000 ft²)
- WING 4** – Conference Room/Exposition Space (8,850 ft² on 1st floor)
- WING 5** – Guest Housing, Guest Support Services, Small Kitchen & Grill (111,500 ft²)
- WING 6** – Multipurpose Room/Athletic Facility (8,850 ft² on 1st floor)
- DINING ADDITION 6/7** – Dining Facility & Kitchen (7,000 ft²)
- WING 7** – Conference Room/Exposition Space (7,650 ft² on 1st floor)
- WING 8** – Elevator System, Vending Area, & Security Office/Support (9,000 ft² on 4 floors)
- ROTUNDA** – Main Lobby & Kiosk (7,000 ft² on 1st floor)

Each of the four prison cell wings would have the approximate capacity for the following arrangements and events (Figure 2-4):

- Theater seating for 900 people per wing.
- Class Room seating for chairs and tables for 400 people per wing.
- Banquet event seating for 650 people per wing.
- Reception event for 750 people per wing.

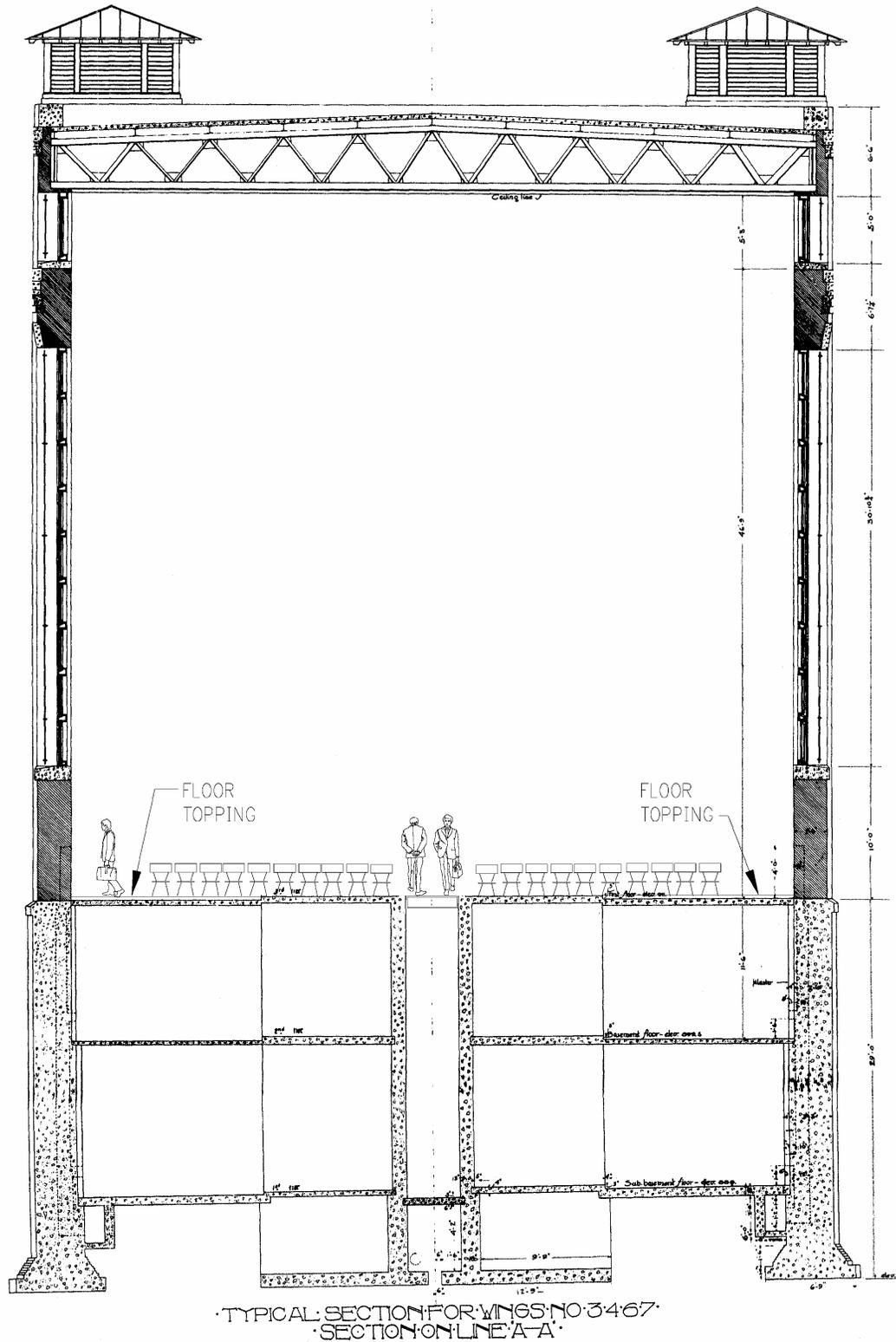


Figure 2-3 Cross Section of Typical Cell Block Wing with Conference Set Up

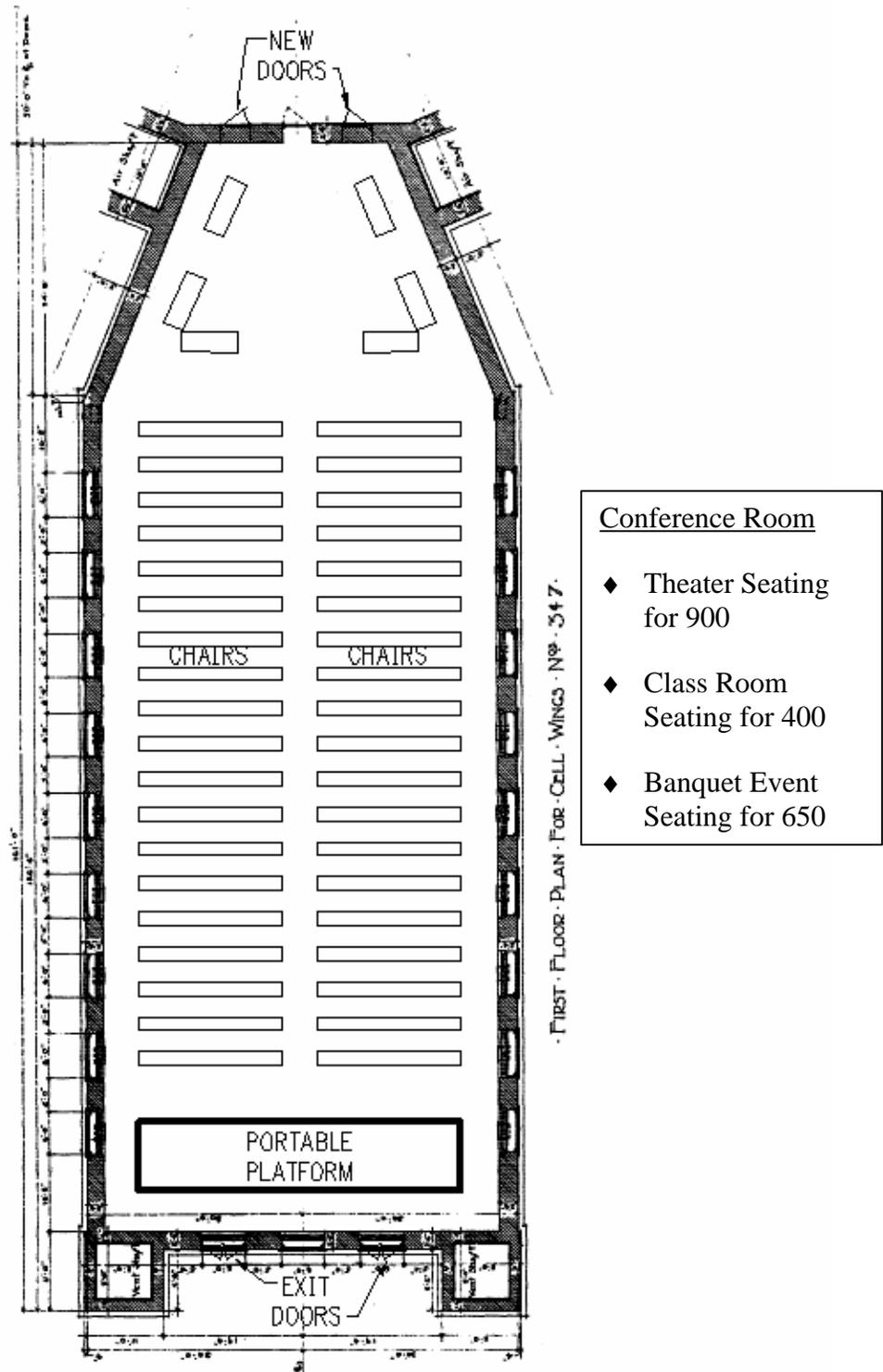


Figure 2-4 Floor Plan of Typical Prison Cell Wing for Conference Meeting

A proposed multipurpose wing would have the floor space for a full (50 ft. by 94 ft.) regulation basketball court, however, there would be limited room on each of the sidelines. With a clear height to the bottom of the roof trusses of approximately 52 feet, headroom is also not a problem. With this relatively high headroom, design should consider various acoustical treatments, such as, the addition of hanging baffles or banners from the ceiling or treatments on the walls.

The guest housing wing (Wing 5) would have the capacity to provide 160 to 240 guest rooms or suites. The exact number would depend on size, amenities, and arrangement developed in the final design. Although this number of guest rooms seems low compared to the size of the conference/exposition space, it could easily be supplemented with hotel/motel space off the installation, existing guest housing units on the installation, redesign of another wing and the conversion of other buildings within the walls of the USDB for additional guest housing.

2.3.1.3 Noncontributing Buildings

Buildings 471, 485, 486, 496 and 498 would be demolished and a new parking area constructed to support the redevelopment of the Castle. Building 450 would be demolished. Removal of this structure would open up the original parade grounds for added green space and landscaping. The existing Power Plant would be rehabilitated to serve the facilities within the prison walls for steam heat. New control systems would be necessary since a new and different use of the Castle is proposed. New features for energy efficiency and the possible disconnection of southern buildings could assist in compensating for any deficiencies in capacity. The Power Plant's exterior elements, i.e., masonry, roof, windows, doors, etc., would be restored with basic interior finishes upgraded.

2.3.1.4 Contributing Buildings

Buildings 463, 464, 465, 466, 467, 468, 472, 473, and 487 would be rehabilitated into modern administrative/educational use for future space requirements of the installation. Building 470 would serve the installation as a light industrial use facility, similar to its current use.

2.3.1.5 Prison Walls and Guard Houses

The existing limestone and concrete masonry prison walls along with the guard houses would be left intact and preserved as historic elements of the newly developed property. Two additional entrances/gates would be necessary to enter the new facilities within the walls for better traffic flow, access for pedestrians and for emergency vehicles.

2.3.1.6 Advantages of This Alternative

- The historic USDB would be preserved to historic preservation standards with minimal alterations to its exterior while its historic setting within the NHLD would be maintained.
- The facilities would be upgraded to modern building standards with respect to seismic requirements, electrical/mechanical systems, etc.
- The facilities would provide a wide variety of space needs for a full-service conference/convention center.
- The facility could host special events and activities that require high security requirements.
- The facility would be available for military use and special events.
- The facility's central location within the country and close proximity to the Kansas City International (KCI) airport make the conference center ideal for national conferences and conventions.

- South general use buildings would be available for education, office and administrative use, storage, and expansion of conference activities.

2.3.1.7 Disadvantages of This Alternative

- This alternative is expensive because of renovation and seismic upgrading of the Castle.
- The regional market for medium sized conference and convention space is very competitive.
- Proposed assembly hall space is relatively small compared to other regional medium sized conference centers and inflexible.
- Located within an active and secure military installation limits use from private sector.
- Amenities such as fast-food restaurants, entertainment and cultural venues are not close to facility.
- Smaller meetings and conferences would compete with the existing Frontier Conference Center located on the installation.
- Adverse impacts to NHLD properties would be minimal but would require a MOA between Fort Leavenworth, the Kansas SHPO, and the ACHP to determine the amount of mitigation.
- Expansion of parking facilities necessary for this use could require real estate outside prison walls and possibly impact the NHLD.

2.3.2 Alternative 2 – Military Operations and Urban Training Center

This alternative would create a MOUT Center that would be used to train soldiers for combat in an urban setting. The buildings that make up the USDB prison complex and the auto shop and metal buildings to the north of the Castle could be the actual setting for training exercises. The general use buildings to the south would be reserved for general office, storage, and educational use. Figure 2-5 illustrates the facilities layout for Alternative 2.

Alternative 2 provides for the following:

- The Castle, Power Plant, and Auto Shop buildings would remain and provide 346,000 ft² of building construction to be used for MOUT;
- 162,100 ft² of general use space suitable for administrative offices, educational facilities, etc.;
- 45,700 ft² of space for light industrial use and power plant;
- Demolition of 9,900 ft² of non-historic construction to support site improvements; and
- Preservation of 3,300 linear feet of prison walls.

2.3.2.1 Costs

The estimated total project cost to implement Alternative 2 is \$21.7 million. This alternative represents an economical solution to reuse of the Castle. Expensive seismic upgrading to the Castle would be avoided while the facility was used for this type of low-occupancy use.

2.3.2.2 Castle Rehabilitation

It is assumed that only exterior restoration and stabilization would be implemented for the Castle. The solid masonry construction of the Castle would be satisfactory for a military operations and urban training environment. Due to limited occupation for periodic training exercises, it is assumed that seismic retrofitting would not be implemented.

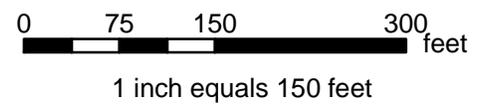
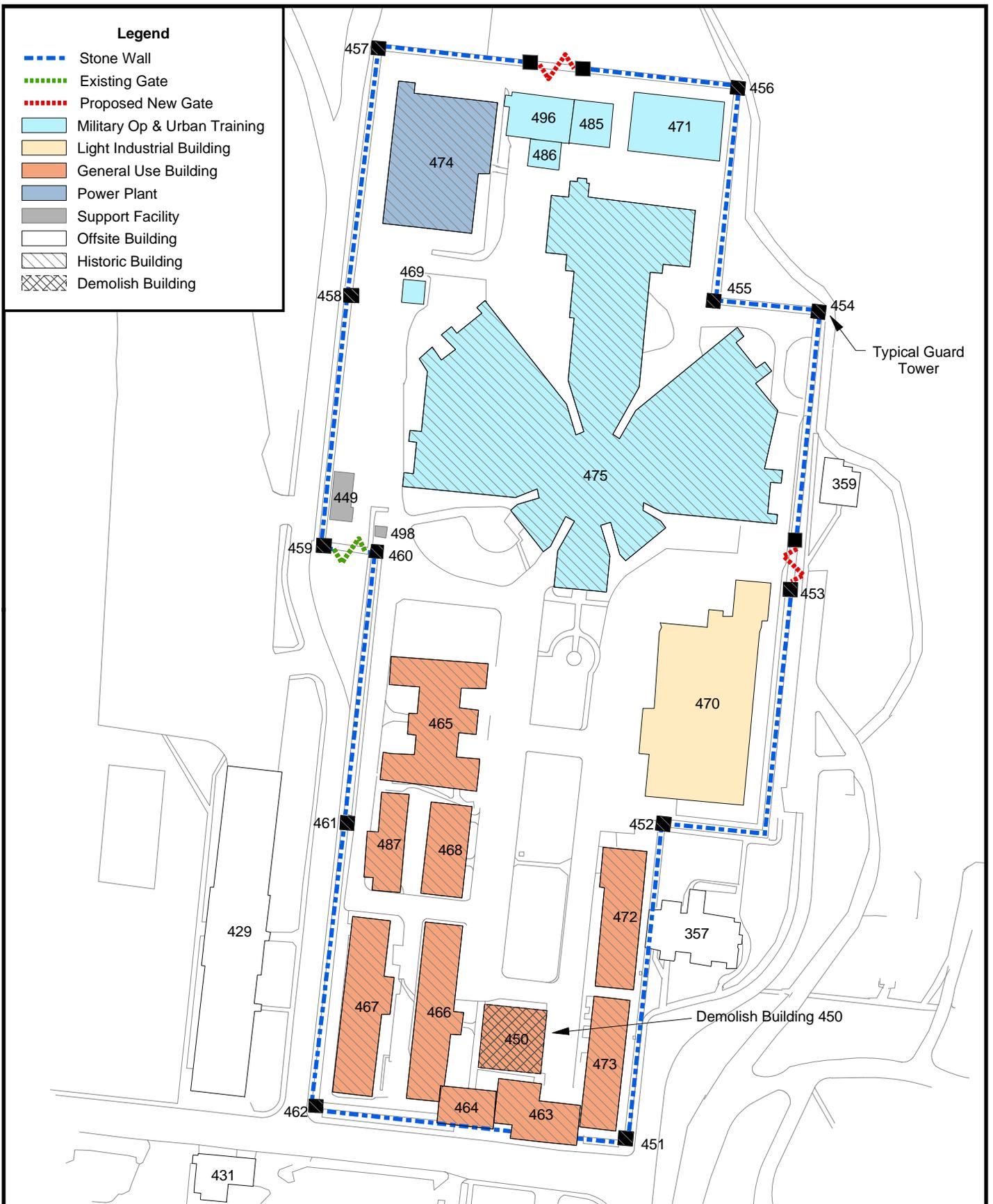


Figure 2-5
Alternative 2
Military Operations &
Urban Training Center
Facilities Layout

Source: Fort Leavenworth GIS Department.

2.3.2.3 Noncontributing Buildings

Buildings 469, 471, 474, 475, 485, 486, 496 and 498 would be maintained. These metal shop buildings could be considered expendable for training use or as parking enclosures and maintenance facilities in support of the MOUT Center. Building 450 would be demolished. Removal of this structure opens up the original parade grounds for added green space and landscaping.

2.3.2.4 Contributing Buildings

Due to the historic integrity of the facilities on the southern portion of the USDB, with construction dating from 1840 to 1930 (excluding Buildings 450 and 470), it was assumed that these facilities would not be appropriate for MOUT use. This type of training could damage the buildings and their architectural features.

Buildings 463, 464, 465, 466, 467, 468, 472, 473, and 487 would be rehabilitated into modern administrative/educational use for future space requirements of the installation. Building 470 would serve the installation as a light industrial use facility, similar to its current use.

2.3.2.5 Prison Walls and Guard Houses

The existing limestone and concrete masonry prison walls along with the guard houses would be left intact and preserved as historic elements of the newly developed property. Two additional entrances/gates would be necessary to enter the new facilities within the walls for better traffic flow and access along with public safety for emergency vehicle access.

2.3.2.6 Advantages of This Alternative

- Limited interior renovation and seismic upgrading would be implemented making this alternative relatively inexpensive.
- This alternative would make available several examples of interior and exterior environments for urban-type military operations.
- This training activity would be separated from the adjacent installation activities by the prison walls.
- General use buildings to the south of the Castle would be available for training classes, education, office and administrative use, and storage.

2.3.2.7 Disadvantages of This Alternative

- Exposure of the Castle to military-type training exercises could potentially damage building components and therefore be an adverse effect as defined in 36 CFR 800.
- Training activities at the installation currently focus on leadership and tactical instruction as opposed to field combat.
- Training may be restricted to daylight hours because of noise and nearby housing.
- Training exercises located at the Castle and northern portion of the complex could impact uses in the general use buildings in the southern portion of the complex as well as nearby facilities.
- There is an existing MOUT facility at nearby Fort Leonard Wood, MO.

2.3.3 Alternative 3 – Military/Government Archival & Records Center

This alternative would create an archival and records processing and storage facility at the Castle for military and government agencies. The remaining buildings would be renovated and reserved for general use, i.e., administrative offices and instructional use. Because of the extensive history of Fort Leavenworth and its central location, this is an appropriate location for an Archival and Records Center. Its built-in security features are also well suited for the protection of highly classified and sensitive documents. Figure 2-6 illustrates the facilities layout for Alternative 3.

Alternative 3 provides for the following:

- 300,000 ft² of Military Archival & Records Center, created from the shell of the Castle;
- 162,100 ft² of general use space suitable for administrative offices, educational facilities, etc.;
- 89,500 ft² of space for light industrial use and power plant;
- Demolition of 25,100 ft² of primarily non-historic structures to support site improvements; and
- Preservation of 3,300 linear feet of prison walls.
- The redevelopment of the USDB for an archives and records storage facility provides an excellent opportunity to provide appropriate space to serve the US Army in a central location within the country.

2.3.3.1 Costs

The estimated total project cost to implement Alternative 3 is \$84.5 million. Reuse of the historic USDB facility as an archival and records storage facility is relatively expensive, however, it can provide an invaluable amount of space and storage volume for this type of need. Construction of intermediate floors within each cell wing provides an excellent opportunity for providing seismic support to the unreinforced masonry walls.

2.3.3.2 Castle Rehabilitation

Use of the USDB Castle building would have the capacity to serve the military as a large archival and records processing and storage center totaling approximately 296,000 ft². It is assumed that all basement and sub-basement areas (except for Wing 5) would be reserved for mechanical and electrical systems, storage, or maintenance services so that limited tenant finishing would be necessary and would not be included in the square-foot accounting of renovated space. All cell block structures above the first floor, i.e., concrete partition walls, steel cage structures, gates, stairs, and miscellaneous elements, would be demolished leaving each of the four cell wings (wings 3,4,6, and 7) open for the construction of three additional, high-load capacity floors (Figure 2-7).

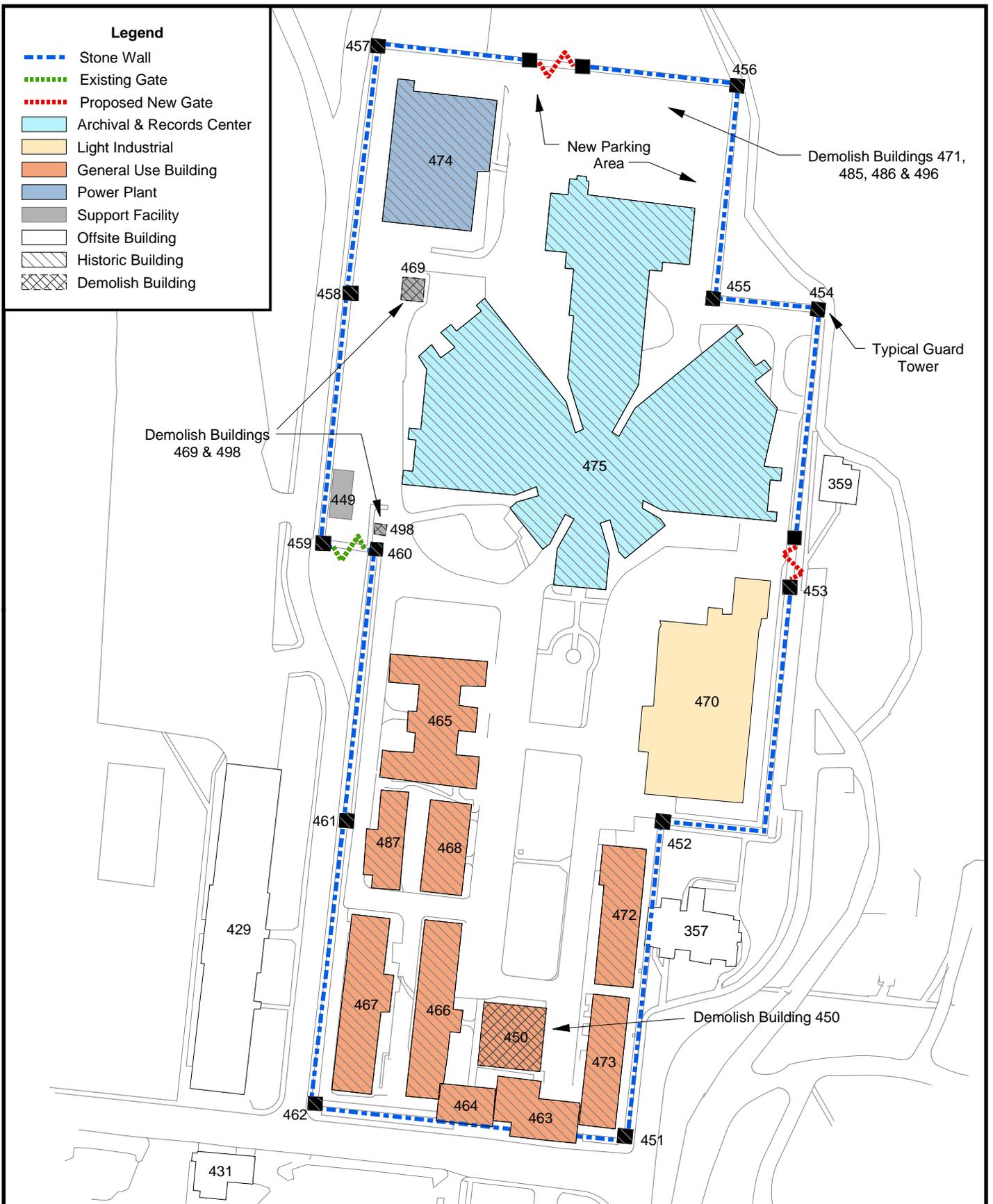


Figure 2-6
Alternative 3
Archival & Records Center
Facilities Layout

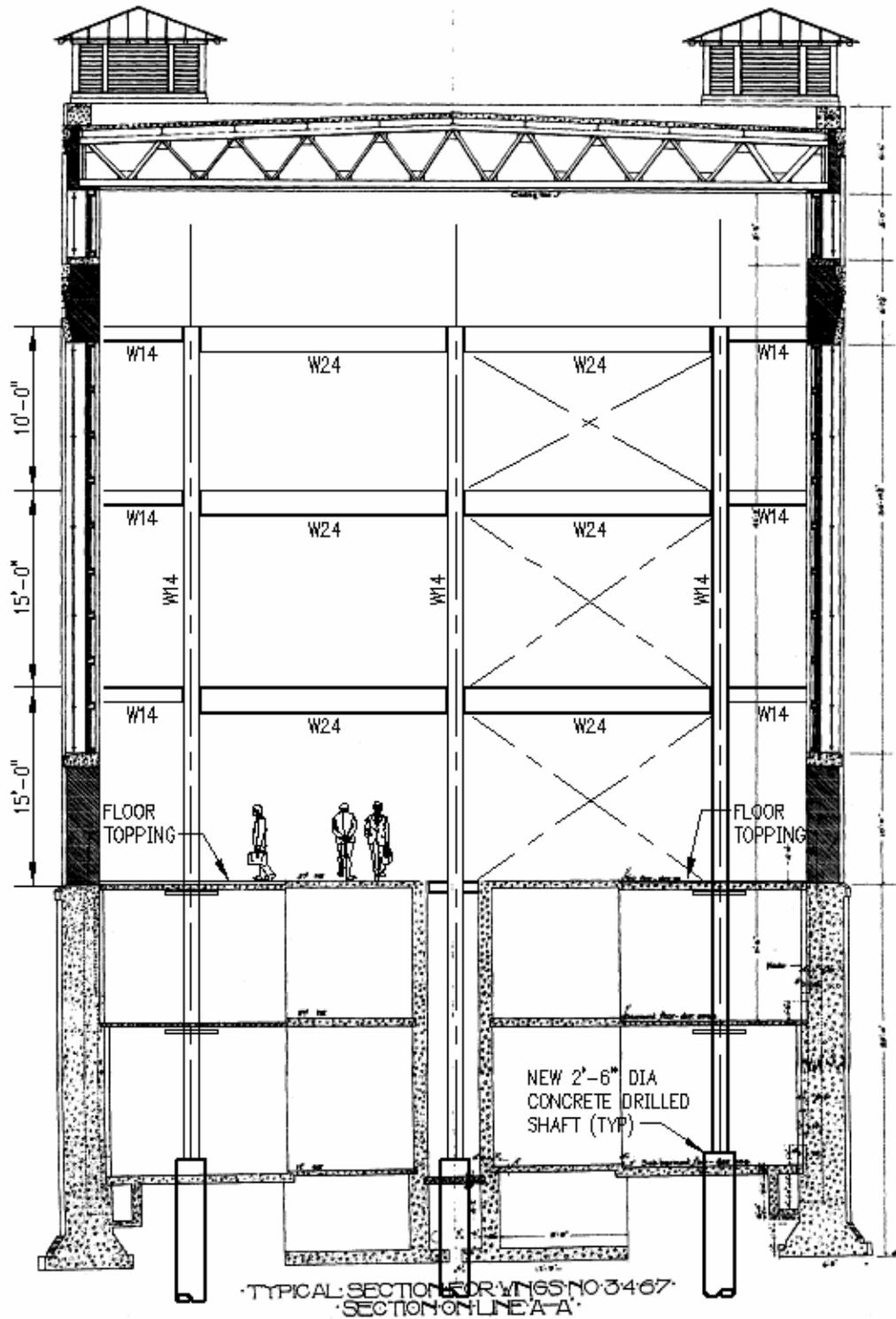
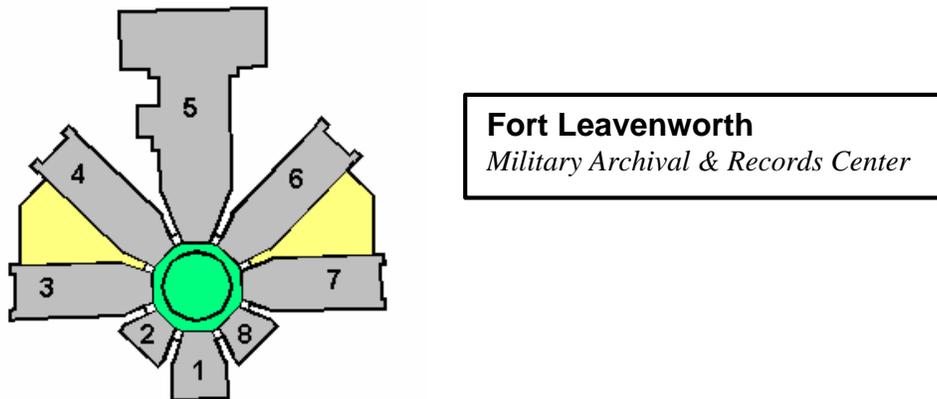


Figure 2-7 Cross Section of Typical Cell Block Wing with Archival/Records Center

The following floor usage plan is assumed in the development of this alternative:



WING 1 – Small Meeting Rooms, Support Services and Administrative Offices (16,400 ft² on 4 floors)

WING 2 – Administrative Offices (9,000 ft² on 4 floors)

WING 3 – Archival/Records Storage – Four Floors (30,600 ft²)

DINING ADDITION 3 / 4 – Records Processing Area (7,000 ft²)

WING 4 – Archival/Records Storage – Four Floors (35,400 ft²)

WING 5 – Records Receiving, Loading Dock, Administrative Offices, Conference Rooms, & Break/Vending Area (111,500 ft² on 4 floors)

WING 6 – Archival/Records Storage – Four Floors (35,400 ft²)

DINING ADDITION 6 / 7 – Archival Processing & Preservation Area (7,000 ft²)

WING 7 – Archival/Records Storage – Four Floors (30,600 ft²)

WING 8 – Elevator System, Vending Area, & Security Office/Support (9,000 ft² on 4 floors)

ROTUNDA – Main Lobby & Display Area (7,000 ft² on 1st floor)

2.3.3.3 Noncontributing Buildings

Buildings 471, 485, 486, 496 and 498 would be demolished and a new parking area constructed to support the redevelopment of the Castle. Building 450 would be demolished. Removal of this structure opens up the original parade grounds for added green space and landscaping. The existing Power Plant would be rehabilitated to serve the facilities within the prison walls for steam heat. New control systems are necessary since a new and different use of the Castle is proposed. New features for energy efficiency and the possible disconnection of southern buildings could assist in compensating for any deficiencies in capacity. The Power Plant exterior elements, i.e., masonry, roof, windows, doors, etc., would be restored with basic interior finishes upgraded.

2.3.3.4 Contributing Buildings

Buildings 463, 464, 465, 466, 467, 468, 472, 473, and 487 would be rehabilitated into modern administrative/educational use for future space requirements of the installation. Building 470 would serve the installation as a light industrial use facility, similar to its current use.

2.3.3.5 Prison Walls and Guard Houses

The existing limestone and concrete masonry prison walls along with the guard houses would be left intact and preserved as historic elements of the newly developed property. Two additional

entrances/gates would be necessary to enter the new facilities within the walls for better traffic flow and access along the public safety for emergency vehicle access.

2.3.3.6 Advantages of This Alternative

- The historic USDB would be preserved to historic preservation standards with minimal alterations to its exterior while its historic setting within the NHLD would be maintained.
- There could potentially be a large amount of floor space developed for high-volume storage and records processing.
- Seismic upgrading would be accomplished with additional structural support within the cell block wings.
- The facility would be upgraded to modern building standards with respect to seismic requirements, electrical/mechanical systems, etc.
- The prison walls and security features would provide the security and protection necessary for the storage and processing of sensitive documents.
- Fort Leavenworth's central location within the country makes it more accessible to military installations and operations across the nation.
- General use buildings to the south of the Castle would be available for education, office and administrative use, storage, and expansion of archival activities.

2.3.3.7 Disadvantages of This Alternative

- This alternative would be expensive, requiring construction of a facility entirely within a historic structure.
- Economical storage facilities already exist within the Kansas City area through private sector facilities and the installation already has a modern archival facility that provides similar services.
- The USDB complex is not located near major transportation routes that would typically serve a storage facility.
- Alterations, while minimal, to the exterior may be considered an adverse effect as defined in 36 CFR 800.
- Adverse impacts to NHLD properties would require mitigation measures approved and agreed to in a MOA between Fort Leavenworth, the Kansas SHPO, and the ACHP.

3.0 AFFECTED ENVIRONMENT

3.1 INTRODUCTION

3.1.1 Overview

The USDB is located at Fort Leavenworth, Kansas, approximately 38 miles northwest of downtown Kansas City, Missouri, and 20 miles from Kansas City International Airport. Fort Leavenworth is located on the west bluff of the Missouri River just north of the town of Leavenworth, Kansas (Figure 3-1).

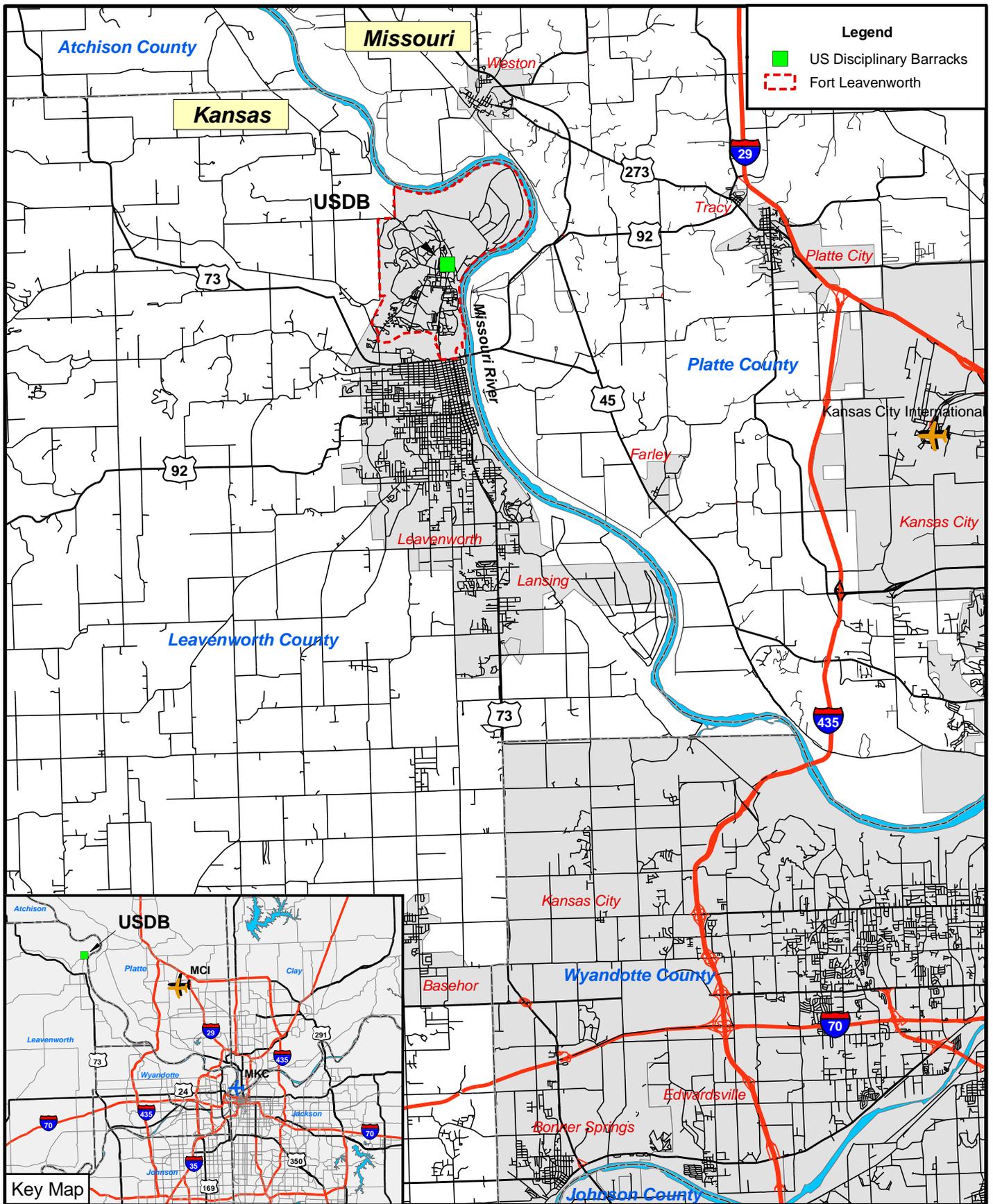
This section identifies environmental resources and conditions relevant to the buildings and facilities within the existing prison walls of the USDB complex, even though several buildings outside the walls are currently and/or historically linked to the functions of the military prison. Consistent with guidance issued by the Council on Environmental Quality, 40 CFR 1501.7(a)(3), this is a “focused” EA. The Army has considered the full spectrum of environmental resources and conditions often found in NEPA analyses and determined certain resources would not be affected by the proposed action. These are identified below and the reasons for their not being examined in detail are presented. Following sections address resources and conditions that are germane to the proposed action: land use, air quality, noise, geology and soils, water resources, cultural resources, buildings, socioeconomics, infrastructure, visual elements, hazardous waste, and biological resources. These environmental resources and conditions are fully evaluated for their potential environmental effects.

3.1.2 Resources Not Examined in Detail

The Army has considered the following environmental resources and conditions and, for the reasons provided, found them not germane to the proposed action.

Airspace. The Federal Aviation Administration manages and controls all airspace in the United States for commercial, civil, and military aircraft use. Management and control of airspace above the USDB complex does not affect, nor would it be affected by, activities at that location.

Environmental Justice. On February 11, 1994, President Clinton issued Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. The essential purpose of the Executive Order is to ensure the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no groups of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from the execution of federal, state, tribal, and local programs and policies. Consideration of environmental justice concerns typically includes race, ethnicity, and the poverty status of populations in the vicinity of a proposed action. Reuse of the USDB complex is not an action that has the potential to substantially affect human health or the environment by excluding persons, denying persons benefits, or subjecting persons to discrimination because of their race, color, or national origin. The essential aspect of the proposed action is the partial demolition and renovation of existing structures. Operational activities and personnel staffing for the old USDB complex are now occurring at the new USDB.



Protection of Children. Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks (April 21, 1997), recognizes a growing body of scientific knowledge that demonstrates that children might suffer disproportionately from environmental health risks and safety risks. These risks arise because (1) children's bodily systems are not fully developed; (2) children eat, drink, and breathe more in proportion to their body weight; (3) their size and weight may diminish protection from standard safety features; and (4) their behavior patterns might make them more susceptible to accidents. Based on these factors, the President directed each federal agency to make it a high priority to identify and assess environmental health risks and safety risks that could disproportionately affect children. Access to the USDB complex is controlled and children are not routinely allowed entry.

3.2 CULTURAL RESOURCES

3.2.1 Historical Context of Fort Leavenworth Military Installation

Fort Leavenworth was established in 1827 as a military installation to support the westward expansion of the United States. Its strategic location adjacent to the Santa Fe and Oregon-California trails provided for the protection of travelers, traders, missionaries, and homesteaders. Soldiers from Fort Leavenworth explored the West, opened trails, and maintained order in this uncharted territory. Fort Leavenworth worked in conjunction with a series of military installations that extended from the Gulf of Mexico to Lake Superior. With Fort Leavenworth's central location, Missouri River landing, and multiple missions, it became the most significant of these military installations.

In addition to its role in protecting the westward migration of people and goods, Fort Leavenworth was instrumental in the plan for relocating and consolidating Native American tribes to permanent "Indian Territory" in the West. In 1829, the United States Congress established Fort Leavenworth as the headquarters for the Upper Missouri Indian Agency to aid in the relocation process and to protect emigrant Indians from the east. From 1830 to the early 1850s, Fort Leavenworth hosted several Indian Councils to resolve disputes between different Indian nations and to negotiate territorial conflicts with the United States government.

During the Mexican War in 1846 through 1848, Fort Leavenworth served as the base of operations for the Army of the West where it housed, equipped, and trained volunteers from Missouri to fight. It was during this time that the role of the installation began to shift from frontier outpost to the Army's main troop and supply depot for the West.

In the mid 1850s, Fort Leavenworth began to play a role in the border conflicts between free state and pro-slavery advocates prompting the US Army to move the headquarters of the Department of the West to the installation. During the Civil War, Fort Leavenworth functioned as an arsenal, supply base, and training camp for volunteer troops. Fort Leavenworth troops fought in the strategic Battle of Westport, which secured control of the Missouri River for Union troops. After the war, on July 28, 1866, US Congress authorized the formation of six regiments of "Negro" troops. One of these regiments became known as the "Buffalo Soldiers", an African-American regiment housed at Fort Leavenworth during a time when racial segregation and discrimination were the norm.

As Native American and Civil War conflicts subsided, Fort Leavenworth settled into a role as a garrison post. In 1873, US Congress authorized the establishment of a central federal military prison as recommended by a special board appointed by Secretary of War William W. Belknap. The site of the new prison was supposed to be Rock Island, Illinois, but was later changed to Fort Leavenworth in 1874. The new military prison system worked to maintain discipline within the Army ranks, to improve conditions of confinement for prisoners, and to reform offenders.

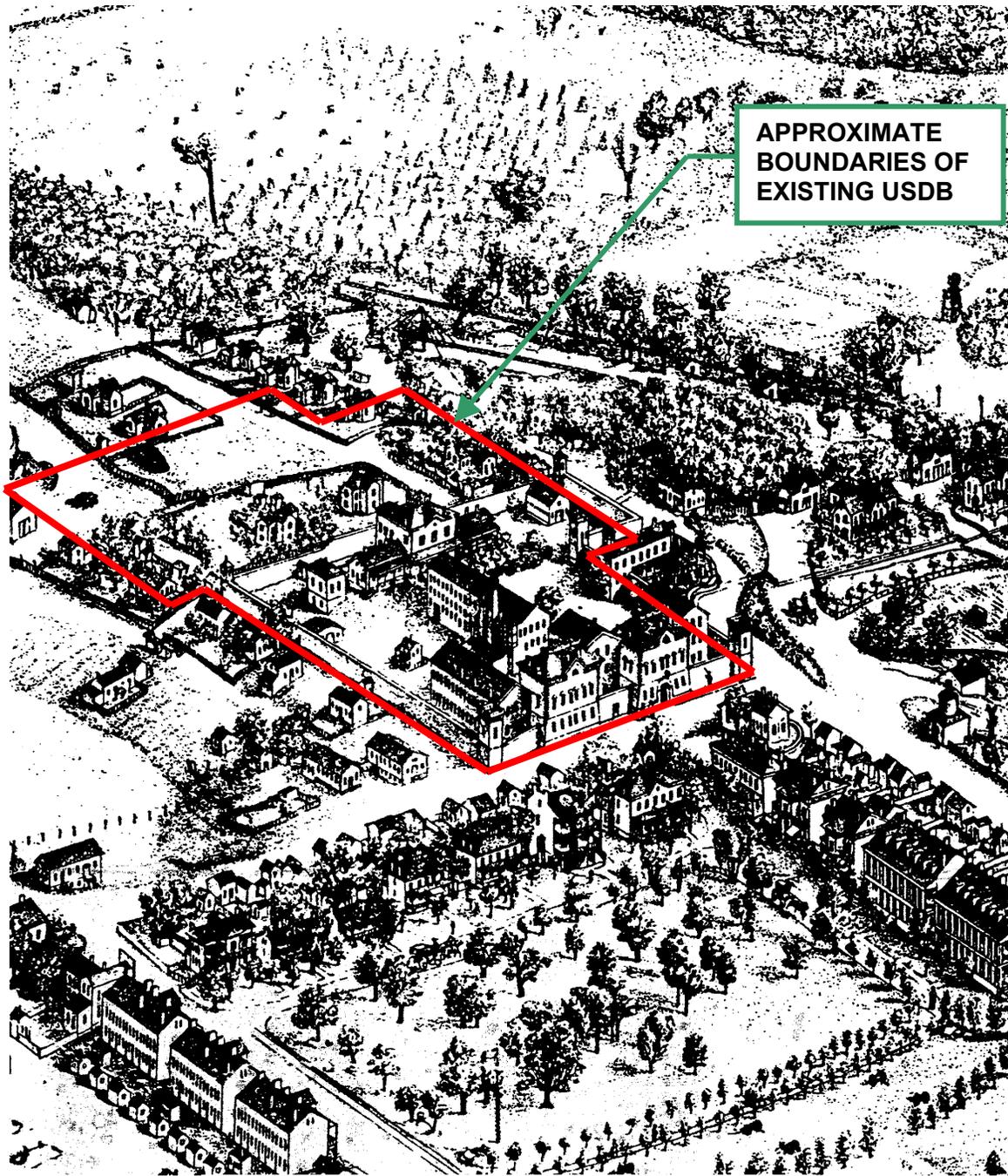
The US Army also embarked on new programs for the training and education of soldiers and officers. In 1882, General William T. Sherman established the School of Application for Infantry and Cavalry. By 1910, Fort Leavenworth hosted the Army's service schools: the Army School of the Line (Infantry and Cavalry School), the Staff College, the Signal School, the Field Engineer School, the Field Service School, the Correspondence School, and the School for Medical Officers. The Command and General Staff College at Fort Leavenworth became instrumental in the training of officers and generals for world wars, conflicts, and homeland defense. Fort Leavenworth remains the oldest active army installation west of the Mississippi River.

3.2.2 Historical Context of USDB

William W. Belknap, Secretary of War, appointed a special review board to study the Canadian military prison system as an effort to find solutions to the poor conditions of confinement of US Army prisoners in state and local institutions. Major Thomas F. Barr, Judge Advocate of the Department of the East, documented in detail unsatisfactory conditions at different military installations in the country. His report criticized the small, inadequately constructed and arranged guardhouses along with the inordinate proportions of time and resources required for disciplinary matters. As a result of these reports, the United States established a central military prison at Fort Leavenworth in 1874 (See Figure 3-2, Bird's Eye View of Fort Leavenworth, KS).

By September 1876 over 300 prisoners were transferred from installation stockades to temporary housing at Fort Leavenworth and immediately began the construction of the great masonry wall using stones quarried on the installation, the remodeling of the quartermaster buildings, and the construction of new facilities to house prison staff. By 1877, prisoners were manufacturing army shoes and, by 1889, the prison annually produced 5,000 pairs of boots, 30,000 pairs of shoes, 25,000 corn brooms, and 4,000 barracks chairs.

Twice in its history, the institution was transferred to the United States Department of Justice and used as a civilian prison. It was first transferred in 1895 while the first federal prison, the US Penitentiary Leavenworth, was constructed adjacent to the Fort Leavenworth military installation. It was returned to the Army in 1906. Major construction that expanded the United States Military Prison to its present walled area was started in 1909 and completed in 1921. Included in this construction was the structure known as the Castle (Figure 3-3). It was during this period of construction, in 1915, that the United States Military Prison was renamed the United States Disciplinary Barracks. It was, again, transferred to the Department of Justice in 1929. In November of 1940, it was returned to the Department of the Army. It is the only maximum security confinement facility in DOD and the oldest penal institution in the federal system. The maximum housing capacity for the facility was 1,700 inmates with an average population of 600 inmates at the time of transfer to the new USDB.



BIRD'S-EYE VIEW
OF
FORT LEAVENWORTH, KAN.
1881.



*Sketched and Lithographed
by
Wilhelm Dammner
Arch't, Eng. & Lith.
Top. Ass^t to Chief Engineer, Dept of the Mo., U. S. Army.*

Figure 3-2 1881 Bird's Eye View of USDB



Figure 3-3 1911 Castle Construction and View of USDB Looking South

3.2.3 National Historic Landmark District Designation

Fort Leavenworth was first declared a NHLD in December 1960. This designation was a general classification with no specific boundaries. In 1974, the NPS assigned boundaries to the NHLD, however, a number of significant buildings were not included and the National Registry documentation was less than comprehensive. A more recent survey, conducted by Sarah F. Schwenk and Deon Wolfenbarger in 1994, led to the extension of the NHLD boundaries with appropriate documentation and historic context.

The current configuration of the Fort Leavenworth NHLD consists of 213 acres with an irregular boundary located within the 5,634-acre Fort Leavenworth Military Reservation (see Figure 3-4). The district contains over 200 contributing buildings of varying architectural styles, which have been maintained to a high standard resulting in a historic district with an extraordinary degree of integrity.

3.2.4 USDB

The USDB complex is located on a northern extension of the Fort Leavenworth NHLD that is bounded by the Missouri River bluff to the east and a valley to the west. The prison walls, along with the drop in elevation of the land, define the NHLD boundaries on three sides of the prison

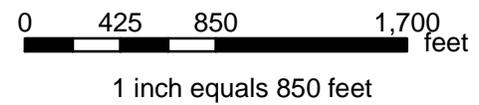
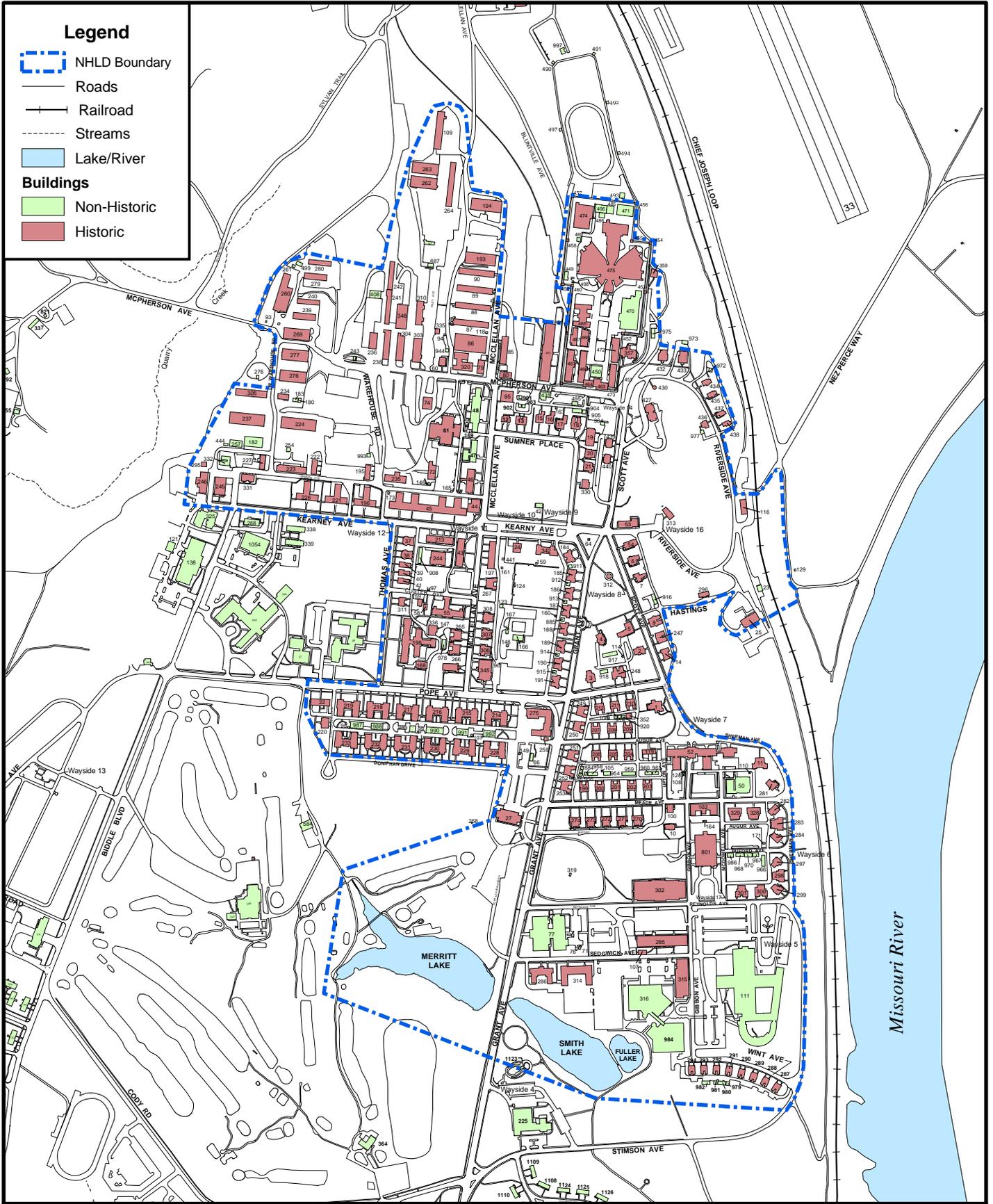


Figure 3-4
Fort Leavenworth
National Historic Landmark District

Source: Fort Leavenworth GIS Department.

complex. The Castle structure and central rotunda are visible from several miles to the east in the Missouri River valley.

The USDB complex lies north of the most historically significant planned open space at Fort Leavenworth, the “Main Parade.” This area was the original parade grounds and is surrounded by the earliest construction on the installation. It hosts the original commander’s residence, circa 1839, and the Rookery Building, circa 1834, possibly the oldest building in the state of Kansas. East of the Main Parade area, adjacent to the southeast corner of the USDB complex, Riverside Drive extends to the southeast toward the river enclosing another planned open space and park. Historic officer’s residences surround this park along the river bluff. Wagon ruts from the Santa Fe and Oregon Trails are still visible from Riverside Drive and are marked with two limestone rubble columns at the bottom and top of the hill. Incorporated in the east prison wall is the west endwall of Building 357, located outside the prison. This structure, originally constructed in 1855 as a Quartermaster Depot, was expanded in 1880 for the Commandant’s residence. The original USDB guard barracks (Building 429), circa 1925, lies parallel and adjacent to the south portion of the west prison walls, but just outside the walls. Buildings 357 and 429 are not included in this study. The location and function of the buildings within the walls of the USDB are provided in Figure 1-1 and in Table 1-1.

Of the 32 USDB buildings, 11 are historic, 9 are non-historic, and 12 are guard towers on the wall. The 20 prison buildings listed and the surrounding prison wall all contributed to Fort Leavenworth’s mission for the housing, care, and rehabilitation of DOD prisoners.

3.2.5 Archaeological Sites

Archeological resources in the vicinity of the USDB consist of prehistoric stone artifacts and the Quarry Creek Archaeological Site, which is listed on the National Register (American Resources Group, 1989). None of the sites are within the USDB.

3.3 BUILDINGS

The grounds of the USDB are in relatively good condition and the green space appears to be well maintained. The existing pavements appear to have performed well for only limited traffic within the prison walls but the asphalt pavements are in need of a seal coat or overlay. Sidewalks are also in good condition.

3.3.1 Architectural

3.3.1.1 Roofs

Roof materials for the buildings are of three types: metal standing seam (historic), composition shingle, and flat built-up roof with loose-laid ballast. The standing seam metal roofs are coated with red paint. The painted surfaces are faded and peeling. The composition shingle roofs appear to be in good condition. The flat roofs on the Castle and Buildings 450, 465 and 470 have problems with leaks and require continuous maintenance.

3.3.1.2 Exterior Walls

3.3.1.2.1 Pre-1900 Masonry

Exterior walls for historic buildings in the south portion of the USDB are primarily load bearing, unreinforced brick and limestone masonry representing the oldest construction within the prison walls. Overall, the limestone masonry construction appears to be in excellent condition. The brick and mortar construction is in relatively good condition. All masonry work, except for Buildings 468 and 487 and the lower front walls of Buildings 463 and 464 is painted.

Clay brick masonry construction of this vintage, as evident by the buildings in the southern portion of the USDB and typical to the Midwest region of the country, is relatively soft and porous compared to modern manufactured brick. This era was prior to Portland Cement being introduced and lime was typically used for the binding agent in mortar. Early brick and lime mortar construction resulted in walls that are susceptible to moisture absorption from rainwater, roof or gutter leaks, or just humidity in the air. Excessive moisture in the walls can lead to deterioration. For most of the painted masonry surfaces on the USDB buildings, the coatings are in varying stages of deterioration, especially in areas with excess moisture exposure.

3.3.1.2.2 Post-1900 Masonry

Post-1900 masonry construction is represented by the Castle, the Power Plant (Bldg. 474), Pope Hall (Bldg. 470), the Clinic/Barracks (Bldg. 465), and the Mental Health Clinic (Bldg. 450). The Clinic/Barracks, Power Plant, and the Castle are constructed of solid load-bearing brick masonry. As identified in the ARS, the Castle's brick masonry is unreinforced and according to the 1991 Finney & Turnipseed Study, 1992 Kansas City District Corps of Engineers Study, and the 1998 TapanAm Associates/Dames & Moore Study is considered very vulnerable to seismic activity.

Pope Hall is constructed as a reinforced concrete structure with concrete masonry unit infill and a brick veneer exterior. The Mental Health Clinic walls are painted concrete masonry units. Materials used in this era of masonry construction are typically stronger and more durable than pre-1900 material, primarily due to the introduction of Portland Cement. These masonry buildings are currently in relatively good condition.

3.3.1.3 Windows & Doors

Doors and windows are in relatively good condition. Several of the older buildings have new replacement windows. Most windows have iron security bars anchored into the walls. Windows in the Castle are fitted with relatively new insect screens.

3.3.2 Structural

3.3.2.1 Buildings

The general use buildings, located in the southern portion of the USDB, are in relatively good condition. A site visit, by a structural engineer, through several areas revealed local deterioration that has led to some structural concerns, however, these were considered relatively minor and manageable. There were no apparent major structural defects or deficiencies that would impede the rehabilitation of the general use buildings.

3.3.2.2 Prison walls

The masonry prison walls traverse approximately 3,300 feet around the USDB complex and were constructed in two phases. The first phase of construction surrounded the south portion and dates back to the inception of the military prison in 1874. The second phase of construction extended the walls to the north during the construction of the Castle in 1921, doubling the size of the prison complex.

The south portion is constructed of quarry-faced limestone laid in a random ashlar coursing for the exterior faces and filled with rubble and mortar. The outside surface is battered for strength and stability. As the walls extend to the north, they function as retaining walls where fill was added to the inside of the wall. This allowed the hilltop site to be graded level and provide for subsequent expansion of the prison to the north. The south portions of the limestone prison walls are connected to the front limestone masonry facades of Buildings 463 and 464, which creates a primary prison entrance and security checkpoint station. The present limestone and mortar construction is stable with no visible signs of distress due to soil pressure, thermal expansion, or excess loading. The exterior stones are showing initial signs of deterioration because of moisture penetration and weathering. This portion of the limestone walls is approximately 1,650 feet in length.

The north portion of the prison walls was added at the time of the construction of the Castle. This portion was constructed of cast concrete blocks with the outside face cast to resemble quarry-faced stones. The blocks were laid in a running bond pattern. The inside face of the wall is flat and painted. The present concrete block construction is stable. There are some cracks, primarily vertical, in this construction. Moisture exposure has caused some of the blocks on the outside face to experience surface spalling (the chipping or flaking of stone or concrete) and painted surfaces on the inside face are peeling. It appears that expansion joints were incorporated in the construction of this section of the prison walls. This portion of the concrete masonry wall is also approximately 1,650 feet in length.

There are 12 guard houses constructed at the top of the prison walls. The walls are topped with pre-cast concrete caps on the north section and cut limestone caps (mixed with pre-cast concrete where sections have been replaced) on the south section. A coil of razor wire covers the top of the caps.

3.4 LAND USE

All the land adjacent to the USDB is within the Fort Leavenworth boundaries. Specific uses of the land within the vicinity of the USDB include Sherman Army Airfield, a railroad corridor, family housing, the Main Parade area, instructional facilities, and vehicle and electronic communications maintenance facilities. The adjacent areas have been developed and are comprised mostly of buildings, maintained grassy lawns, paved roads, sidewalks, and parking lots.

3.5 SOCIOECONOMICS

The existing population, economy, and available housing and community services define socioeconomic resources. The following section describes the socioeconomic resources of the

Fort Leavenworth area. A discussion of the existing population, economy, and available housing is included.

3.5.1 Regional Population

Change in population of a district often can be indicative of economic growth or decline in a given region. A community with a rapidly increasing population may be undergoing economic growth by offering employment opportunities, or other motives, and encouraging immigration into the area. On the other hand, regions with static or declining populations may be experiencing emigration due to employment or living opportunities available elsewhere. Population counts for areas around the installation were obtained from the 1990 and 2000 reports from the US Bureau of the Census.

The population in Leavenworth County, including the cities of Leavenworth and Lansing, Fort Leavenworth, and other towns, has increased by 6.7 percent from 1990 to 2000. By 1996 it had exceeded the 1980 population projection for the year 2000 by more than 4,000 people. Much of the change in population can be credited to a strong national economy and the suburban characterization of Leavenworth. As Kansas City continues to expand as a hub for business, many outlying districts, formerly considered distant, have developed into thriving suburbs.

Although the population in Leavenworth County continues to increase, population trends for the City of Leavenworth show an 8.0 percent decline from 1990 to 2000, from a population of 38,495, to a population of 35,420. However, the City of Lansing has grown in population by 29.1 percent, from a population of 7,120 in 1990, to a population of 9,199 in 2000.

Population data for Fort Leavenworth is shown in Table 3-1. Classifications for residents are installation population, command and general staff college, and resident population outside of the installation. The population of Fort Leavenworth itself experiences daily and frequent fluctuations as a result of commuters and students. Many civilian and military personnel reside in the City of Leavenworth, but commute to work on the installation. The influence of students on the population varies due to the nature of short-term courses conducted at the installation. Modifications of the installation's mission or significant alterations in the population of Fort Leavenworth would considerably affect the City of Leavenworth and nearby communities.

3.5.2 Regional Economy

This section provides information on the area's civilian labor force. Table 3-2 contains data related to the occupational organization and proportions of labor in the Fort Leavenworth area. Professions are classified as manufacturing, non-manufacturing, or government employment. Manufacturing employment encompasses goods-producing jobs. Non-manufacturing professions include service-related employment, excluding occupations within government entities. Government employment refers to jobs generated by local, state, and federal governments.

Total expenditures at Fort Leavenworth, not including civilian payroll, are approximately \$133,887,078 (PAO, 2001). Table 3-3 contains Fort Leavenworth payroll data. Local characteristics of the economy also influence the composition of community labor forces based on the concentration of various enterprises. For example, the high percentage of government

jobs at Fort Leavenworth can be attributed to the need for civilian workers at the installation and local Veterans Administration Facility.

Table 3-1 Fort Leavenworth Population for September 2002

Installation Population	
Military, including CGSC Students	3,844
Family Members on installation	4,463
Department of Army and DOD Civilians	1,592
Other Employees	560
Military Prisoners	434
TOTAL	10,893
Command and General Staff College	
US Army Students	900
Other US Services Students	131
International Officer Students	89
Reserve Officer Students	64
SAMS	86
CAS 3	600
Other Classes	164
All CGSC Students FY 01	TOTAL 2,034
Resident Population Outside installation	
Active Duty Military	1,404
Living in Leavenworth	843
Living in Lansing	238
Living Elsewhere	322
Family Members	1,580
Army Retired	6,939
Other Services Retired (37 County Service Area)	10,671
TOTAL	23,598

Source: Fort Leavenworth Public Affairs Office, September 30, 2002

Table 3-2 Fort Leavenworth Study Area Civilian Labor Force

Occupation	Kansas City Metropolitan Statistical Area (MSA)		Leavenworth County	
	Number	Percent	Number	Percent
Manufacturing	39,194	9.9	1,553	7.9
Non-Manufacturing	300,443	76.0	10,846	55.4
Government	51,808	13.1	6,902	35.3
Agriculture	3,661	0.9	255	1.3
Total	395,111	100	19,556	100

Source: Kansas Department of Human Resources, Labor Market Information, 2000.

The major employers in Leavenworth include the state, local, and federal government along with private businesses. Of the three levels of government, the federal government provides the

largest share of jobs in the county. The following governmental organizations employ a large number of civilians in Leavenworth County:

- Fort Leavenworth - Approximately 2,141 civil service positions;
- Veterans Administration Hospital - Approximately 945 employees;
- Kansas State Penitentiary - Approximately 700 employees;
- Federal Penitentiary - Approximately 560 employees;
- Leavenworth School District - 800 employees;
- Leavenworth County - Approximately 340 employees;
- City of Leavenworth - 245 employees; and
- Lansing School District - Approximately 200 employees.

Table 3-3 Fort Leavenworth Payroll Data

Military	\$151,276,362
DA & DOD Civilians	\$70,687,900
NAF Employees	\$8,742,339
AAFES Employees	\$4,203,756
Commissary Employees	\$2,522,667

Source: Fort Leavenworth Public Affairs Office, September 2002

With 850 employees, Hallmark is the significant manufacturing company in the Leavenworth area. Other manufacturing enterprises located in Leavenworth employ significantly fewer workers. Several service businesses, which employ more than 200 persons each, also contribute largely to the workforce in Leavenworth. These include: Armed Forces Insurance, Capital Electric Construction Co., Alex R. Masson (wholesale florist), Heatron, Inc., St. Mary College, St. John’s Hospital.

High government employment in a region can produce numerous effects. While many such entities may provide a large quantity of jobs, cutbacks or reductions in government involvement in an area or in particular programs can adversely affect the local economy. Therefore, the economic welfare of the community depends heavily on the activities and decisions of the governments.

Unemployment in an area corresponds in large part with the economic well being of the region. Unemployment in Leavenworth County was 1.9 percent in 2000 (US Bureau of the Census). Regions heavily dependent on military installations, spending, and projects can be profoundly impacted by cutbacks and reductions.

3.5.3 Housing

There are two types of housing on the installation, housing for families and housing for unaccompanied personnel. Family housing is located in the main cantonment and in the newer, suburban style neighborhoods. Quarters for unaccompanied personnel are located in several apartment-style buildings, or barracks, which are principally located on the fringes of the installation. According the Public Affairs Office, there were 1,586 family quarters and 1,059 units for unaccompanied personnel on the installation.

Housing within Leavenworth consists of owner-occupied housing and renter-occupied housing. The total number of housing units in 2000 for the City of Leavenworth was 12,936, with a vacancy rate of 7.0 percent. In 1990, the City of Leavenworth had 12,568 total housing units, with a vacancy rate of 8.6 percent.

For Leavenworth County, the total number of housing units in 2000 was 24,401, with a vacancy rate of 5.5 percent. That is a 14.7 percent increase in number of housing units from 21,264 housing units in 1990, and a 1.7 percent decrease in vacant housing units, down from 7.2 percent in 1990.

3.6 INFRASTRUCTURE

The operation of most modern communities is linked to the public facilities and utilities infrastructure. The following descriptions present utilities, transportation services, waste disposal, and public services located at Fort Leavenworth and in the surrounding region.

3.6.1 Utilities

The following section describes the water distribution, sanitary sewer, the storm water system, electric service, the gas system and the telephone system.

3.6.1.1 Water Supply/Distribution

Fort Leavenworth operates its own water treatment and distribution system. Raw water is drawn from five wells located in the bottomland adjacent to the south end of the Sherman Army Airfield and inside the levee from the Missouri River. It is then pumped through a 16-inch cast iron main to the installation's treatment plant. At the plant, raw water is treated with lime, soda ash, carbon dioxide, and fluoride, and is filtered and chlorinated. The water treatment plant has a design capacity of 5 million gallons per day (CAC, 1992).

The lime sludge from the water treatment plant is dewatered in a sludge press. The sludge is collected and disposed of as a solid waste. The wastewater from the dewatering process is sent to the installation's sanitary sewer for transport to the City of Leavenworth's wastewater treatment plant. When the volume of lime sludge exceeds the capacity of the press, it is discharged into the lime sludge lagoons. The installation has a National Pollutant Discharge Elimination System permit for this discharge on an emergency basis.

3.6.1.2 Sanitary Sewer System

Fort Leavenworth maintains a sewage collection system and, under a contract with the City of Leavenworth, discharges wastewater to a sewage treatment plant owned and operated by the city. The topography of the installation allows most of the cantonment area and the family housing areas in the south-central portion to be served by gravity flow sewers. However, lift stations and force mains are required in areas that cannot be served by gravity. The most recent evaluation of the sanitary sewer transport system on the installation was conducted in 1993.

3.6.1.3 Storm Water System

Because of the proximity to the Missouri River, the reservation is impacted along the east shore by the 100-year floodplain of the river. There is a levee around the Sherman Army Airfield in the northeastern part of the reservation that provides some protection against flooding. The levee

is not of uniform elevation; it is lower on the south end, where floodgates have been installed to prevent backwater. Storm water in the upland area on the west side of the installation is handled primarily in open ditches; though some built up areas and where roads cross ravines have underground drain pipes.

3.6.1.4 Electric Service

Fort Leavenworth is currently supplied electrical power by Westar Energy. Power is delivered from 34.5 kV sub-transmission system at a metering point west of the West Gate of the installation (Guernsey, 1997). Electric facilities on the installation are currently owned and operated by Fort Leavenworth. Three substations and 15 distribution feeders supply the primary voltage to the installation via above ground and underground facilities. The larger portions of the family housing areas and schools on the installation have underground facilities. The feeders in and around the airfield and ranges are also underground, and any proposed new facilities are planned for underground placement, where feasible. Underground facilities are a combination of direct-buried facilities, duct and manhole construction, and cable in conduits (Guernsey, 1997). There are approximately 80 miles of overhead distribution lines and 66 miles of underground transmission lines including ducts and conduits on Fort Leavenworth.

3.6.1.5 Natural Gas Service

The USDB Power Plant, built in 1911, provides heat and hot water for the entire USDB complex. Currently, the building houses three boilers (fueled by natural gas), two standby generators with diesel engines, fuel oil tanks and switchgear. It supplies steam heating, from the boiler system, and backs up power from the generators to the buildings within the USDB. No cooling systems are provided.

Geary Energy LLC is the primary provider of natural gas. This is now under contract that is competitively bid on a yearly basis by the Defense Energy Supply Center. At Fort Leavenworth, all buildings are heated with natural gas provided by Williams Gas Pipeline Company. To maintain reliable service, the installation has a continuing program to repair or replace older line segments. Fort Leavenworth has a leak detection program, and is working to expand the number of line segments equipped with cathodic protection systems. Steel lines are being replaced with polyethylene lines to prevent corrosion problems. Outlying areas on the installation not served by natural gas are heated with propane.

3.6.1.6 Telephone Service

The US Army provides official telephone service on Fort Leavenworth. There is one main 9,000 line digital switch in the Dial Central Office and eight branch switches. Connectivity to commercial and Defense Switched Network service is provided by MCI, AT&T and Southwestern Bell. Southwestern Bell provides unofficial telephone service in residential areas.

3.6.2 Transportation

The main transportation arteries in the vicinity of USDB include Kearny Avenue, McPherson Avenue, McClellan Avenue, and Chief Joseph Loop. On the installation, a system of paved roads between buildings provides access to the various facilities. The Main Gate is located at the intersection of US Highway 73 and Grant Avenue. The second entrance, called the West Gate, is located where Hancock Avenue meets US Highway 73. The third entrance, the Farm Gate, off 155th Street is now closed. Bottlenecks and general congestion are common along Grant

Avenue, which is the only 4-lane road on the installation. Fort Leavenworth can be reached via Interstate Highways 29 and 70, US Highways 73 and 24-40, and Kansas Highways 92, 7, 45, 192, and 5.

Sherman Army Airfield on Fort Leavenworth was established in 1923. It is primarily a military airfield but the City of Leavenworth leases some acreage for civilian flights. Several civilian airports, including Kansas City Municipal Airport and Johnson County Executive Airport, also serve the area.

3.6.3 Solid Waste Disposal

Solid waste generated on Fort Leavenworth is handled differently depending on its source. An active recycling program on Fort Leavenworth reduces the amount of solid waste generated. All residential waste is now collected twice a week by Directorate of Installation Support (DIS) personnel and is disposed of at the Leavenworth County Transfer Station in Lansing, Kansas. Solid waste generated from DIS construction and renovation activities is disposed of in the construction and demolition landfill located north of the USDB off Sheridan Drive. Civilian contractors working on Fort Leavenworth are required to haul any waste generated to a disposal site off the installation. Compost is currently deposited in an area on the west side of the installation.

3.6.4 Law Enforcement Services

The Military Police headquartered out of the Provost Marshall's Office provides security on Fort Leavenworth. There are military personnel and civilian employees assigned to the Provost Marshall's Office. Fort Leavenworth experiences a low number of crimes partially attributed to the limited number of people on the installation. The most frequent type of crime on Fort Leavenworth is larceny. Military police have a positive relationship with civilian police in the Leavenworth area. However, civilian police are typically not involved with activities on installation.

3.6.5 Fire Protection Services

Fort Leavenworth currently maintains two fire stations. One is located near the Main Parade ground on the southeast corner of McPherson Avenue and McClellan Avenue. The second fire station is located at Building 701 near the National Cemetery on Biddle Boulevard. Although fire protection on the installation is considered sufficient, the amount of personnel assigned to this duty is normally at the minimum permitted by Army regulations. Fort Leavenworth has mutual aide agreements with surrounding civilian fire departments to give aid to each other in the event that a fire is beyond their individual capabilities.

The water main system has been looped to continually circulate water, which increases the available pressure, so there are no buildings or facilities that are currently considered to be under-protected. There are approximately 310 fire hydrants on the water distribution system.

3.7 GEOLOGY AND SOILS

The uppermost bedrock in the USDB vicinity comprises the Lawrence Formation, consisting chiefly of gray shale and sandstone that weathers yellowish-gray. The Lawrence Formation also

contains minor amounts of red shale, coal, gray limestone, and conglomerate. An outcropping of the underlying Iatan Limestone, which is a dense, light-gray limestone, is also present in the vicinity of the USDB. Bedrock in the vicinity is commonly covered with a veneer of glacial, alluvial, fluvial or eolian unconsolidated sediments.

The USDB is built on three soil types. These include the Ladoga, Knox, and Marshall soils. All three soils are formed in loess and although moderately well drained, the sloping upland soils are susceptible to erosion.

Fort Leavenworth is located within a Zone 2A seismic area, which is a moderate earthquake zone compared to other areas of the country. For comparison, Los Angeles and San Francisco are located within Zone 4, which represents the highest seismic risk. Studies were conducted in 1991, 1992, 1993, 1995 and 1998 to evaluate the seismic condition of the Castle. Only the Castle has been studied with respect to its seismic resistance as it relates to modern building codes. The Castle is constructed of unreinforced brick masonry, which is considered very vulnerable to seismic activity. Based on a preliminary review of the drawings and field observations, the remaining buildings within the walls of the USDB complex should perform adequately in the case of a seismic event with only minimal retrofitting. The buildings of main concern would be the multi-story, pre-1900 brick masonry buildings, such as Buildings 463, 464, 466, 467, 472, and 473.

3.8 VISUAL ELEMENTS

The USDB resides within Fort Leavenworth, bounded by Sherman Army Airfield to the north and east, McPherson Ave. to the south, and Bluntville Ave. to the west. Surrounding land uses consist of a mix of airfield, housing, commercial, and parking. Sherman Army Airfield is located to the northeast, housing to the southeast, and offices to the south and west.

Building materials and architectural styles vary slightly among the existing structures on the site and in the project area. Most of the structures relate to the late 1800s military style of construction.

The surrounding landscape consists of the Missouri River valley. Within this landscape there are several distinct areas that exhibit unique visual characteristics. The USDB resides on top of a bluff, which forms the western edge of the Missouri River valley. West of the USDB the landscape continues to rise slightly toward Hancock Hill and Bell Point before dropping down to Salt Creek and is mostly forested land.

North and east of the USDB the landscape is relatively flat, extending to the northeastern portion of the Missouri River valley. Visual characteristics of this area include a low, level floodplain extending to the river with a fringe of trees along the riverbank, screening the view of the river. Beyond the river to the northeast lies a bluff area known as Weston Bend State Park. This park is located approximately 2.6 miles to the northeast of the USDB and is mostly forested land.

East and southeast of the USDB the landscape is mostly level terrain consisting primarily of agriculture. Highway 92 crosses the Missouri River near the southeast entrance to the installation and turns northeastward to intersect with Highway 45 near Beverly, just south of Weston Bend State Park. To the south lies the city of Leavenworth and is primarily urban. Two

particular features in the southern landscape are the US Army Command & General Staff College (USACGSC) Bell Hall and the installation headquarters building. The headquarters building with its bell tower, rises above the landscape, and can be seen from several miles away in all directions.

3.9 WATER RESOURCES

No surface water resources are located within the walls of the USDB complex. The nearest surface water features include Quarry Creek, the Missouri River, and two lime sludge lagoons associated with the water treatment facility. The lime sludge lagoons are southeast of the USDB complex and in the Missouri River floodplain. West of the USDB complex, Quarry Creek flows northeast to the Missouri River floodplain. East of the USDB complex, it flows southeast along the Missouri River floodplain to the Missouri River. The nearest wetlands are located below the USDB complex, in the Missouri River floodplain, and south of the lime sludge lagoons. Federal Emergency Management Agency floodplain maps indicate that the USDB is not located in a floodplain.

According to the Natural Resources Conservation Service, alluvial aquifers of the Missouri River and its tributaries are the main source of groundwater in the vicinity of the USDB complex. Based on groundwater sampling conducted in December 2000, the USDB appears to be on a groundwater high point, with drainage away from the site to the north-northwest and northeast.

3.10 AIR

Air quality in the vicinity of the USDB is currently in compliance with all state and federal ambient air quality standards. The 1990 Clean Air Act Amendments and Army Regulation 200-1 require Army installations to comply with all federal, state, and local air pollution laws, as applicable to air emissions, fuel use, composition requirements, and equipment design and operation. A study conducted in 1989 by the Army Environmental Health Agency, now the US Army Center for Health Promotion and Preventive Medicine, found that air pollution sources met the requirements of the Kansas Department of Health and Environment air pollution regulations.

3.11 NOISE

Fort Leavenworth has established an Installation Compatible Use Zone program, which monitors existing noise levels and protects the general public from noise impacts. Currently, in the vicinity of the USDB, there are no significant noise levels produced.

3.12 HAZARDOUS WASTE

A Phase 1 Site Assessment was conducted in 1997 for the USDB complex to determine the extent of soil and groundwater contamination related to the release from six former underground storage tanks (USTs) adjacent to Building 487, the dry cleaning shop. The principal contaminants of concern include Stoddard Solvent (mineral spirits), chlorinated solvents, and total petroleum hydrocarbons (TPHs). The six USTs, used for Stoddard Solvents, were located on the east side of Building 487. The USTs have been removed from this area; however, excavation obstructions prevented the removal of all of the contaminated soil. In the vicinity of the USDB complex, the groundwater gradient moves from east to west carrying the Stoddard

Solvents westward or down gradient. Chlorinated solvents and TPHs were detected from sampling areas that were cross gradient from the former UST locations and Stoddard Solvent contamination. The chlorinated solvents and TPHs could have contaminated areas outside of the USDB complex

Additional investigation and sampling at the dry cleaning site occurred in 2000. Seven monitoring wells near this site have consistently had volatile organic compounds (VOC) detections at levels greater than maximum contaminant levels. Perchloroethene and Trichloroethene and their associated degradation products are the majority of the VOCs detected at this site.

Various Fort Leavenworth activities generate, transport, and store hazardous waste. Hazardous wastes generated on Fort Leavenworth are not disposed of on the installation but stored at a number of satellite accumulation points. The Directorate of Installation Support, Environmental Division (DIS ENV DIV) makes arrangements for the storage and disposal of hazardous waste. Currently, Safety Kleen collects and disposes of recyclable and solvent hazardous waste on an as needed basis. All records of disposal throughout the installation are maintained by the DIS ENV DIV. Community service and public works activities such as lead-based paint debris, pesticide application, dry cleaning, and vehicle maintenance contribute to the production of hazardous waste on the installation.

The Defense Reutilization and Marketing Office (DRMO) nationwide contract is used for disposal of hazardous wastes not accepted by Safety Kleen or other contractors. The disposal of mixed painting wastes, including lead-based paint debris is still accomplished by the DRMO.

3.13 BIOLOGICAL RESOURCES

3.13.1 Vegetation

Vegetation within the USDB complex consists of two ornamental trees and mowed grassy lawns. The USDB complex is surround by developed areas that contain ornamental trees, shrubs, and maintained lawns.

3.13.2 Wildlife

Only common wildlife species that are extremely tolerant of human disturbance and capable of occupying urbanized areas could inhabit the area within the walls of the USDB complex and the developed areas of Fort Leavenworth. Species that could occur in the developed areas adjacent to the USDB complex could include 13-lined ground squirrel (*Spermophilus tridecemlineatus*), American robin (*Turdus migratorius*), American crow (*Corvus brachyrhynchos*), mourning dove (*Zenaida macroura*), fox squirrel (*Sciurus niger*), American toad (*Bufo americanus*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), opossum (*Didelphis marsupialis*), among others.

3.13.3 Threatened and Endangered Resources

No threatened or endangered species are known to occur within the walls of the USDB complex. The US Fish and Wildlife Service (USFWS) has not designated any areas on Fort Leavenworth as critical habitats (USFWS, 1998). The Kansas Department of Wildlife and Parks has

designated “all lands and waters in a corridor along the main stem of the Missouri River from the Kansas-Nebraska state line downstream to Wyandotte County, Kansas as state-designated critical habitat for the bald eagle (*Haliaeetus leucocephalus*).” The bald eagle is a state and federally threatened bird that frequents major water courses, impoundments, and marshes in Kansas, as a winter resident. This species requires tall, mature trees and large horizontal limbs with open branching patterns for roosting and perching. The bald eagle is known to be a winter inhabitant of installation lands, but currently does not breed on the installation (Freeman et al, 1997).

4.0 ENVIRONMENTAL CONSEQUENCES

Several key terms will be used throughout this section, they include direct and indirect impacts, short-term and long-term impacts, and significant. The terms impact and effect are synonymous as used in this EA. Impacts may be determined to be beneficial or adverse, and may apply to the full range of natural, aesthetic, historic, cultural, and economic resources of the installation and its surroundings. Definitions and examples of direct and indirect impacts as used in this document are as follows.

A direct impact is caused by the proposed action, and occurs at the same time and place. An indirect impact is caused by the proposed action and is later in time or farther removed in distance, but is still reasonably foreseeable. For direct impacts to occur, a resource must be present in a particular area. For example, if highly erodible soils were disturbed due to construction, there would be a direct impact to soils from erosion at the construction site. Sediment laden runoff would indirectly affect water quality in adjacent areas downstream from the construction site.

In addition to indicating whether impacts are direct or indirect, we also distinguish between short-term and long-term impacts. Short-term and long-term do not refer to any rigid time period and are determined on a case-by-case basis in terms of the environmental consequences of the proposed action. Where both short-term and long-term impacts are expected to occur, this fact is discussed in the corresponding text narrative.

The term significant as used in NEPA requires consideration of both the context and intensity of the impact evaluated. Significance can vary in relation to the context of the proposed action. For the proposed action, context may include consideration of effects on a national, regional, and/or local basis. Both short-term and long-term effects may be relevant. Impacts are also evaluated in terms of the intensity or severity. Factors contributing to the intensity of an impact include:

- The degree to which the action affects public health or safety;
- The proximity of the action to resources which are legally protected by various statutes and regulations such as wetlands, sites and buildings listed on or eligible for the NRHP, regulatory floodplains, and federally-listed threatened and endangered species;
- The degree to which the effects of the action on the quality of the human environment could be highly uncertain or controversial;
- Whether the action is related to other actions that are individually insignificant but cumulatively significant; and
- Whether the action threatens to violate federal, state, or local law imposed for the protection of the environment.

4.1 CULTURAL RESOURCES

The primary focus of this EA is on the USDB complex and the alternatives considered for this facility now that the new prison facility is in use. To determine the effect of the proposed alternatives both the individual eligibility of the structures for listing on the NRHP and their inclusion in the Fort Leavenworth NHLD must be considered. The Fort Leavenworth NHLD was first declared in 1960, and included over 100 NRHP properties that were either eligible on

their own or were contributing to the NHLD designation, but no specific boundaries were assigned to the NHLD. In 1974, the NPS designated boundaries for the district. However, this NHLD left a number of contributing structures out of the boundary. Schwenk and Wolfenbarger of Historic Research and Management Services completed a more comprehensive study in 1994 and presented the study to the NPS in the form of a NRHP Registration Form in 1995 (Schwenk and Wolfenbarger, 1994). This NRHP Registration Form recommended the extension of the NHLD and provided the appropriate documentation and historic context to validate this recommendation. The final certification and filing are still pending, but are expected to be approved. Regardless of the approval process, the structures that are listed as contributing to the eligibility of the NHLD in the 1995 NRHP Registration Form, are afforded the protection of Section 106 because they are eligible for listing on the NRHP.

In Schwenk and Wolfenbarger's 1994 comprehensive study, the proposed NHLD boundary is an irregular line encompassing 213 acres of the 5,634 acres that are the Fort Leavenworth Military Reservation (see Figure 3-2). The district contains over 300 contributing buildings of varying architectural styles, all of which have been maintained to a high standard. Thus, the NHLD at Fort Leavenworth maintains a high degree of integrity and meets National Historic Landmark (NHL) Criteria 1 and 4.

Criteria 1 and 4 (36 CFR 65.4) state that an area is eligible for the NHL where:

1. The district is associated with events that made a significant contribution to, and are identified with, or that outstandingly represent, the broad national patterns of United States history and from which an understanding and appreciation of those patterns may be gained.
4. The district embodies the distinguishing characteristics of an architectural type specimen exceptionally valuable for a study of a period, style or method of construction, or that represent a significant, distinctive and exceptional entity whose components may lack individual distinction.

The NHLD also meets Criteria a and c (36 CFR 60.4) for listing on the NRHP. Criteria a and c are described as:

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and

- a. that are associated with events that have made a significant contribution to the broad patterns of our history or;
- c. that embody the distinctive characteristics of a type, period or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.

Table 4-1 lists the number of contributing and non-contributing resources included in the NHLD boundary.

Table 4-1 Contributing and Noncontributing Resources within the NHLD

Number of Contributing Properties	Number of Noncontributing Properties	Type of Resource
217	66	Buildings
6	0	Sites
3	1	Structures
2	1	Objects

The areas of significance used in Schwenk and Wolfenbarger's 1994 NHLD nomination are military, exploration/settlement, education, architecture, community planning and development, and ethnic heritage/black. The period of significance is 1827-1945 with significant dates of 1827 (establishment of Cantonment Leavenworth) and 1827-1839 (headquarters Upper Missouri Indian Agency). Because of the continuing historic significance of Fort Leavenworth, the 1827-1945 dates would be expanded to 50 years prior to the present (1953) if an evaluation were conducted today. This is based on the reasoning used to establish the 1945 ending date used in the 1994 nomination report.

Under Criterion 1 the NHLD is significant because of Fort Leavenworth's long and varied history in the nineteenth century that corresponds to the successive stages by which Euro-Americans conquered and settled the immense territory stretching from the Mississippi River to the Pacific. The themes and sub-themes include:

- Political and Military Affairs from 1783 to 1860
 - Mexican War, 1846-1848
 - Army and Navy
 - The Rise of Sectionalism
- Westward Expansion of the British Colonies and the United States, 1763-1898
 - British and United States Exploration of the West
 - Military-Aboriginal American Contact and Conflict
 - Western Trails and Travelers

In addition, the activities at the fort between 1861 and 1865 are significant in the context of "The Civil War" ("War in the West"). The location of the US Army's central military prison and post-graduate officer training program was established in the latter half of the 19th century. These prison and officer training missions continue today, but their roots are in the latter half of the nineteenth century.

Additional themes and sub-themes applicable to Fort Leavenworth include:

- Political and Military Affairs, 1865-1939
 - The Progressive Era
- World War I
- Military Affairs not Related to World War I or World War II, 1914-1941
- World War II
 - The Home Front
- Education
 - The Military

The establishment of a central military prison system at Fort Leavenworth in 1874 is an important component when considering the significance of the post. However, there are structures within or abutting the USDB that were significant to the history of Fort Leavenworth prior to 1874. The Fort Leavenworth structures in place within the boundaries of the USDB, prior to the establishment of the central military prison, include building 466, erected circa 1840 as a quartermaster warehouse; another quartermaster warehouse, building 473, constructed circa 1863; and building 357, constructed in 1855 as a quartermaster depot. Buildings 466, 473 and 357 were modified after 1874. Building 473 was modified in 1875 into a cell house. Buildings 466 and 357 were modified for prison use and to serve as the prison commandant's residence respectively in 1877.

Most of the remaining NRHP eligible or District contributing structures within the walls of the USDB were constructed prior to the extensive expansion that started in 1906. The expansion ended with the construction of the Castle rotunda in 1921. This also coincides with the military's new program of prisoner rehabilitation. The existing structures were converted to work and vocational instruction shops. Most of these structures maintain their spartan "military prison" look and have little if any decorative additions. The Castle, while a part of their new program of rehabilitation, was constructed mainly as prison housing and reflected common architectural patterns for prison structures.

The entire USDB is within the proposed 1995 boundaries of the NHLD at Fort Leavenworth; therefore, any proposed actions must be evaluated by applying the criteria of adverse effect (36 CFR 800.5). An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling or association. Adverse effects may also include reasonably foreseeable effects that may occur later in time. Examples of adverse effects include but are not limited to:

- Physical destruction or damage to all or part of the historic property.
- Alteration of the property including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation, and provision of handicap access not consistent with the Secretary's standards for the treatment of historic properties (36 CFR 68).
- Removal of the property from its historic location.
- Change of the character of the property's use or of physical features within the property's setting.
- Introduction of visual, atmospheric or audible element that diminish the integrity of the property.
- Neglect of a property that causes its deterioration.
- Transfer, lease or sale of a property out of federal ownership without adequate and legally enforceable restrictions or conditions.

4.1.1 United States Disciplinary Barracks (USDB)

Specific adverse impacts to the USDB and, therefore, the NHLD range from no action to demolition of the Castle. The following paragraphs discuss the potential effects of the Proposed Action and the alternatives.

4.1.1.1 No Action Alternative

This alternative represents no action taken to demolish, renovate or occupy the structures within the walls of the USDB. Only minimal maintenance and repair would be provided. Utilities (electrical, water, gas) would remain in place but be used to a lesser degree. Fort Leavenworth is required by 36 CFR 800 and Army Regulation 420-40 to protect and preserve historic buildings. Brick buildings similar to those within the USDB are best protected when environmental conditions of temperature and humidity are controlled. Interior architectural elements exposed to extreme temperatures could be vulnerable to damage. Historically, structures that are not occupied have, over time, a tendency to suffer accelerated deterioration. An established maintenance crew would handle the necessary maintenance and repair efforts.

4.1.1.2 Proposed Action— Partial Demolition and General Use

The Proposed Action includes demolition of the Castle, Auto Shops and Mental Health Clinic and maintaining the remaining buildings until a use is determined. The Power Plant will also be demolished, but not until individual heating systems have been installed in the remaining buildings. Table 4-2 provides a list of actions that would potentially cause adverse effects to the NRHP Eligible properties within the USDB under this alternative. Buildings 450, 469, 471, 485, 486, 496, and 498 are not eligible for the NRHP and neither their demolition nor retention would have an adverse effect on NRHP eligible structures or on the NHLD.

Table 4-2 Effect of Proposed Action on NRHP Eligible Properties

Building No.	Construction Date	Name or Use	Potential Adverse Effect
463	1877	Administrative Building	Renovation/Restoration
464	1878	Administrative Building	Renovation/Restoration
465	1930	Clinic/Barracks	Renovation/Restoration
466	1840	FE Maintenance Shop/Barracks	Renovation/Restoration
467	1887-92	Administrative/ Crafts/FE Shops	Renovation/Restoration
468	1878	Machine Shop	Renovation/Restoration
472	1878	Education/Print Shop	Renovation/Restoration
473	1863	Visitor/Administration Building	Renovation/Restoration
474	1911	Power Plant	Demolition
475	1913-21	Castle – Main Prison Building	Demolition
487	1921	Dry Cleaning Plant	Renovation/Restoration

The actual use of the name USDB was made in 1915, but the area it occupies has a longer history. Prior to 1855, the area occupied by the USDB was green space. In 1855, Fort Leavenworth initiated development of the area and constructed the quartermaster depot, (building 357) which was close to the quartermaster warehouses Building 466 (ca 1840). Building 473 was added in 1863. These structures served Fort Leavenworth during the Civil War, Westward Expansion, and early historic periods and determined the eligibility of the NHLD. These three buildings were converted to prison use following the establishment of the Army's central military prison system in 1874. Other buildings were added to this area prior to the completion of the Castle in 1921. When considering the overall importance of these themes and sub-themes to the eligibility of the NHLD, all of these pre-1911 structures more aptly

represent the first 100 years of Fort Leavenworth's history than the buildings constructed after 1911. However, the Castle and the Power Plant do represent an evolution of the prison system.

Currently only 4 of the 11 contributing buildings within the walls of the USDB were constructed after 1911. These include the Castle, the Power Plant, the Dry Cleaning Plant, and the Clinic/Barracks. The Castle and the Power Plant were constructed between 1911-1921, and both use common designs. The Castle used a design that included a central rotunda and wings that was commonly used in the early 20th century but does not necessarily complement the architecture of the other buildings inside the walls of the USDB. Sing Sing prison in Westchester, New York used this same prison design and is still in operation. In the past, there were also other central military prisons (Alcatraz Island and Fort Jay on the west and east coasts respectively). The USDB was the only maximum security military prison remaining after the closing of Lompoc, California in 1959. The new USDB has now assumed this role.

Although the 1995 nomination to expand the NHLD at Fort Leavenworth used the argument that the USDB designation in 1915 was a significant event for social reform in the Progressive Era, the Castle's main purpose was housing the prisoners. The other buildings within the walls of the USDB and other outlying areas were the true focus of the social reform movement placing emphasis on rehabilitation rather than punishment and imprisonment.

Viewshed is another factor that should be considered. The effect on the viewshed of the NHLD can be considered an adverse effect. The viewshed for the structures on McClellan Avenue, whose construction dates range from ca 1884 to 1901. Although the Castle is a landmark on the Missouri River, the viewshed from outside the NHLD contains no NRHP eligible properties whose viewshed would be affected and no designated historic landscapes. Therefore, the adverse effects to the viewshed caused by demolishing the Castle would be minimal.

The Castle is eligible for the NRHP, beyond being a part of the NHLD. The same is true for the Power Plant. For the Proposed Action this demolition of NRHP eligible properties would require mitigation.

In summary, the impact to the NHLD is considered to be adverse. The adverse effects to the NHLD caused by the demolition of the Castle and Power Plant can be mitigated by retaining the wall and the guard towers and preserving the other historic buildings. The NHLD boundaries will not be affected by removal of the castle. In compliance with Fort Leavenworth's responsibilities under Section 106 of the National Historic Preservation Act, 1966 (as amended), and because of the adverse effects of the Proposed Action, Fort Leavenworth will develop a MOA in consultation the Kansas SHPO, the ACHP, and the NPS.

4.1.1.3 Alternative 1 – Conference Center/Guest Housing

This alternative creates a large conference center and guest lodging facility within the Castle. No NRHP eligible structures would be demolished. The remaining structures would receive the same treatment as in the Proposed Action. Table 4-3 provides a list of actions that could potentially result in adverse effects to the NRHP eligible properties within the USDB under this alternative.

Table 4-3 Effect of Alternative 1 on NRHP Eligible Properties

Building No.	Name or Use	Potential Adverse Effect
463	Administrative Building	Renovation/Restoration
464	Administrative Building	Renovation/Restoration
465	Clinic/Barracks	Renovation/Restoration
466	FE Maintenance Shop/Barracks	Renovation/Restoration
467	Administrative/Crafts/FE Shops	Renovation/Restoration
468	Machine Shop	Renovation/Restoration
472	Education/Print Shop	Renovation/Restoration
473	Visitor/Administration Building	Renovation/Restoration
474	Power Plant	Renovation/Restoration
475	Castle – Main Prison Building	Renovation/Restoration
487	Dry Cleaning Plant	Renovation/Restoration

Adverse effects could impact all of the NRHP eligible properties because of renovation, restoration and seismic upgrading. For many of the same reasons stated for the Proposed Action, excluding the viewshed issues, the adverse effect to the NHLD would not affect the boundaries or eligibility of the NHLD. Other unidentified adverse effects may be encountered with this alternative if additional real estate is required for parking outside of the current prison walls. The adverse effects to the NRHP and NHLD properties can be mitigated. In compliance with Fort Leavenworth's responsibilities under Section 106 of the National Historic Preservation Act, 1966 (as amended), and because Alternative 1 would have adverse effects on historic properties, Fort Leavenworth would develop a MOA in consultation the Kansas SHPO, the ACHP, and the NPS.

4.1.1.4 Alternative 2 – Military Operations and Urban Training Center

Alternative 2 would create a MOU Center. Only Building 450 would be demolished. However, this type of training would expose historic properties to activities that could adversely affect the integrity of the structures. The Castle would be retained and renovated with a partial seismic upgrade, while the remaining historic buildings would be subject to the same processes as in Alternative 1. Table 4-4 provides a list of actions that could potentially result in adverse effects to the NRHP eligible properties within the USDB under this alternative.

Another adverse effect could be created by explosive vibrations that could damage the structural integrity of the directly affected historic properties as well as those within close proximity inside and outside the prison walls. The chemicals used in the training, primarily smoke, could have an adverse effect on historic properties within and outside the prison walls. Rappelling is also common with a MOU and this alone can mar or destroy portions of the exterior of a structure. If the effects of the training lead to the destruction or serious deterioration of the NRHP eligible structures within the walls of the USDB, the eligibility of the structures could be compromised and that could compromise the currently submitted boundaries of the NHLD. This alternative has the potential, over time, to adversely effect the significance and the boundaries of the NHLD should the guard towers, wall, Castle and Power Plant deteriorate or lose their integrity due to damage caused by training. The adverse effect to the NRHP and NHLD properties could be mitigated. This could be accomplished by negotiating a MOA between the consulting parties,

specifying the required upkeep and maintenance needed for the NRHP eligible properties to retain their integrity. In compliance with Fort Leavenworth's responsibilities under Section 106 of the National Historic Preservation Act, 1966 (as amended), and because Alternative 2 would have adverse effects on historic properties, Fort Leavenworth would develop a MOA in consultation the Kansas SHPO, the ACHP, and the NPS prior to implementing this alternative.

Table 4-4 Effect of Alternative 2 on NRHP Eligible Properties

Building No.	Name or Use	Potential Adverse Effect
463	Administrative Building	Renovation/Restoration
464	Administrative Building	Renovation/Restoration
465	Clinic/Barracks	Renovation/Restoration
466	FE Maintenance Shop/Barracks	Renovation/Restoration
467	Administrative/Crafts/FE Shops	Renovation/Restoration
468	Machine Shop	Renovation/Restoration
472	Education/Print Shop	Renovation/Restoration
473	Visitor/Administration Building	Renovation/Restoration
474	Power Plant	Demolition
475	Castle – Main Prison Building	Demolition
	Guard Towers and Wall	Training
487	Dry Cleaning Plant	Renovation/Restoration

4.1.1.5 Alternative 3 – Military/Government Archival & Records Center

This alternative would create an archival and record processing and storage facility in the Castle. The remaining historic, significant structures would be renovated and reserved for general use. The Castle would be gutted with the exterior remaining intact. Gutting the interior would be an adverse effect. The remaining structures would be treated the same as in Alternative 1. Table 4-5 provides a list of actions that could potentially result in adverse effects to the NRHP eligible properties within the USDB under this alternative.

In compliance with Fort Leavenworth's responsibilities under Section 106 of the National Historic Preservation Act, 1966 (as amended), and because Alternative 3 would have adverse effects on historic properties, Fort Leavenworth would develop a MOA in consultation the Kansas SHPO, the ACHP, and the NPS prior to implementation of this alternative.

4.1.1.6 Summary

All of the reuse alternatives would have, or have the potential to have, an adverse effect on the NHLD and NRHP eligible structures to varying degrees. The Proposed Action includes demolition of the Castle on the NRHP, near the northern boundary of the NHLD. The removal of this structure would have an adverse effect on the structure, but removal of the structure would not alter the boundaries of the NHLD. The adverse effects to the Castle that result from demolition could be mitigated. The historic wall marking the northern boundary is a historic property and would remain, as would all of the NRHP eligible structures currently within the walls of the USDB. Alternative 2 has the greatest potential to jeopardize the boundaries of the NHLD, but retain all of the historic structures. None of the other alternatives would jeopardize the NHLD designation at Fort Leavenworth if mitigation of the adverse effects to NHRP eligible

Table 4-5 Effect of Alternative 3 on NRHP Eligible Properties

Building No.	Name or Use	Adverse Effect
463	Administrative Building	Renovation/Restoration
464	Administrative Building	Renovation/Restoration
465	Clinic/Barracks	Renovation/Restoration
466	FE Maintenance Shop/Barracks	Renovation/Restoration
467	Administrative/Crafts/FE Shops	Renovation/Restoration
468	Machine Shop	Renovation/Restoration
472	Education/Print Shop	Renovation/Restoration
473	Visitor/Administration Building	Renovation/Restoration
474	Power Plant	Demolition
475	Castle – Main Prison Building	Demolition
487	Dry Cleaning Plant	Renovation/Restoration

properties is included. All of the adverse effects to the NHL and to NRHP properties could be mitigated by development of a MOA between the consulting parties.

4.1.2 Archaeological Sites

None of the alternatives would impact known archeological resources in the vicinity of the USDB, which consist of prehistoric stone artifacts or the Quarry Creek Archaeological Site. The Quarry Creek Archaeological site is listed on the National Register but it is located outside of the USDB complex and would not be impacted. Ground disturbing activities associated with all of the alternatives could adversely effect unknown but eligible historic or prehistoric archaeological sites within the original boundaries of the USDB. It is improbable that there are any archaeological remains, sites, or artifacts because of the ground disturbance when the Castle and Power Plant were constructed. See Figure 3-3, 1911 Castle construction and View of USDB. Within the original wall boundaries an 1881 drawing depicts structures that appear to have been located in areas that are now the Castle and green space. There's the possibility that there could be archaeological evidence for earlier structures that is intact. See Figure 3-2, 1881 Bird's Eye View of Prison Grounds. Therefore, provisions for identifying and evaluating archaeological resources should be included when negotiating a MOA prior to implementing any of the alternatives that require ground disturbing activities or construction areas.

4.2 BUILDINGS

Prior to implementing any alternative that involves the reuse of the Castle, a comprehensive seismic evaluation needs to be performed that takes into account the facility's new use and extended design life. This study would consider the addition of new structural elements inside the building to support new floors, a dynamic analysis of all wings and rotunda structures, a geotechnical investigation to determine seismic soil coefficients and allowable soil pressures, and a detailed plan to upgrade deficiencies in structural elements. Only the Castle has been studied for its seismic resistance relative to modern building codes. The remaining buildings within the walls of the USDB would perform adequately in the case of a seismic event with only

minimal retrofitting. The buildings of main concern are the multi-story, pre-1900 brick masonry buildings such as Buildings 463, 464, 466, 467, 472, and 473. It was recommended in the ARS that a complete and comprehensive seismic evaluation be performed during design development of each of the building renovations.

4.2.1.1 No Action Alternative

Further studies may be necessary to evaluate the seismic condition of Buildings 463, 464, 466, 467, 472, 473, and the Castle. If the studies determine it necessary, this alternative may require seismic event retrofitting to the structures of Buildings 463, 464, 466, 467, 472, 473 and the Castle.

4.2.1.2 Proposed Action – Partial Demolition and General Use

Seismic studies of the USDB would not be required prior to its demolition; however, studies may be necessary to evaluate the seismic condition of Buildings 463, 464, 466, 467, 472, and 473. If the studies determine it necessary, this alternative may require seismic event retrofitting to the structure of Buildings 463, 464, 466, 467, 472, and 473.

4.2.1.3 Alternative 1 – Conference Center and Alternative 3 – Archival Center

These alternatives would require extensive structural retrofitting of the Castle for a seismic event. The Castle is constructed of unreinforced brick masonry and very vulnerable to seismic activity. The Kansas City District Corps of Engineers Study of 1992 concluded that the most economical method to strengthen the brick masonry walls was center coring, which has had some success in high seismic hazard areas on the West Coast. Center coring systems use reinforcing steel that is pressure grouted into holes drilled vertically all the way through the wall from the top and spaced approximately 5 feet apart. Center coring systems are very well suited to historic preservation projects since the installation and reinforcement is embedded in the walls and hidden from view.

The Corps of Engineers Study of 1992 also recommended underpinning to increase the capacity of the existing foundations to withstand the design earthquake loading. Underpinning was proposed by installing concrete drilled shafts/piers where the exterior of the structure is accessible and by auger cast-in-place piles installed from the subbasement level where access to the exterior is unavailable. Drilled shafts/piers and auger cast piles were proposed to extend 50 feet below existing exterior grade to a layer of limestone for an end-bearing type foundation system.

Other applicable schemes of structural retrofitting suggested by the Corps of Engineers Study of 1992 include the addition of external buttresses, external framing, steel cross-bracing, moment resisting frames using existing roof trusses, foundation base isolation, and reducing building length.

Additional seismic studies and retrofitting may be necessary for Buildings 463, 464, 466, 467, 472, and 473.

4.2.1.4 Alternative 2 – Military Operations and Urban Training Center

Further studies may be necessary to evaluate the seismic condition of Buildings 463, 464, 466, 467, 472, 473, and the Castle. If the studies determine it necessary, this alternative may require

seismic event retrofitting to the structures of Buildings 463, 464, 466, 467, 472, 473 and the Castle.

4.3 LAND USE

This section presents an analysis of the potential impact on land use for Fort Leavenworth and adjacent land to the installation. An impact to land use would be considered significant if one or more of the following occur as a result of the proposed action: conflict with applicable ordinances and/or permit requirements, nonconformance with applicable land use plans, prevention of adjacent or nearby properties being used for existing activities, or conflict with established uses of an area.

4.3.1 No Action Alternative

Under the No Action Alternative, no changes to land use would occur on Fort Leavenworth or adjacent land. The No Action alternative would be compatible with the general character of nearby facilities and the installation land use patterns.

4.3.2 Proposed Action – Partial Demolition and General Use

Land use conflicts on Fort Leavenworth are not expected under the Proposed Action. Most land uses would be compatible with the general character of established and planned installation land use patterns. Facility demolition and alteration activities may have a temporary minor constraint on existing operations and land uses; however, after demolition, no impacts are expected on any adjacent land use. The Proposed Action would change the existing land use from a prison facility to office/administrative use. No land use changes to the City of Leavenworth and surrounding areas are expected.

4.3.3 Alternative 1 – Conference Center/Guest Housing

Alternative 1 would change the existing land use from a prison facility to a conference center and guest lodging. In addition, parking facilities within the USDB complex would be limited and areas adjacent or nearby would be required to meet the necessary parking requirement. This additional parking could cause some land use conflicts, depending on the size of the area needed. The only open area for expansion is to the north of the USDB complex and within the complex itself. Existing parking areas to the west and south of the complex have limited capacity during the day. The land use changes would be compatible with the general character of the area surrounding the USDB complex and Fort Leavenworth. No land use changes outside of the installation would be required.

4.3.4 Alternative 2 – Military Operations and Urban Training Center

Alternative 2 would change the existing land use from a prison facility to a MOUT Center. The buildings that make up the USDB prison complex and the auto shop and metal buildings to the north of the Castle would be the location of the MOUT Center, and the general use buildings to the south would be for administration and/or educational use. The MOUT would not be compatible with nearby land uses. The MOUT would affect the adjacent housing and administrative activities adjacent to the USDB complex and neighboring buildings, requiring restrictions for noise and night activities. These restrictions could be counterproductive to the

training requirements for a MOUT facility. Alternative 2 would not change the existing land use in the vicinity of Fort Leavenworth.

4.3.5 Alternative 3 – Archival Center

Under Alternative 3, no changes to land use would occur on Fort Leavenworth or adjacent land. Alternative 3 would be compatible with the general character of nearby facilities and the installation land use patterns.

4.4 SOCIOECONOMICS

Two types of socioeconomic effects were analyzed for implementation of the Proposed Action; Alternatives 1, 2, and 3; and the No Action Alternative. Direct effects are those associated with the project such as expenditures and labor requirements. Secondary effects include the expenditures and labor created by direct expenditures in the local community.

4.4.1 Population

It is expected that an adequate labor force is present in the area to support direct and secondary employment needs for the Proposed Action and alternatives. Due to the location of Fort Leavenworth (within 30 miles of a large metropolitan area) and the transitory nature of the construction industry, it is expected that those demolition/renovation workers not living in the region of influence (ROI) would not relocate but would commute to the installation. Therefore, the population increase caused by secondary workers is expected to be small. Because there would not be substantial growth in population or the need for new housing, no impacts are anticipated.

Under the No Action Alternative, the current employment requirements for maintenance of the facilities would remain unchanged. It is assumed those personnel who are assigned to maintain these facilities would remain at the installation, and there would be no change in either the direct expenditures or the payroll spending of the direct employees. This would precipitate no change in the secondary effects. Therefore, no impacts are expected to occur.

4.4.2 Economy

The demolition and renovation within the USDB complex for the Proposed Action and alternatives would provide temporary and long-term employment within the local area. Most of the new employment would be in the construction sector of the economy. Demands for construction materials could also stimulate job growth in the manufacturing sector; however, this growth would not necessarily be local because some construction materials would be imported from outside the project area (e.g., lumber, office furniture, interior finishes). The purchase of materials, fuel, food, and services by construction workers would contribute to local employment and income, particularly within the City of Leavenworth. Overall, the project demolition and renovation would tend to reduce local unemployment.

Limited gains in permanent employment would occur directly as a result of the Proposed Action and alternatives. The work force needed for operations and maintenance (O&M) would be small relative to the size of the demolition and renovation workforce and the available workforce in the Leavenworth area.

4.4.2.1 No Action Alternative

No short-term employment or economic benefit would be realized from implementation of the No Action alternative. No significant increase or decrease in annual operations and maintenance expenditures are expected from the No Action alternative. The minimal annual expenditures would remain at the current level of approximately \$500,000 for utilities plus additional maintenance costs with occasional increases or decreases depending on the amount of maintenance that would be required each year for up keep.

4.4.2.2 Proposed Action – Partial Demolition and General Use

Implementation of the Proposed Action would cause an immediate short-term and a sustained long-term positive socioeconomic effect to the local economy, and to individual citizens. Initial demolition and renovation would cause an increase in economic activity from construction workers in the area during the demolition and renovation period. Estimated demolition and renovation costs for the proposed project are approximately \$29.9 million.

Existing personnel from nearby buildings and facilities will provide the operation and maintenance for the remaining facilities. Annual expenditures for local goods and services are estimated at \$724,300 and are not expected to be significant but they provide some small degree of economic support to the local and regional economy.

4.4.2.3 Alternative 1 – Conference Center/Guest Housing

Construction of a new conference center would not impact existing facilities in the Leavenworth area. Leavenworth currently has several existing facilities that host small to moderately sized conferences. In addition, Fort Leavenworth has a relatively new facility on the installation called the Frontier Conference Center that actually hosted one of the meetings of interested parties in the community during the early stages of the USDB ARS. As a large conference center, the proposed facility, could actually support local business in the community. Its main competition would be located in Kansas City.

Competition from conference centers in Kansas City could impact the proposed facility. There are several Kansas City facilities including Bartle Hall/Municipal Auditorium Convention Center, Overland Park Convention Center, Crown Center Exhibit Hall, and Kansas City Market Center. In addition to the convention and exposition centers, Kansas City hosts the KCI Expo Center, Jack Reardon Civic Center, and Overland Park Trade Center. Many hotels, casinos, universities/colleges, and community centers, etc. also have the capability of hosting small to moderate sized meetings and conventions. The market for the moderate to large sized conventions is extremely competitive with each of the above venues targeting area niches within the Kansas City area.

Tracking the bookings for events arranged through the Convention and Visitors Bureau of Greater Kansas City, event attendance and hotel room rentals have generally increased slightly over the last ten years. Future bookings are down dramatically while attendance is slightly up, indicating that larger conventions are being booked through the Bureau.

The special features of the proposed conference center would be the added security from the historic prison walls and security infrastructure along with its location within a military

installation. This type of centrally located facility could attract special military or security-sensitive events from across the entire country.

Implementation of Alternative 1 would cause an immediate short-term and a sustained long-term positive socioeconomic effect to the local economy, and to individual citizens. The renovation would stimulate economic activity from the increase of construction workers in the area during the demolition and renovation period. Estimated demolition and renovation costs for the proposed project are approximately \$99 million.

Operation and maintenance of the Conference Center would generate new jobs, but the number of new employees would be determinate on the usage of the facility. Existing personnel from nearby buildings and facilities would be used for the operations and maintenance of remaining USDB facilities. Annual expenditures for local goods and services are estimated at \$1,554,400 and would provide economic support to the local and regional economy.

4.4.2.4 Alternative 2 – Military Operations and Urban Training Center

Implementation of Alternative 2 would cause an immediate short-term and a sustained long-term beneficial positive socioeconomic effect to the local economy, and to individual citizens. The renovation would stimulate substantial economic activity from the increase of construction workers in the area during the demolition and renovation period. Estimated demolition and renovation costs for the proposed project are approximately \$21.7 million.

Existing personnel from nearby building and facilities would be used for operation and maintenance of the remaining facilities. Annual expenditures for local goods and services are estimated at \$1,212,000 and are not expected to be significant but they would provide some small degree of economic support to the local and regional economy.

4.4.2.5 Alternative 3 – Military/Government Archival & Records Center

Implementation of Alternative 3 would cause an immediate short-term and a sustained long-term positive socioeconomic effect to the local economy, and to individual citizens. The renovation would stimulate substantial economic activity from the increase of construction workers in the area during the demolition and renovation period. Estimated demolition and renovation costs for the proposed project are approximately \$84.5 million.

Operation and maintenance of the archival and records center would generate some new jobs. The impact on the installation or local economy would be minimal. Annual expenditures for local goods and services are estimated at \$1,983,000 and are not expected to be significant but they would provide some small degree of economic support to the local and regional economy.

4.4.3 Housing

No increases in housing demands are expected from the temporary and permanent work forces needed for the Proposed Action and alternatives because most of the labor would come from local sources. Under the No Action alternative no impacts on existing housing would occur.

4.5 INFRASTRUCTURE

4.5.1 Utilities

Effects on utilities are considered in terms of increases in demands on utility systems and the ability of existing systems to meet those demands. Potential effects to the environment could occur if the existing systems are insufficient to handle the increased demand requiring construction and operation of a new system that may impact the environment. Utility demands include both construction and operations usage.

4.5.1.1 *No Action Alternative*

The No Action alternative would not require any additional public facilities or infrastructure resources. The USDB facility would require the same amount of utility services as is currently provided.

4.5.1.2 *Proposed Action – Partial Demolition and General Use*

The buildings that would be demolished would not require any utility services. This alternative would cause an overall reduction of utility needs for the installation.

4.5.1.3 *Alternative 1 – Conference Center/Guest Housing*

This alternative would increase the amount of natural gas, electricity, water, wastewater, and communication services used by the USDB. Utility costs for the installation would increase slightly due to the amount of utility services needed to operate a conference center with guest housing. Additional capacity (additional utility lines, pipelines, etc.) for natural gas, electricity, water, wastewater, and telephone service would be required by this alternative to accommodate guests using the conference center and staying in the guest housing.

4.5.1.4 *Alternative 2 – Military Operations and Urban Training Center*

The USDB facility would require the current level of utility services. The use of electricity and other utilities may increase during training operations but it is not expected to be significantly more than the current usage level.

4.5.1.5 *Alternative 3 – Military/Government Archival & Records Center*

This alternative would increase slightly the amount of utility services used by the USDB. The installation would experience an increase in utility costs (primarily gas and electricity) because of the amount of energy needed to maintain proper climate control in the archival and records center. Additional natural gas, electricity, water, wastewater, and communication lines may be constructed to provide the capacity needed.

4.5.2 Transportation

The effects of the Proposed Action, alternatives, and the No Action alternative on roadways include a temporary increase in construction-related traffic during the demolition and renovation. Alternatives 1, 2 and 3 would also include an increase in commuter-related traffic after the renovation completion.

4.5.2.1 *No Action Alternative*

No impacts to roadways or transportation routes are anticipated by the selection of this alternative.

4.5.2.2 Proposed Action – Partial Demolition and General Use

Based on the 95,000 tons of debris to be transported from the USDB, approximately 3,200 heavy trucks or an estimated 32 trucks per day over a 5-month period are anticipated to transport waste construction materials off the installation and bring on new construction materials needed for the renovation. Traffic volumes would increase moderately on the installation during demolition and renovation, but return to normal once demolition and renovation are complete. Heavy haul dates and routes would be coordinated with the appropriate installation directorates and local agencies. There are currently three alternative routes into the installation that could be used for the transportation of the demolition waste and construction deliveries; 1) the main entrance on Grant Avenue, 2) the west entrance at Hancock Ave. and 3) the north entrance, located just west of the new USDB. The north entrance is currently closed for security reasons. The west entrance, Hancock Ave. has historically been used for construction deliveries. The increase in heavy trucks and worker vehicles could significantly impact area roadways. Substantial damage to installation roadways used for demolition/renovation deliveries is expected and the necessary repairs shall be performed by the installation on the roadway(s). On-site construction parking would be provided at the site.

4.5.2.3 Alternative 1 – Conference Center/Guest Housing

Based on the 20,000 tons of debris to be transported from the USDB to implement this alternative, approximately 700 heavy trucks, or an estimated 32 trucks per day over a one-month period, are anticipated to transport waste construction materials off the installation and bring on new construction materials needed for the renovation. Traffic volumes would increase moderately on the installation during demolition and renovation, but return to normal once demolition and renovation are complete. Heavy haul dates and routes will be coordinated with the appropriate installation directorates and local agencies. Minimal damage to roadways used for demolition/renovation deliveries is expected and the necessary repairs shall be performed on the roadway(s). On-site construction parking would be provided at the site.

This alternative is expected to impact transportation routes within the vicinity of the USDB facility by increasing the amount of traffic to and from the conference center and guest housing during events. Additional personnel could be required during events to direct traffic to and from designated parking areas. Additional traffic congestion could occur at security checkpoints as guests and their vehicles are inspected before entering or leaving the installation. This alternative could increase the amount of traffic (passenger vehicle and buses) on local roads and highways within the vicinity of the installation; however, this increase would be intermittent, only occurring during events.

4.5.2.4 Alternative 2 – Military Operations and Urban Training Center

Based on the 1,000 tons of debris to be transported from the USDB, approximately 50 heavy trucks are anticipated to transport waste construction materials off the installation and bring on new construction materials needed for the renovation. Traffic volumes would increase slightly on the installation during demolition and renovation, but return to normal once demolition and renovation are complete. Heavy haul dates and routes would be coordinated with the appropriate installation directorates and local agencies. Damage to roadways used for demolition/renovation deliveries is not expected, but should damage occur, the necessary repairs shall be performed on the roadway(s). On-site construction parking would be provided at the site.

Transportation routes within the vicinity of the USDB facility would be impacted by military vehicles during urban training operations. Additional impacts may include traffic congestion during training exercises while military equipment is being brought inside the walls of the USDB facility or leaving the USDB facility.

4.5.2.5 Alternative 3 – Military/Government Archival & Records Center

Based on the 20,000 tons of debris to be transported from the USDB, approximately 700 heavy trucks or an estimated 32 trucks per day over a one-month period are anticipated to transport waste construction materials off the installation and bring on new construction materials needed for the renovation. Traffic volumes would increase moderately on the installation during demolition and renovation, but return to normal once demolition and renovation are complete. Heavy haul dates and routes would be coordinated with the appropriate installation directorates and local agencies. Damage to roadways used for demolition/renovation deliveries is not expected, but should damage occur, the necessary repairs shall be performed on the roadway(s). On-site construction parking would be provided at the site.

Due to the increased truck traffic to and from the archival and records center, this alternative is expected to impact transportation routes within the vicinity of the USDB facility. Of particular concern is the added traffic congestion resulting from the additional time security personnel will need to inspect the trucks entering and leaving the archival and records center and Fort Leavenworth. This alternative would increase the amount of truck traffic on local roads and highways within the vicinity of the installation; however, this increase is not expected to be significantly more than current levels.

4.5.3 Solid Waste Disposal

In 2001 the installation recycled 1,624 tons and landfilled 4,543 tons of household trash. The Proposed Action alternative would generate an estimated 75,000 tons of construction debris from the Castle demolition and 20,000 tons from Buildings 450, 469, 471, 485, 486, 496 and 498. Alternatives 1, 2, and 3 would generate 20,000 tons from demolition of Buildings 450, 469, 471, 485, 486, 496 and 498. Portions of this waste material could be recycled as scrap iron; however, the majority would be transported to local construction/debris landfills. There are two area landfills in the vicinity of Fort Leavenworth for construction debris that have the required capacity for waste generated during the demolition.

Once the demolition and renovations are complete, no additional solid waste impacts would be generated by the Proposed Action alternative, Alternative 2 and the No Action Alternative. Alternative 1, the conference center and guest housing, is expected to generate more trash and solid waste than what is currently being generated. Alternative 3, the archival and records center, would create additional trash and solid waste but it is not expected to be more than what is currently generated by the installation.

4.5.4 Law Enforcement Services

The Proposed Action would have a long-term beneficial impact on law enforcement services. Demolition and removal of the Castle, Power Plant and miscellaneous metal shop buildings to the north of the Castle would decrease the overall probability that law enforcement services would be needed at the USDB facility for security purposes. Alternatives 1, 2, 3, and the No

Action Alternative would require law enforcement services for all of the buildings of the USDB facility. Although Alternatives 1 and 3 could include the installation of suitable security systems in the conference center with guest housing or the archival and records center, the potential would remain for an incident to occur within USDB facility that would require the assistance of law enforcement personnel.

4.5.5 Fire Protection Services

The Proposed Action would have a long-term beneficial impact on fire protection services. Demolition of and removal of the Castle, Power Plant and miscellaneous metal shop buildings to the north of the Castle would decrease the overall probability that a fire would occur at the USDB facility. Alternatives 1, 2, 3, and the No Action Alternative would require fire protection services for all of the buildings of the USDB facility. Although Alternatives 1 and 3 would include upgrades to existing fire protection systems for the conference center with guest housing or the archival and records center; the potential for a fire to occur at the USDB facility would remain.

4.6 GEOLOGY AND SOILS

None of the alternatives would cause short-term and long-term impacts to the geology at or in the vicinity of the USDB complex.

4.6.1.1 No Action Alternative

Short-term and long-term impacts to soils in the vicinity of the USDB are not expected. No construction activities are required by implementation of this alternative.

4.6.1.2 Proposed Action – Partial Demolition and General Use

Potential short-term and long-term impacts to soils in the vicinity of the USDB are expected to be minimal. This alternative would require fill material (soil) to be brought in from an offsite source to level the ground where the demolished buildings once stood. Some additional soil may be brought to the site for landscaping. Proper erosion and sediment control devices shall be used during demolition and construction activities.

4.6.1.3 Alternative 1 – Conference Center/Guest Housing

Short-term and long-term impacts to soils in the vicinity of the USDB are not expected. This alternative may require some construction work; however, proper erosion and sediment control devices shall be used during any construction activities. Some additional soil may be brought to the site for landscaping.

4.6.1.4 Alternative 2 – Military Operations and Urban Training Center

Short-term and long-term impacts to soils in the vicinity of the USDB are not expected. This alternative may require some demolition work; however, proper erosion and sediment control devices shall be used during any demolition activities. Some additional soil may be brought to the site for landscaping.

4.6.1.5 Alternative 3 – Military/Government Archival & Records Center

Short-term and long-term impacts to soils in the vicinity of the USDB are not expected. This alternative may require some construction work; however, proper erosion and sediment control

riverbank shield views from the Missouri River toward the USDB. The roofline of the Castle building can be viewed from Weston Bend State Park, however the most striking feature in the skyline is the Bell Tower south of the USDB complex.

Visibility of the Castle from Highway 92 is fairly good. The roofline of the Castle extends slightly into the natural skyline. Landscaping and trees also limit the view from homes located due east of the Castle, across the Missouri River.

There is no visibility of the Castle within the City of Leavenworth. Numerous buildings on Fort Leavenworth block the view from the south. In addition, Highway 73 borders the installation on the south and the topography of the area slopes downward from the installation to the City of Leavenworth.

Visibility of the Castle from Salt Creek is limited. Only the roofline extends into the skyline and, as with the Missouri River assessment unit, the most striking feature is the Bell tower.

Visual impacts affecting nearby residences and offices would be beneficial. Removal of the Castle, Power Plant, Mental Health Clinic (Building 450) and miscellaneous metal shop building to the north of the Castle and would provide more open/green space and landscaping. In addition, the architectural design of the Castle is different from the majority of the neighboring buildings.

4.7.3 Alternatives 1, 2, and 3

Alternatives 1, 2, and 3 would not directly alter any visual resources. No changes to the exterior façade of the buildings are expected. Alternatives 1, 2, and 3 have some demolition, mostly buildings of non-historic value, and are inconsistent in architectural style to nearby historic buildings.

4.8 WATER RESOURCES

None of the alternatives would cause significant impacts to surface water resources (streams, ponds, and wetlands) since none of these resources are located within the walls of the USDB complex. Implementation of any alternative would not impact surrounding surface water or ground water resources. Proper mitigation measures and erosion and sediment control devices shall be used if any construction is necessary. None of the alternatives would impact any floodplains because none exist within the walls of the USDB complex. The proposed alternative (demolition of the Castle) would require some earth moving activities but should not impact any groundwater resources on or in the vicinity of the USDB complex.

4.9 AIR

According to the EPA, all of Kansas is in attainment for criteria pollutants. In addition, Platte County, Missouri, which lies across the Missouri River and east of the USDB in Leavenworth County, Kansas, is in attainment for criteria pollutants.

4.9.1 No Action Alternative

This alternative would not cause any short-term or long-term impacts to the local or regional ambient air quality. Aside from regular maintenance activities, no construction activities are expected to result from this alternative.

4.9.2 Proposed Action – Partial Demolition and General Use

The impacts resulting from the proposed project on air quality in the area would be short-term and minimal, occurring only during demolition and construction activities. The emissions from construction vehicles and equipment would have no significant impact on the air quality of the region; however, the demolition activities may cause a temporary degradation in the local and regional ambient air quality due to fugitive dust. Construction activities may have short-term impacts on the local air quality in the immediate vicinity of the USDB. Once the demolition and construction activities are completed, emissions would subside and ambient air quality would return to pre-construction levels.

4.9.3 Alternative 1 – Conference Center/Guest Housing

Construction activities, resulting from this alternative, may cause short-term impacts on the local air quality in the immediate vicinity of the USDB. Once the construction activities are completed, emissions would subside and ambient air quality would return to pre-construction levels. Long-term impacts to ambient air quality are not expected.

4.9.4 Alternative 2 – Military Operations and Urban Training Center

This alternative would not cause any short-term or long-term impacts to the local or regional ambient air quality. Only minimal construction activities are anticipated to result from this alternative.

4.9.5 Alternative 3 – Military/Government Archival & Records Center

Construction activities, resulting from this alternative, may cause short-term impacts on the local air quality in the immediate vicinity of the USDB. Once the construction activities are completed, emissions would subside and ambient air quality would return to pre-construction levels. Long-term impacts to ambient air quality are not expected.

4.10 NOISE

4.10.1 No Action Alternative

No short-term or long-term noise impacts are expected to result from this alternative. Regular maintenance activities would not cause noise impacts.

4.10.2 Proposed Action – Partial Demolition and General Use

Short-term noise impacts would be caused by the demolition and construction activities associated with this alternative. Long-term noise impacts are not expected to result from selection of the proposed alternative.

4.10.3 Alternative 1 – Conference Center/Guest Housing

Short-term noise impacts would be caused by construction activities associated with converting the Castle into a conference center/guest housing. Long-term noise impacts are not expected to result from the operation of the conference center/guest housing.

4.10.4 Alternative 2 – Military Operations and Urban Training Center

Short-term noise impacts, resulting from construction activities, are not expected. Only minimal construction would be required to convert the Castle into an urban training center. Long-term impacts, resulting from the MOUT activities, could include loud intense noise over short periods occurring during the day or night. Such noise could be annoying or distracting to nearby offices during the day and especially to housing at night.

4.10.5 Alternative 3 – Military/Government Archival & Records Center

Short-term noise impacts would be caused by construction activities associated with turning the existing USDB facility buildings into a military/government archival and records center. Long-term noise impacts are not expected to result from the operation of the military/government archival and records center.

4.11 HAZARDOUS WASTE

For the purpose of this EA, it is assumed that nominal asbestos containing materials in the form of steam piping insulation, floor tile, and building/roofing sealant would be encountered in the event of major rehabilitation of the USDB complex. Another anticipated environmental hazard would be the presence of lead-based paints (LBP). It is assumed that encapsulation procedures would be adequate for the abatement of LBP. Other potential environmental hazards would include underground fuel tanks, dry cleaning chemical contamination of soil, paints and solvent contamination of the auto shop area, and other chemical, fuels, or solvents used in the shop areas or vocation training facilities.

4.11.1 No Action Alternative

The No Action alternative would create a minimal amount of additional hazardous materials. Any solvents, chemicals, or hazardous materials used in the power plant and auto shop must be disposed of properly. Existing asbestos insulation would be left in place and removed only if it created a maintenance hazard. The current Stoddard Solvent, chlorinated solvents, and TPH soil contamination must be monitored, but no remediation measures would be required as part of this alternative.

4.11.2 Proposed Action – Partial Demolition and General Use

Demolition of the USDB Castle, power plant, auto shop, and mental health clinic, would generate the most amount of hazardous waste. Asbestos insulation within the Castle and other buildings must be removed before demolition. Additionally, any solvents, chemicals, or hazardous materials used in the Power Plant and auto shop must be disposed of properly. This alternative may also require the removal of some soil that has been contaminated in order to demolish buildings.

4.11.3 Alternative 1 – Conference Center/Guest Housing

Alternative 1, a conference center with guest housing, may require asbestos remediation in part of or in all of the buildings used. Any solvents, chemicals, or hazardous materials used in the power plant and auto shop must be disposed of properly. Construction activities associated with remodeling the buildings should not generate additional hazardous materials or disturb contamination present in the soils beneath the USDB complex. The current Stoddard Solvent, chlorinated solvents, and TPH soil contamination must be monitored, but no remediation measures would be required as part of this alternative.

4.11.4 Alternative 2 – Military Operations and Urban Training Center

Alternative 2, military operations and urban training center, would have minimal impacts on hazardous materials. Existing asbestos insulation would be left in place and removed only if it created a maintenance or operational hazard. Any solvents, chemicals, or hazardous materials used in the power plant and auto shop must be disposed of properly. The current Stoddard solvent, chlorinated solvents, and TPH soil contamination must be monitored, but no remediation measures would be required as part of this alternative.

4.11.5 Alternative 3 – Military/Government Archival & Records Center

Alternative 3, military/governmental archival and records center, may require asbestos remediation in part of or in all of the buildings used. Any solvents, chemicals, or hazardous materials used in the power plant and auto shop must be disposed of properly. Construction activities associated with remodeling the buildings should not generate additional hazardous materials or disturb contamination present in the soils beneath the USDB complex. The current Stoddard Solvent, chlorinated solvents, and TPH soil contamination must be monitored, but no remediation measures would be required as part of this alternative.

4.12 BIOLOGICAL RESOURCES

None of the alternatives would cause significant impacts to vegetation, wildlife, or threatened and endangered species. The USDB complex and surrounding area is developed and does not support any protected species communities, critical habitats, or rare and unique habitats for vegetation and wildlife. Only common wildlife species, which are extremely tolerant of human disturbance and capable of occupying urbanized areas, are expected to inhabit the area within the walls of the USDB complex and the developed areas of Fort Leavenworth. Similarly, the vegetation within the USDB complex consists of ornamental trees, shrubs, and maintained lawns.

4.13 CUMULATIVE IMPACTS

The cumulative impact analysis evaluates the effects of implementing any one of the four alternatives in association with past, present and reasonably foreseeable future Army actions at Fort Leavenworth. The cumulative impact analysis is prepared at a level of detail that is reasonable and appropriate to support an informed decision by the Army in selecting a preferred alternative. For this EA, the boundary of the cumulative impact analysis area is in most cases the installation boundary, except for those resource categories that are more regional in scope such

as infrastructure and socioeconomics. This analysis has been formatted to review the cumulative impacts according to each resource category.

Past actions are defined as actions within the cumulative analysis area include past actions at Fort Leavenworth and past demographic, land use and development trends. The characteristics and results of these past actions are described in this EA in Chapter 3, Affected Environment.

Present Actions include current operations at Fort Leavenworth and funded construction projects as described and evaluated in the Installation Environmental Assessment of the Ongoing Mission Operations/Master Plan and Draft Summary Development Plan.

Reasonably foreseeable future actions are limited to those that can be identified and defined with respect to timeframe and location. For this EA this includes projects planned at Fort Leavenworth for the next five years, or through 2007. Reasonably foreseeable actions considered in the cumulative impact analysis include the continuation of present management actions, building repairs/renovations, development trends and the following representative key planned projects at Fort Leavenworth that are scheduled to occur over the next 5 years. These are:

- Grant Avenue Repairs
- New Barracks Phase II
- Family Housing Replacement
- New Battle Simulation Center
- BCTP Campus
- Hancock Street Repairs
- Harney Gym Addition
- New Lewis & Clark Center

Many projects planned for Fort Leavenworth are being developed as part of the current Summary Development Plan.

Most of the environmental resource categories evaluated in this EA do not result in cumulative impacts. Many of the categories only cause short-term and minor long-term impacts. The information presented below describes the significance of cumulative impacts if any, to the environmental resource categories, and if any measures will be implemented to mitigate impacts.

Cultural Resources – In compliance with Fort Leavenworth’s responsibilities under Section 106 of the National Historic Preservation Act, 1966 (as amended), and because all of the proposed reuse alternatives, including the No Action alternative, could have the potential for adverse effects on historic properties, Fort Leavenworth would developed a MOA in consultation with the Kansas SHPO, the ACHP, and the NPS. The MOA would identify the specific actions needed to mitigate the adverse effects of the Proposed Action. In addition to the proposed reuse alternatives for the USDB, which is located within the NHLD, four of the planned projects are located within the NHLD. These planned projects are the Grant Avenue Repairs, the new Battle Simulation Center, BCTP Campus and Lewis and Clark Center. These planned projects would also be coordinated with the Kansas SHPO. No adverse cumulative impacts to the NHLD are expected as a result of continued coordination with the SHPO.

Buildings – The Proposed Action will not require further seismic studies of the Castle prior to demolition. Alternative 2 and the No Action alternative would not require further seismic analysis of the Castle. Alternatives 1 and 3 would require further seismic studies of the Castle for each proposed use. All of the reuse alternatives, however, may require studies to evaluate the seismic condition of the remaining buildings and structures within the USDB. These buildings could require retrofitting. All of the planned projects are new construction and would be designed for seismic conditions as appropriate.

Land Use – The Proposed Action, including the demolition of the Castle and renovation of other buildings within the USDB complex, is consistent with the installation land use and compatible with adjacent existing or proposed land uses. Alternative 2 would be incompatible with surrounding lands and therefore restrictions for use as a MOUT site would make this use unlikely. Alternative 3 and the No Action alternative would not require any changes to land use. Alternative 1 may require land adjacent to the USDB be converted to parking. All of the planned projects are consistent with current and future land uses for the installation. There will be no adverse cumulative impacts to land use.

Socioeconomics – All of the reuse alternatives, with the exception of the No Action Alternative, would cause short-term beneficial impacts to the local economy. None of the reuse alternatives would cause any measurable effects on population, nor will they cause the need for new housing. No measurable effects on population or housing are expected in conjunction with the planned projects. Adequate labor force and housing is present in the surrounding area to support the additional employment needs for all the proposed future actions. Increased economic activity occurring during demolition, renovation, and construction of the planned projects will benefit nearby communities.

Infrastructure –An increase in traffic volume and delays on certain installation roads during demolition and construction is anticipated as a result of the Proposed Action, Alternatives 1, 2, 3, and all other planned projects. However, the degree of impact is not anticipated to be significant. The impacts of potential congestion problems will be reduced as the schedule of the projects will occur at different times. Substantial damage to installation roadways used by the heavy vehicles for demolition, renovation, and construction deliveries is expected and the necessary repairs will be performed by the installation. The majority of the roadway damage is expected along Hancock Street, which is one of the planned projects scheduled for repairs during the next five years. The timing of the Hancock Street repairs should be scheduled after the major demolition, renovation and construction projects. As noted earlier, the demolition of the Castle will require removal of debris by truck and Hancock Street is the preferred route for access and egress for construction vehicles in the cantonment area.

Assuming the currently planned improvements relating to utility system distribution and collection systems are completed as scheduled, and considering the fact that existing water treatment plant facilities have adequate capacity to serve all current and foreseeable future needs, no significant adverse impacts are expected to occur. Energy, communication systems, and solid waste disposal provided by outside resources will be adjusted by the supplier to meet the increased demand without impacting the environment. Energy consumption at Fort Leavenworth would increase but energy efficient construction and continued expansion of the natural gas system should help reduce the environmental impact of energy usage. The Proposed Action

would benefit utility costs by reducing utility requirements for the USDB complex through reduction in the number of buildings and upgrading of current utility systems within the remaining buildings.

Geology and Soils – A review of the effects on soils and geology from past, present, and reasonably foreseeable future actions and the proposed reuse alternatives indicated that there may be minor cumulative impacts, primarily to soil as a result of erosion. Through the use of best management practices such as silt fences or protective covering minimizes the potential effects of erosion during demolition/construction activities. Therefore, the adverse cumulative impacts are not anticipated to be significant.

Aesthetics – The proposed action would alter the visual resources of the USDB; however, removal of the Castle, Power House, and miscellaneous metal shop buildings to the north would provide more open green space and landscaping and return the visual integrity to a more consistent form of the earlier quartermaster facility. Alternatives 1, 2, 3, and the No Action would not change the visual resources. The planned projects, located at several sites over the southern portion of the installation, would occupy some of the installation open space; however, in some instances other structures would be removed to create new open space. No adverse cumulative impacts are expected.

Water Resources – Any potential cumulative impacts to water resources caused by demolition or renovation activities associated with the alternatives for reuse and the No Action alternative within the USDB complex and construction of planned projects would be minor, short-term, and mitigatable. Demolition and construction plans shall contain erosion and sediment control measures. No surface water resources or floodplains are located within the USDB complex or within the proposed areas for the planned projects. No adverse cumulative impacts are expected.

Noise – Activities located within the cumulative impact analysis area are expected to increase short-term noise levels during demolition and renovation of the USDB and construction of the planned projects. No long-term adverse cumulative noise impacts are expected.

Air – Construction worker transportation vehicles and the operation of construction equipment at the USDB site and at proposed projects would cause short-term increases in emissions. Once the demolition, renovation, and construction activities are completed, emissions would subside and ambient air quality would return to pre-construction levels. No adverse cumulative air impacts are expected since the projects are scheduled over five years.

Hazardous Waste – Demolition and construction will generate some hazardous wastes as a part of all reuse alternatives and for the planned projects. The installation's existing hazardous material and waste management procedures shall be incorporated into all demolition and construction contracts. Fort Leavenworth shall manage asbestos-containing material and lead-based paint in accordance with existing directives. No adverse cumulative impacts are expected.

Biological Resources – All of the reuse alternatives for the USDB and the planned projects are located in the cantonment area of Fort Leavenworth. Therefore, impacts to biological resources would be minimal and cause disturbance to animals and vegetation adapted to such urban

environments. No adverse impacts cumulative impacts to threatened, endangered, or otherwise sensitive biological resources are expected.

Summary – The benefits of this project would not come without some short-term impacts as addressed in this EA; however, Fort Leavenworth shall make the necessary commitments to mitigate the adverse impacts. A review of the cumulative impacts to the environment does not show any special vulnerability to the existing resources.

5.0 CONCLUSION

The Proposed Action to demolish the Castle, Power House, Mental Health Clinic and miscellaneous metal shop buildings within the old USDB complex was analyzed by comparing the environmental effects associated with the Proposed Action, three reuse alternatives, and the No Action alternative. The baseline environmental conditions for the USDB complex were described and the environmental consequences of implementing the Proposed Action were evaluated. The physical environments at Fort Leavenworth would not be significantly affected by proceeding with the demolition.

Implementation of the Proposed Action or one of the reuse alternatives would result in short-term and long-term significant adverse effects. However, numerous features of the various alternatives, as noted in Section 4.0, have the potential to provide a positive effect. The primary adverse effect of all of the reuse alternatives is the adverse affect on historic buildings within the NHLD. Appendix B contains a negotiated MOA between the concerned parties that includes at a minimum, adequate documentation and planning prior to demolition, seismic upgrade, and renovation to mitigate these adverse effects.

The Proposed Action and Alternatives 1, 2 and 3 would not adversely affect human health or the environment. Minimal air quality effects on the environment would occur during demolition and construction from generation of dust. Traffic volumes on installation roads would increase during demolition and renovation for Alternatives 1, 2 and 3 and at a slightly higher level for the Proposed Action particularly during demolition. Damage to installation roadways during demolition/renovation may occur and, if required, repairs will be performed by the installation. No wetlands, floodplains, or endangered species would be affected by any of the alternatives.

For Alternatives 1 and 3, comprehensive seismic evaluation would need to be preformed for the Castle's new use. All four reuse alternatives, including the Proposed Action, may require seismic evaluation of the general use buildings and structures prior to renovation.

Alternative 1 may require additional parking that could impact adjacent land uses. Alternative 2 is not compatible with adjacent land uses and would affect nearby housing and administrative activities. Alternative 2 could cause noise impacts over short periods from operations occurring during the day or night and restrictions may be required.

Solid waste disposal would increase during demolition, renovation and operation from each of the reuse alternatives. Area landfills for construction debris have the required capacity for waste generated during the demolition. Analysis of other environmental resources concluded that no impacts to geology and soils, water resources, hazardous wastes, and biological resources are expected.

Economic activity from the Proposed Action and three reuse alternatives will increase during demolition and renovation; see Table 5-1 for a cost comparison. Utility costs and additional capacity would increase slightly for Alternatives 1 and 3. The Proposed Action will benefit utility costs by reducing utility requirements. None of the proposed reuse alternatives will disproportionately impact minority or low-income populations.

Table 5-1 Alternatives Cost Comparison

Alternatives	Demolition/ Renovation Costs	Annual Maintenance Costs	Buildings Demolished	Buildings Renovated	Buildings Maintained
Proposed Action	\$29,900,000	\$724,300	450, 469, 471, 474, 475, 485, 486, 496, 498	463, 464, 465, 466, 467, 468, 470, 472, 473, 487	449
Alternative 1 – Conference Center & Guest Housing	\$99,000,000	\$1,544,400	450, 469, 471, 485, 486, 496, 498	463, 464, 465, 466, 467, 468, 470, 472, 473, 474, 475, 487	449
Alternative 2 – MOUT	\$21,700,000	\$1,212,000	450	463, 464, 465, 466, 467, 468, 470, 472, 473, 487	449, 469, 471, 474, 475, 485, 486, 496, 498
Alternative 3 – Archival & Records Center	\$84,500,000	\$1,983,000	450, 469, 471, 485, 486, 496, 498	463, 464, 465, 466, 467, 468, 470, 472, 473, 474, 475, 487	449
No Action		\$500,000			449, 450, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 485, 486, 487, 496, 498

The Proposed Action would alter the visual resources by providing more open green space and landscaping. Alternatives 1, 2, and 3 would not directly alter any visual resources. Only minor changes to the exterior façade of the remaining buildings are expected.

The No Action Alternative would not impact any of the environmental resources analyzed.

In conclusion, implementation of the Proposed Action, the reuse alternatives, or No Action alternative will require mitigation measures as described in Table 5-2 and the negotiated MOA. Based on the recommended mitigation for the NRHP eligible properties and the NHL, a mitigated finding of no significant impact by the Fort Leavenworth Garrison Commander is appropriate.

Table 5-2 Summary of Mitigation Measures

Resource	Mitigation Measure
Cultural Resources	Documentation of Building 475, the Castle, before demolition. Design and construct a wayside exhibit near site of Building 475. Implement a short- and long-term phased maintenance and repair plan. Prepare a long-term preservation plan. See Appendix B, Memorandum of Agreement for further details.
Noise	Limit demolition and construction activities to daylight hours.
Geology and Soils	Use appropriate BMPs (such as silt fences, straw bale dikes, diversion ditches, riprap channels, water bars, and water spreaders) to reduce soil erosion and sedimentation.
Water Resources	Implement BMPs identified in the SWPPP to control erosion and sediment discharges during construction.
Hazardous Materials	Dispose of all items found to contain hazardous materials/waste in accordance with the applicable regulations.
Biological Resources	Follow state and local BMPs to prevent runoff and sedimentation to lakes and streams during site preparation and new construction. Follow guidelines in INRMP to preserve natural features during construction and use native vegetation to landscape exteriors and roadsides.

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- US Department of Agriculture, February 1977. Soil Survey of Leavenworth and Wyandotte Counties, Kansas.
- US Census Bureau, 1990 and 2000. Website:
<http://factfinder.census.gov/servlet/BasicFactsServlet>

8.0 MAILING LIST

Federal Mailing List

Mr. Steve Allie
Historian/Curator
Ft. Leavenworth Army Museum, Bldg. 801
Ft. Leavenworth KS 66027-1360

Mr. Mike Bogner
Directorate of Installation Support (DIS)
820 McClellan Avenue
Ft. Leavenworth KS 66027-1360

Mr. Joseph Cothorn
EPA, Environmental Services Division
901 North 5th St.
Kansas City KS 66101-2907

Dr. Jack Damron
HQ TRADOC
Attn: ATBO G
5E North Gate Road
Fr. Monroe VA 23651-1048

COL Clay Edwards
Fort Leavenworth Historic Society
P.O. Box 3356
Ft. Leavenworth KS 66027

Mr. Scott Farley
U.S. Army Environmental Center
ATTN: SFIM-AEC-JA
Aberdeen Proving Ground MD 21010-5401

Mr. Al Gehrt
Kansas City Corps of Engineers
601 E. 12th Street
Kansas City MO 64106

Mr. Bill Gill
U.S. Fish and Wildlife Service
Kansas Ecological Services Office
315 Houston Street, Suite E
Manhattan KS 66502

Ms. Caroline Hall
U.S. Army Environmental Center
ATTN: SFIM-AEC-EQN
Aberdeen Proving Ground MD 21010-5401

Mr. George Handley
Kansas City Corps of Engineers
601 E. 12th Street
Kansas City MO 64106

Mr. Tim Hanna
Directorate of Installation Support (DIS)
820 McClellan Avenue
Ft. Leavenworth KS 66027-1360

Ms. Alice Hanson
Directorate of Installation Support (DIS)
820 McClellan Avenue
Ft. Leavenworth KS 66027-1360

Ms. Christine Hendzlik
Kansas City Corps of Engineers
601 E. 12th Street, CENWK-PM-MI
Kansas City MO 64106

Mr. Lee Keating
Advisory Council on Historic Preservation
12136 West Bayaud Avenue, Suite 330
Lakewood CO 80228

Mr. Jim Linburg
National Trust for Historic Preservation
910 16th Street, Suite 1100
Denver CO 80202

Mr. Chris McDaid
Cultural Resource Officer
ATTN: ATBO-SE
Ft. Monroe VA 23651-5000

Ms. Dena Sanford
National Register Program
NPS – Midwest Regional Office
1709 Jackson Street
Omaha NE 68102

Mr. William Robertson
CAC Historian
1 Reynolds Avenue
Ft. Leavenworth KS 66027-1354

LTC Jeffrey Williamson
Directorate of Installation Support (DIS)
820 McClellan Avenue
Ft. Leavenworth KS 66027-1360

Mr. Mike Wolf
Directorate of Installation Support (DIS)
820 McClellan Avenue
Ft. Leavenworth KS 66027-1360

Ms. Judy Wimberg
Directorate of Installation Support (DIS)
841 McClellan Avenue
Ft. Leavenworth KS 66027-1361

Ms. Janet Wray
PAO Officer, Public Affairs
Building 198
Ft. Leavenworth KS 66027

State Mailing List

Ms. Christy Davis
Kansas State Historic Preservation Office
6425 SW 6th
Topeka KS 66615

Mr. Chris Mammoliti
Kansas Department of Wildlife and Parks
Environmental Services Section
512 Southeast 25th Avenue
Pratt KS 67124

Ms. Jennifer Delisle
Kansas Biological Survey
2041 Constant Avenue
Lawrence KS 66047

Mr. Sam Sunderraj
Kansas Department of Agriculture
109 SW 9th Street, 2nd Floor
Topeka KS 66612-1283

Mr. Ron Hammerschmidt
Kansas Department of Health and Environment
Division of Environment
1000SW Jackson, Suite 400
Topeka KS 66612-1367

Local and Other Mailing Lists

Mr. Gary E. Carlson
Leavenworth Area Development Corp.
1298 Eisenhower Road
Leavenworth KS 66048

Mr. John Krueger
City of Leavenworth
100 N. 5th Street
Leavenworth KS 66048

Charlie Gregor
Leavenworth Chamber of Commerce
518 Shawnee
Leavenworth KS 66048

COL Steven Kempf
Leavenworth County Historical Society
1128 5th Avenue
Leavenworth KS 66048

Connie Hachenberg
Leavenworth Chamber of Commerce
518 Shawnee
Leavenworth KS 66048

Ms. Evelyn D. Lange
Preservation Alliance of Leavenworth
28041 187th Street
Leavenworth KS 66048

Kansas Preservation Alliance, Inc.
112 W. 7th, Suite D
Topeka KS 66603

Lansing Historical Society
P.O. Box 32
Lansing KS 66043

Ms. Cydney E. Millstein
Architectural & Historic Research
P.O. Box 22551
Kansas City MO 64113

Ms. Betty Philips
Leavenworth Historical Society
801 Cherokee
Leavenworth KS 66048

Appendix A Scoping Process

SUMMARY OF AGENCY SCOPING LETTER RESPONSES AND PUBLIC INFORMATION MEETING ACTIVITIES

1. Agency Scoping Meeting Letters and Responses

Scoping letters were sent out to federal, state and local contacts as identified on the mailing lists included in this package. A copy of the letter that was sent has been included. The responses from the agencies and the issues identified are listed on a page in front of the agency letters.

The issues included:

- concerns about any construction or demolition and the possibility of asbestos containing materials being present and procedures necessary for removing such materials,
- need for a NPDES permit if more than 1 acre of ground is disturbed,
- notification that potential remediation sites are near the USDB,
- notification that Kansas state-listed species may be in the area,
- notification that riparian area near the Missouri River is Bald Eagle habitat,
- notification that no adverse effects are anticipated to federally-listed threatened and endangered species, and
- concerns about offsite solid waste disposal sites and their ability to accommodate construction waste that might occur from the project.

No response has been received from the Kansas State Historical Preservation Officer (SHPO), although considerable coordination occurred during the Alternative Reuse Study and a representative from the SHPO's office attended the public information meeting.

2. Public Information Meeting Summary

A public information meeting was conducted from 4-7 pm on August 20, 2002 at the Leavenworth Riverfront Community Center. Prior to the meeting, notices were sent to those on the mailing lists that have been previously provided, news releases were sent to radio stations, newspapers, and television stations and a public notice was published as a legal notice in six newspapers.

One comment was received as a result of the meeting from an individual that the USDB would provide a good tourist attraction and a good location for the Frontier Army Museum.

Included as a part of this packet of information are a list of the display boards, a copy of the signed registration cards, the fact sheet handed out at the meeting, a blank copy of the comment sheet, and the letter received from Carlton Richardson.

The meeting was attended by Christy Davis from the Kansas SHPO office.

LIST OF LETTER RESPONSES FROM SCOPING LETTERS

DATE	AGENCY	ISSUE
7/23/02	Kansas Biological Survey	None/no record Kansas Natural Heritage Inventory
7/24/02	Command Historian/CAC-FLW	None
7/25/02	Kansas Dept. of Agriculture	None
7/30/02	Kansas Dept. Health & Environment Bureau of Air/Radiation/Asbestos	Concerns about Asbestos Containing Material
7/31/02	Kansas Dept. Health & Environment Bureau of Water	NPDES required if more than 1 acre disturbed
7/31/02	Kansas Dept. Health & Env. Bureau of Env. Remediation	Potential remediation sites nearby
8/6/02	Kansas Dept. Wildlife & Parks	Bald Eagle habitat along the Missouri River plus several other Species threatened or endangered in Kansas
8/12/02	US Department of Interior Fish and Wildlife	No adverse effects to T&E species Concerns about solid waste offsite
8/15/02	Kansas Dept. of Agriculture	Additional information required to determine if permits required

STATE OF KANSAS

BILL GRAVES, GOVERNOR
Jamie Clover Adams, Secretary of Agriculture
109 SW 9th Street
Topeka, Kansas 66612-1280
(785) 296-3558
FAX: (785) 296-8389



Division of Water Resources
David L. Pope, Chief Engineer
109 SW 9th Street, 2nd Floor
Topeka, KS 66612-1283
(785) 296-3717 FAX (785) 296-1176

KANSAS DEPARTMENT OF AGRICULTURE

August 15, 2002

Ms. Judy Wimberg
Environmental Division
Directorate of Installation Support
841 McClellan Avenue
Fort Leavenworth, Kansas 66027-1361

RE: DWR A-95 2002.250

Dear Ms. Wimberg:

This will acknowledge receipt of your letter we received August 12, 2002 regarding the Environmental Assessment for the reuse of the U.S. Disciplinary Barracks in Fort Leavenworth, Kansas.

Additional information concerning the potential reuse of the barracks is needed before we can determine if any necessary permits are needed from this agency. If you have additional questions regarding the need for a permit, please contact Bob Lytle at 785 296-6086.

Sincerely,

A handwritten signature in cursive script that reads "Bob Lytle".

Bob Lytle
Environmental Scientist
Technical Services Section

RFL:ssc



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Kansas Field Office
315 Houston Street, Suite E
Manhattan, Kansas 66502-6172

August , 9 2002

Mr. Gregory W. Knauer, AICP
Project Manager
Burns & McDonnell
9400 Ward Parkway
Kansas City, Missouri 64114-3319

Dear Mr. Knauer:

Thank you for your recent letter regarding preparation of an Environmental Assessment (EA) considering the future use of the U.S. Disciplinary Barracks (USDB) at Fort Leavenworth, Kansas. We understand there are five potential reuse alternatives under consideration:

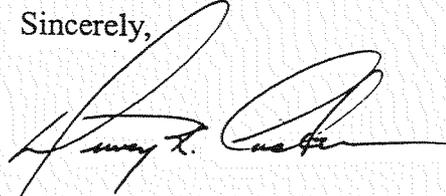
- Conference center with guest housing;
- Military operations and urban training center;
- Military and government archival records center;
- Partial demolition of USDB complex and general use of remaining buildings;
- No action (continued maintenance to keep buildings in operating condition).

Based on our review of the proposed action, including the fact that this project will be reuse of the existing structures/facilities, there should be no adverse impacts to fish and wildlife resources, including threatened and endangered species.

The only alternative that has offsite potential for impacts is the demolition alternative. If demolition materials are to be wasted offsite, or if fill materials are needed for additions, then the offsite activities should be evaluated in the environmental assessment. We would appreciate the opportunity to review information on any offsite activities which may potentially have environmental impacts.

Thank you for the opportunity to comment on this project. If we can be of any assistance please call Mr. Dewey Caster, of my staff, at 785 539-3474 ext. 108.

Sincerely,

A handwritten signature in black ink, appearing to read "William H. Gill". The signature is fluid and cursive, with a long horizontal stroke at the end.

For: William H. Gill
Field Supervisor

WHG\drc



STATE OF KANSAS
DEPARTMENT OF WILDLIFE & PARKS

Operations Office
512 SE 25th Ave.
Pratt, KS 67124-8174
Phone: (620) 672-5911 FAX: (620) 672-6020



6 August 2002

Mr. Gregory W. Knauer, AICP, Project Manager
Burns & McDonnell
9400 Ward Parkway
Kansas City, MO 64114-3319

Ref: D3.0100
Leavenworth
Track: 20020422

Dear Mr. Knauer:

We reviewed your review request regarding the future use of the U.S. Disciplinary Barracks at Fort Leavenworth, Kansas. Information will be used to prepare an Environmental Assessment (EA) for the five alternatives being considered.

State-designated critical habitats for the state and federally threatened Bald Eagle include a corridor along the main stem of the Missouri River. All suitable habitats in Leavenworth County are state-designated as critical habitats for the state-threatened northern redbelly snake and smooth earth snake. Please find enclosed a list of threatened and endangered species and species in need of conservation that could occur in Leavenworth County and a list of state-designated critical habitats in the county. Kansas Statute Annotated 32-963 and Kansas Administrative Regulation 115-15-3, pursuant to the Kansas Nongame and Endangered Species Conservation Act (K.S.A. 32-957 to 963, 32-1009 to 1012, and 32-1033), require special action permits for projects affecting critical habitats for state-listed threatened or endangered species.

The no action alternative would not result in any potential habitat loss. Any of the action alternatives that do not involve construction that might disturb existing habitats would be the next best alternative from an environmental and natural resource perspective.

If you have any questions, please E-mail me at chrish@wp.state.ks.us or call me at extension 198. Thank you for the opportunity to review this proposal and comment.

Sincerely,

Chris Hase, Aquatic Ecologist
Environmental Services Section

Enclosures

xc: KDWP Reg. 2 F&W Sup., Wolfe



**THREATENED AND ENDANGERED SPECIES
KNOWN OR LIKELY TO OCCUR
IN
LEAVENWORTH COUNTY, KANSAS**

American Burying Beetle (*Nicrophorus americanus*) - Endangered: May occur in suitable grasslands and upland woodlands. Endangered nationally.

Bald Eagle (*Haliaeetus leucocephalus*) - Threatened: Known to occur as a regular winter resident along the Missouri River. Prefers mature riparian woodland along the river. ***Critical habitat has been designated.*** Threatened nationally.

Chestnut Lamprey (*Ichthyomyzon castaneus*) - Threatened: Known to occur in the Missouri River main stem. Spawns over clean gravel in small tributary streams. Spawning has not been documented in Kansas. ***Critical habitat has been designated.***

Eastern Spotted Skunk (*Spilogale putorius interrupta*) - Threatened: Known to occur historically and may still occur in suitable habitat. Prefers brushy grasslands and woodland edges. May also use abandoned or little used farm buildings.

Eskimo Curlew (*Numenius borealis*) - Endangered: Formerly a regular spring transient using bare fields and heavily grazed or burned grasslands. Has not been recorded in Kansas since 1902. A few birds may still migrate through the state. Endangered nationally.

Flathead Chub (*Platygobio gracilis*) - Threatened: May occur in the Kansas River and Missouri River main stems. Prefers turbid streams with unstable sand bottoms. ***Critical habitat has been designated.***

Least Tern (*Sterna antillarum*) - Endangered: Known to nest along the Kansas River. May still occur as an occasional seasonal transient or summer visitant at waters where forage fish are abundant. ***Critical habitat has been designated.*** Endangered nationally.

Northern Redbelly Snake (*Storeria occipitomaculata occipitomaculata*) - Threatened: May occur in suitable habitat. Prefers moist mature upland woodland having dense leaf litter, rocks, and other debris for cover. ***Critical habitat has been designated.***

Pallid Sturgeon (*Scaphirhynchus albus*) - Endangered: Known to occur in the Missouri River main stem. Known to occur historically in the Kansas River during flood flows. Prefers swift turbid rivers with firm sand substrate. ***Critical habitat has been designated.*** Endangered nationally.

Peregrine Falcon (*Falco peregrinus*) - Endangered: May occur as an uncommon seasonal transient or winter visitant at areas where waterfowl concentrate.

(continued)

Leavenworth Co. Threatened & Endangered Species - Page 2

Piping Plover (*Charadrius melodus*) - Threatened: Known to nest along the Kansas River. May also occur as a rare seasonal transient on sparsely vegetated shores of marshes or impoundments. ***Critical habitat has been designated.*** Threatened nationally.

Sicklefin Chub (*Macrhybopsis meeki*) - Endangered: Known to occur in the Missouri River main stem. Prefers areas of strong current over sand or gravel substrate. ***Critical habitat has been designated.*** Federal candidate.

Silverband Shiner (*Notropis shumardi*) - Threatened: May occur in the Missouri River main stem. Prefers moderately deep areas of flowing water over sand or gravel substrate. ***Critical habitat has been designated.***

Smooth Earth Snake (*Virginia valeriae elegans*) - Threatened: Known to occur historically and may still occur in suitable habitat. Prefers rocky hillsides in or near moist woodlands where rocks, logs, or leaf litter provide cover. ***Critical habitat has been designated.***

Snowy Plover (*Charadrius alexandrinus*) - Threatened: May occur as an occasional seasonal transient or summer visitant at sparsely vegetated wetlands and impoundment shorelines.

Sturgeon Chub (*Macrhybopsis gelida*) - Threatened: Restricted to larger sandy rivers where they frequent areas swept by currents especially at heads of islands and sandbars. Has been documented in the Missouri River. ***Critical habitat has been designated.*** Federal candidate.

Western Silvery Minnow (*Hybognathus argyritis*) - Threatened: Prefers large shallow sandy rivers where it utilizes runs and backwater pools. Currently known from the Missouri River. ***Critical habitat has been designated.***

White-faced Ibis (*Plegadis chihi*) - Threatened: Known to occur as an occasional seasonal transient or summer visitant at wetlands and impoundments.

LEAVENWORTH COUNTY - DESIGNATED CRITICAL HABITATS

BALD EAGLE - *Haliaeetus leucocephalus* (Linnaeus, 1766)

Status: Threatened in Kansas
Threatened Nationally

All Kansas land and waters within a corridor along the main stem of the Missouri River from the confluence of the Kansas River at Kansas City, Wyandotte County to the Kansas-Nebraska border in Section 5, T1S, R19E, Doniphan County. The listed stream corridors have outermost boundaries that are along a line 100 yards landward from the stream's ordinary high water mark on each bank.

CHESTNUT LAMPREY - *Ichthyomyzon castaneus* (Girard, 1858)

Status: Threatened in Kansas

All reaches of the main stem Missouri River that are congruent with the Kansas-Missouri border.

FLATHEAD CHUB - *Platygobio gracilis* (Richardson, 1836)

Status: Threatened in Kansas

- (1) All reaches of the main stem of the Kansas River from the point it enters Douglas County at River Mile 71.3 to its confluence with the main stem Missouri River.
- (2) All reaches of the main stem Missouri River congruent with the Kansas-Missouri border.

LEAST TERN - *Sterna antillarum* (Lesson, 1847)

Status: Endangered in Kansas
Endangered Nationally

All the waters within a corridor along the main stem of the Kansas River from the confluence of the Smoky Hill River and Republican River on Fort Riley in Geary County to the confluence of the Missouri River in Kansas City, Wyandotte County.

NORTHERN REDBELLY SNAKE - *Storeria occipitomaculata occipitomaculata* (Storer, 1839)

Status: Threatened in Kansas

All suitable woodland habitat within Leavenworth County. Redbelly Snakes seem to prefer deeply wooded regions near rivers and lakes, sandstone woods, wooded hillsides, hillsides near streams, steep slopes of forested hills, moist areas, moist woodlands, woodlands with dense leaf litter, lowlands, forest edge, open fields, the vicinity of old dilapidated farm buildings, and woodlands which remain damp throughout the year.

LEAVENWORTH COUNTY - DESIGNATED CRITICAL HABITATS (Page 2)

PALLID STURGEON - *Scaphirhynchus albus* (Forbes and Richardson, 1905)

Status: Endangered in Kansas
Endangered Nationally

All reaches of the main stem Missouri River that are congruent with the Kansas-Missouri border.

PIPING PLOVER - *Charadrius melodus* (Ord, 1824)

Status: Threatened in Kansas
Threatened Nationally

All the waters within a corridor along the main stem of the Kansas River within Leavenworth County.

SICKLEFIN CHUB - *Macrhybopsis meeki* (Jordan and Evermann, 1896)

Status: Endangered in Kansas
Federal Candidate

All reaches of the main stem Missouri River that are congruent with the Kansas-Missouri border.

SILVERBAND SHINER - *Notropis shumardi* (Girard, 1856)

Status: Threatened in Kansas

All reaches of the main stem Missouri River that are congruent with the Kansas-Missouri border.

SMOOTH EARTH SNAKE - *Virginia valeriae elegans* (Kennicott, 1859)

Status: Threatened in Kansas

All suitable woodland habitat within Leavenworth County. This species prefers open sandstone woods, rocky hillsides in moist woodlands, deciduous forests, wooded urban areas, woodland edge situations, open brushy woodlands without a continuous leaf canopy, and abandoned fields. They are frequently found in thick piles of dead leaves, or beneath leaf litter, flat rocks, logs, and other surface debris, most often near forest-edge or on hillsides with sparse tree cover.

LEAVENWORTH COUNTY - DESIGNATED CRITICAL HABITATS (Page 3)

STURGEON CHUB - *Macrhybopsis gelida* (Girard, 1856)

Status: Threatened in Kansas
Federal Candidate

- (1) The main stem of the Kansas River from its start at the confluence of the Republican and Smoky Hill Rivers in Geary County to its confluence with the Missouri River in Wyandotte County.
- (2) All reaches of the main stem of the Missouri River that are congruent with the Kansas-Missouri border.

WESTERN SILVERY MINNOW - *Hybognathus argyritis* (Girard, 1856)

Status: Threatened in Kansas

All reaches of the main stem Missouri River that are congruent with the Kansas-Missouri border.



Species In Need of Conservation Known or Likely to Occur in Leavenworth County, Kansas

- Black Tern - *Chlidonias niger* (Linnaeus)
- Blue Sucker - *Cydeptus elongatus* (LeSueur)
- Bobolink - *Dolichonyx oryzivorus* (Linnaeus)
- Brassy Minnow - *Hybognathus hankinsoni* (Hubbs)
- Cerulean Warbler - *Dendroica cerulea* (Wilson)
- Eastern Chipmunk - *Tamias striatus* (Linnaeus)
- Franklin's Ground Squirrel - *Spermophilus franklinii* (Sabine)
- Highfin Carpsucker - *Carpoides velifer* (Rafinesque)
- Plains Minnow - *Hybognathus placitus* (Girard)
- Red-Shouldered Hawk - *Buteo lineatus* (Gmelin)
- River Shiner - *Notropis blennioides* (Girard)
- Southern Bog Lemming - *Synaptomys cooperi* (Baird)
- Southern Flying Squirrel - *Glaucomys volans volans* (Linnaeus)
- Timber Rattlesnake - *Crotalus horridus* (Linnaeus)
- Whip-Poor-Will - *Caprimulgus vociferus* (Wilson)

AGENCY REVIEW TRANSMITTAL FORM

Comments by _____

Transmittal Date _____

This form provides notification and the opportunity for your agency to review and comments on this proposed project as required by Executive Order 12372. Review Agency, please complete Parts II and III as appropriate and return to contact person listed below. Your prompt response will be appreciated.

RETURN TO: Mr. Gregory W. Knauer, AICP
Project Manager
Burns & McDonnell
9400 Ward Parkway
Kansas City, MO 64114-3319

PART I

REVIEW AGENCIES/COMMISSION

- | | | |
|--|--|---|
| <input type="checkbox"/> Aging | <input type="checkbox"/> Education | <input type="checkbox"/> State Forester |
| <input type="checkbox"/> Agriculture-DWR | <input type="checkbox"/> Geological Survey, KS | <input type="checkbox"/> Transportation |
| <input type="checkbox"/> Biological Survey,KS | <input checked="" type="checkbox"/> Health & Environment | <input type="checkbox"/> Water Office,KS |
| <input type="checkbox"/> Conservation Commission | <input type="checkbox"/> Historical Society | <input type="checkbox"/> Wildlife & Parks |
| <input type="checkbox"/> Corporation Commission | <input type="checkbox"/> Social & Rehabilitation | _____ |
| <input type="checkbox"/> Commerce | _____ | _____ |

PART II

AGENCY REVIEW COMMENTS

COMMENTS: (Attach additional sheet if necessary) Please see the enclosed comments from Mr. Dan Gravatt, Bureau of Remediation and Mr. Don Carlson, Bureau of Water regarding Reuse of the U.S. Disciplinary Barracks at Fort Leavenworth, KS.

PART III

RECOMMENDED ACTION COMMENTS

- | | |
|--|--|
| <input checked="" type="checkbox"/> Clearance of the project should be granted. | <input type="checkbox"/> Clearance of the project should not be delayed but the Applicant should (in the final application) address and clarify the questions or concerns indicated above. |
| <input type="checkbox"/> Clearance of the project should not be granted. | |
| <input type="checkbox"/> Clearance of the project should be delayed until the issues or questions above have been clarified. | <input type="checkbox"/> Request the opportunity to review final application prior to submission to the federal funding agency. |
| <input type="checkbox"/> Request a State Process Recommendation in concurrence with the above comments. | |

DIVISIONS/ AGENCY/ COMMISSION

Reviewer's Name: _____

Ronald Hornum

Date: July 31, 2002

Organization: Kansas Department of Health & Environment
Director, Division of Environment
1000 SW Jackson, Suite 400
Topeka, KS 66612-1367



KANSAS
DEPARTMENT OF HEALTH & ENVIRONMENT
BILL GRAVES, GOVERNOR
Clyde D. Graeber, Secretary

MEMORANDUM

TO: Donna Fisher

THROUGH: Randy Carlson, Leo Henning, Gary Blackburn ⁴

FROM: Dan Gravatt, BER/ARS Project Manager for Fort Leavenworth

DATE: July 22, 2002

SUBJECT: **Environmental Assessment for Evaluating Reuse of the US Disciplinary Barracks, Fort Leavenworth, Kansas**

I have reviewed the subject request, received on July 16, 2002, and evaluated the proposed alternatives for reuse of the US Disciplinary Barracks (USDB) with respect to its proximity to known or potentially contaminated sites at Fort Leavenworth. Sites with the potential to affect work at the USDB are as follows:

FTL-15, the Stoddard Solvent Tanks, is part of the USDB and is associated with a plume of groundwater contamination. The FTL-39 wash rack is at the north end of the USDB but has closed. The FTL-53 used oil tank was removed from the north end of the USDB in 1993. The FTL-70 fuel oil spill area is at the north end of the USDB. The FTL-71 McClellan Avenue Maintenance Shop site is 250 feet west of the USDB. The FTL-37 wash rack is 500 feet west of the USDB. The FTL-34 wash rack is 150 feet south of the USDB but is inactive. The FTL-61 underground storage tank is 150 feet south of the USDB, but was investigated in 1995 and determined to be closed clean. The FTL-14 used oil tank was 500 feet west of the USDB, but was removed in 1995 and closed clean.

Please note that this memorandum only serves to identify the known sites adjacent to the USDB, and is not a comprehensive survey of the potential contaminants present at those sites. Extensive documentation is available for many of these sites in files maintained by KDHE, Fort Leavenworth, and the US Army Corps of Engineers. This documentation should be evaluated to determine the potential impacts of these sites to the proposed work.

Thank you.

cc: File, Fort Leavenworth (C4-052-70004-1)

C:\MyFiles\My Documents\Leav_USDB_Memo.wpd

DIVISION OF ENVIRONMENT
Bureau of Environmental Remediation

1000 SW Jackson, Suite 410
(785) 291-3252

Printed on Recycled Paper

Topeka, KS 66612-1367
FAX: (785) 296-4823



KANSAS
DEPARTMENT OF HEALTH & ENVIRONMENT
BILL GRAVES, GOVERNOR
Clyde D. Graeber, Secretary

MEMORANDUM

TO: Donna Fisher, Receptionist - DOE Director's Office

FROM: Donald R. Carlson, BOW-IPS

DATE: July 23, 2002

SUBJECT: Reuse of the U.S. Disciplinary Barracks
Fort Leavenworth, KS

I have no objections regarding the proposal but offer the following comments for consideration:

If the proposal involves construction activities that result in disturbing 5 acres or more, the project owner (party responsible for the project) needs to file a National Pollutant Discharge Elimination System (NPDES) permit application for stormwater runoff resulting from construction activities with the Kansas Department of Health and Environment. After March 10, 2003, any construction activities which disturb 1 acre or more are required to file an application and be permitted. Any questions regarding the required permitting or requests for the permit application forms should be directed to Alan Brooks at (785) 296-5549.



KANSAS
DEPARTMENT OF HEALTH & ENVIRONMENT
BILL GRAVES, GOVERNOR
Clyde D. Graeber, Secretary

July 30, 2002

Gregory W. Knauer, AICP
Burns & McDonnell
9400 Ward Parkway
Kansas City, MO 64114-3319

Dear Mr. Knauer:

This letter is in response to your letter received July 11, 2002 requesting comments regarding the reuse activities planned for the U.S. Disciplinary Barracks, in Fort Leavenworth, Kansas. This letter concerns asbestos-containing materials which may be present in older buildings.

Many of these older structures contain building materials which may contain asbestos. Common building materials which may be asbestos-containing materials (ACM) that are found in older public and commercial buildings and houses include sprayed-on acoustical ceiling plasters, floor coverings such as vinyl tile and linoleum, siding, roof shingles and associated felts, as well as thermal system insulation on plumbing, boilers and steam piping, and duct work of heating and air-conditioning equipment.

As asbestos was used in more than 3600 different building materials, it is important to identify these materials prior to the start of the renovation or demolition for reuse. To determine if asbestos-containing materials are present in the public or commercial buildings, an inspection for asbestos-containing materials by a trained and accredited asbestos inspector is required by federal EPA asbestos control regulations. Enclosed with this letter is a listing of firms which provide asbestos-related consultation services, including accredited inspections, for your consideration.

Asbestos-containing materials (ACM) are divided into two main categories. Non friable (hard) asbestos-containing materials are not easily damaged and do not readily release airborne asbestos fibers. Non friable ACM may include square floor tile, asphaltic roofing, and asbestos/cement (A/C) siding and shingles. These materials can become friable, and release airborne asbestos fibers, if subjected to sanding, grinding, sawing, crushing, or pulverizing to a powder.

Friable (soft) asbestos-containing materials are easily damaged and, when disturbed, can readily release airborne asbestos fibers. Friable ACM may include sprayed-on acoustical ceiling plasters, thermal insulation on heating and cooling systems, and resilient (no-wax) linoleum. If friable ACM is to be removed or disturbed by renovation or demolition activities, they must be removed first by specially trained workers.

Division of Environment
Bureau of Air and Radiation
Asbestos Control Section
(785) 296-1550

1000 SW Jackson, Suite 310
Topeka, KS 66612-1366
FAX (785) 296-1545

KANSAS LICENSED ASBESTOS ABATEMENT CONTRACTORS

Current as of April 1, 2002

Page 1

A B S ABATEMENT, INC.	9415 E. HARRY, SUITE 304	WICHITA	KS	67207	316-683-9377
ABATEMENT SYSTEMS, INC.	P.O. BOX 773	BROKEN ARROW	OK	74013-0773	918-251-2504
AC AND S, INC.	1809 LIBERTY	KANSAS CITY	MO	64102	816-842-2990
ACM REMOVAL, INC.	PO BOX 1839	WICHITA	KS	67201-1839	316-262-8998
ALL PHASE ENVIRONMENTAL, INC.	215 N. FEDERAL HWY, SUITE 6A	BOCA RATON	FL	33432-3935	561-620-8222
ALLSTATE SPECIALTY CONSTRUCTION, INC.	32700 W. 255TH STREET	PAOLA	KS	66071	913-294-4716
ASBESTOS HANDLERS, INC.	6920 EAST READING PLACE	TULSA	OK	74115	918-836-5585
ASBESTOS REMOVAL AND MAINTENANCE, INC.	1630 S. ST. CLAIR, #20	WICHITA	KS	67213	316-269-1012
ASBESTOS REMOVERS INC.	1420 CENTERPARK ROAD	LINCOLN	NE	68512	402-423-6631
ASSOCIATED INSULATION, INC.	701 PECAN CIRCLE	MANHATTAN	KS	66502	785-776-0145
AT ABATEMENT SERVICES, INC.	4915 STILWELL	KANSAS CITY	MO	64120	816-242-0444
B & B ABATEMENT	2509 VIA LINDA DRIVE	LAWRENCE	KS	66047	785-331-3455
B & R INSULATION, INC.	15001 W. 101ST TERRACE	LENEXA	KS	66215	913-492-1346
BASIC INDUSTRIES, INC.	16055 AIRLINE HWY/PO BOX 83780	BATON ROUGE	LA	70817-7412	225-752-4333
BENNING'S ASBESTOS & LEAD	2314 FILLMORE	TOPEKA	KS	66611-1248	785-354-7386
CHAMPION ENVIRONMENTAL SERVICES INC	38 WEST END DRIVE	GILBERTS	IL	60136	847-844-1695
CHERRY ENVIRONMENTAL SERVICES, INC.	6133 SELINSKY	HOUSTON	TX	77048	713-987-0000
CLEAN AIR ENVIRONMENTAL	PO BOX 275	ROSSVILLE	KS	66533	785-584-6607
CORNERSTONE SERVICES GROUP LLC	C/O IREX CORPORATION 120 N LIME	LANCASTER	PA	17602	717-399-5292
CYLX CORPORATION	PO BOX 1087	BARTLESVILLE	OK	74005	918-333-8835
ENGINEERING-ENVIRONMENTAL MANAGEMENT INC1510 W CANAL COURT, SUITE 2000		LITTLETON	CO	80120	303-721-9219
ENVIRO SAFE AIR, INC	116 GATEWAY DROVE/ PO BOX 1370	NORTH SIOUX CITY	SD	57049	605-232-4554
ENVIRONMENTAL ACTION, INC.	PO BOX 279	DEPEW	OK	74028	918-324-5274
ENVIRONMENTAL PROTECTION ASSOCIATES OF	220 NORTH KNOXVIL	RUSSELLVILLE	AR	72801	57 68-8806

In Kansas, the removal of friable (soft) ACM must be performed by a Kansas licensed asbestos abatement contractor. These licensed contractors use certified asbestos workers, specialized equipment, and specific work procedures to remove friable ACM.

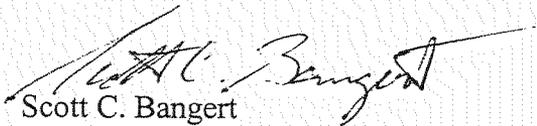
In addition, I have enclosed a current listing of Kansas licensed asbestos abatement contractors, if friable ACM is to be removed during the construction activities of this renovation or demolition project.

Written notification of the intent to demolish public or commercial building is required under the EPA asbestos NESHAP regulations (40 CFR Part 61.145). A Demolition Notification Form must be completed for each building, portion of a building, or affected structure, and the completed form sent to KDHE, delivered or postmarked **at least 10 working days prior to the start of demolition activities**. Enclosed is the Asbestos Demolition Notification Form (ET-ASB10) for reporting intent to perform demolition for your use.

Again, friable ACM to be removed, or ACM which will become friable during renovation or demolition activities, must be removed by a Kansas licensed asbestos abatement contractor first.

If you have any additional questions regarding asbestos related issues, please contact me at (785) 296-1689.

Sincerely,


Scott C. Bangert
Environmental Scientist
Radiation and Asbestos Control Section
Bureau of Air and Radiation

SCB:dr

Enclosures

**ARCHITECTURAL/ENGINEERING/CONSULTING FIRMS OFFERING
CONSULTING SERVICES FOR ASBESTOS ABATEMENT**
June, 2001**

NAME	INSPECTIONS & SAMPLING	PROJECT DESIGN	PROJECT MONITORING
ACT 14953 West 101 st Terrace Lenexa, Kansas 66219 (913) 492-1337	Yes*	Yes	Yes
Allied Environmental Consultants, Inc. PO Box 234 Wichita, Kansas 67201-0234 (316) 262-5698	Yes	Yes	Yes
APEX Environmental Consultants, Inc. 4800 College Boulevard Overland Park, Kansas 66211-1601 (913) 338-2739	Yes	Yes	Yes
Black & Veatch-Env. Division 10950 Grandview Drive Overland Park, Kansas (913) 458-6149	Yes	Yes	Yes
Bristol Env. Services, Inc. 6400 W. 110 th Street, Suite 100 Overland Park, Kansas 66211 (913) 469-8855	Yes	Yes	Yes
Burns & McDonnell 9400 Ward Parkway Kansas City, Missouri 64114 (816) 333-9400	Yes	Yes	Yes
Certified Env. Management, Inc. 2450 S. 9 th Street Salina, Kansas 67402-0504 (785) 823-0492	Yes*	No	Yes
Control Engineering 3001 Creighton Terrace Manhattan, Kansas 66502 (785) 539-7309	Yes	Yes	Yes
Ecosphere Env. Services 1611 Saint Andrews Drive Lawrence, Kansas 66047 (785) 843-2077	Yes	Yes	Yes

NAME	INSPECTIONS & SAMPLING	PROJECT DESIGN	PROJECT MONITORING
Environmental Management, Inc. PO Box 47622 Wichita, Kansas 67201-7622 (316) 262-8902	Yes	Yes	Yes
Environmental Management Resources 1310 Wakarusa - Suite A Lawrence, Kansas 66049 (785) 842-9013	Yes	Yes	Yes
HWS Consulting Group, Inc. 3206 Kimball Avenue Manhattan, Kansas 66503-2157 (785) 539-2202 Denver Office (03) 771-6868 x322	Yes	Yes	Yes
Dalrymple Environmental Inc. 7841 SW 12 th Street Topeka, Kansas 66615 (785) 273-0345	Yes	Yes	Yes
Integrated Solutions 1206 E. Lincoln Wichita, Kansas 67211 (316) 264-7050	Yes	Yes	Yes
Kingston Environmental Services 1600 SW Market Lee's Summit, Missouri 64081 (816) 524-8811	Yes*	Yes	Yes
Max Bishop Architects 2737 Belmont Blvd. Salina, Kansas 67401 (785) 823-3400	Yes	Yes	Yes
META 901 Kentucky, Suite 303 Lawrence, Kansas 66044 (785) 842-6382	Yes	Yes	Yes
Neil H. Miller & Associates 5745 N. Tyler Road Wichita, Kansas 67205 (316) 721-3462	Yes	Yes	Yes
Occu-Tec, Inc. 6700 Corporate Drive, Suite 130 Kansas City, Missouri 64120 (816) 231-5580	Yes	Yes	Yes

NAME	INSPECTIONS & SAMPLING	PROJECT DESIGN	PROJECT MONITORING
Precision Testing Laboratories 1405 S. Mosley Wichita, Kansas 67211 (316) 265-0012	Yes**	Yes	Yes
Professional Industrial Hygiene Svc., Inc. 805 NE Stock Court Blue Springs, Missouri 64014 (816) 229-7506	Yes	Yes	Yes
Professional Services Industries, Inc. 8936 Nieman Road Overland Park, Kansas 66214 (913) 310-1600	Yes*	Yes	Yes
Reliable Env. Management & Services, 2500 West 31 st Street Lawrence, Kansas 66047 (785) 842-9911 Inc.	Yes	Yes	Yes
RTI Consultants 2024 East Spruce Circle Olathe, Kansas 66062 (913) 768-1212	Yes	Yes	Yes
The Tellis Group, Inc. PO Box 6005 Leawood, Kansas 66206 (913) 649-1179	Yes	Yes	Yes
Thompson & Associates 7 Village Plaza Liberal, Kansas 67901 (316) 626-5204	Yes	Yes	Yes
Williams Engineering & Industrial Hygiene RR 2, Box 56A Carbondale, Kansas 66414 (785) 836-9545	Yes	Yes	Yes

*Firms with laboratories which analyze bulk samples for the presence of asbestos.

**This list was compiled by the Kansas Department of Health and Environment to assist in the location of firms that provide asbestos consultation and related services. This list does not represent an approval or recommendation by the Department of the firms listed or services provided, nor does this listing represent a complete or exclusive compilation of available services.

KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT ASBESTOS DEMOLITION NOTIFICATION FORM

GENERAL INSTRUCTIONS: This Asbestos Demolition Notification Form is to be completed and submitted before a building or structure is to be demolished. **NOTE:** If the building or structure contains friable asbestos-containing materials, the Asbestos Notification Form (ET-ASB8) must be completed and submitted to the Department. This Asbestos Demolition Form will not be accepted for reporting the removal of friable asbestos-containing materials from buildings scheduled for demolition. This form is to be received by the Department not less than 10 working days before the demolition project is scheduled to start. Any notification that is incomplete or any notification indicating site activities to be in violation of applicable regulations will be considered an invalid notification.

Separate notifications must be provided for each building or other individual facility where demolition of said building or facility is to be demolished. Additional copies of this form should be reproduce as needed.

Under most circumstances, the removal of Category I nonfriable asbestos-containing materials will not be required prior to demolition unless the building is to be burned or the materials are considered to be friable. Category II nonfriable asbestos-containing materials must be removed prior to demolition if the materials would be subject to crushing, crumbling or pulverizing during the process of demolition of the building or structure.

Mail the original, signed and completed form to: **Kansas Department of Health and Environment
Air and Asbestos Compliance Section
1000 SW Jackson, Suite 310
Topeka, Kansas 66612-1366
(785) 296-1550**

PART A AUTHENTICATION

I hereby certify that, to the best of my knowledge and understanding, the information provided is complete, true and correct.

Print or Type Name _____ Title _____

Signature _____ Date _____

Name of Firm _____

Telephone No. () _____

PART B PROJECT DESCRIPTION

Building/Structure Owner _____

Owner Address: Street _____

City _____ State _____ Zip _____

Owner Contact: Name _____ Telephone No. () _____

Building Address: Street _____ City _____ County _____

Present Use: _____ Age of Building _____

Building Floor Space: (sq ft) _____ No. of Floors _____

Scheduled Demolition Start _____ / _____ / _____ Completion _____ / _____ / _____

Describe how building will be demolished: _____

STATE OF KANSAS

BILL GRAVES, GOVERNOR
Jamie Clover Adams, Secretary of Agriculture
109 SW 9th Street
Topeka, Kansas 66612-1280
(785) 296-3558
FAX: (785) 296-8389

Division of Water Resources
David L. Pope, Chief Engineer
109 SW 9th Street, 2nd Floor
Topeka, KS 66612-1283
(785) 296-3717 FAX (785) 296-1176

KANSAS DEPARTMENT OF AGRICULTURE

July 25, 2002

Mr. Gregory W. Knauer, AICP
Burns & McDonnell
9400 Ward Parkway
Kansas City, MO 64114-3319

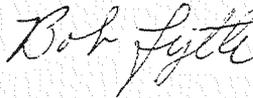
RE: DWR A-95 2002.231

Dear Mr. Knauer:

This will acknowledge receipt of your letter and attachments dated July 9, 2002 regarding the Environmental Assessment for Evaluating Reuse of the U.S. Disciplinary Barracks at Fort Leavenworth, Kansas.

Based upon the information provided, it does not appear that any authorization is required from the Chief Engineer of the Division of Water Resources under either the Kansas Water Appropriation Act, K.S.A. 82a-701 et seq., or the Obstruction in Streams Act, K.S.A. 82a-301 to 305a.

Sincerely,



Bob Lytle
Environmental Scientist
Technical Services Section

RFL:ssc



DEPARTMENT OF THE ARMY
US ARMY COMBINED ARMS CENTER AND FORT LEAVENWORTH
415 SHERMAN AVENUE UNIT 1
FORT LEAVENWORTH, KANSAS 66027-2300

REPLY TO
ATTENTION OF:

July 24, 2002

Command History Office

Burns and McDonald
9400 Ward Parkway
Kansas City, MO 64114-3319

Dear Mr. Knauer:

In response to your letter of July 9, 2002; I know of no environmental issues surrounding the U.S. Disciplinary Barracks at Fort Leavenworth Kansas.

For further information please contact my assistant, Mr. Kelvin Crow, at (913) 684-7392.

Sincerely,

William G. Robertson

Dr. William G. Robertson
Command Historian

The University of Kansas

Kansas Biological Survey

July 23, 2002

Mr. Gregory W. Knauer
Burns & McDonnell
9400 Ward Parkway
Kansas City, MO 64114-3319

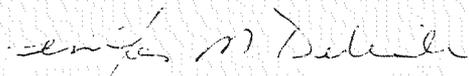
RE: EA for Evaluating Reuse of the US Disciplinary Barracks, Fort Leavenworth, Kansas

Dear Mr. Knauer;

I have reviewed the referenced project for impacts to rare species and natural communities. The Kansas Natural Heritage Inventory contains no records for rare plants, animals, or natural communities within the project area. If the project is contained within the limits of the Disciplinary Barracks there is unlikely to be any impact to these resources.

Please give me a call at 785-864-7639 if you have any questions.

Sincerely,



Jennifer M. Delisle
Information Manager
Kansas Natural Heritage Inventory

2. PUBLIC INFORMATION MEETING DOCUMENTATION

PUBLIC NOTICE

The Combined Arms Center and Fort Leavenworth is initiating the preparation of an Environmental Assessment for the reuse of the U.S. Disciplinary Barracks. Upon completion of the new military prison on Fort Leavenworth, and the relocation of the detainees and staff to the new facility, the existing U.S. Disciplinary Barracks (USDB) will become available for other uses.

The majority of the buildings in the USDB complex were constructed during the period 1863 to 1878. The main inmate domicile, known as the "castle," was constructed during the period 1909 to 1921. The USDB complex is situated on 12.5 acres along the northeastern edge of Fort Leavenworth. The USDB complex consists of two non-historic buildings and 24 historic structures, including the perimeter stone wall, 12 guard towers, and 11 buildings.

Potential reuses for the U.S. Disciplinary Barracks (USDB) were developed, analyzed, and presented in an Alternatives Reuse Study. Five potential reuse alternatives were identified:

- Conference center with guest housing;
- Military operations and urban training center;
- Military and government archival records center;
- Demolition of the "castle" and general use of the remaining buildings; and
- No action (continued maintenance to keep buildings in operating condition).

The Environmental Assessment (EA) will evaluate the impacts associated with the proposed reuse alternatives. As part of the EA process, a public information open-house meeting will be held on Tuesday, August 20, 2002 from 4:00 pm until 7:00 pm at the Leavenworth Riverfront Community Center, 123 S. Esplanade, Leavenworth, Kansas.

To send comments or request additional information, please contact: Ms. Judy Wimberg, Environmental Division, Directorate of Installation Support, 841 McClellan Avenue, Fort Leavenworth, Kansas 66027-1361; 913-684-3307.

NEWS RELEASE

The Combined Arms Center and Fort Leavenworth is initiating the preparation of an Environmental Assessment for the reuse of the U.S. Disciplinary Barracks. Upon completion of the new military prison on Fort Leavenworth, and the relocation of the detainees and staff to the new facility, the existing U.S. Disciplinary Barracks will become available for other uses.

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To send comments or request additional information, please contact: Ms. Judy Wimberg, Environmental Division, Directorate of Installation Support, 841 McClellan Avenue, Fort Leavenworth, Kansas 66027; 913-684-3307.

Medium	City	Station/Newspaper	Fax
Radio	Atchison	KAIR-AM, 1470/KAIR-FM, 93.7	913-367-7021
	Leavenworth	KKLO-AM, 1410	913-375-1631
	Lawrence	KANU-FM, 91.5	785-864-5278
		KLWN-AM, 1320	785-843-4585
	Kansas City	KCMO-AM, 710	913-514-3004
		KMBZ-AM, 980	913-677-8901
		KPHN-AM, 1190	816-471-1320
		WDAF-AM, 610	913-677-8935
		KCUR--FM, 89.3	816-235-2864
	Television	Lawrence	KUJH-TV, Channel 14
Kansas City		WDAF-TV, Channel 4	816-561-4181
		KCTV, Channel 5	913-677-7243
		KMBC-TV, Channel 9	816-421-4163
		KCPT-TV, Channel 19	816-931-2500
		KSHB-TV, Channel 41	816-932-4145
		KSMO-TV, Channel 62	913-621-4703
Newspaper	Atchison	Atchison Daily Globe	913-367-7531
	Lawrence	Lawrence Journal-World	785-843-4512
	Leavenworth	The Leavenworth Times	913-682-1114
		The Fort Leavenworth Lamp	913-684-3624
	Kansas City	The Kansas City Star	816-234-4926
	KCK	The Kansas City Kansan	913-371-4300
	Tonganoxie	Tonganoxie Mirror	913-845-9451
	Basehor	Basehor Sentinel	913-422-4233

2216 Wilson Avenue
Leavenworth, Kansas 66048

August 10, 2002
Phone-913-651-9424

Ms. Judy Wimberg
Environmental Division
Directorate of Installation Support
841 McClellan Avenue
Fort Leavenworth, Kansas 66027

Dear Ms. Wimberg;

Every since the construction of the new U.S.D.B. began, I have been hoping that someone would suggest using the old U.S.D.B. Facility for a tourist attraction.

The Frontier Army Museum have been trying to raise funds for a larger facility.

The Army decide not to use the old U.S.D.B. facility. I believe that it would be a excellent location for the Frontier Army Museum.

The museum volunteers could conduct paid guided tours of the facility creating funds for the upkeep of the buildings.

I believe that it would be a popular tourist attraction. You would have space that could be rented to the general public for parties, picnic, business meetings, and etc.

If everything go well for a year, a snack bar could be set-up with a private contractor, N.A.F. or the Frontier Army Museum. I know that the Army use will take priority, but if the Army decide not to use it, please consider this as a pliable use.

Leavenworth is known all over the world as Prison City.

Sincerely



Carlton R. Richardson

PUBLIC INFORMATION MEETING
ENVIRONMENTAL ASSESSMENT
REUSE OF THE U.S. DISCIPLINARY BARRACKS

August 20, 2002
REGISTRATION

Name Christy Davis

Address KS SHPO

Phone number (optional) 785-272-8681 x215

PUBLIC INFORMATION MEETING
ENVIRONMENTAL ASSESSMENT
REUSE OF THE U.S. DISCIPLINARY BARRACKS

August 20, 2002
REGISTRATION

Name Kathryn West

Address (W) 206 Arch St W, KS
(W) ~~660~~ 6301 Manchester Ave.

Phone number (optional) KS, MO 64633

(W) 816-737-9722

PUBLIC INFORMATION MEETING
ENVIRONMENTAL ASSESSMENT
REUSE OF THE U.S. DISCIPLINARY BARRACKS

August 20, 2002

REGISTRATION

Name Tim Hanna
Address 14223 Robin Rd.
Leavenworth, KS 66048
Phone number (optional) 913-684-8940

PUBLIC INFORMATION MEETING
ENVIRONMENTAL ASSESSMENT
REUSE OF THE U.S. DISCIPLINARY BARRACKS

August 20, 2002

REGISTRATION

Name PAUL STRAND
Address 1806 Miami
LV 66048
Phone number (optional) _____

PUBLIC INFORMATION MEETING
ENVIRONMENTAL ASSESSMENT
REUSE OF THE U.S. DISCIPLINARY BARRACKS

August 20, 2002
REGISTRATION

Name JONATHAN HARRINGTON

Address 841 MCCLYLLAN
FT. LEAVENWORTH, KS 66027

Phone number (optional) 913/684-8973

PUBLIC INFORMATION MEETING
ENVIRONMENTAL ASSESSMENT
REUSE OF THE U.S. DISCIPLINARY BARRACKS

August 20, 2002
REGISTRATION

Name Janet Wray

Address PAO
FT Leavenworth

Phone number (optional) 684-1718

**List of Posters for Fort Leavenworth Public Scoping Meeting
August 20, 2002**

Poster

1. Welcome
2. Introduction
3. Purpose of Meeting
4. Environmental Assessment Elements
5. Scoping Process
6. Alternative Reuse Study
7. Alternative 1 (with layout)
8. Alternative 1 (elements and \$)
9. Alternative 1 (building modifications)
10. Alternative 2 (with layout)
11. Alternative 2 (elements and \$)
12. Alternative 3 (with layout)
13. Alternative 3 (elements and \$)
14. Alternative 3 (building modifications)
15. Alternative 4 (with layout)
16. Alternative 4 (elements and \$)
17. Alternative 4 (building modifications)
18. No Action Alternative
19. Schedule
20. Installation Map
21. Aerial Photograph
22. USGS Map

FACT SHEET FOR U.S. DISCIPLINARY BARRACKS ENVIRONMENTAL ASSESSMENT

Introduction

Fort Leavenworth, Kansas has been the home to the US Military Prison and the US Disciplinary Barracks (USDB) since 1874. A new USDB facility has recently been completed. The inmates will be relocated to the new facility in the near future and the old USDB will become vacant. The Combined Arms Center and Fort Leavenworth is preparing an Environmental Assessment to evaluate four potential reuse alternatives and the no action alternative for the old USDB. This public information meeting is being used to receive comments on the potential reuse of the historic USDB facilities.

History of Fort Leavenworth

In response to the nation's westward expansion, Fort Leavenworth was established as a frontier outpost in 1827. Its primary purpose was protecting the northwest fur trade and developing trade with Santa Fe. The fort became a depot for supplies headed for all military posts to the west of this location. The post served as headquarters for numerous military campaigns during the Mexican and Indian Wars. After providing support for Union forces during the Civil War, Fort Leavenworth was selected for the placement of an Army school to address the technological, organizational and tactical changes occurring in warfare. An active post for 175 years, Fort Leavenworth is now the Army's center for advanced tactical education, combat development and training.

The historical and architectural nature of Fort Leavenworth was officially recognized when Fort Leavenworth was designated as a Registered National Historic Landmark in 1996. Previously, in 1974, a portion of Fort Leavenworth was listed in the National Register of Historic Places. The USDB building complex resides within the boundaries of the Fort Leavenworth National Historic Landmark District.

US Disciplinary Barracks

The USDB began operation at Fort Leavenworth in 1874 and operated through 2002. The buildings used for the initial military prison were formerly part of the Quartermaster Depot that supplied all military posts, camps and stations in the Indian Territory to the west, via the Santa Fe and Oregon Trails. Three of these Quartermaster Depot buildings constructed in 1840 were used as part of the military prison.

The USDB consists of 3,300 linear feet of prison walls surrounding an area of approximately 12.5 acres and is joined on the north by a five-acre recreation field, surrounded by a double chain-link fence. Within the walled area are 30 buildings dating back to 1840 and as recent as 1986. The majority of the buildings were constructed during the period 1863 to 1878. The main inmate domicile, known as the "Castle", was constructed during the period 1909 to 1921.

FT. LEAVENWORTH KANSAS
U. S. DISCIPLINARY BARRACKS

Environmental Assessment
Public Information Meeting

**FACT SHEET FOR U.S. DISCIPLINARY BARRACKS
ENVIRONMENTAL ASSESSMENT**



USDB Complex



South (Front) Elevation of the USDB Castle (Building 475)

FT. LEAVENWORTH KANSAS
U. S. DISCIPLINARY BARRACKS

**Environmental Assessment
Public Information Meeting**

FACT SHEET FOR U.S. DISCIPLINARY BARRACKS ENVIRONMENTAL ASSESSMENT

The USDB complex consists of the perimeter stone wall, 12 guard towers, 18 miscellaneous support buildings, and the Castle (Bldg 475). The 18 support buildings are the following:

- Bldg 449 Custody Facility (newer)
- Bldg 450 Mental Health Clinic (circa 1972);
- Bldg 463 Administration (circa 1877);
- Bldg 464 Administration (circa 1878);
- Bldg 465 Clinics / Barracks (circa 1930);
- Bldg 466 F.E. Maintenance Shops / Barracks (circa 1840);
- Bldg 467 Admin. / Crafts / Maintenance Shops (circa 1887);
- Bldg 468 Machine Shop (circa 1878);
- Bldg 469 Storage Shed (circa 1934);
- Bldg 470 Vocational Training (circa 1963);
- Bldg 471 Auto Repair Shop (circa 1967);
- Bldg 472 Education / Print Shop (circa 1878);
- Bldg 473 Visitor / Administration (circa 1865);
- Bldg 474 Power Plant (circa 1911);
- Bldg 485 Auto Body Shop (circa 1932);
- Bldg 486 Auto Body Paint Shop (circa 1982);
- Bldg 487 Dry Cleaning Plant (circa 1921);
- Bldg 496 Auto Body Repair & Metal / Welding Shops (circa 1967).

ENVIRONMENTAL ASSESSMENT

The purpose of this Environmental Assessment (EA) is to provide an evaluation of five alternatives as presented in the Alternative Reuse Study. The EA will be used by the Department of the Army to assist in determining the best use of the existing United States Disciplinary Barracks (USDB) at Fort Leavenworth, Kansas.

The EA evaluates four reuse alternatives and the no action alternative for the property as presented in the Alternative Reuse Study. A list of potential alternative reuses was compiled based on a series of brainstorming meetings with post personnel, local historical groups, state and federal preservation agencies, and interested parties in the community. Alternatives were narrowed down to the five listed below by evaluating and scoring each of the proposed reuses with respect to the overall mission of the post, compatibility with adjacent land use, economic viability, and compatibility of the facilities for their new use. Alternatives selected for incorporation into this study are the follows:

- Alt. No. 1 – Conference Center & Guest Housing
- Alt. No. 2 – Military Operations & Urban Training Center
- Alt. No. 3 – Military/Government Archival & Records Center
- Alt. No. 4 – Demolition of the Castle & Rehabilitation of the General Use Bldgs.
- Alt. No. 5 – No Action

FT. LEAVENWORTH KANSAS U. S. DISCIPLINARY BARRACKS

**Environmental Assessment
Public Information Meeting**

FACT SHEET FOR U.S. DISCIPLINARY BARRACKS ENVIRONMENTAL ASSESSMENT

The first three alternatives focus on the reuse of “The Castle” (Building 475). The Castle is the primary prison building, which poses the most challenging reuse consideration for the study. The Castle consists of eight wings radiating from a tall center rotunda structure and is constructed of primarily unreinforced masonry. The four reuse alternatives also include complete renovation for the remaining historic buildings within the walls for general use as administrative offices, educational facilities, and a military prison interpretive center. The fourth alternative includes complete demolition of the Castle and Power House (Building 474) to provide for more open space within the walls for landscaping and parking to support complete renovation of the remaining buildings. The fifth alternative is the No Action alternative, which would leave the facilities empty and maintain the existing level of exterior maintenance.

The Castle has been the subject of numerous structural studies conducted between 1991 and 1998. These studies investigated the limitations of the building with respect to modern building codes and seismic guidelines for its current use as a prison. Each study utilized a combination of different criteria, analytical methods, and assumptions resulting in the following conclusions:

- The Castle would require a major reinvestment (up to \$60,000,000) to bring it up to modern seismic codes for its continued use as a prison.
- The Castle would be safe for its limited use while a new USDB complex is being constructed.

The results of these studies were incorporated into this alternative reuse study within the context of each of their proposed uses. New seismic/structural studies were not conducted, although, they would be necessary to implement any proposed reuse of the Castle and adjoining buildings.

The following alternatives are being evaluated in the Environmental Assessment.

Alternative No. 1 requires complete seismic upgrading of the Castle utilizing the four prison cell wings as open multipurpose spaces for conferences, meetings, banquets, etc., the north wing as guest lodging, and the smaller south wings as support facilities for a complete full service military conference and exposition center. The remaining buildings on the south portion of the property (except Building 450) would be rehabilitated for general administrative and educational use. The total cost for this alternative is approximately \$99,100,000.

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Alternative No. 2 assumes that only exterior restoration of the Castle would be implemented in order to maintain weather tightness. This alternative assumes that there would be no seismic upgrading due to limited occupancy for urban combat training exercises. The remaining buildings on the south portion of the property (except Building 450) would be rehabilitated for general administrative and educational use. The total cost for this alternative is approximately \$21,700,000.

Alternative No. 3 incorporates the construction of a multi-floor structure within the historic masonry shell for each of the four prison wings, eliminating the need for expensive seismic upgrading of these wings. This proposed new construction would to be anchored to the existing masonry construction, providing lateral/seismic support. This alternative also provides for the large amount of floor space necessary for a high volume archival and records storage facility. As in Alternatives 1 and 2, this alternative also incorporates the rehabilitation of the south buildings (except Building 450) for general administrative and educational use. The total cost for this alternative is \$84,500,000.

Alternative No. 4 includes the complete demolition of the Castle and Power House and eliminates the expensive seismic upgrading and rehabilitation costs of those facilities. This also provides for more open space within the walls for access, parking, and landscaping for improved support of the proposed renovation of the south prison buildings. The total cost for this alternative is \$29,900,000.

The **No Action** alternative will require continued maintenance expenses for exterior painting, roof maintenance, janitorial services, and lawn maintenance. Seismic upgrades or renovation costs are not considered in this alternative.

Coordination

Coordination with government agencies and interested parties occurred during the preparation of the Alternative Reuse Study and is continuing as part of the Environmental Assessment.

Schedule

The Environmental Assessment is scheduled for completion in the early 2003.

Contact

For additional information, please contact Judy Wimberg, Directorate of Installation Support, Environmental Division, 841 McClellan Avenue, Fort Leavenworth, Kansas 66027

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Appendix B Memorandum of Agreement

**MEMORANDUM OF AGREEMENT
AMONG
FORT LEAVENWORTH, KANSAS,
THE KANSAS STATE HISTORIC PRESERVATION OFFICER AND THE ADVISORY
COUNCIL ON HISTORIC PRESERVATION
CONCERNING
THE FORMER UNITED STATES DISCIPLINARY BARRACKS**

WHEREAS, Fort Leavenworth has constructed a new facility to replace the function of the former historic United States Disciplinary Barracks (USDB) comprised of 20 facilities listed in Attachment A and proposes to demolish Building 475, the Castle, and retain Buildings 463-68, 472-474, and 487 for adaptive reuse (hereinafter, the Undertaking); and

WHEREAS, pursuant to 36 CFR §800.4 (c)(2) Fort Leavenworth has determined that Buildings 475, 463-68, 472-474, and 487 are contributing structures within the boundaries of the Fort Leavenworth National Historic Landmark District (NHLD) that is listed on the National Register of Historic Places (NRHP); and

WHEREAS, Fort Leavenworth has determined that Buildings 449, 450, 469, 470, 471, 485, 486, 496, and 498 also proposed for demolition do not contribute to the Fort Leavenworth National Historic Landmark District and are not eligible for inclusion in the NRHP; and

WHEREAS, Fort Leavenworth has developed an Alternative Reuse Study (ARS) to examine a range of feasible alternatives, including adaptive reuse, for these properties and has determined that reuse of Building 475, the Castle, is not feasible but that is possible to retain Building 463-68, 472-474, and 487 for future use; and

WHEREAS, Fort Leavenworth has determined that this Undertaking will have an effect on the Fort Leavenworth NHLD and has consulted with the Kansas State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP) in accordance with Sections 106 and 110 of the National Historic Preservation Act (NHPA), 16 U.S.C. §§470f, 470h-2, and the implementing regulations, 36 CFR Part 800, to resolve the adverse effects on historic properties; and

WHEREAS, Fort Leavenworth has notified the Secretary of the Interior pursuant to 36 CFR §800.10(c) and invited the Secretary to participate in the consultation and to sign this Memorandum of Agreement (MOA); and

WHEREAS, the National Park Service has reviewed and commented on various documents developed by Fort Leavenworth during this consultation on behalf of the Secretary of the Interior but has declined to be a signatory;

NOW, THEREFORE, Fort Leavenworth, the SHPO, and the ACHP agree that upon Fort Leavenworth's decision to proceed with the Undertaking, Fort Leavenworth shall ensure that the following stipulations are implemented in order to take into account the effects of this Undertaking on historic properties.

STIPULATIONS

Fort Leavenworth shall ensure that the following measures are carried out:

Documentation Requirements for Building 475, the Castle: the following documentation shall be complete before any demolition of Building 475 (see Attachment B):

Wayside Exhibit – Fort Leavenworth shall design and construct a wayside exhibit at or near the site of Building 475. Fort Leavenworth will consult with the SHPO to determine the appropriate location for the exhibit. This exhibit will be similar to other stone wayside exhibits located at the installation. Plans of the design and the text to be included on this exhibit will be submitted to the SHPO for a 30-day review period. Fort Leavenworth will consider all comments provided by the SHPO and, if feasible, incorporate them into the final design. Ft Leavenworth will notify the Kansas SHPO, in writing, if it determines not to incorporate any of the SHPO's comments and provide reasons why it made this determination.

- A. Large-Format Photographs – Fort Leavenworth shall document Building 475 with photographs documenting the exterior and interior of this property. A scope of work outlining the proposed photographs will be provided to the SHPO for a 30-day review, and Fort Leavenworth will revise the scope of work, if feasible, to incorporate any comments of the SHPO. The number of interior and exterior photographs may be limited to 75. These photographs will be taken with archivally stable black-and-white film and at least one copy of each will be printed on archivally stable photographic paper. A plan of the building indicating the location of each photograph will be included with this photographic record.
- B. Historic Document Curation – Fort Leavenworth shall compile all documents, drawings, photographs, and other relevant records related to the USDB that are in its records. A list of these records will be provided to the SHPO and these materials will be curated according to Attachment C.

II. Maintenance and Repair Plans for Other USDB Buildings: Fort Leavenworth shall implement a Short-term and a Long-term phased maintenance and repair plan for Buildings 463-68, 472-474, and 487.

- A. Short-term Repair and Stabilization Plan - The scope of the short-term repairs and a process for determining their priority is set out in Attachment D. Fort Leavenworth shall ensure that all work accomplished under this plan shall conform to the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Properties, 36 CFR Part 68, and National Register Preservation Bulletins 24 and 31. Fort Leavenworth will begin to implement this plan no later than six months following the execution of this

MOA and the contract for all work anticipated by the plan will be awarded prior to the start of the demolition of Building 475, the Castle, and the project will be completed within a 12 month period following award.

Fort Leavenworth will ensure, for the short-term, that the following items are implemented to each remaining USDB building:

- Steam heat during the winter months, maintaining no less than 45 degrees F.
- Air Ventilation and circulation throughout the buildings during the years without occupancy.
- Dehumidification of buildings, especially those with basements, using a Commercial grade dehumidifier.
- Periodic monitoring of building conditions during the years without occupancy.

B. Long-term Preservation Plan - Fort Leavenworth shall prepare a long-term preservation plan within 12 months of the execution of this MOA.

This preservation plan will address the maintenance and repair needs of the buildings, including heating and ventilation, after the initial repairs are completed; will identify feasible long-term reuses of the buildings; and on-going stabilization by developing specific treatments that follow the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Properties, and 36 CFR Part 68. Fort Leavenworth agrees to complete all work included in the long-term preservation plan no later than three years following the date demolitions begins on Bldg 475, the Castle.

The plan will be developed under the direct supervision of a person or persons meeting, at the minimum, the Secretary of the Interior's Professional Qualification Standards (Federal Register, Vol. 62, No. 119, page 33712, June 20, 1997) for Historic Architect or Architectural Historian, and will be submitted to the SHPO for a 30-day review period.

Fort Leavenworth will consider all comments provided by the SHPO and, if feasible, incorporate them into the final plan. Ft Leavenworth will notify the Kansas SHPO, in writing, if it determines not to incorporate any of the SHPO's comments and provide reasons why it made this determination.

III **DURATION.** This MOA will be in effect for five years from the date of its execution or until Fort Leavenworth completes the work set out in Paragraphs I. and II. above, whichever period is shorter. Fort Leavenworth will notify the SHPO and ACHP in writing when it has determined that it has completed the work set out above. If the work has not been completed within the five years following execution, Fort Leavenworth will request that the parties enter into consultation to amend this MOA to modify the time frames and the scope of work, if appropriate.

IV. DISCOVERIES

- A.** If during the performance of the Undertaking, previously unidentified historic properties are discovered, or previously unanticipated effects occur to known historic properties, Fort Leavenworth shall make reasonable efforts to avoid, minimize or mitigate adverse effects to such properties. Fort Leavenworth may assume a newly discovered property to be eligible for the National Register for purposes of Section 106, and shall determine actions that can be taken to resolve any adverse effects. Fort Leavenworth shall notify the SHPO within 48 hours of the discovery by telephone, followed by written notification that may be transmitted by facsimile. This notification shall include an assessment of National Register eligibility and the proposed actions to resolve potential adverse effects.
- B.** The SHPO shall respond within 48 hours of the notification. Any request by the SHPO to visit the site of the discovery within this time frame will be subject to reasonable requirements for identification, escorts, safety, and other administrative and security procedures.
- C.** Fort Leavenworth will take into account any SHPO recommendations regarding National Register eligibility and the proposed actions and then carry out appropriate actions. Should such actions include archeological investigations, these actions will be carried out by or under the direct supervision of a person or persons meeting, at the minimum, the Secretary of the Interior's Professional Qualification Standards (Federal Register, Vol. 62, No. 119, page 33712, June 20, 1997) for Archeologists. Fort Leavenworth shall provide the SHPO and the ACHP with a written report of such actions when they are completed.

V. MONITORING AND REPORTING

Fort Leavenworth shall provide a summary report detailing all work undertaken pursuant to this MOA to the SHPO and ACHP by September 30 of each year following the execution of this MOA until it expires or is terminated. Such reports shall include any scheduling changes proposed, any problems encountered, and any disputes or objections regarding Fort Leavenworth's efforts to carry out its terms. Failure to provide such summary report may be considered noncompliance with the terms of this MOA.

VI. DISPUTE RESOLUTION

- A.** Should the SHPO or ACHP object in writing to Fort Leavenworth regarding how the proposed Undertaking is carried out or the manner in which the terms of this MOA have been followed, Fort Leavenworth shall consult with such party to resolve the objection. If Fort Leavenworth determines that the objection cannot be resolved, Fort Leavenworth shall forward all documentation relevant to the dispute to ACHP, including Fort Leavenworth's proposed response to the objection. Within 30 days after receipt of all pertinent document, the ACHP will:

1. Advise Fort Leavenworth that it concurs with Fort Leavenworth's proposed response whereupon Fort Leavenworth shall respond to the objections accordingly; or
 2. Provide Fort Leavenworth with recommendations pursuant to 36 CFR §800.2(b)(2) which Fort Leavenworth shall take into account in reaching a final decision regarding the dispute; or
 3. Notify Fort Leavenworth that it will comment pursuant to 36 CFR §800.7(c) and proceed to comment on the subject in dispute.
- B. Should the ACHP not exercise one of the above options within 30 days after receipt of all pertinent documentation, Fort Leavenworth may assume that the ACHP concurs in the proposed response to the objection.
- C. Fort Leavenworth shall take into account the ACHP's recommendation or comment provided in accordance with this stipulation with reference only to the subject objection. Fort Leavenworth's responsibilities to carry out all other actions subject to the terms of this MOA that are not the subject of the dispute remain unchanged.

AMENDMENTS: Any signatory to this MOA may propose to Fort Leavenworth that it be amended, whereupon Fort Leavenworth shall consult with the other signatories to consider such an amendment. 36 CFR § 800.6(b)(7) shall govern the execution of any such amendment.

TERMINATION: If any signatory determines that the terms of this MOA cannot be or are not being carried out, Fort Leavenworth shall consult to seek amendment of the MOA. If this MOA is not amended, any signatory may terminate it, and Fort Leavenworth shall either execute an MOA with the signatories under 36 CFR §800.6(c)(1) or request the comments from the ACHP under 36 CFR §800.7(a).

IX ANTI DEFICIENCY: The Anti-Deficiency Act, 31 U.S.C. Section 1341, prohibits federal agencies from incurring an obligation of funds in advance of or in excess of available appropriations. Accordingly, the signatories agree that any requirements for the obligation of funds arising from the terms of this agreement shall be subject to the availability of appropriated funds for that purpose, and that this agreement shall not be interpreted to require the obligation or expenditure of funds in violation of the Anti-Deficiency Act. If sufficient funds are not made available to fully implement this MOA, Fort Leavenworth shall consult with the other signatories to either terminate or amend this MOA.

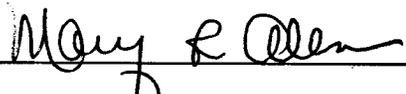
EXECUTION of this Memorandum of Agreement by Fort Leavenworth, the Kansas State Historic Preservation Officer, and the Advisory Council on Historic Preservation and implementation of its terms evidences that Fort Leavenworth has afforded the ACHP an opportunity to comment on the planned demolition of Building 475 and the reuse of Buildings 463-68, 472-474, and 487 and the potential effects on historic properties, and that Fort Leavenworth has taken into account the effects of the Undertaking on historic properties and satisfied its responsibilities under Sections 106 and 110 of the National Historic Preservation Act.

Fort Leavenworth, Kansas

By:  Date: 11 JUL 03

COL John W. Towers
Garrison Commander, Fort Leavenworth

Kansas State Historic Preservation Officer

By:  Date: 7-28-03

Ms. Mary R. Allman
Kansas State Historic Preservation Officer

Advisory Council on Historic Preservation

By:  Date: 8/25/03

Mr. John M. Fowler
Executive Director

**ATTACHMENT A - INVENTORY OF REMAINING HISTORIC AND NON-HISTORIC
STRUCTURES WITHIN THE USDB COMPLEX**

OTHER HISTORIC USDB BUILDINGS

FAC NO.	FACILITY NAME	PRIMARY USE	YEAR BUILT	GSF
451-462		GUARD TOWER	1943	1452
463		USDB ADMIN GEN PURP	1877	9,285
464	MCPHERSON HALL	ADMIN & VTF BLDG	1878	8,420
465		CLINIC/CONFINE FAC	1927	38,852
466		CONFINE FAC/FE MAINT SHOP	1860	25,160
467		ADMIN/FE MNT/FURNITURE	1887	34,656
468		MACHINE SHOP	1878	4,900
472		ACES FAC/APPL INST BLDG	1872	21,546
473		ADMIN/ADP BLDG	1863	14,400
474		LAUNDRY/HEATING PLANT	1911	27,635
487		DRY CLEANING/FE MAINT	1921	4,810
TOTAL				
GSF:				176,716

NON-HISTORIC USDB BUILDINGS REMAINING

FAC NO.	NAME	PRIMARY USE	YR BLT	GSF
449		CONFINEMENT FACILITY	1986	997
450		HEALTH CLINIC	1972	9,894
469		STORAGE SHED	1934	625
470	POPE HALL	APPL INST BLDG	1963	45,736
471		APPL INST BLDG	1967	4,535
485		APPL INSTR BLDG	1932	2,006
486		PAINT SPRAY BLDG	1982	960
496		APPL INSTR BLDG	1968	7,134
498		TRANSIT SHED	1972	208
TOTAL GSF				72,095

ATTACHMENT C– CURATION OF NEW AND EXISTING USDB DOCUMENTATION

A. Existing/Historic Photographs

Photographs shall be enclosed in suitable plastic enclosures made of uncoated polyester film, uncoated cellulose triacetate, polyethylene or polypropylene. Once placed within the plastic enclosures, the photographs shall be stored in acid-free archival envelopes. The contents of the envelopes, photo name, building number, date, shall be noted on them in pencil. The envelopes shall then be stored in clearly labeled acid-free boxes and stored away from food and natural light on steel shelves with baked enamel finish, in a building with a relative humidity below 60 percent.

B. Existing/Historic Architectural Drawings

Any existing (both historic and recently produced) architectural drawings shall be unfolded or unrolled and reproduced. Fragile or brittle architectural drawings shall be electronically scanned and reproduced in original size, or photographed, the negatives scanned for reproduction of drawings to the original size. Both the originals and reproductions shall be placed in acid-free buffered card stock folders. The outside of the folders shall be clearly labeled in pencil, identifying their content subjects and dates. The folders shall then be placed in files within conservation quality flat drawer museum cabinets (steel with baked enamel finish). The file cabinet(s) shall be clearly labeled and stored away from food and natural light in a building with a relative humidity below 60 percent.

C. Archival Materials

Archival Materials relating to the buildings shall be placed in acid-free buffered folders. Acidic items, such as newspaper clippings, shall be isolated from non-acidic items (in separate folders). The outside of the folders shall be clearly labeled in pencil, identifying their content and dates. The folders shall then be placed inside acid-free reinforced board document boxes. The document boxes shall be stored on elevated steel shelves with baked enamel finish, away from food and natural light in a building with a relative humidity below 60 percent.

D. National Archives Requirements

Federal agencies are also bound by records retention policies established by the National Archives. Fort Leavenworth should consult with the Kansas City regional office of the National Archives concerning historic records. The current contact for this office is as follows:

Mark Corrison
Records Management - National Archives
816-823-5023

ATTACHMENT D – SHORT-TERM MAINTENANCE AND REPAIR PLAN FOR BUILDINGS 463-468, 472-474, 487

This is a prioritized list of repairs for buildings 463-468, 472-474, 487, using funds made available for accomplishing the tasks required by the Memorandum of Agreement.

1. Priority Process: Fort Leavenworth evaluated the highest to the lowest priority for each USDB structure, using the following criteria:

- **Historic Building Significance** - Building 466 has been determined to be the most significant, where Building 474 is considered the least significant.
- **Priority of Exterior Repair Type** - Priority is given to the most important area of repair to protecting the building envelope: roof, exterior paint and repair of wood items, masonry and concrete repairs, including any structural and utilities.

2. Repair Schedule:

- **Roof Repairs.** Roof repairs will include gutter and downspouts for Buildings 465, 466, 463, 464, 467, 468, and 474.
- **Exterior paint and repairs.** Paint and repair all wood items on the exterior of the building to include soffits, fascias, windows, doors and any other items that require painting. All 10 buildings are included.
- **Masonry and Concrete Repairs.** Remove, replace and repair all deteriorated masonry and tuck pointing as required. This will involve work on all 10 buildings. Building 465 is in the worst condition and requires immediate repair and Building 472 will require additional concrete repairs.