FINAL

ENVIRONMENTAL ASSESSMENT

FOR

WHITE ELEMENTARY SCHOOL REPLACEMENT

FORT BENNING
GEORGIA

OCTOBER 2012

Maneuver Center of Excellence
Fort Benning, Georgia

In Compliance with the National Environmental Policy Act

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Prepared by:
Directorate of Public Works
Environmental Management Division
Fort Benning, Georgia

JEFFREY FLETCHER
Colonel, AG
Garrison Commander

SUMMARY

INTRODUCTION

Fort Benning has prepared an Environmental Assessment (EA) to identify and evaluate potential environmental and socioeconomic effects from the construction of a new elementary school in the Sand Hill Cantonment Area at Fort Benning, Georgia. Under the Proposed Action, Fort Benning would construct, operate and maintain a new elementary school to support the pre-Kindergarten through Grade 5 student population residing in the Patton Village neighborhood. This Proposed Action also includes demolition of the current White Elementary School in the Main Post Cantonment Area.

As required by the National Environmental Policy Act of 1969 (NEPA; 42 *United States Code* [USC] 4321 *et seq*.), the Council on Environmental Quality (CEQ) Regulations Implementing the Procedural Provisions of NEPA (40 *Code of Federal Regulations* [CFR] Part 1500-1508), and the Army NEPA Regulation (*Environmental Analysis of Army Actions*, 32 CFR Part 651), the potential environmental and socioeconomic effects of this Federal Proposed Action are analyzed in this EA.

NEPA and Federal implementing regulations collectively establish a process by which Fort Benning considers the potential environmental impacts of its proposed actions and invites the involvement of interested members of the public prior to deciding on a final course of action. As such, this EA will facilitate the decision-making process regarding the Proposed Action and its reasonable Alternatives. This EA will also provide the basis for determining if a Finding of No Significant Impact (FNSI) is appropriate, or if an Environmental Impact Statement (EIS) is required.

PROPOSED ACTION

Under the Proposed Action, Fort Benning would construct a new elementary school to support the student population residing in the recently developed Patton Village housing area. The new school will be designed per the standards of Department of Defense Education Activity (DoDEA) "21st Century Education Specifications" and have the capacity to accommodate a population of 600 students. The proposed new elementary school will be a two or three story facility that will consist of an information center, computer labs, fitness areas, kitchen and cafeteria areas, supply and administrative offices, art and music specialty rooms, counseling center, and service docks in addition to primary educational classrooms. The new elementary school campus will also include site improvements such as covered walkways, sidewalks, utility connections, fire access lanes, playgrounds and shade structures, security fencing, landscape lighting, parking areas, and force protections measures. All classrooms and supporting facilities will be designed to be Americans with Disabilities Act (ADA) accessible and meet Anti-terrorism/Force Protection (AT/FP) requirements.

In conjunction with the construction of a new ES for Patton Village students, the current White ES on Main Post would be slated for demolition. The facilities of the current White Elementary School in the Main Post Cantonment Area would require extensive repair and maintenance to remain in operation as an elementary school facility. Based on DoDEA's current design standards, the configuration of the current White ES does not meet DoDEA design standards and educational initiatives in terms of space quantity, functional adjacencies, and required spatial relationships. A total of nine buildings and ancillary facilities would be slated for demolition and the area would be returned to green space.

Renovation and conversion of the current White Elementary School for other uses to meet other Installation mission needs have been considered. A change in functional use would require costly renovation and conversion to meet other Installation mission needs. As such, through economic analysis,

it has been determined that complete demolition of the current White ES is the most cost effective option as discussed in **Section 3.4** of the EA.

PURPOSE AND NEED

The purpose of the Proposed Action is to construct a new elementary school to support the student population residing in the recently developed Patton Village housing area. These students are currently being bused from Patton Village in the Sand Hill Cantonment Area to three different elementary schools on Main Post. Construction of a new elementary school within the Patton Village residential area would reduce the need for busing, provide a support facility for Soldiers and their Families, and allow the Fort Benning school system to operate more efficiently.

The goal of DoDEA is "*provide an exemplary education that inspires and prepares all DoDEA students for success in a dynamic, global environment*". This goal requires schools of the future to be flexible and adaptable, allowing adjustments to new and innovative ways to deliver instruction, and meet the needs of all students. Facility design should satisfy the functional requirements and criteria to meet DoDEA's 21st Century School learning objectives that include innovation in education, curriculum delivery, use of technology, and the requirements for sustainability and energy conservation.

If the Proposed Action were not implemented, Patton Village students would continue to require busing to Main Post. Residents of Patton Village would not be provided the same level of amenities and support facilities as other neighborhoods on-Post, which could potentially affect the morale of Soldiers and their Families. This would also hinder implementation of current DoDEA 21st Century School initiatives to enhance educational opportunities with the continued use of out-dated facilities that are undersized (per current DoDEA design specifications), lack optimal functionality for curriculum delivery and use of technology, require extensive maintenance and/or repairs, and do not meet Army mandated requirements for sustainability and energy conservation.

PROPOSED ACTION ALTERNATIVES

The NEPA, CEQ, and the Army NEPA Regulation require a range of reasonable alternatives to be considered and evaluated. The Army used screening criteria to determine which Alternatives were reasonable. For purposes of analysis, an Alternative was considered reasonable only if it enabled Fort Benning to accomplish the primary mission of providing an elementary school for the student population of Patton Village, while identifying a cost effective reuse of the current White Elementary School to meet current Installation and mission needs. Alternatives for the Proposed Action were developed as part of the planning process. Per the screening criteria discussed in the EA, all of the reasonable Alternatives analyzed include demolition of the current White Elementary School.

The Army used screening criteria to determine which Alternatives are reasonable. Satisfaction of these screening criteria would provide a location suited to meet the purpose of and need for the Proposed Action, while potentially minimizing adverse environmental and operational effects. Screening criteria used for this Proposed Action consisted of:

- **Reduce busing operations:** The Proposed Action should reduce the need for bussing of students from residential areas to school locations. (The location of the school should be within easy walking distance for most students, which per Georgia State guidelines is 1-mile.)

- **Site Accessibility and Proximity to Housing:** The Proposed Actions should provide ease of accessibility from both a pedestrian and vehicular standpoint, with adequate access roads for public transportation.

- **Pedestrian Safety:** The Proposed Action should minimize, if not eliminate pedestrian-vehicle conflicts.

- **Meet DoDEA's 21st Century Learning Objectives:** The Proposed Action should provide a learning environment that meets all DoDEA criteria and functional requirements, as well as the requirements for sustainability and energy conservation.

- **Patton Village Phase IV Future Development:** The Proposed Action should minimize the loss of acreage slated for future housing units from the Phase IV residential development design for Patton Village.

- **Land Use Compatibility:** The Proposed Action should not be located in an area that would conflict with or limit training, or conflict with nearby land uses.

- **Facility Re-Utilization of the Current White ES:** Should be economically feasible and support Installation and mission needs, while being compatible with nearby land uses.

Three alternatives were identified as "reasonable" to meet the purpose and need of the Proposed Action. The No Action Alternative is also discussed below.

- **Alternative C (Preferred Alternative):** The proposed location for this Alternative is directly adjacent to the northeastern portion of Patton Village in the Sand Hill Cantonment Area. The total proposed acreage impacted by this Alternative projection is 29 acres.

- **Alternative A:** The proposed location for the Alternative is directly north of Patton Village in the Sand Hill Cantonment Area. The total proposed acreage impacted by this Alternative projection is 24 acres.

- **Alternative D:** The proposed location for this Alternative is approximately 0.1 miles from the northern portion of the Patton Village in the Sand Hill Cantonment Area. The total proposed acreage impacted by this Alternative projection is 20 acres.

- **No Action Alternative:** Under this Alternative, the Proposed Action would not be implemented.

While the No Action Alternative would not satisfy the purpose or need for the Proposed Action, this alternative was retained to provide a comparative baseline against which to analyze the effects of the Proposed Action, as required under the CEQ Regulations (40 CFR 1502.14). The No Action Alternative reflects the ***status quo*** and serves as a benchmark against which the effects of the Proposed Action can be evaluated.

ENVIRONMENTAL CONSEQUENCES

The existing condition of the environmental resources at Fort Benning potentially affected by each of the three considered Alternatives and consequences of their implementation is presented in **Section 4**.

Analysis consists of a comparison of each Alternative and the potential environmental effects to each environmental resources area, or Valued Environmental Component (VEC). A total of 12 VECs were considered for analysis in the EA. A summation of VECs fully analyzed, environmental effects, and mitigation measures for potential adverse effects to VECs are identified where applicable and are summarized **Table ES-1**. **Section 5** of the EA presents an analysis of the potential cumulative effects from implementing any of the Action Alternatives and the No Action Alternative.

Table ES-1. Comparison of Potential Effects to VECs Fully Analyzed for Proposed Action Alternatives.

VEC	NO ACTION ALTERNATIVE	ALTERNATIVE A	ALTERNATIVE C (PREFERRED)	ALTERNATIVE D
Soils	No effects.	*Minor, short-term* adverse effects due to potential erosion during construction. Effects would be reduced through compliance with NPDES requirements. No *long-term* adverse effects as site would be revegetated and stabilized.	*Minor, short-term* adverse effects due to potential erosion during construction. Effects would be reduced through compliance with NPDES requirements. No *long-term* adverse effects as site would be revegetated and stabilized.	*Minor, short-term* adverse effects due to potential erosion during construction. Effects would be reduced through compliance with NPDES requirements. No *long-term* adverse effects as site would be revegetated and stabilized.
Water Resources	No effects.	*Minor, short-term* adverse effects during construction. Effects would be reduced through compliance with NPDES requirements.	*Minor, short-term* adverse effects during construction. Effects would be reduced through compliance with NPDES requirements.	*Minor, short-term* adverse effects during construction. Effects would be reduced through compliance with NPDES requirements.
Biological Resources	No effects.	*Minor, short-term* adverse effects from removal of 24 acres of trees and vegetation. No adverse effects to any Federal or State-listed species, their habitat, or migratory birds.	*Minor, short-term* adverse effects from removal of 29 acres of trees and vegetation. No adverse effects to any Federal or State-listed species, their habitat, or migratory birds.	*Minor, short-term* adverse effects from removal of 20 acres of trees and vegetation. No adverse effects to any Federal or State-listed species, their habitat, or migratory birds.
Cultural Resources	No effects.	*No* adverse effects from new construction. Adverse effects from demolition of eligible historic buildings will be fully mitigated resulting in *no* adverse effects. Mitigation of impacts through HABS/HAER documentation.	*No* adverse effects from new construction. Adverse effects from demolition of eligible historic buildings will be fully mitigated resulting in *no* adverse effects. Mitigation of impacts through HABS/HAER documentation.	*No* adverse effects from new construction. Adverse effects from demolition of eligible historic buildings will be fully mitigated resulting in *no* adverse effects. Mitigation of impacts through HABS/HAER documentation.
Hazardous & Toxic Materials and Waste	No effects.	*Negligible* adverse effects from construction and operations. *Minor, short-term* adverse effects from demolition and disposal.	*Negligible* adverse effects from construction and operations. *Minor, short-term* adverse effects from demolition and disposal.	*Negligible* adverse effects from construction and operations. *Minor, short-term* adverse effects from demolition and disposal.

The analysis contained in this EA indicates that for all of the Proposed Action Alternatives, only *short-term, minor* adverse effects would occur to Soils, Water Resources, Biological Resources, and Hazardous and Toxic Materials and Wastes due to construction, demolition, and operational activities. No significant adverse impacts to any resources are anticipated either in a *long-* or *short-term* basis. These *minor* adverse effects do not contribute to significant adverse cumulative effects when considering other past, present, and reasonably foreseeable future projects at Fort Benning.

In accordance with Army NEPA Regulations, the Army must indicate if any mitigation measures are needed to minimize potential adverse effects. Potential adverse effects to cultural resources, due to demolition of historically eligible structures, would be fully mitigated by implementing Army Alternative Procedures to identify and implement the appropriate action. HABS/HAER documentation would be required to be prepared by Fort Benning and submitted to the Georgia SHPO prior to the demolition of eligible structures, and would result in *no* adverse effects. The EA analyses also demonstrates that adherence to applicable Federal and State environmental laws, regulations, and permitting processes would minimize adverse environmental impacts resulting from implementation of any of the Proposed Action Alternatives. This determination is based on the following:

Potential adverse impacts to *Soils and Water Resources* would be mitigated by:

- Application of Federal and State erosion control measures and NPDES permitting requirements to include preparation of an ESPCP detailing erosion and sedimentation control BMPs, and a minimum 25-foot surface water setback to minimize soil impacts during construction would be required prior to any construction activities.

For *Biological Resources*, no mitigation is necessary; however, the project designers should consider the following:

- Limit disturbed areas as much as possible through design
- Use native trees and other vegetation in open spaces and around storm water management structures.
- Employ tree protection devices at the sites of construction and demolition.

Potential adverse impacts to *Hazardous and Toxic Materials and Waste* would be mitigated by:

- Adherence to Federal and State laws and regulations would minimize impacts due to demolition, construction, and maintenance operations activities in the long-term.

Of the 12 VECs considered, seven were dismissed from full analysis based on the potential for impacts that are considered to be negligible or non-existent, and are summarized in **Table ES-2**.

Table ES-2. VECs Not Fully Analyzed for the Proposed Action Alternatives.

VEC	NO ACTION ALTERNATIVE	ALTERNATIVE A	ALTERNATIVE C (PREFERRED)	ALTERNATIVE D
Land Use	No effects.	No effects.	No effects.	No effects.
Air Quality	No effects.	*Negligible, short-term* localized increase in air emissions during construction and demolition activities. *No* long-term effects.	*Negligible, short-term* localized increase in air emissions during construction and demolition activities. *No* long-term effects.	*Negligible, short-term* localized increase in air emissions during construction and demolition activities. *No* long-term effects.
Noise	No effects.	*Negligible, short-term* localized, effect during construction and demolition. No long-term noise effects.	*Negligible, short-term* localized, effect during construction and demolition. No long-term noise effects.	*Negligible, short-term* localized, effect during construction and demolition. No long-term noise effects.
Socioeconomics (including Environmental Justice and Protection of Children)	No effects.	Short-term, *positive* impact for dollars being spent within the community. No effects to protection of children or environmental justice.	Short-term, *positive* impact for dollars being spent within the community. No effects to protection of children or environmental justice.	Short-term, *positive* impact for dollars being spent within the community. No effects to protection of children or environmental justice.
Utilities	No effects.	No effects.	No effects.	No effects.
Transportation and Traffic	No effects.	*Negligible, short-term* localized effect during construction and demolition. *Long-term, beneficial* effects through reduced busing operations.	*Negligible, short-term* localized effect during construction and demolition. *Long-term, beneficial* effects through reduced busing operations.	*Negligible, short-term* localized effect during construction and demolition. *Long-term, beneficial* effects through reduced busing operations.
Airspace	No effects.	No effects.	No effects.	No effects.

CONCLUSION

The analysis contained in this EA indicates that for the most part, implementation of the Proposed Action would have only *short-term, minor* adverse effects to *Soils*, *Water Resources*, *Biological Resources*, and *HTMW* due to demolition, construction, and operational activities associated with all of the Action Alternatives. Adherence to Federal and State laws and regulations would minimize impacts due to demolition, construction, and maintenance operations activities.

Under any of the Action Alternatives, there would be *no* effects to cultural resources within the Area of Potential Effect (APE) on Main Post resultant of demolition activities. Adverse effects to cultural resources in the Main Post Historic District would be fully mitigated by implementing Army Alternate Procedures and preparation of HABS/HAER documentation.

Based on this EA, it is concluded that the Preferred Alternative (Alternative C), with its associated facility construction and demolition would meet the purpose and need of constructing a new elementary school to support the student population residing in the recently developed Patton Village housing area. Although all of the Action Alternatives met the screening criteria provided in **Section 3.2.1**, the limits of

disturbance and location proposed for Alternative C was considered to be the best option to reduce the loss of acreage for the construction of future housing units. As part of the Phase IV residential development design for Patton Village, this Alternative would result in a net loss of only 9 housing units, whereas Alternatives A and D would result in 27 and 42 housing units respectively. The EA analysis demonstrated that with adherence to applicable Federal and State environmental laws, regulations, and permitting processes, no *significant* adverse environmental impacts would result from the Proposed Action as implemented by Alternative C. Therefore, preparation of an Environmental Impact Statement is not warranted.

The No Action Alternative would not meet the purpose and need for providing an elementary school to support the student population of the Patton Village housing area.

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1.0 PURPOSE, NEED, AND SCOPE

1.1 INTRODUCTION

This Environmental Assessment (EA) evaluates the proposal of the Department of Defense Education Activity (DoDEA) and Domestic Dependent Elementary and Secondary Schools (DDESS) to implement the proposed construction of a new elementary School at Fort Benning, Georgia. This Proposed Action involves the replacement of the current Edward A. White Elementary School (hereinafter referred to as "White ES"), in the Main Post Cantonment Area with a new school to serve the recently developed Patton Village residential housing area within the Sand Hill Cantonment Area. The facilities of the current White ES are outdated and are in need of major repairs and maintenance. Based on DoDEA's current design standards, even with extensive renovation and facility upgrades, the current White ES cannot meet the goals of DoDEA's 21st Century Education Specifications (USACE 2012). Renovation and conversion for other uses to meet other Installation mission needs have been considered, however, the most cost effective option is complete demolition as discussed in **Section 3.4.** Students currently attending White ES would be redistricted to attend Herbert J. Dexter Elementary School approximately one- half mile away on Main Post.

As required by the National Environmental Policy Act of 1969 (NEPA; 42 *United States Code* [USC] 4321 *et seq*.), the Council on Environmental Quality (CEQ) Regulations Implementing the Procedural Provisions of NEPA (40 *Code of Federal Regulations* [CFR] Part 1500-1508), and the Army NEPA Regulation (*Environmental Analysis of Army Actions*, 32 CFR Part 651), the potential environmental and socioeconomic effects of this Federal Proposed Action are analyzed in this EA. These regulations collectively establish a process by which Fort Benning considers the potential environmental impacts of its proposed actions and invites the involvement of interested members of the public prior to deciding on a final course of action. As such, this EA will facilitate the decision-making process regarding the Proposed Action and its reasonable Alternatives. This EA will also provide the basis for determining if a Finding of No Significant Impact (FNSI) is appropriate, or if an Environmental Impact Statement (EIS) is required.

Fort Benning consists of approximately 182,000 acres of federally owned land south and east of Columbus, Georgia, and south of Phenix City, Alabama; the Chattahoochee River traverses the southwest portion of the Installation (**Figure 1**). There are four cantonment areas on Fort Benning: Main Post, Kelley Hill, Sand Hill, and Harmony Church. Within these cantonment areas, Fort Benning has its own offices, schools, shopping malls, medical facilities, housing, and churches. Fort Benning also has multiple training facilities, firing ranges, and maneuver training areas on the Installation.

The cantonment areas on-Post provide a centralized location for community facilities and support services for Soldiers and their Families. One such support service for on-Post residents is the DoDEA/DDESS school system. Currently, all of the schools are located within the Main Post Cantonment Area, and are directly adjacent or in close proximity to existing housing areas acting as "neighborhood schools." The only residential area not serviced by a neighborhood school is Patton Village in the Sand Hill Cantonment Area.

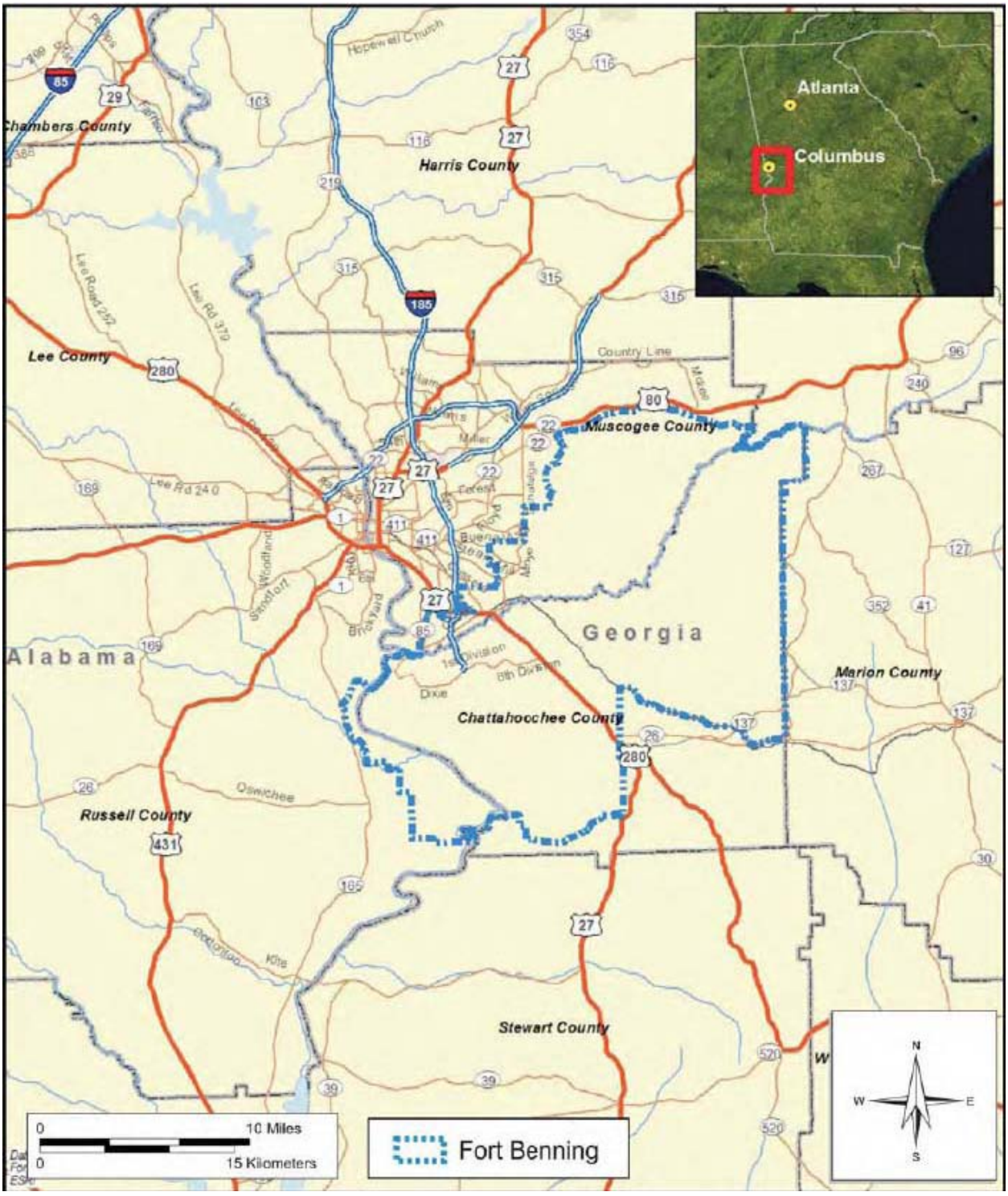

Figure 1. Location of Fort Benning

1.2 PURPOSE AND NEED

The purpose of the Proposed Action is to construct a new elementary school to support the student population residing in the recently developed Patton Village housing area. These students are currently being bused from Patton Village in the Sand Hill Cantonment Area to three different elementary schools on Main Post: Richard G. Wilson, Herbert J. Dexter, and Frank R. Loyd. These schools are approximately 4 to 7 miles away from the heart of Patton Village. Construction of a new ES within the Patton Village residential area would reduce the need for busing, provide a support facility for Soldiers and their Families, and allow the Fort Benning school system to operate more efficiently.

The Army acknowledges the codependency of family housing with services, activities, and ancillary supporting facilities to improve morale and the quality of life for Soldiers and their Families. It is the intent to develop residential neighborhoods as part of a larger community that can share such amenities as village and community centers, recreation facilities and pools, bike and jogging trails, playfields and tot lots, and day care centers (USACE 2005). Such proximity of these amenities to housing helps to create a sense of "small town" neighborhoods and enhances a sense of community, and facilitates a positive residential experience for the Soldiers and their families residing on Fort Benning.

An additional component of support services for Army families is the DoDEA/DDESS school system. Fort Benning currently operates six elementary schools and one middle school on-Post. All of the schools are located within the Main Post Cantonment Area, and are directly adjacent or in close proximity to existing housing areas acting as "neighborhood schools". The only residential area that is not serviced by a neighborhood school is the recently constructed Patton Village.

The goal of DoDEA is "*provide an exemplary education that inspires and prepares all DoDEA students for success in a dynamic, global environment"* (DoDEA 2006). This goal requires schools of the future to be flexible and adaptable, allowing adjustments to new and innovative ways to deliver instruction, and meet the needs of all students. Facility design should satisfy the functional requirements and criteria to meet DoDEA's 21st Century School learning objectives that include innovation in education, curriculum delivery, use of technology, and the requirements for sustainability and energy conservation (USACE 2012).

If the Proposed Action were not implemented, Patton Village students would continue to require busing to Main Post. Residents of Patton Village would not be provided the same level of amenities and support facilities as other neighborhoods on-Post, which could potentially affect the morale of Soldiers and their Families. This would also hinder implementation of current DoDEA 21st Century School initiatives to enhance educational opportunities with the continued use of out-dated facilities that are undersized (per current DoDEA design specifications), lack optimal functionality for curriculum delivery and use of technology, require extensive maintenance and/or repairs, and do not meet Army mandated requirements for sustainability and energy conservation (USACE 2012b). The Proposed Action is described in more detail in **Section 2.0**.

1.3 SCOPE

This EA has been developed in accordance with the NEPA, the CEQ's NEPA implementing regulations, and the Army NEPA regulation. This EA evaluates the potential direct, indirect, and cumulative environmental and socioeconomic effects as a result of implementing the Proposed Action or its Alternatives. After elimination of alternatives that are considered not reasonable, the potential environmental impacts associated with the Proposed Action are compared to the No Action Alternative and any other reasonable Alternatives carried forward.

All of the Action Alternatives presented in this EA consist of the construction of a new ES adjacent to the Patton Village residential area within the Sand Hill Cantonment Area. The new school will be designed per the standards of DoDEA's "21st Century Education Specifications" and have the capacity to accommodate a population of 600 students. The current White ES in the Main Post Cantonment Area would require extensive repair and maintenance to remain in operation as an elementary school facility. **Section 2.0** provides a more detailed discussion of the school's facilities and amenities. However, the configuration of the current White ES does not meet DoDEA design standards and educational initiatives in terms of space quantity, functional adjacencies, and required spatial relationships (USACE 2012). As the current student population of White ES can be redistricted to Dexter ES on Main Post, the facilities have been considered for another functional use. A change in functional use would require costly renovation and conversion to meet other Installation mission needs. As such, through economic analysis, it has been determined that complete demolition of the current White ES is the most cost effective option as discussed in **Section 3.4**. Therefore, demolition is included as a part of all of the Action Alternatives.

The dissimilarities between all of the Action Alternatives are the site locations and amount of disturbed acres of land for each Alternative. A more detailed description and discussion of the Alternatives is presented in **Section 3.0**., as well as descriptions of the Alternatives eliminated from detailed study per the screening criteria discussed in **Section 3.2.**

Resource categories, (or "Valued Environmental Components" [VECs]), analyzed in this EA include: land use; air quality; noise; geology and topography; soils; ground and surface water resources, including wetlands; biological resources, including vegetation, wildlife, wildlife habitat, plant communities, and protected species; cultural resources; socioeconomics; human health and safety, including children's health and safety risks; environmental justice; utilities; transportation; and Hazardous and Toxic Materials and Wastes (HTMW). Mitigation measures have been identified per VEC, as needed, to minimize potential adverse environmental impacts. This EA also considers the cumulative effects of this proposed action when considering the past, present, and reasonably foreseeable actions within the region influenced by the Alternatives.

1.4 DECISION MAKING

The Garrison Commander of Fort Benning is the Federal decision-maker concerning this Proposed Action. The purpose of this EA is to inform the Federal decision-maker and the public of the potential environmental and socioeconomic consequences of the Proposed Action and its reasonable Alternatives. This EA includes identifying the actions that the government will commit to undertake to minimize environmental effects, as required under the NEPA. After consideration of the potential environmental and socioeconomic effects, the Garrison Commander will decide whether or not to implement the Proposed Action, under which Alternative, and what mitigation measures will be implemented to reduce impacts to the environment.

1.5 PUBLIC AND AGENCY INVOLVEMENT

Fort Benning invites public participation in their Federal decision-making through the NEPA process. Consideration of the issues and concerns of all interested persons promotes open communication and enables better decision-making. Agencies, Federally recognized Native American Tribes, organizations, and members of the public having a potential interest in the Proposed Action are urged to participate in the Federal decision-making process.

1.5.1 Public Review of the Final EA and Draft FNSI

This EA and a Draft Finding of No Significant Impact (FNSI) will be available to the public for a 30-day public comment period. The Notice of Availability (NOA) for the Final EA and Draft FNSI will be published in *The Columbus Ledger-Enquirer*, Fort Benning's *The Bayonet*, *The Tri-County Journal*, and *The Stewart-Webster Journal Patriot Citizen* in accordance with the Army NEPA Regulation (32 CFR Part 651.36). The Final EA and Draft FNSI will also be available at the following local libraries (see **Appendix D**):

1. Columbus Public Library
2. Fort Benning Main Post Library
3. Cusseta-Chattahoochee Public Library

In addition, the documents will be posted on the Fort Benning website at https://www.benning.army.mil/garrison/DPW/EMD/legal.htm. The NOA has also been mailed to all agencies/individuals/organizations on the Fort Benning NEPA distribution (mailing) list for the Proposed Action (see **Appendix D**).

At the end of this 30-day public comment period, all comments submitted will be considered in the Garrison Commander's decision making. As appropriate, the Garrison Commander may then execute the FNSI and proceed with implementation of the selected Alternative. If it is determined that implementation of the selected Alternative would result in significant impacts that cannot be mitigated to less-than-significant levels, a Notice of Intent (NOI) to prepare an EIS will be published in the *Federal Register*, or the Proposed Action will not be implemented.

1.5.2 Native American and Cultural Resources Consultation/Coordination

For proposed Army actions, consultation with Federally recognized Native American Tribes is required under Department of Defense Instruction (DoDI) 4710.02 (*Interactions with Federally Recognized Tribes*), which implements the Annotated DoD American Indian and Alaska Native Policy (dated 27 October 1999); Army Regulation (AR) 200-1; the NEPA; the National Historic Preservation Act (NHPA); and the Native American Graves and Protection and Repatriation Act (NAGPRA).

Fort Benning consults with Federally recognized Native American Tribes affiliated with the Fort Benning area by following the Army Alternate Procedures (AAP) for compliance with Section 106 of the NHPA, and the consultation procedures prescribed within the Historic Properties Component (HPC) of the Integrated Cultural Resources Management Plan (ICRMP) for Fort Benning (DA 2012; DA 2008). Under these procedures, Fort Benning provides the Tribes with copies of relevant documentation with existing and proposed actions (e.g. this EA), and solicits Tribal input. Fort Benning also holds consultation meetings with the Tribes biannually.

As part of this on-going process and dialogue, Fort Benning requests consultation with these Tribes as Sovereign Nations per Executive Order (EO) 13175, *Consultation and Coordination with Indian Tribal Governments*, 6 November 2000. Any concerns expressed by the Tribes will be incorporated into the Federal decision-making process regarding this Proposed Action.

1.6 REGULATORY FRAMEWORK FOR ANALYSIS

A decision on whether to proceed with the proposed action rests on numerous factors such as mission requirements, availability of funding, and environmental considerations. In addressing environmental considerations, Fort Benning is guided by relevant statutes (and their implementing regulations) and EOs that establish standards and provide guidance on environmental management and planning.

This EA has been developed in accordance with the NEPA, CEQ's NEPA implementing regulations, and the Army's NEPA Regulation. Federal, State, and local laws and regulations specifically applicable to this Proposed Action are identified within this EA, where appropriate, and include, but are not limited to:

- Federal Endangered Species Act (ESA) of 1973, as amended (Public Law 93-205, 87 Stat. 884, 16 USC 1531 - 1534).
- Federal Water Pollution Control Act, or Federal Clean Water Act (CWA), of 1972, as amended; Sections 401 and 404.
- Migratory Bird Treaty Act (MBTA; 16 USC 703-712, 3 July 1918; as amended 1936, 1960, 1968, 1969, 1974, 1978, 1986, and 1989).
- Federal Clean Air Act of 1990 (42 USC 7401 *et seq*., as amended).
- Resource Conservation and Recovery Act (RCRA) (42 U.S.C. § 6901 *et seq*., October 21, 1976; as amended December 31, 2002).
- Georgia Department of Natural Resources - Water Quality Control Act and the implementing regulations pertaining to the National Pollutant Discharge Elimination System (NPDES).
- The Georgia Erosion and Sedimentation Control Act of 1975 (as amended; *GESA).*
- EO 12898 (*Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*)
- EO 13045 (*Protection of Children from Environmental Health Risks and Safety Risks*)

2.0 DESCRIPTION OF THE PROPOSED ACTION

The purpose of the Proposed Action is to construct a new elementary school to support the student population residing in the recently developed Patton Village housing area. The Patton Village community is a result of the Army's Residential Communities Initiative (RCI) for management and development of Army family housing and ancillary supporting facilities (USACE 2005). The RCI privatized housing at Fort Benning by transferring ownership of residential houses and improvements through a land lease to Fort Benning Family Communities, LLC, a non-Federal entity. As part of the housing development plan, existing housing on Main Post has undergone a combination of renovation, demolition, and new construction. To off-set some of the housing units lost on Main Post due to demolition and re-design of neighborhood communities, approximately 800 new homes have been slated for construction in the Sand Hill Cantonment Area (USACE 2005).

As part of the housing development plan, Patton Village has been designed to be constructed in four phases. Phase one construction began in July of 2006 with subsequent phases two and three being completed in November of 2009 (personal communication, Douglas 2012). These three Phases have resulted in the construction of 664 housing units which are occupied primarily by junior and senior enlisted ranks of military personnel and their dependents (USACE 2012b). To date, Phase four of the Patton Village development plan has not been implemented. The implementation of the final phase of housing construction for Patton Village will be dependent upon future needs based on housing market analysis (FBFC 2005).

As of the 2011-2012 school year (SY), there are 600 school-age children residing in Patton Village that met eligibility requirements for kindergarten (K) through grade 5 (personal communication, Stone 2012). These students are currently being bused from Patton Village in the Sand Hill Cantonment Area to three different elementary schools on Main Post: Richard G. Wilson, Herbert J. Dexter, and Frank R. Loyd. These schools are approximately 4 to 7 miles away from the heart of Patton Village. Construction of a new ES within the Patton Village residential area would reduce the need for busing, provide a support facility for Soldiers and their Families, and allow the Fort Benning school system to operate more efficiently.

The proposed new ES will be designed to accommodate a population of 600 students, which equates to a facility of approximately 125,000 gross square feet (GSF) per the standards of the DoDEA 21st Century Education Specifications (DoDEA 2010). The proposed new ES will be a two or three story facility that will consist of an information center, computer labs, fitness areas, kitchen and cafeteria areas, supply and administrative offices, art and music specialty rooms, counseling center, and service docks in addition to primary educational classrooms. The new ES campus will also include site improvements such as covered walkways, sidewalks, utility connections, fire access lanes, playgrounds and shade structures, security fencing, landscape lighting, parking areas, and force protections measures. All classrooms and supporting facilities will be designed to be Americans with Disabilities Act (ADA) accessible and meet Anti-terrorism/Force Protection (AT/FP) requirements.

In conjunction with the construction of a new ES for Patton Village students, the current White ES on Main Post would be slated for demolition. White ES was initially constructed in 1961 and was named after First Lieutenant Edward Ansel White (US Army). Lieutenant White was posthumously awarded the Distinguished Service Cross for extraordinary heroism in action in the Korean War on August 2, 1950. White ES is within the Main Post Historic District (MPHD) and is considered a contributing resource. Additionally, the school was designed locally by J.N. Pease (Columbus, GA) and Francis M. Daves (Cartersville, GA) (personal communication, Perry 2012). As White ES is considered to be a contributing resource to the MPHD, a Historic American Buildings/Historic American Engineering Record (HABS/HAER) survey must be performed prior to demolition activities. The HABS/HAER survey is required to comply with Section 106 and 110b of the NHPA.

In 2006, DDESS prepared a Master Plan for the redevelopment of the Fort Benning community schools based on an assessment of facility conditions (DDESS 2006). The facility assessment for the current White ES concluded that the general purpose classrooms have low functionality and are undersized. Physical education classes have to be conducted in a classroom or in the multi-purpose room as there is no gym facility on the campus. Additionally, music and art instruction are conducted in the same classroom, and there is a lack of storage space for musical instruments. The computer lab also lacks storage space and has ventilation problems. The school cafeteria kitchen functions as a serving line, as there is no cooking in the kitchen on site.

The current White ES school site is relatively small, (approximately 11 acres), and constrained by roadways, parking lots, and adjacent buildings. (see **Figure 2**). The "pod" configuration of White ES makes it difficult for deliveries, and despite the presence of covered walkways, pedestrian circulation is poor and difficult to supervise. The front access circulation loop for buses is undersized, and service vehicle access and maneuvering can be impeded by the configuration of parking spaces. The facility itself exhibits progressive deterioration as the buildings are showing stress cracks in the concrete piers. Additionally, the heating and cooling systems are not functioning properly, the boiler interior is deteriorating, plumbing fixtures are in fair to poor condition, and the facility does not meet all current criteria of the ADA. The site also does not meet current Force Protection stand-off distances of 82 feet, nor does it meet the Army wide mandate to reduce energy consumption by 30 percent per the Energy Independence and Security Act (EISA) of 2007.

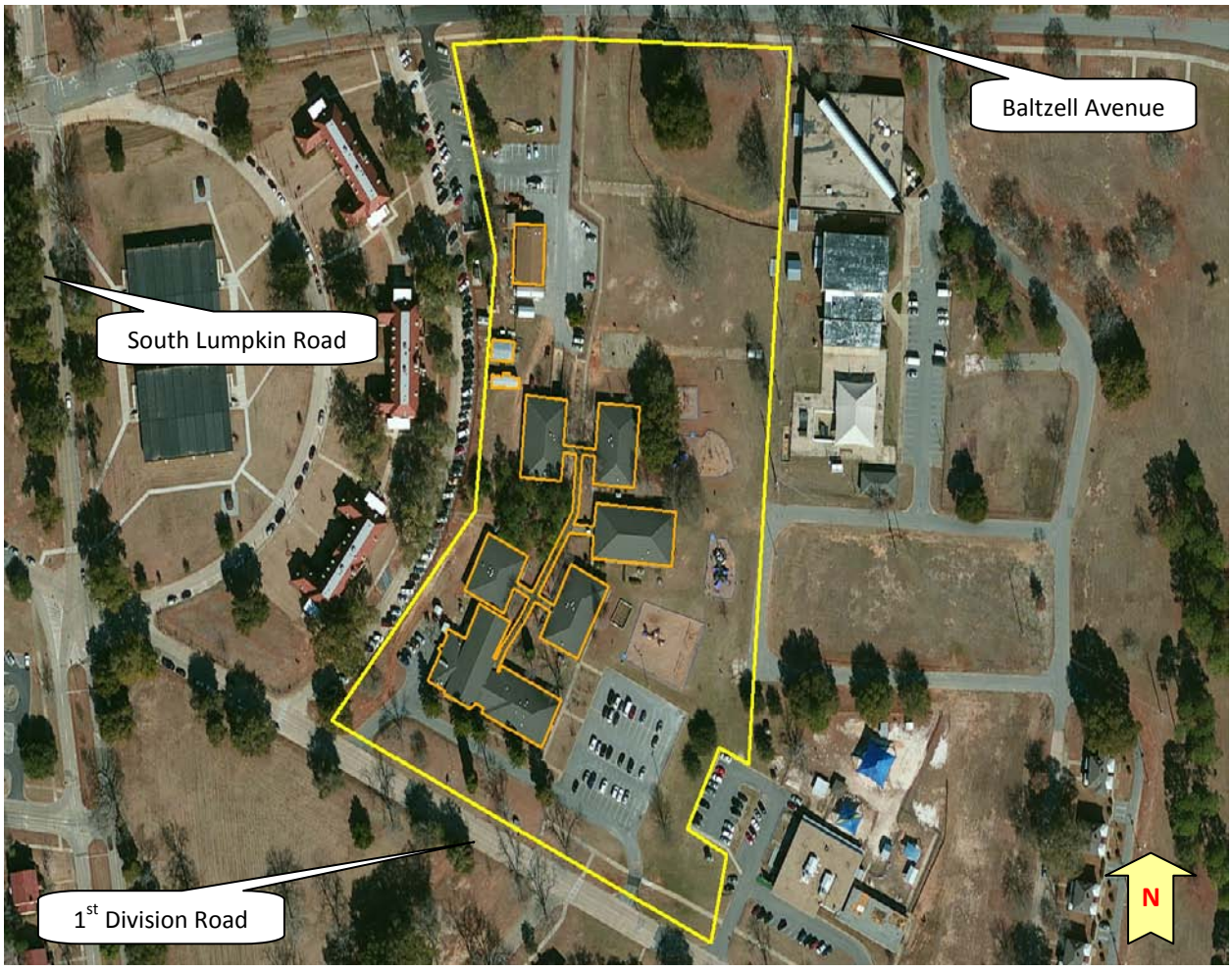

Figure 2. Location of Current White Elementary School and DoDEA Leased Property Boundary.

Property Boundary White Elementary School and Facilities

DoDEA performed a facility condition assessment in 2006 for all school facilities on the Installation. Of the seven schools that currently serve the Installation community, four were identified with shortcomings that needed to be addressed to meet site and facility sustainability, as well as the objectives of DoDEA's

"21st Century Education Specifications" (DDESS 2006). The four schools identified were originally built between 1950 and 1960, and include: Loyd ES (1958), White ES (1961), McBride ES (1965), and Dexter ES (1968). Of these four schools, only Dexter ES was not identified for complete replacement per the DoDEA Master Plan as the facilities have been expanded and upgraded post 1968. This included additional classroom and administrative space, and the construction of a new gymnasium which was recently completed in 2012. The DoDEA Military Construction (MILCON) Program for FY 2010-2015 has programmed the replacement of McBride ES, White ES, and Loyd ES.

Resultant of the 2006 facility assessment, facility conditions for the current White ES were consistently ranked as poor, and had the lowest condition assessment score of all the schools on-Post (DoDEA 2006). The current White ES has a "Failing" rating and would require major repairsand servicing to maintain operability. The facility also does not support current DoDEA educational initiatives in terms of space quantity, functional adjacencies, and required spatial relationships (USACE 2012). This facility condition rating indicated that replacement of such facilities would be more cost effective than continued maintenance and repairs. In addition, current White ES students can be redistricted to Dexter ES (approximately one-half mile away) without reaching capacity (personal communication, Stone 2012).

The current White ES campus, including ancillary facilities, encompasses 56,664 square feet of building space (see **Table 1**.) As the majority of the buildings on the White ES campus were constructed in 1961, it is presumed that asbestos containing materials (ACM) and lead-based paint (LBP) are present as these were common components of construction materials during that time. The addition of classroom space, administrative offices, and a maintenance shop occurred after the initial construction with the most recent addition being building 1046 which was constructed in 1996. However, all of the facilities will require hazardous materials surveys prior to any demolition activities to identify any needed hazardous materials abatement. Abatement and disposal of such materials will be conducted in accordance with all applicable Federal, State, and Army regulations.

Table 1. Proposed Building Demolition of the Current White School Campus

Building Number	Current Use	Square Footage
1042	Storage	2,574
1043	Administrative & General Purpose	1,219
1044	Classrooms	5,257
1045	Classrooms	10,537
1046	Classrooms	7,374
1047	Classrooms	5,257
1048	Classrooms	4,367
1049	Maintenance Shop & General Purpose	2,198
1050	Classrooms	13,682
	Total:	**56,664**

Fort Benning Master Planning performed an economic analysis on the reuse of the current White ES for purposes other than an elementary school (see **Appendix B**). As discussed in **Section 3.4**, a number of scenarios were analyzed to determine the costs associated with facility reuse, partial or entire demolition, and mothballing until a future reuse or mission need could be determined. Facility renovation and conversion for reuse would incur the highest costs, (over $6.5 million), of all of the Alternatives considered in the economic analysis, whereas complete demolition would cost the Installation the least

(approximately $1 million, including hazardous waste abatement and disposal). Based on costs estimates and mission needs, demolition of the current White ES facilities was determined to be the most cost effective course of action. Further discussion of the economic analysis and mission needs is presented in **Section 3.4**. A summation of these costs is provided in **Table 2**.

Table 2. Cost Summary for Renovation, Demolition, and Conversion of White Elementary School.

Alternatives Considered for White Elementary School	**Cost**
Complete Demolition	$1,030,718
Complete Renovation for Use as an Elementary School	$5,383,080
Complete Renovation and Conversion for Reuse	$6,799,680
Partial Demolition and Conversion of Building 1050	$2,423,682
Mothball all Buildings for Future Use	$1,841,636*
Mothball Building 1050 for Future Use and Partial Demolition	$444,665*

**Cost does not include renovation and conversion for facility reuse, or maintenance and utility costs for minimal upkeep for reuse.*

3.0 ALTERNATIVES CONSIDERED

3.1 INTRODUCTION

The NEPA, CEQ Regulations, and Army NEPA Regulations require consideration and analysis of reasonable Alternatives to a Proposed Action. Alternatives that are eliminated from detailed analysis must be identified along with a brief discussion of the reasons for eliminating them. For purposes of analysis, an alternative was considered "reasonable" only if it would enable Fort Benning to accomplish the primary mission of providing an elementary school for the student population of Patton Village, while implementing the requirements of DoDEA's 21st Century Learning Objectives. Additionally, adaptive reuse of the current White ES was analyzed based on current Installation and mission needs. Alternatives for reuse were considered reasonable if facility resue was determined to be economically feasible.

A reasonable Alternative must meet the purpose of and need for the Proposed Action as described in **Section 1.2**. "Unreasonable" Alternatives would not enable DoDEA to meet the purpose of and need for the Proposed Action. This section presents Fort Benning's development of Alternatives, addresses Alternatives available for the Proposed Action, and also describes the No Action Alternative.

3.2 ALTERNATIVES DEVELOPMENT

3.2.1 Screening Criteria

The Army used screening criteria to determine which Alternatives are reasonable. Satisfaction of these screening criteria would provide a location suited to meet the purpose of and need for the Proposed Action, while potentially minimizing adverse environmental and operational effects.

- **Reduce busing operations:** The Proposed Action should reduce the need for bussing of students from residential areas to school locations. (The location of the school should be within easy walking distance for most students, which per Georgia State guidelines is 1-mile.)

- **Site Accessibility and Proximity to Housing:** The Proposed Actions should provide ease of accessibility from both a pedestrian and vehicular standpoint, with adequate access roads for public transportation.

- **Pedestrian Safety:** The Proposed Action should minimize, if not eliminate pedestrian-vehicle conflicts.

- **Meet DoDEA's 21st Century Learning Objectives:** The Proposed Action should provide a learning environment that meets all DoDEA criteria and functional requirements, as well as the requirements for sustainability and energy conservation.

- **Patton Village Phase IV Future Development:** The Proposed Action should minimize the loss of acreage slated for future housing units from the Phase IV residential development design for Patton Village.

- **Land Use Compatibility:** The Proposed Action should not be located in an area that would conflict with or limit training, or conflict with nearby land uses.

- **Facility Re-Utilization of the Current White ES:** Should be economically feasible and support Installation and mission needs, while being compatible with nearby land uses.

3.3 EVALUATED ALTERNATIVES

All of the Alternatives evaluated consist of construction of a new ES near Patton Village, and subsequent demolition of the current White ES on Main Post. All of the Alternatives evaluated for further consideration, (with the exception of the No Action Alternative), meet the purpose and need for the Proposed Action, and meet the screening criteria used to determine a reasonable Alternative. All of the evaluated Alternative sites are within 1-mile of the current extent of housing units; directly adjacent to housing and safely accessible by pedestrians; will not impact any Federal or State listed species; are large enough tracts of land to satisfy the facility specifications and functional requirements of DoDEA; and will not present a conflict for nearby land use as the area is currently designated as "residential" per the 2011 Fort Benning Real Property Master Plan. All of the Alternatives evaluated for further consideration in this EA are entirely within RCI leased property boundary.

The dissimilarities of the evaluated Alternatives are the actual locations, amounts of disturbed acres projected per location, and number of housing units potentially lost from the RCI residential development design for Phase IV construction in Patton Village. These dissimilarities are described more in detail

below. The total limits of disturbance for each Alternative include utility connections for electric, water, sewer and gas, as well as erosion and sedimentation control features required for construction activities. The locations of the sites considered for construction of the new ES near Patton Village are illustrated in **Figure 3**.

Figure 3. Locations of Alternatives for the new Elementary School.

Alternative A Site
Alternative B Site
Alternative C Site (Preferred)
Alternative D Site
Installation Boundary
RCI Property Boundary
Surface Water

3.3.1 Alternative A

This site is adjacent to the northern portion of the Patton Village Phase III housing within RCI leased property. Based on the RCI residential development design, this Alternative would result in a net loss of an area planned for 27 future housing units. The proposed limits of disturbance (LOD) for this location is approximately 24 acres.

3.3.2 Alternative C (the Preferred Alternative)

This site is adjacent to the northeastern portion of Patton Village Phase III housing bordered by Custer Road to the east. This Alternative would result in a net loss of an area planned for 9 housing units based on the RCI residential development design. The proposed LOD for this location is approximately 29 acres.

3.3.3 Alternative D

This site is located approximately 0.1 miles from the northern portion of the Patton Village Phase III housing. This Alternative would result in a net loss of an area planned for 42 future housing units based on the RCI residential development design. The proposed LOD for this location is approximately 20 acres.

3.3.4 No Action Alternative

For the No Action Alternative, no new elementary school would be constructed adjacent to the Patton Village housing area. The pre-K through grade 5 student population residing in Patton Village would continue to be bused to other elementary schools in the Main Post Cantonment Area. This Alternative would not meet the Purpose and Need as discussed in **Section 1.2**, but is required per NEPA regulations for decision makers and the public to evaluate potential effects of the Proposed Action by comparing impacts of all the Alternatives with baseline conditions.

3.4 ALTERNATIVES ELIMINATED FROM FURTHER CONSIDERATION

3.4.1 Alternative B

This site Alternative consists of approximately 32 acres and is located to the northeast of Patton Village across Custer Road and directly adjacent to the Sand Hill recruit reception center and training field as illustrated in **Figure 3**. This proposed site is not within the RCI leased property boundary, and therefore would not result in a net loss of any housing units per RCI's residential development design. Although this Alternative location meets a number of the screening criteria, it does not meet the criteria for pedestrian safety and has the potential for incompatible land uses.

As this site is located across a major thoroughfare into Sand Hill, this Alternative would potentially require a pedestrian bridge over the road to help ensure the safety of students and parents walking to school. Custer Road is currently heavily traveled as it is a main access point to Sand Hill from off-Post, and is being considered to become a four-lane road in the future. The widening of Custer Road would only serve to create a greater hazard to pedestrian safety.

The land use for this Alternative site is currently designated as "training and ranges" per Fort Benning's Real Property Master Plan (USACE 2011c). This potentially creates an incompatible land use for the placement of a school at this location. All other schools on the Installation are within areas designated as "community" or "residential" and are not directly adjacent to areas that are specifically designated for training or troop facilities. A school on this Alternative location would be within visual and audible range of the new recruit reception center and training field which may include disruptive activities to the school's operations. This factor in conjunction with pedestrian safety issues eliminated this Alternative from further consideration.

3.4.2 Renovation of the Current White Elementary School

This Alternative was not carried forward for analysis as it did not meet a number of the screening criteria used to determine reasonable alternatives for the Proposed Action. This Alternative would not reduce the need for busing of Patton Village students to other school on-Post. The current White ES, even with extensive repairs, and upgrades, would not meet the design criteria of the DoDEA 21st Century Education Specifications in terms of space quantity, functional adjacencies, and required spatial relationships. Continued use of this facility would not satisfy the 21st Century Learning Objectives that DoDEA requires of military school systems to provide innovation in education and curriculum, use of technology, and would not meet the requirements for sustainability and energy conservation.

Although the continued use of this facility for educational purposes would be compatible with nearby land uses, economic analysis indicated renovation costs would be over $5.4 million (see **Appendix B).** When compared to the cost of demolition (as summarized in **Table 2**), this option is not economically feasible. Therefore, due to DoDEA education specifications and costs associated with renovation of the current White ES to continue to operate as an elementary school, this was considered not to be a reasonable Alternative.

3.4.3 Conversion of the Current White Elementary School for an Alternate Use

As defined by Army Real Property regulations, Installation facilities are assigned Category Codes based on the functional use (AR 405-45). Conversion of facilities for an alternate use would require a change from an existing facility code to a different facility code that reflects the new functional use. Prior to the conversion of a facility for an alternate use, the current White ES would be required to be renovated and upgraded to the standards of its previous use. Reuse considerations would include the probable need for completely new mechanical, electrical, heating, air conditioning, life safety systems and the inclusion of other systems that are needed to support the selected reuse of the structure. After renovation was completed, the facility would then have to be converted to meet its new functional use.

One proposed reuse for the current White ES is administrative space for the staff of the DoDEA District Superintendant's Office (DSO). The present DSO offices are located off of Custer Road, approximately 2 miles northeast of White ES. The DSO facility footprint includes offices, storage areas, and overhead protection that total approximately 39,000 square feet. As the facilities that comprise the current White ES campus consist of 56,664 square feet, there would be sufficient space to accommodate the needs of DSO staff and equipment. However, this proposed conversion of the current White ES would result in an increase of already overabundant administrative office space. This in turn could affect future military funding for Sustainment, Renovation, and Modernization (SRM) for other administrative facilities on-Post. Additionally, the conversion to administrative office space would incur a major cost to the Installation as discussed below and in the previous section (**Section 3.4.2**). Therefore, this proposed functional use is no longer discussed in this document.

Based on Installation Real Property Planning and Analysis System and Facility Planning System reports, there exists a shortage of General Instruction Buildings (GIB) at Fort Benning. Therefore, the reuse of White ES as a GIB was determined to be the most efficient use of the facility. A GIB is a general purpose facility intended for use by Total Army School System (TASS) schools which is a composite school system that includes Army National Guard, U.S Army Reserve, and Active Army institutional training systems (AR 350-18). TASS conducts initial military training, reclassification training, officer, warrant officer, noncommissioned officer and Department of the Army (DA) civilian professional development training and education and functional training.

Economic analysis indicated that conversion of all nine buildings for use as a General Instruction facility would cost approximately $1.4 million. Total cost of this Alternative would be over $6.5 million (including costs for initial facility renovation) and would be the most costly Alternative to implement. Although not be considered an incompatible land use, there is no immediate need for GIBs in this particular location as the nearby WHINSEC campus is currently being renovated and converted for this functional use. This in conjunction with the costs associated with renovation and conversion make this Alternative unreasonable.

3.4.4 Partial Demolition and Conversion of Building 1050 for an Alternate Use

This Alternative consists of the renovation and conversion of Building 1050 and the demolition of all other buildings that comprise the current White ES campus. As previously discussed, the conversion of this space for a GIB would be the most efficient use for this facility. Economic analysis indicated that demolition, renovation, and conversion costs would be over $2.3 million. Based on these costs and that there is no immediate need for a GIB at this location, this Alternative was not considered reasonable.

3.4.5 Mothball Buildings for Future Use

Mothballing is the act of temporarily securing real property and its component features to reduce vandalism or break-ins. This Alternative includes two scenarios for the current White ES campus: 1) mothball the entire White ES campus for future use; or 2) mothball building 1050 for future use and demolish all other buildings of the White ES campus. Economic analysis indicated that to mothball the entire White ES would cost the Installation over $1.8 million. This analysis did not include the cost of utilities or maintenance costs to sustain the buildings during the time period for the Installation to decide on reuse possibilities. Although this option is would incur less cost than any of the other Alternatives not considered reasonable, there would still be the cost of renovation and conversion of these facilities for a different functional use. This in turn could incur an additional $6.5 million in cost (based on FY12 dollars) as previously discussed in **Section 3.4.3**.

Costs associated with the mothballing of Building 1050 alone would include demolition of all other facilities of the current White ES, utility services and maintenance, as well as renovation and conversion. Economic analysis indicated that the mothballing of Building 1050 alone would cost the Installation approximately $450 thousand. This in conjunction with demolition and renovation/conversion costs (as discussed in **Section 3.4.4**) would total over $2.7 million, and would not include the cost of utility services and maintenance until reuse decisions are made. Based on these costs and that there is no immediate need for a GIB or an alternate use being considered at this location, this Alternative was not considered reasonable.

3.5 COMPARISON OF THE POTENTIAL EFFECTS OF THE EVALUATED ALTERNATIVES

The existing condition of the environmental resources at Fort Benning potentially affected by each of the Proposed Action Alternatives is presented in **Section 4.0**. That section also presents an analysis of each Alternative's potential environmental effects to each environmental resource area and mitigation measures where appropriate. This EA evaluated 13 environmental resources for their potential to be affected by the Proposed Action Alternatives and the No Action Alternative. In accordance with CEQ regulations, this evaluation determined seven resources did not warrant further examination in the EA. The reader is referred to **Table ES-1** or **Table 3** for a summation of potential environmental effects and mitigation measures required to reduce identified impacts.

4.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

4.1 INTRODUCTION

This Section provides a description of the existing environmental and socioeconomic conditions at and surrounding the Alternatives being considered. As described in **Section 3.0**, these Alternatives include the No Action Alternative, and three Alternative site locations located north of the Patton Village residential area within Sand Hill. All of the Alternatives (except the No Action Alternative) presented in this EA include the construction of a new 125,000 square foot elementary school per the requirements of DoDEA facility specifications and learning objectives, as well as the demolition of the current White ES on Main Post.

This Section provides information that provides a baseline from which to identify and evaluate any individual or cumulative environmental and socioeconomic changes likely to result from the implementation of the Action Alternatives. The Region of Influence (ROI) of these Action Alternatives, and therefore of this EA, is relatively small and is primarily contained within the Sand Hill and Main Post Cantonment Areas.

In compliance with the NEPA, CEQ Regulation, and Army NEPA Regulation, the description of the affected environment focuses on those resources and conditions potentially subject to the effects of the Proposed Action. This is in accordance with CEQ Regulations at 40 CFR Part 1500.1(b) and 1500.4(b): "…NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail….prepare analytic rather than encyclopedic analyses."

4.2 RESOURCES ANALYZED

The rationale for dismissing certain VECs is based on the potential for impacts that are considered to be negligible or non-existent. The following subsections discuss those VECs that have been dismissed from further analysis in this EA and those that are fully analyzed. VECs not fully analyzed are described in S**ection 4.3**, and are summarized in **Table 3** at the end of that section. Resources that have been considered to present a potential impact to resources are fully analyzed in **Section 4.4**, and are summarized in **Table** 4 at the end of that section.

For the No Action Alternative, the existing environment would not change, and would not impact any VECs as discussed in this EA. Therefore, the No Action Alternative does not warrant further analysis in this document.

4.3 RESOURCES ELIMINATED FROM FURTHER ANALYSIS

4.3.1 Land Use

Land use within the approximately 2,500-acre Sand Hill Cantonment Area includes the main Reception Station for Initial Entry Training Soldiers and trainee complexes (known as the "Starships") that include dining facilities, classrooms, barracks, and physical training areas. Other Soldier community facilities include fitness and recreation centers, a swimming pool, and sport fields to support Basic Combat Training and One Station Unit Training. Until recently, land use in the Sand Hill Cantonment Area was solely for troop and community activities and Soldier training.

The western portion of Sand Hill was previously classified as "training and ranges" until 2006 when construction began as part of RCI to develop the residential housing area now known as Patton Village (USACE 1994). Now classified as "residential", this 335-acre parcel of land is separated from the Soldier training and community facilities to the east by Custer Road and is bound to the north and west by the Installation boundary. Immediately adjacent land to north is comprised of residential areas in the city of Columbus, and to the west is a green space area that is to be developed into additional housing units to complete Phase IV of Patton Village. Immediately to the south are residential housing units and the southern boundary of the Sand Hill Cantonment Area as demarcated by the four-lane divided highway of US-27/80 (Victory Drive).

The current White ES is located in a segment of the Main Post Cantonment Area that is designated as "community". The property is bound on the north and south by historic housing along two main thoroughfares of the Main Post Historic District, Baltzell Avenue and Sigerfoos Road. Adjacent lands to the west consist of historic buildings utilized for administrative functions and green space. To the east are recreational facilities and green space.

The Proposed Action, under any of the Action Alternatives, would be compatible and consistent in land use with the Sand Hill and Main Post Cantonment Areas, and the immediately adjacent land areas. The proposed Action would not result in a substantial change in land use from existing conditions. The land use designation for the newly constructed White ES would change from "residential" to "community" (personal communication, Adcock 2012). The land use of the current location of White ES would remain as "community" after demolition activities. The area will be left as green space in the Main Post Cantonment Area. Land uses both in the Sand Hill and Main Post Cantonment Areas would be consistent with current functions and therefore would not have any effects to land usage.

4.3.2 Air Quality

According to the Georgia Department of Natural Resources (GaDNR), Chattahoochee and Russell Counties are currently in attainment for all National Ambient Air Quality Standards (NAAQS) criteria pollutants. In 2009, GaDNR recommended to the US Environmental Protection Agency (USEPA) that Muscogee County, Georgia be classified as being in non-attainment for the 8-hour ozone standard (http://www.georgiaair.org/airpermit/html/planningsupport/naa.htm). Based on currently available data, however, this recommendation has not yet been accepted by the USEPA, and the area is considered to be in full attainment of the NAAQS.

The Proposed Action would result in a *negligible*, short-term localized increase in air emissions during construction and demolition activities. This would result from construction and work vehicles onsite, and the short-term generation of fugitive dust due to minor earth disturbances during construction of the new school, and demolition of the current White ES. Any increases in emissions and fugitive dust during construction and/or demolition would be *short-term*, and therefore would not result in an increase of criteria pollutants at Fort Benning or its surrounding area in the *long-term*.

Once the new ES has been constructed and is operational, Fort Benning would be required to include the estimated annual emissions from all stationary sources, (e.g. boilers, HVAC, etc.), in the Installation's Title V permit. Stationary source emissions estimated for the current White ES would be removed from the Title V permit. No long-term air quality effects are anticipated based upon the Title V permitting requirements for Fort Benning. In addition to Title V permitting, all applicable Federal and State air quality protection requirements will be implemented. Because the activities associated with the Proposed Action would constitute negligible changes to existing emissions levels, local and regional air quality would not be degraded.

On February 18, 2010, the CEQ issued draft guidance on incorporating greenhouse gas (GHG) considerations into NEPA review of federal actions. This guidance is intended to establish protocols for the analysis of the direct and indirect effects of GHG and the potential effects of climate change on the environment that may result from proposed Federal actions. The current CEQ proposal identifies annual emissions of more the 25,000 metric tons of carbon dioxide equivalent, (which includes carbon dioxide, methane, nitrous oxide, hydroflourocarbons, perflourocarbons, and sulfur hexaflouride), as the minimum level in assessing impacts on the environment and public health and safety, and for reporting emissions under the Clean Air Act (CEQ 2010).

Examples of proposals for Federal agency action that may warrant a detailed analysis and discussion of the GHG impacts of various alternatives, as well as possible measures to mitigate climate change impacts, include: 1) approval of a large solid waste landfill; 2) approval of energy facilities such as a coal-fired power plant; or 3) authorization of a methane venting coal mine (CEQ 2010). In reference to the Proposed Action, the GHG emissions resulting from construction and operations of a new ES, and demolition of the current White ES would be *negligible* based the current CEQ guidance concerning GHGs.

4.3.3 Noise

There are minor noise producing activities within the Sand Hill Cantonment Area. As Sand Hill supports the Basic Combat Training and One Station Unit Training, the majority of troop activity is focused on physical training, classroom lecture instruction, and unit maintenance facilities for vehicles and equipment. Noise producing activities within the Patton Village neighborhood and the Main Post Cantonment Area would be typical of any residential community (e.g. vehicular traffic, children playing, mowing grass, etc.), and would be negligible. Although there are firing ranges within the Main Post Cantonment Area, the closest range to the location of the current White ES is approximately 1 mile away. There are no firing ranges within the Sand Hill Cantonment Area.

Noise resulting from the use of vehicles and equipment for the construction and demolition of facilities under all of the Proposed Action Alternatives would be short-term and localized resulting in *negligible* noise effects. Construction and demolition would occur in each specific area over a short period of time, and would occur during normal business (i.e., daylight) hours. Although there are sensitive noise receptors (e.g. residential areas) adjacent to the sites of construction and demolition, no long-term noise effects would occur from these activities. Temporary increased levels of noise would terminate upon completion of construction and demolition, and the noise environment would return to pre-construction and pre-demolition conditions.

Operationally, training in the Sand Hill area would continue in the similar manner as is found under existing conditions and will be accounted for in the Installation's Operational Noise Management Plan. Noise producing activities from the new ES would not change or adversely affect the current noise environment within the Patton Village community.

4.3.4 Socioeconomics

For the purposes of this EA's analysis, socioeconomics includes population, housing, economy, employment, Protection of Children, Environmental Justice, and community facilities and services, including emergency services, of and at Fort Benning and its immediate vicinity.

The Proposed Action would have a short-term, *positive* effect on the local economy during construction and demolition. This includes the potential for additional jobs and subsequent increased local spending by the workforce. None of the Action Alternatives would induce long-term population growth within the Installation or the surrounding communities, nor have an adverse effect on housing. The socioeconomic effects from this proposed action would be negligible, and are consistent with those effects presented in the MCoE Final EIS. Therefore, socioeconomics have been eliminated from further discussion in this EA.

In 1994, President Clinton signed EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. This EO requires Federal agencies to identify any disproportionately high and adverse human health or environmental effects on low income and/or minority communities. As the Proposed Action is limited to the Sand Hill and Main Post Cantonment Areas, there would be no effects to minority or low-income populations. Therefore, there are no effects to Environmental Justice issues and are not further discussed in this EA.

Because children may suffer disproportionately (i.e., more so than adults, due to physiological and behavioral differences) from environmental health risks and safety risks, EO 13045, *Protection of Children From Environmental Health Risks and Safety Risks*, was signed by President Clinton in 1997. The intent of EO 13045 was to prioritize the identification and assessment of environmental health and safety risks that may affect children, and to ensure that Federal agencies' policies, programs, activities, and standards address these environmental and safety risks to children.

The potential of the Proposed Action to cause environmental and safety risks to the school age population of the Patton Village or the Main Post community is negligible. All construction and demolition activities areas would be carefully monitored and controlled for only authorized access, (e.g. construction workers, project managers, mitigation monitors, etc.), therefore, no effects to children would occur. Training activities within the Sand Hill Cantonment Area would not pose and environmental or safety risks to children once the new White ES becomes operational.

4.3.5 Utilities

Columbus Water Works, ATMOS Gas, and Flint Energies own and manage the water and sewer, gas, and electric utilities, respectively, on Fort Benning. The sanitary sewage collection system connects to the Columbus Water Works treatment plant (USACE 2009). Flint Energies supplies electricity to Fort Benning through overhead and/or buried transmission lines, and ATMOS Gas provides gas through underground pipelines.

Under the Proposed Action, utility systems (power, electric, sewer, and potable/waste water) would need to be connected to new ES. Detailed electrical engineering designs have not been performed, nor have specific demands been determined; however, the increase in the building footprint would slightly increase the demand for electricity, gas, and water and sewer services. However, demolition of the current White ES would offset the demand of a new facility. The new White ES would be required to adhere to the Army mandate to follow the guidelines for energy efficiency per the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED).

Therefore, all of the Proposed Action Alternatives would result in *negligible* impacts to utilities in the short-term (during construction activities), or in the long-term (during operations).

4.3.6 Transportation and Traffic

The primary access road into Sand Hill from outside and within the Installation is Custer Road. Custer road can be accessed from the city of Columbus from the north, and from the south via US-27/80 (Victory Drive) or from Main Post. There are two Access Control Points (ACPs) on Custer Road for all external traffic coming into the Installation. Traffic studies conducted for BRAC in 2007 indicated that of the 7 ACPs across the Installation, the northern ACP on Custer Road is the second most utilized entrance (USACE 2007).

Custer Road also provides three entrances to the Patton Village housing area. The street layout within Patton Village was designed as four neighborhoods along the topography of the site and linked by large circular green spaces and curving streets. The Soldier training area of Sand Hill to the east of Patton Village is also primarily accessed by Custer Road both on- and off-Post. The major thoroughfares are 2nd Infantry Division Road and 11th Airborne Division Road (which both terminate into Custer Road to the east and Moye Road to the west); and 2nd Armored Division Road which runs eastward towards the Malone Range Complex.

On Main Post the primary access road to the current White ES is Sigerfoos Road which traverses through a number of historic residential areas and terminates to the southwest into a major on-Post thoroughfare Dixie Road. Sigerfoos Road also intersects with South Lumpkin Road which also runs through historic housing, but also serves as a major egress road to Benning Boulevard and off-Post. To the north of the current White ES is Baltzell Avenue, which primarily serves as a connector road from the Installation's golf course to South Lumpkin Road.

For all of the Action Alternatives, short-term, localized, *negligible* effects to transportation and traffic flow within the Sand Hill and Main Post Cantonment Areas would occur. This would be temporary increase in vehicular traffic, (e.g. heavy equipment, dump trucks, etc.), during construction and demolition activities. Once the new ES is constructed near Patton Village, transportation and traffic flow in the Sand Hill and Main Post Cantonment Areas could experience long-term, beneficial impacts as the majority of school-age children could walk to school rather than being bused to schools on Main Post.

Due to the short-term, localized, *negligible* effects to transportation in the Sand Hill and Main Post Cantonment Areas, this resource is not carried forward in the EA.

4.3.7 Airspace

There would be no effects to airspace under any of the Action Alternatives. Construction and demolition activities would not affect the current airspace designations and all flights and associated activities would occur on other parts of the Installation. Therefore, no further discussion of airspace is warranted in this EA.

Table 3. VECs Not Fully Analyzed for the Proposed Action Alternatives.

VEC	NO ACTION ALTERNATIVE	ALTERNATIVE A	ALTERNATIVE C (PREFERRED)	ALTERNATIVE D
Land Use	No effects.	No effects.	No effects.	No effects.
Air Quality	No effects.	*Negligible, short-term* localized increase in air emissions during construction and demolition activities. *No* long-term effects.	*Negligible, short-term* localized increase in air emissions during construction and demolition activities. *No* long-term effects.	*Negligible, short-term* localized increase in air emissions during construction and demolition activities. *No* long-term effects.
Noise	No effects.	*Negligible, short-term* localized, effect during construction and demolition. No long-term noise effects.	*Negligible, short-term* localized, effect during construction and demolition. No long-term noise effects.	*Negligible, short-term* localized, effect during construction and demolition. No long-term noise effects.
Socioeconomics (including Environmental Justice and Protection of Children)	No effects.	Short-term, *positive* impact for dollars being spent within the community. No effects to protection of children or environmental justice.	Short-term, *positive* impact for dollars being spent within the community. No effects to protection of children or environmental justice.	Short-term, *positive* impact for dollars being spent within the community. No effects to protection of children or environmental justice.
Utilities	No effects.	No effects.	No effects.	No effects.
Transportation and Traffic	No effects.	*Negligible, short-term* localized effect during construction and demolition. *Long-term, beneficial* effects through reduced busing operations.	*Negligible, short-term* localized effect during construction and demolition. *Long-term, beneficial* effects through reduced busing operations.	*Negligible, short-term* localized effect during construction and demolition. *Long-term, beneficial* effects through reduced busing operations.
Airspace	No effects.	No effects.	No effects.	No effects.

4.4 RESOURCES FULLY ANALYZED

The following subsections describe the existing conditions of those VECs found within Fort Benning and the Sand Hill and Main Post Cantonment Areas that were retained for further analysis. Each of these VECs has the potential to be affected by the Proposed Action Alternatives. Under the No Action Alternative, there would be no effect to any of the VECs analyzed as the Proposed Action would not be implemented, therefore, the No Action Alternative is not discussed for the following analyzed VECs.

4.4.1 Soils

Two basic soil provinces make up Fort Benning: the Georgia Sand Hills and the Southern Coastal Plains. Based on the US Department of Agriculture, Natural Resource Conservation Service's (USDA NRCS) soil survey “K factor," most of the soils found at Fort Benning, with the exception of southern portions of the Installation, are identified as low to moderately erodible when undisturbed. The degree of erodibility is determined by physical factors such as drainage, permeability, texture, structure, and percent slope. The

rate of erodibility is based on the amount of vegetative cover, climate, precipitation, proximity to water bodies, and land use. Disruptive activities accelerate the natural erosion process by exposing the erodible soils to precipitation and surface runoff (USACE 2009).

Prime farmland soils, protected under the Farmland Protection Policy Act (7 USC 4201; FPPA of 1981, as amended) are not discussed in this EA, as no lands within Fort Benning have been classified as prime farmland. Therefore, there is no further discussion of prime farmland in this EA.

4.4.1.1 Affected Environment

The Region of Influence (ROI) for soils analysis includes the Sand Hill and Main Post Cantonment Areas, that could be directly and/or indirectly impacted by soil erosion and sedimentation from the Proposed Action.

The common soil types found within Sand Hill and Main Post consist of the Nankin, Troup, Bibb, Lucy, Fuquay, and the Cowarts-Ailey. Most of the soils found at Fort Benning, with the exception of the southern portions of the Installation, are identified as having a low to moderate erosion hazard when left undisturbed. These soils types are generally prone to erosion when disturbed (e.g., such as through construction). **Appendix C** provides a brief description of soils within the ROI.

4.4.1.2 Environmental Consequences of the Proposed Action Alternatives

The acreages for the limits of disturbance for all of the Proposed Action Alternatives represent the maximum, worst-case scenario based on property and project boundaries. The total amount of earth disturbances for all of the Proposed Action Alternatives, (as discussed in **Section 3.3**), will be determined through the final Geographic Information System (GIS) based design of the new ES, which will be dependent upon topographical features at each proposed site, utility tie-ins, and the final Architectural and Engineering (A/E) facility design. Minor earth disturbances are expected from demolition activities associated with the current White ES, which encompasses approximately 11 acres. Demolition will include the removal of buildings, supporting facilities, site improvements (such as parking lots and walkways), and underground structures and utilities.

Impacts to soils are considered significant if ground disturbance or other activities violate applicable Federal or State laws and regulations, and failure to receive applicable state permits (e.g., National Pollution Discharge Elimination System [NPDES] construction permit) prior to initiating the Proposed Action. Potential adverse effects to soils could result from ground disturbance leading to soil erosion, sedimentation, and pollutants such as hazardous materials and/or waste.

Under all of the Proposed Action Alternatives, tributary stream areas will be avoided during any land disturbing activities as practicable; however, if disturbance to these areas is deemed unavoidable the appropriate permits (e.g., stream buffer variance [SBV]) will be obtained. Soil erosion and sedimentation controls will be put in place, per the Clean Water Act, the Georgia Erosion and Sedimentation Control Act, and appropriate NPDES permits will be obtained in prior to any construction activities.

Under all of the Proposed Action Alternatives, *short-term, minor adverse effects* to soils within the ROI could occur during construction and demolition phases. No long-term effects to soils would be anticipated for any of the Alternatives as all ground disturbances at the proposed sites, including the site of demolition, would be re-vegetated and stabilized.

4.4.1.3 Mitigation Measures

For any of the Proposed Action Alternatives, mitigation measures would be implemented as part of Federal and State permitting requirements to minimize the effects to soil resources during construction and demolition activities. Application of Federal and State erosion control measures and NPDES permitting requirements to include preparation of an Erosion, Sedimentation and Pollution Control Plan (ESPCP) detailing erosion and sedimentation control Best Management Practices (BMPs), and a minimum 25-foot surface water setback to minimize soil impacts during construction are required prior to construction and demolition activities. Additionally, adherence to Federal and State laws and regulations would minimize impacts due to operations and maintenance activities in the long-term. Therefore, no additional mitigation measures are warranted.

4.4.2 Water Resources

This subsection provides a description of the water resources and wetlands within the limits of the Proposed Action Alternatives. Water resources include both surface water and groundwater. For the purposes of this EA, no surface waters or wetlands were delineated in the field specifically for any of the Action Alternatives. All information was obtained through Fort Benning environmental documentation and Installation GIS data, and National Wetlands Inventory (NWI) surveys. Water resources discussed in this EA include Surface Water, Groundwater, Floodplains, and Wetlands which could potentially be affected by demolition, construction or operational activities associated with the Proposed Action.

Section 305(b) of the CWA requires States to assess and describe the quality of its surface waters every two years in a report called the 305(b) report. Section 303(d) of the CWA requires States to submit to the USEPA a list of all of the waters that are not meeting their designated uses and that need to have a Total Maximum Daily Load (TMDL) established for the water body. As there are no surface waters within the Proposed Action Alternatives that are listed on the 303(d) list, this subject is not discussed further in this EA.

Fort Benning is located within the Coastal Plain Hydrogeologic province. The principal groundwater source for Fort Benning is the Cretaceous aquifer system. Groundwater depths at the Installation are variable and range from two feet near Upatoi Creek to more than 100 feet in surrounding elevations. On average, depths in the main cantonment areas vary from 20 to 40 feet. As implementation of any of the Proposed Action Alternatives would not have any effects to groundwater resources, this subject is not discussed further in this EA.

EO 11988, *Floodplain Management*, requires Federal agencies to determine whether a proposed action would occur in a floodplain and instructs Federal agencies to consider the risk, danger, and potential impacts of locating projects within floodplains. As implementation of any of the Proposed Action Alternatives would not have any effects to delineated floodplain areas, this subject is not discussed further in this EA.

Wetlands are defined by the CWA as areas “inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and under normal circumstances do support, the prevalence of vegetation typically adapted for life in saturated soil conditions” (USDI, 1992). Wetlands are protected under Sections 401 and 404 of the CWA and other regulations. Disturbances to wetlands that cannot be avoided need to comply with the permitting requirements of Section 404 of the CWA. Wetland information presented in this EA is based on available GIS data as a result of previous Installation wetland delineations, and NWI mapping. No onsite wetland delineations were conducted specifically in support of this EA.

4.4.2.1 Affected Environment

The ROI for water resources and wetlands analysis includes the Sand Hill and Main Post Cantonment Areas that could be directly and/or indirectly impacted by soil erosion and sedimentation from the Proposed Action.

The Sand Hill Cantonment Area drains via tributaries to Upatoi Creek to the south. There are no surface water features at the current White ES location on Main Post. The closest surface water body is an unnamed tributary approximately 500 feet away that drains north to the Upatoi Creek.

4.4.2.2 Environmental Consequences of the Proposed Action Alternatives

There is one unnamed stream that runs through all of the Proposed Action Alternative sites in Sand Hill. This ephemeral stream feeds into a larger tributary to the west and then traverses south to the Upatoi. Based on Fort Benning GIS data, this identified stream could potentially be impacted with the implementation of any of the Proposed Actions Alternatives. **Figure 3** illustrates the location of the Proposed Action Alternatives in relation to the delineated stream bed. Based on the LOD of each Alternative, (as discussed in **Section 3.3**), Alternative A could potentially effect 822 linear feet of stream. Alternative D could potentially effect 505 linear feet of stream, whereas Alternative C (the Preferred Alternative), could potentially effect 110 linear feet.

The threshold level of significance for water quality is the violation of applicable Federal or State laws and regulations, such as the CWA and NPDES permitting, and if the Proposed Action would result in a violation of standard water quality conditions or criteria. The Clean Water Act also addresses hazardous materials and waste through Spill Prevention, Control, and Countermeasure (SPCC) and NPDES requirements. Adverse effects to water resources (including water quality) could result from erosion, runoff, and surface contamination from pollutants such as hazardous materials and/or waste. Effects to water resources are most likely to occur during rain events during construction and demolition activities.

Based on Installation wetland delineations and NWI mapping, no wetlands have been identified within any of the Proposed Action Alternatives. However, prior to project implementation, site specific field investigations will be required to determine the presence of wetlands for development of the project's Erosion, Sedimentation, and Pollution Control Plan (ESPCP). If wetlands are determined to be present, the project will require applicable permitting per Section 404 of the CWA. No effects to wetlands would be anticipated for any of the Alternatives.

Under any of the Action Alternatives, *short-term, minor adverse effects* to surface water resources within the ROI could occur during construction phase within Sand Hill. No long-term effects to water resources would be anticipated for any of the Alternatives as all of the sites, including the site of demolition, would be re-vegetated and stabilized.

4.4.2.3 Mitigation Measures

Adherence to Federal and State requirements and NPDES permitting requirements to include preparation of an ESPCP detailing erosion and sedimentation control BMPs for implementation would minimize the effects to water resources. A minimum 25-foot surface water setback (from the edge of wrested vegetation) to minimize soil impacts during construction would be required prior to any construction activities. No construction equipment or construction would occur within this buffer, in accordance with

the Georgia Erosion Sedimentation Act (GESA), with the exception of perpendicular utility crossings (if needed). If wetlands are found are found within the chosen Alternative, adherence to the mitigation provision in the CWA Section 404 permit would reduce impacts. Therefore, no additional mitigation measures are warranted.

4.4.3 Biological Resources

Biological resources include native or naturalized plants and animals and the habitats in which they occur. The dominant plant species make up plant communities, which in turn define the vegetation of an area. Habitat is defined as the area or environment where the resources and conditions are present that cause or allow a plant or animal to live there (Hall *et al.* 1997). Fort Benning manages and conserves its biological resources through its Integrated Natural Resources Management Plan (INRMP). All proposed actions on the Installation are considered for their potential effects through the NEPA process, and in accordance with various Executive Orders, USFWS Biological Opinions, Memorandums of Understanding, and State and Federal Endangered Species Acts. Biological resources discussed in this EA include Vegetation, Wildlife, Migratory Birds, and Threatened and Endangered Species, which could potentially be affected by demolition, construction or operational activities associated with the Proposed Action Alternatives.

4.4.3.1 Affected Environment

The ROI for biological resources is the Sand Hill and Main Post Cantonment Areas. Vegetation in the undeveloped areas of Sand Hill consists of hardwood and pine trees, and is heavily wooded. The developed areas of Sand Hill consist more of open grassed areas between buildings and training facilities. Vegetation in the Main Post Cantonment Area primarily consists of hardwood tree species, decorative shrubs around buildings, and open grassed areas for green space.

The built-up or cantonment areas does not, by nature, provide good habitat for wildlife. Development and human activity have forced native animal populations to less disturbed and less active areas of the Installation, such as training areas. Wildlife species common within the Sand Hill and Main Post Cantonment Areas include whitetailed deer, gray squirrel, eastern cottontail rabbit, raccoon, striped skunk, groundhog, and mourning dove (USACE 2005). The Proposed Action will not have any adverse effects to aforementioned wildlife, and/or migratory birds, therefore this is not discussed further.

The only Federally listed species potentially impacted in the ROI is the RCW. The undeveloped portion of the Patton Village neighborhood includes a pine stand of approximately three and a half acres with pines aged 8 years old. However, this pine stand is not considered to be part of current RCW foraging habitat, nor is it considered necessary to reach RCW recovery goals (personal communication, Barron 2012). This pine stand is not contiguous to any other designated RCW foraging habitat, and is approximately one-half mile away from the nearest foraging habitat partition. Therefore, the removal of these pine trees as a result of any of the Proposed Action Alternatives will not impact any current or future RCW partitions on Fort Benning. There is no designated RCW habitat (current or potential) within the Main Post Cantonment Area as it is heavily developed and urbanized. Therefore, there would be no impacts to the RCW population at this location. There are no State Listed Species indentified within Patton Village or the Main Post Cantonment Area. As there would be no adverse impacts to State and Federally Listed species, this is not discussed further.

4.4.3.2 Environmental Consequences of the Proposed Action Alternatives

Impacts would be considered significant if one of more of the following conditions would result:

- Substantial loss or degradation of habitat or ecosystem functions (natural features and processes) essential to the persistence of native plant and animal populations, including migratory birds

- Disruption of a Federally listed species, its normal behavior patterns, or its habitat that substantially impedes the Installation's ability either to avoid jeopardy or conserve and/or recover the species

At the site of new construction, vegetation removal would be within the LOD as discussed in **Section 3.3**. These acreages represent the maximum amount vegetation removal to accommodate for the facility footprint, utility tie-ins, and AT/FP requirements. For all of the Proposed Action Alternatives there would be *minor, short-term* adverse effects to vegetation in the Sand Hill ROI. Vegetation removal as part of the current White ES demolition activities would be minimal. As the area is to be turned into green space, there would be a beneficial effect to vegetation in the Main Post ROI.

4.4.4.3 Mitigation Measures

No mitigation is necessary; however, the project designers should consider the following:

- Limit disturbed areas as much as possible through design

- Use native trees and other vegetation in open spaces and around storm water management structures.

- Employ tree protection devices at the sites of construction and demolition.

4.4.4 Cultural Resources

Cultural resources include: historic properties as defined in the NHPA, cultural items as defined in the NAGPRA, archaeological resources as defined in the Archaeological Resources Protection Act (ARPA), sacred sites as defined in EO 13007 to which access is provided under the American Indian Religious Freedom Act (AIRFA), collections as defined in (36 CFR Part 79), the regulation for *Curation of Federally Owned and Administered Collections*, and the *Presidential Memorandum on Government-to-Government Relations with Native American Tribal Governments*. These requirements define the basis of the Army's compliance responsibilities for management of cultural resources. Regulations applicable to the Army's management of cultural resource also include those promulgated by the Advisory Council on Historic Preservation (ACHP) and the National Park Service, and as prescribed in Army Regulation (AR) 200-1.

Management of cultural resources on Fort Benning is accomplished through the Installation's Integrated Cultural Resources Management Plan (ICRMP 2008). Fort Benning has also adopted the Army Alternate Procedures (AAP) for implementing the NHPA in an effort to improve efficiency in the Installation's Cultural Resources Management (CRM). The Historic Properties Component (HPC) of the ICRMP: 1) provides Standard Operating Procedures (SOPs) for assessing the Proposed Action and the potential effects on the Installation's historic properties; 2) replaces the NHPA Section 106 procedures (DA 2012);

and 3) uses NEPA documentation to satisfy most consultation requirements with the Tribes and State Historical Preservation Offices. Cultural resources found within the boundaries of Fort Benning include: archaeological resources, architectural resources and historic districts, cemeteries, and Native American resources.

4.4.4.1 Affected Environment

The ROI (or Area of Potential Effect [APE]) for cultural resource analysis includes the Sand Hill Cantonment Area, as well as the Main Post Cantonment Area that could be directly and/or indirectly affected by the Proposed Action. There are no known archaeological sites or cemeteries located within the Proposed Action Alternatives, and no Tribe has identified a property of traditional religious or cultural importance on Fort Benning managed lands. As there will be *no* adverse effects to archaeological sites, cemeteries, or Tribal religious or cultural resources as a result of the Proposed Action being implemented, these topics are not discussed further in this EA.

The impact analysis for cultural resources focuses on the properties that are listed on or considered eligible for the National Register of Historic Places (NRHP), and properties that are considered to be contributing resources to a historic district. Under the NHPA, only cultural resources included in or eligible for inclusion on the NRHP, defined as 'historic properties', warrant consideration with regard to adverse impacts from a Proposed Action. Historic properties generally must be more than 50 years old to be considered for protection under the NHPA. To be considered eligible for the NRHP, cultural resources must meet one or more criteria as defined in 36 CFR 60.4. These criteria include association with an important event, association with a famous person, embodiment of the characteristics of an important period in history, or the ability to contribute to scientific research. Historic properties may be buildings, structures, historic districts, or objects.

Since 1987, four architectural surveys have been conducted of Fort Benning's Cantonment Areas and other developed areas. As a result of these surveys, it has been determined that there are three distinctive districts on the Installation, of which one is the Main Post Historic District (MPHD). NRHP nominations for these districts are in process, and are treated as though they are listed (USACE 2009). The current White ES has been designated as a contributing cultural resource to the MPHD. As the majority of the school buildings and facilities were constructed in 1961, White ES could be considered eligible for the NRHP as it has reached the 50-year threshold for protection under the NHPA.

The current White ES (Building 1050) is named after First Lieutenant Edward Ansel White (US Army). Lieutenant White was posthumously awarded the Distinguished Service Cross for extraordinary heroism in action in the Korean War on August 2, 1950. Although memorialization of a building does not preclude a designation as eligible for inclusion on the NRHP, there are other contributing factors to its potential eligibility. Additionally, the school was designed by local architects J.N. Pease and Francis Daves in contrast to other DoD schools on Fort Benning and other military Installations (personal communication, Perry 2012). Therefore, the current White ES is treated as if it were eligible for the NRHP, and will require surveys, documentation, and potential reuse analysis prior to demolition to adhere to the requirements of the NHPA and Fort Benning's implementation of Army Alternate Procedures as approved by the Georgia State Historic Preservation Office (SHPO). The economic analysis for potential reuse of the current White ES is included in **Appendix B.**

4.4.4.2 Environmental Consequences of the Proposed Action

As all of the Proposed Action Alternatives consist of the construction of a new ES in the Patton Village neighborhood, and demolition of the current White ES in the Main Post Cantonment Area, the environmental consequences are consistent among all the Proposed Action Alternatives analyzed in this EA.

An alternative would have a significant effect on cultural resources if it would:

- Result in damage, destruction, or demolition to a building that is eligible or listed on the NRHP (i.e., an historic property), and that cannot be fully mitigated.

- Result in any adverse visual impact to an eligible or listed historic district that cannot be mitigated

There would be *no* effects to architectural resources or historic districts within the Sand Hill Cantonment Area, as there are no known cultural resources at this location. Impacts to cultural resources within the Main Post Cantonment Area from the demolition of the current White ES would be *adverse* without mitigation.

4.4.4.3 Mitigation Measures

Alternatives not carried forward, (as discussed in **Section 3.4**), could have acted as mitigation measures for impacts to cultural resources due to demolition. In summary, renovation of current facilities for continued use as an elementary school was not feasible per the current design standards of DoDEA schools. Renovation and conversion of such facilities for reuse based on Installation and mission needs was considered. However, economic analysis of facility reuse indicated that this was not economically feasible, and would not meet current mission needs. Therefore, demolition of White Es and its ancillary facilities was deemed the most cost effective option.

Adverse effects to cultural resources, due to demolition of historically eligible structures, would be fully mitigated by implementing Army Alternative Procedures to identify and implement the appropriate action. HABS/HAER documentation would be required to be prepared by Fort Benning and submitted to the Georgia SHPO prior to the demolition of eligible structures, and would result in *no* adverse effects.

4.4.5 Hazardous and Toxic Materials and Waste

Hazardous materials and waste are identified and regulated primarily by the Comprehensive Environmental Response, Compensation, and Liability Act; the Occupational Safety and Health Act; the Resource Conservation and Recovery Act (RCRA); the Federal Insecticide, Fungicide, and Rodenticide Act; and the Emergency Planning and Community Right-to-Know Act. Hazardous materials have been defined to include any substance with special characteristics that could harm people, plants, or animals when released. Various state laws also regulate the management and disposal of hazardous materials and waste.

Hazardous waste is defined in the RCRA as any “solid, liquid, contained gaseous or semisolid waste, or any combination of wastes that could or do pose a substantial hazard to human health or the environment.” Waste may be classified as hazardous because of its toxicity, reactivity, ignitibility, or corrosivity. In addition, certain types of waste are “listed” or identified as hazardous in 40 CFR 263.

4.4.5.1 Affected Environment

Hazardous and Toxic Materials and Waste (HTMW) exist within the Sand Hill Cantonment Area and consist of, but are not limited to, asbestos and lead-based paint in older buildings, regulated wastes, petroleum products, and Solid Waste Management Areas/Units (SWMU). The area of Sand Hill that has been developed as Patton Village did have an identified SWMU in the Phase I development footprint which consisted of construction debris. This SWMU (FTBN-032) was assessed in 1994 under an Installation-wide RCRA facility investigation report (CHPPM 1994). It was determined that "No Further Action" was required at this site since there was no identified contamination migration. The related construction debris was removed during the development of Patton Village. Based on examination of existing Fort Benning HTMW data, including mapping of known HTMW areas, the proposed new construction under all of the Action Alternatives would not be located within an area known to be contaminated with or to contain HTMW (personal communication, Williams 2012).

As part of all the Proposed Action Alternatives, 9 buildings and structures that comprise the current White ES on Main Post have been slated for demolition (see **Table 1** for the demolition list). As the majority of these facilities were constructed in 1961, it is assumed that lead-based paint (LBP) and asbestos containing materials (ACM) are present. There are no known SWMUs at the current school location which is immediately adjacent to areas of Main Post housing, administrative offices, and child development and recreational facilities. The closest SWMU to this location is approximately one-third of a mile to the southwest.

4.4.5.2 Environmental Consequences of the Proposed Action Alternatives

Current operations in the training areas of Sand Hill, Patton Village and the construction and operation of the new White ES would have *negligible* impacts to HTMW. There would minor storage and use hazardous materials such as petroleum, oil and lubricants, cleaning agents, paints, adhesives, herbicide and pesticide, and other products for household and school maintenance.

All of the Action Alternatives include the demolition of 9 buildings and structures totaling 56,664 square feet. Impacts of the Proposed Action Alternatives would be considered significant if they present a substantial risk of release of hazardous materials/wastes that could create a potential public health hazard to people or the environment and/or if existing storage and disposal facilities could not adequately serve the waste handling requirements.

As previously discussed, LBP and ACM are presumed to be present due to the construction date of these facilities. All buildings and structures will be required to be inspected for the presence of LBP and ACM prior to any demolition activities. The state of Georgia requires submittal of an Asbestos Project Notification form 10 days prior to any demolition activities. Abatement of LBP and ACM, and disposal of wastes generated during demolition will be performed in accordance with all applicable Federal, State and Army regulations. There would be no need for additional municipal solid or hazardous waste disposal facilities, therefore there would be *minor* effects resulting from demolition and disposal activities of wastes generated from the Action Alternatives.

In the short-term, the quantity of hazardous materials such as Petroleum, Oil, and Lubricants (POLs) would increase in support of the construction activities. Quantities of various fuels in excess of current operating demand would be required for construction and demolition activities due to the use of heavy equipment. In the long-term, the effects to HTMW would be *negligible* for regular maintenance operations of the new school.

The risk of uncontrolled release of hazardous substances during construction and long-term operation would be minimized by following applicable Federal and State laws and regulations and Army policy for storage of hazardous materials.

If the Proposed Action is implemented, adherence to existing material and waste management plan and procedures for handling, storage, and disposal of these substances would preclude any long-term, adverse impacts. In summary, it is anticipated that if the any of the Proposed Action Alternatives were implemented, there would be both *minor, short- term* adverse effects resulting from hazardous material disposal from demolition activities, but *negligible* effects from hazardous material storage and handling during construction activities and operations.

4.4.5.3 Mitigation Measures

Adherence to Federal and State laws and regulations would minimize impacts due to demolition, construction, and maintenance operations activities in the long-term. Therefore, no additional mitigation measures are warranted.

Table 4. Comparison of Potential Effects to VECs Fully Analyzed for the Proposed Action Alternatives.

VEC	NO ACTION ALTERNATIVE	ALTERNATIVE A	ALTERNATIVE C (PREFERRED)	ALTERNATIVE D
Soils	No effects.	*Minor, short-term* adverse effects due to potential erosion during construction. Effects would be reduced through compliance with NPDES requirements. No *long-term* adverse effects as site would be revegetated and stabilized.	*Minor, short-term* adverse effects due to potential erosion during construction. Effects would be reduced through compliance with NPDES requirements. No *long-term* adverse effects as site would be revegetated and stabilized.	*Minor, short-term* adverse effects due to potential erosion during construction. Effects would be reduced through compliance with NPDES requirements. No *long-term* adverse effects as site would be revegetated and stabilized.
Water Resources	No effects.	*Minor, short-term* adverse effects during construction. Effects would be reduced through compliance with NPDES requirements.	*Minor, short-term* adverse effects during construction. Effects would be reduced through compliance with NPDES requirements.	*Minor, short-term* adverse effects during construction. Effects would be reduced through compliance with NPDES requirements.
Biological Resources	No effects.	*Minor, short-term* adverse effects from removal of 24 acres of trees and vegetation. No adverse effects to any Federal or State-listed species, their habitat, or migratory birds.	*Minor, short-term* adverse effects from removal of 29 acres of trees and vegetation. No adverse effects to any Federal or State-listed species, their habitat, or migratory birds.	*Minor, short-term* adverse effects from removal of 20 acres of trees and vegetation. No adverse effects to any Federal or State-listed species, their habitat, or migratory birds.

Cultural Resources	No effects.	*No* adverse effects from new construction. Adverse effects from demolition of eligible historic buildings will be fully mitigated resulting in *no* adverse effects. Mitigation of impacts through HABS/HAER documentation.	*No* adverse effects from new construction. Adverse effects from demolition of eligible historic buildings will be fully mitigated resulting in *no* adverse effects. Mitigation of impacts through HABS/HAER documentation.	*No* adverse effects from new construction. Adverse effects from demolition of eligible historic buildings will be fully mitigated resulting in *no* adverse effects. Mitigation of impacts through HABS/HAER documentation.
Hazardous & Toxic Materials and Waste	No effects.	*Negligible* adverse effects from construction and operations. *Minor, short-term* adverse effects from demolition and disposal.	*Negligible* adverse effects from construction and operations. *Minor, short-term* adverse effects from demolition and disposal.	*Negligible* adverse effects from construction and operations. *Minor, short-term* adverse effects from demolition and disposal.

5.0 CUMULATIVE EFFECTS

5.1 INTRODUCTION

As defined by CEQ's NEPA Regulations (40 CFR Part 1508.7), cumulative effects are those which "result from the incremental impact of the Proposed Action when added to other past, present, and reasonably foreseeable future actions, without regard to the agency (Federal or non-Federal) or individual who undertakes such other actions." Cumulative effects analysis captures the effects that result from the Proposed Action when considering the effects of other actions taken during the duration of the Proposed Action in the same ROI. Cumulative effects may be accrued over time and/or in conjunction with other pre-existing effects from other activities in the area (40 CFR 1508.25); therefore, pre-existing impacts and multiple smaller impacts should also be considered.

Cumulative effects analysis must determine if the Proposed Action in this EA could have the possibility of either adverse or beneficial incremental impacts when considering other past, present, and foreseeable future projects in the Proposed Action's ROI. For this EA, the defined ROI includes the lands within the Sand Hill and Main Post Cantonment Areas, and the immediately adjacent, surrounding lands. The time-frame applied for this analysis covers the next five years, as an appropriate planning horizon for the Proposed Action and other future activities reasonably foreseeable and planned at Fort Benning. These reasonably foreseeable future projects extend to approximately FY2017.

5.2 RECENT AND FORSEEABLE FUTURE PROJECTS IN THE REGION OF INFLUENCE

Fort Benning has recently undergone robust growth and development in response to multiple, Army required initiatives including, but not limited to, BRAC 2005, Army Modular Force, Grow the Army, and the associated MCoE. Multiple development projects within Fort Benning have been constructed, are underway, or are planned. These projects have been assessed in compliance with NEPA, and the appropriate decision documents have been signed. Relevant previous NEPA documents can be found at Fort Benning's public notices webpage (https:// www.benning.army.mil/garrison/DPW/EMD/legal.htm).

The following list is an overview of various types of recent actions identified with completed NEPA analysis and documentation within the Sand Hill and Main Post ROI for the Proposed Action:

- **The Maneuver Center of Excellence (MCoE) at Fort Benning, Georgia (June 2009). Final EIS and ROD reached 4 August 2009.** Numerous Installation-wide projects to accommodate the relocation of the Armor School from Fort Knox, Kentucky. Projects within the Sand Hill Cantonment Area included additional unaccompanied personnel housing, classrooms, blood donor center, community facilities, and infrastructure upgrades. Major projects in the Main Post Cantonment Area included construction of the Warrior in Transition Complex, the replacement on Martin Army Community Hospital, Maneuver Battle Lab, and the upgrade and expansion of the Installation's water treatment plant.

- **The BRAC 2005 and Transformation Actions at Fort Benning, Georgia (October 2007). Final EIS and ROD reached 29 November 2007.** Numerous Installation-wide projects for construction of new facilities and training ranges. Projects within the Sand Hill Cantonment Area included additional barracks for initial entry trainees, expansion of health and dental clinics, dining facilities, and upgrades to existing facilities and infrastructure. Projects in the Main Post Cantonment Area included child development centers, the renovation and repairs to Building 4 (Maneuver Center of Excellence), new construction and upgrades for the Special Operations Forces complex, warehouse conversion to General Instruction Buildings, and dining and medical facilities.

- **Residential Communities Initiative at Fort Benning, Georgia (June 2005). Final EA and FNSI reached 18 July 2005.** Privatization of the construction, maintenance, management, renovation, and development of family housing and ancillary supporting facilities. The Patton Village neighborhood in the Sand Hill Cantonment Area was constructed as part of this initiative. Housing on Main Post consists of historic and non-historic structures which will be subject to a combination of replacement and renovations to meet current Army housing standards.

- **Proposed Army Lodge at Fort Benning, Georgia (October 2011). Final EA and FNSI reached 2 December 2011.** To replace and improve short-term and extended stay lodging facilities on-Post for Soldiers and their Families, and other personnel that includes construction of a new 860-room facility in the Main Post Cantonment Area.

In addition, the following actions at Fort Benning are also currently underway or are considered reasonably foreseeable within the ROI to potentially occur in the next five years. Each project has been assessed (or will be assessed in the future) based on the screening criteria found at 32 CFR 651.29 to determine the appropriate level of NEPA documentation to be prepared.

- ***Privatization of Army Lodging***: The Privatization of Army Lodging (PAL) program is the Army's preferred means of revitalizing its transient housing facilities and providing for their long-term sustainment. Current and future lodging facilities on Main Post would be operated and maintained by a private-sector company under a 50-year ground lease agreement.

- ***Resiliency Campus***: Includes a campus composed of 16 buildings within the Main Post Historic District. The main focal point of this project is the interior renovation of Building 35, and other surrounding buildings to create an administrative complex to support Soldiers and their Families. This project would create a "one-stop" customer service center for in/out processing operations for Soldiers, and provide additional support services for them and their families in a centralized location.

- ***Western Hemisphere Institute for Security Cooperation (WHINSEC) Campus***: Includes the renovation and reutilization of a number of historic buildings on Main Post within the Historic District. Eight buildings that comprised the Installation's first Hospital Complex are currently under renovation and are slated for occupancy in 2014. These facilities will be used for the professional training and education to eligible military, law enforcement, and civilian personnel of the nations of the Western Hemisphere.

- ***Patton Village Express Shoppette***: New construction to include food, gas station, and Class Six store to provide a retail store to support Sand Hill and Patton Village residents. Located at the intersection of Custer Road and Thompson Avenue. Construction to start in FY 2013.

- ***Physical Fitness Center Addition***: Santiago Fitness Center at Sand Hill is scheduled for a 20,000 square foot (SF) addition to the current 23,728 SF facility. The addition to Santiago Fitness Center will include large group exercise rooms, small group exercise rooms, classroom, and storage areas. This project is currently slated for construction in FY 2017.

- ***Recreation Center***: Construct a 13,000 SF addition to an existing recreation center. The Sand Hill recreation center project was envisioned as an expansion of the current auditorium to a seating capacity of 1,000 and the addition of a 40'x 60' multipurpose room with the capability of being divided, new restrooms, and additional parking. This project is currently slated for construction in FY 2017.

- ***Sand Hill Club***: Renovate the current Sand Hill Club and construct a 3,382 SF addition to provide an 800 person capacity auditorium, food court, retail shops, support spaces, and new parking lots. The facility will be able to hold ceremonies, concerts, and large events such as Family Days. This project is currently slated for construction in FY 2017.

An additional project within the Sand Hill Cantonment Area ROI is the construction of Benning Technology Park. This is a joint venture between Columbus State University and Flournoy Construction to develop approximately 80 acres of a 174-acre parcel of land adjacent to the Patton Village area along the Installation boundary. Benning Technology Park is intended to provide an office complex with research and development centers for military contractors and consultants. Construction activities started in 2010 and the complex is slated to be complete early in 2013.

5.3 CUMULATIVE EFFECTS ANALYSIS

Analysis of the Proposed Action, under any of the Action Alternatives, resulted in a finding of direct and/or indirect *short-term, minor* adverse effects on *Soils, Water Resources, Biological Resources, and Hazardous and Toxic Materials and Wastes*. Adverse effects to *Cultural Resources* would be mitigated through HABS/HAER documentation resulting in *no* adverse effects. These VECs will be further analyzed in this section of the EA, and as shown in the below analysis, these *minor* adverse impacts do not result in significant adverse cumulative effects when considering other past, present, and reasonably foreseeable future activities in the ROI.

The remaining VECs previously discussed in **Section 4.4** of this EA, would not be affected by the Proposed Action. Impacts to *Land Use, Air Quality, Noise, Socioeconomics and Environmental Justice, Utilities, Transportation and Traffic*, and *Airspace* were not fully analyzed as the potential for impacts to these resources were considered to be *negligible* or nonexistent. As such, there will be no cumulative impacts to these resources and will not be discussed in further detail in this section.

Under the No Action Alternative, there would be no new construction of an elementary school in Patton Village, and the current White ES would not be demolished. Therefore, there would be no cumulative impacts to any of the VECs presented in this EA under the No Action Alternative.

5.3.1 Soils

Projects from past actions such as BRAC/Transformation, MCoE, and RCI initiatives have accounted for major land disturbances, however, many project footprints analyzed as part of the BRAC and MCoE EISs were minimized through architectural and engineering design. Additionally, a number of these projects consisted of the renovation of already existing facilities. Based on the analysis presented in the BRAC and MCoE EISs, and actual design submittals, past projects within the Sand Hill Cantonment Area were projected to impact approximately 500 acres, with approximately 245 acres of additional land disturbances from the construction of RCI housing in Patton Village. Past projects on Main Post were projected to account for approximately 130 acres of land disturbances.

Projects currently occurring or occurring within the reasonably foreseeable future that would be considered cumulative, could impact approximately 40 acres for the Preferred Alternative (Alternative C), which includes the new elementary school construction in Sand Hill and demolition of the current White ES on Main Post. Soils impacts for Alternative A and Alternative D could impact approximately 35 acres and 31 acres respectively for the Proposed Action. The proposed expansion of facilities in the Sand Hill Cantonment Area and construction of the Patton Village Shoppette would account for approximately 3.5 acres of additional land disturbance. There is no anticipated major land disturbances associated with renovation of buildings associated with the WHINSEC and Resiliency Campuses. Although there is a potential for cumulative impacts when considered with past, present, and future actions occurring near the Proposed Action sites, they are not expected to be significant since NPDES BMPs would be incorporated into the project to prevent soil erosion. Therefore, no cumulative impacts to soils are anticipated from implementation of any of the Proposed Action Alternatives.

5.3.2 Water Resources

As stated in **Section 4.4.2.1** there are no floodplains located within the ROI of the Sand Hill and Main Post Cantonment areas, nor are there any identified wetlands within or adjacent to the Proposed Action

project areas. Therefore, these resources were not carried forward into the cumulative impacts analysis. However, there could be minor adverse impacts to surface waters from the Proposed Action.

As discussed in the previous section (**Section 5.3.1**), past projects associated with BRAC/MCoE and RCI initiatives have accounted for major land disturbances which had the potential to impact surface waters within project footprints. However, these projects were required to comply with NPDES construction permitting to minimize potential sedimentation impacts. Implementation of any of the Proposed Action Alternatives has the potential to temporarily increase localized erosion rates to an unnamed tributary during construction activities within the Proposed Action Alternatives' project areas. The Preferred Alternative (Alternative C), could potentially impact approximately 110 linear feet of streams. Alternative A and Alternative D could potentially impact approximately 822 and 505 linear feet of streams respectively.

There would be no long-term impacts to water resources from construction and demolition activities, or the renovation projects for the WHINSEC and Resiliency Campuses. Construction of the Patton Village Shoppette would not impact any water resources in the short- or long-term. All land disturbances would adhere to all Federal and State laws, regulations and permit requirements to protect water quality. Although there is a potential for cumulative impacts when considered with past, present, and future actions occurring near the Proposed Action sites, they are not expected to be significant since NPDES BMPs would be incorporated into the project to minimize impacts to water quality.

5.3.3 Biological Resources

As discussed in the previous section (**Section 5.3.1**), past projects associated with BRAC/MCoE and RCI initiatives have accounted for major vegetation removal as part of land disturbances. Construction of the new ES in Patton Village for the Preferred Alternative site (Alternative C), could potentially remove up to 29 acres of forest and vegetation. Alternatives A and D could potentially impact 24 and 20 acres of forest and vegetation respectively. For all of the Proposed Action Alternatives there would be *minor* adverse effects to vegetation in the Sand Hill ROI. Construction of the Patton Village Shoppette would potentially remove an additional 3.5 acres of vegetation. There would be minimal vegetation removal for the demolition of the current White ES on Main Post and result in a *beneficial* effect to vegetation in the Main Post ROI as the area would be returned to green space. When combined with the past, present, and reasonably foreseeable projects as listed in **Section 5.2,** there would be no cumulative effects to vegetation in the Sand Hill or Main Post ROI as these projects occur within previously disturbed areas.

As the Sand Hill and Main Post Cantonment Areas are developed urban areas, native animal populations generally occur in less active areas outside of the cantonments. As discussed in **Section 4.4.3.1**, the only Federally listed species that may be impacted within the ROI is the RCW for the any of the Proposed Action Alternatives. Within the Sand Hill ROI there is an approximately three and a half acres pine stand that would impacted by all of the Action Alternatives. However, this pine stand is not considered to be part of current RCW foraging habitat. There is no designated RCW habitat within the Patton Village Shoppette project footprint or in the Main Post Cantonment Area, therefore, there would be no RCW impacts within this ROI.

When considering past, present, and reasonably foreseeable projects proposed for the ROI's of the Proposed Action, implementation of the any of the Action Alternatives would not have a cumulative impact to wildlife, migratory birds, State and/or Federally listed Threatened or Endangered Species.

5.3.4 Cultural Resources

As discussed in **Section 4.4.4.1**, there are no identified cultural resources within the Action Alternative locations within the Sand Hill Cantonment Area. Therefore, cumulative impacts analysis is not discussed further for the Sand Hill Cantonment Area.

Per the provisions of Fort Benning's ICRMP and HPC, all past projects associated with BRAC and MCoE initiatives were required to adhere to the NHPA and Fort Benning's SHPO approved Army Alternate Procedures. The demolition of the current White ES on Main Post would have potential negative impact upon architectural resources and the Main Post Historic District viewshed. However, mitigation measures would be implemented to avoid all adverse effects to these resources. All other reasonable foreseeable projects listed in **Section 5.2** would be under the same regulatory requirements for mitigation as applicable to renovations and construction. When considering the past, present, and reasonably foreseeable projects**,** there would be no cumulative effects to cultural resources under any of the Action Alternatives discussed in this EA.

5.3.5 Hazardous and Toxic Materials and Wastes

Minor increases in the use, handling, and storage of HTMW were associated with the construction, renovation, and demolition activities from BRAC, MCoE, and RCI projects as discussed in **Section 5.2**. However, disposal of these materials did not result in adverse impacts to waste streams or the disposal capacity of local permitted landfills. There would be *minor* adverse direct and/or indirect effects resulting from demolition and disposal activities associated with the Proposed Action Alternatives. All future operations and maintenance, and construction and renovation projects would follow all applicable regulatory requirements for the use, storage, and handling of HTMW. Therefore, when considering the past, present, and reasonably foreseeable projects listed in **Section 5.2** there would be no cumulative effects to HTMW with the implementation of any of the Proposed Action Alternatives.

5.4 CONCLUSION

The analysis contained in this EA indicates that for the most part, implementation of the Proposed Action would have only *short-term, minor* adverse effects to *Soils*, *Water Resources*, *Biological Resources*, and *HTMW* due to demolition, construction, and operational activities associated with all of the Action Alternatives. Adherence to Federal and State laws and regulations would minimize impacts due to demolition, construction, and maintenance operations activities.

Under any of the Action Alternatives, there would be *no* effects to cultural resources within the Area of Potential Effect (APE) on Main Post resultant of demolition activities. Adverse effects to cultural resources in the Main Post Historic District would be fully mitigated by implementing Army Alternate Procedures and preparation of HABS/HAER documentation.

After evaluation of impacts it is concluded that the Preferred Alternative (Alternative C), with its associated facility construction and demolition would meet the purpose and need of constructing a new elementary school to support the student population residing in the recently developed Patton Village housing area. Although all of the Action Alternatives met the screening criteria provided in **Section 3.2.1**, the limits of disturbance and location proposed for Alternative C was considered to be the best option to reduce the loss of acreage for the construction of future housing units. As part of the Phase IV residential development design for Patton Village, this Alternative would result in a net loss of only 9 housing units, whereas Alternatives A and D would result in 27 and 42 housing units respectively. The EA analysis demonstrated that with adherence to applicable Federal and State environmental laws, regulations, and

permitting processes, no *significant* adverse environmental impacts would result from the Proposed Action as implemented by Alternative C. Therefore, preparation of and EIS is not warranted for this action.

The No Action Alternative would not meet the purpose and need for providing an elementary school to support the student population of the Patton Village housing area.

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APPENDIX A

ACRONYMS

ACRONYMS

AAP	Army Alternate Procedures
ACM	Asbestos Containing Materials
ACP	Access Control Point
ACHP	Advisory Council on Historic Preservation
ADA	Americans with Disabilities Act
A/E	Architecture and Engineering
AIRFA	American Indian Religious Freedom Act
APE	Area of Potential Effect
AR	Army Regulation
ARPA	Archaeological Resources Protection Act
AT/FP	Anti-terrorism/Force Protection
BMP	Best Management Practice
BRAC	Base Realignment and Closure
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CRM	Cultural Resources Management
CWA	Clean Water Act
DA	Department of the Army
DDESS	Domestic Dependant Elementary and Secondary Schools
DoD	Department of Defense
DoDEA	Department of Defense Education Activity
DoDI	Department of Defense Instruction
DSO	District Superintendant's Office
EA	Environmental Assessment
EIS	Environmental Impact Statement
EISA	Energy Independence and Security Act
EO	Executive Order
ES	Elementary School
ESA	Endangered Species Act
ESPCP	Erosion, Sedimentation and Pollution Control Plan
FNSI	Finding of No Significant Impact
FPPA	Farmland Protection Policy Act
FY	Fiscal Year
GaDNR	Georgia Department of Natural Resources
GESA	Georgia Erosion and Sedimentation Control Act
GHG	Greenhouse Gas
GIB	General Instruction Building
GIS	Geographic Information System
GSF	Gross square Feet
HABS	Historic American Buildings
HAER	Historic American Engineering Record
HPC	Historic Properties Component
HTMW	Hazardous and Toxic Materials and Wastes
ICRMP	Integrated Cultural Resources Management Plan
INRMP	Integrated Natural Resources Management Plan
K	Kindergarten
LBP	Leadbased Paint
LOD	Limits of Disturbance
MBTA	Migratory Bird Treaty Act

MCoE	Maneuver Center of Excellence
MILCON	Military Construction
MPHD	Main Post Historic District
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves and Protection and Repatriation Act
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
NOA	Notice of Availability
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NWI	National Wetlands Inventory
PAL	Privatization of Army Lodging
POLs	Petroleum, Oil, and Lubricants
RCI	Residential Communities Initiative
RCRA	Resource Conservation and Recovery Act
RCW	Red-cockaded Woodpecker
ROD	Record of Decision
ROI	Region of Influence
SBV	Stream Buffer Variance
SHPO	State Historic Preservation Office
SOP	Standard Operating Procedure
SPCC	Spill Prevention, Control, and Countermeasures
SRM	Sustainment, Renovation, and Modernization
SWMU	Solid Waste Management Unit
SF	Square Foot
SY	School Year
TASS	Total Army School System
TMDL	Total Maximum Daily Load
USACE	United States Army Corps of Engineers
USC	United States Code
USDI	United States Department on Interior
USEPA	United States Environmental Protection Agency
VEC	Valued Environmental Component
WHINSEC	Western Hemisphere Institute for Security Cooperation

APPENDIX B

WHITE ELEMENTARY SCHOOL ECONOMIC ANALYSIS

White School EA
Economic Analysis

Executive Summary Report (17 August 2012)

Project Title	**:** Economic Analysis for Future use of White School
Type of Analysis	**:** Mission Requirement - Full
Discount Rate	**:** 0.0%
Period of Analysis	**:** 20 years
Start Year	**:** 2012
Base Year	**:** 2012
Dollar Analysis	**:** Current Dollars
Project Objective	**:** To determine best alternative for the future use of White School and or the land it occupies.

Background:

This project will construct a 2 or 3 story split level elementary school and includes related infrastructural improvements including approximately 120 parking spaces, utility extensions to closest tie in location, service docks, utility support spaces, etc.

The project may require hazardous material abatement and will require subsequent demolition of the existing White school campus to include 9 buildings for a total of 56,664SF of building and support structure along with all site improvements such as parking, walks, supporting facilities, removal of underground structures and utilities. Site will be leveled and seeded.

Buildings to be removed include:
1042 2,574 SF
1043 1,219 SF
1044 5,257 SF
1045 10,537 SF
1046 7,374 SF
1047 5,257 SF
1048 4,367 SF
1049 2,198 SF
1050 13,682 SF

Alternatives Considered for This Analysis:

Status Quo (Current Operations) - The status quo alternative retains the nine facilities for use as a school. This option is not viable for the following reasons: The existing facilities do not meet the current 21st Century School standard design criteria; the space is not adequate; the site is not adequate. This alternative is nonviable.

Demolition; Complete - This alternative demolishes all nine buildings as per the DD1391. This is a viable alternative.

Demolition and Partial Renovation/Conversion - This alternative demolishes some of the buildings and renovates the others for use for another Category Code. The best option for conversion of the remaining buildings is to use them for Category Code 17120, General Instruction Building. There currently is a shortage of space in this category code and converting into this category would be the most efficient use of this space. This would also be the least costly conversion. This is a viable alternative.

Renovation and Conversion for different Cat Code - This alternative renovates and converts all nine buildings for use for another Category Code. The best option for conversion is to use the facility for

Category Code 17120, General Instruction Building. There currently is a shortage of space in this category and converting all of the existing space into this category would be the most efficient use of this space. This would also be the least costly conversion. This is a viable alternative.

Mothball for future use - This alternative mothballs the buildings for future renovation and re-use. The best option for later conversion is Category Code 17120, General Instruction Building. There currently is a shortage of space in this category code and converting into this category would be the most efficient use of this space. This is a viable alternative.

Assumptions of the Analysis:

The alternative of mothball for future use does not include the cost of utilities to maintain the building while it is mothballed. This is real but unknown cost that would further increase the cost of this alternative.

Results and Recommendations:

A table is presented below which shows the results for each alternative and a sensitivity analysis for various discount rates. The results are the same regardless of the discount rate. For example, at a discount rate of 1.0%, the alternative of complete demolition has the lowest net present value (NPV) at approximately $1M. The alternative of mothball for future use is next at $1,8M, followed by demolition and partial conversion at $2.4M, and renovation and conversion is the most expensive alternative at $6.6M.

It is recommended that the complete demolition alternative is the best alternative for the following reasons:

1. There is no immediate need for general instruction building space in that particular location.
2. It is the least cost alternative.

Action Officer : Glen Hall

Phone Number: 706-545-7144

Email Address : Glen.Hall@us.army.mil

Organization : Master Planning Division, DPW

Life Cycle Cost Report

Sources and Derivations:

1. Demolition; Complete
   a. Demolition
   The DD1391 demolition costs are estimated to be $18.19 per square foot. This includes hazardous material abatement. This includes the nine buildings for a total of 56,664 SF along with all site improvements such as parking, walks, and supporting facilities and removal of underground structure and utilities.

2. Demolition and Partial Renovation/Conversion
   a. Demolition
   The demolition costs are estimated to be $18.19 per square foot. This includes hazardous material abatement. This includes eight buildings for a total of 42,982 SF along with all site improvements such as parking, walks, and supporting facilities and removal of underground structure and utilities. Building 1050 will be retained, renovated, and converted to Category Code 17120, General Instruction Building.

   b. Maintenance and Repair
   This cost of $95/SF includes all of the maintenance and repair necessary to bring Building 1050 up to code for Category Code 73046. This is required before the facility can be converted to another use.

   c. Construction Conversion
   This cost of $25/SF includes all of the work necessary to convert Building 1050 from Category Code 73046, Elementary Dependant School to Category Code 17120, General Instruction Building.

3. Renovation and Conversion for different Cat Code
   a. Maintenance and Repair
   This cost of $95/SF includes all of the maintenance and repair necessary to bring Buildings 1042-1050 up to code for Category Code 73046. This is required before the facilities can be converted to another use.

   b. Conversion Construction
   This cost of $25/SF includes all of the work necessary to convert Buildings 1042- 1050 from Category Code 73046, Elementary Dependant School to Category Code 17120, General Instruction Building.

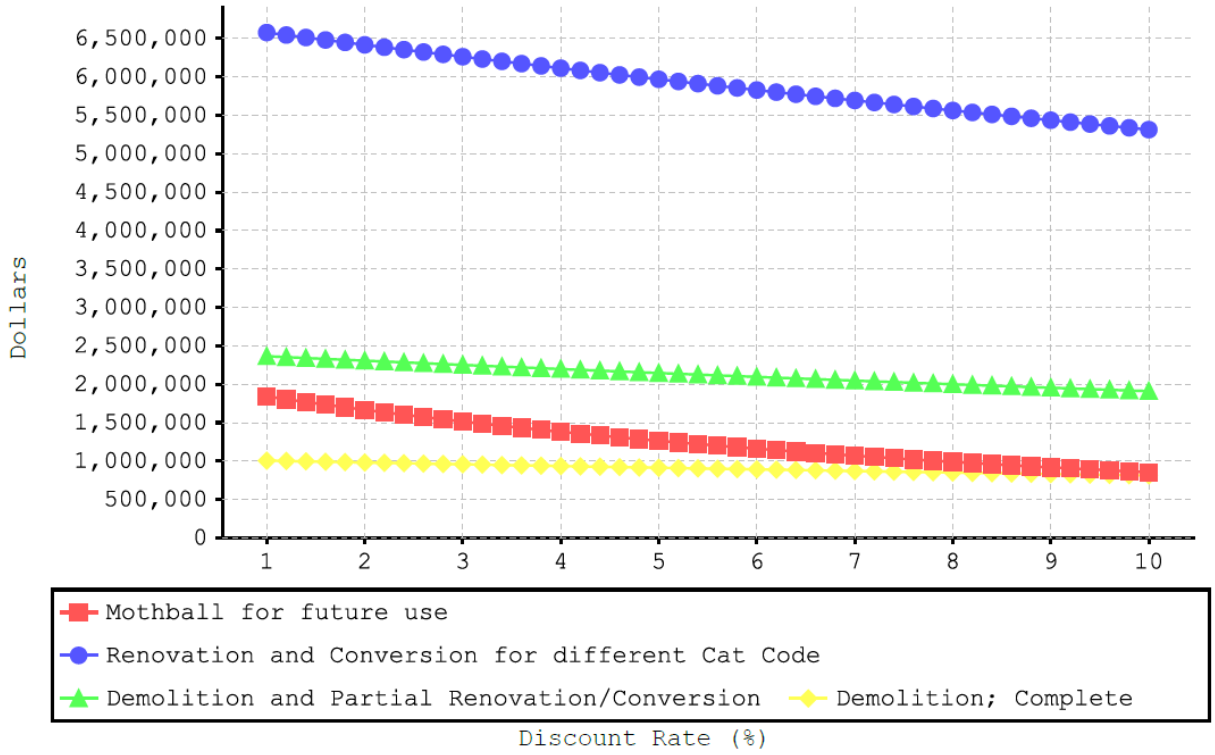
4. Mothball for future use
   a. Mothball for future use

   b. Maintenance and Repair

Discount Rate Sensitivity Analysis

NPV rankings change at the following discount rates: No changes

Graph of Net Present Value vs. Discount Rate



Discount Rate Sensitivity Analysis

NPV rankings change at the following discount rates: No changes

Table of Net Present Values for each Discount Rate

Discount Rate = 1.0% Demolition; Complete $ 1,005,669 Mothball for future use $ 1,841,636 Demolition and Partial $ 2,364,135 Renovation and Conversion $ 6,577,347	Discount Rate = 2.6% Demolition; Complete $ 966,919 Mothball for future use $ 1,572,628 Demolition and Partial $ 2,273,041 Renovation and Conversion $ 6,323,912
Discount Rate = 1.2% Demolition; Complete $ 1,000,708 Mothball for future use $ 1,804,635 Demolition and Partial $ 2,352,471 Renovation and Conversion $ 6,544,898	Discount Rate = 2.8% Demolition; Complete $ 962,223 Mothball for future use $ 1,542,978 Demolition and Partial $ 2,262,001 Renovation and Conversion $ 6,293,198
Discount Rate = 1.4% Demolition; Complete $ 995,781 Mothball for future use $ 1,768,663 Demolition and Partial $ 2,340,889 Renovation and Conversion $ 6,512,673	Discount Rate = 3.0% Demolition; Complete $ 957,559 Mothball for future use $ 1,514,119 Demolition and Partial $ 2,251,037 Renovation and Conversion $ 6,262,693
Discount Rate = 1.6% Demolition; Complete $ 990,888 Mothball for future use $ 1,733,686 Demolition and Partial $ 2,329,385 Renovation and Conversion $ 6,480,670	Discount Rate = 3.2% Demolition; Complete $ 952,927 Mothball for future use $ 1,486,026 Demolition and Partial $ 2,240,146 Renovation and Conversion $ 6,232,395
Discount Rate = 1.8% Demolition; Complete $ 986,028 Mothball for future use $ 1,699,671 Demolition and Partial $ 2,317,961 Renovation and Conversion $ 6,448,887	Discount Rate = 3.4% Demolition; Complete $ 948,325 Mothball for future use $ 1,458,674 Demolition and Partial $ 2,229,330 Renovation and Conversion $ 6,202,301
Discount Rate = 2.0% Demolition; Complete $ 981,202 Mothball for future use $ 1,666,588 Demolition and Partial $ 2,306,616 Renovation and Conversion $ 6,417,321	Discount Rate = 3.6% Demolition; Complete $ 943,755 Mothball for future use $ 1,432,041 Demolition and Partial $ 2,218,586 Renovation and Conversion $ 6,172,411
Discount Rate = 2.2% Demolition; Complete $ 976,408 Mothball for future use $ 1,634,405 Demolition and Partial $ 2,295,347 Renovation and Conversion $ 6,385,971	Discount Rate = 3.8% Demolition; Complete $ 939,216 Mothball for future use $ 1,406,102 Demolition and Partial $ 2,207,915 Renovation and Conversion $ 6,142,721
Discount Rate = 2.4% Demolition; Complete $ 971,648 Mothball for future use $ 1,603,095 Demolition and Partial $ 2,284,156 Renovation and Conversion $ 6,354,835	Discount Rate = 4.0% Demolition; Complete $ 934,707 Mothball for future use $ 1,380,838 Demolition and Partial $ 2,197,315 Renovation and Conversion $ 6,113,231

APPENDIX C

SOIL SERIES DESCRIPTIONS

Soils Series	Description
Ailey	Ailey soils consist of deep or very deep to a dense layer. The series contains well-drained, slowly permeable soils formed in sandy and loamy marine sediment on uplands mostly in the upper coastal plain. Slopes are 20-25 percent. K factor* is 0.15.
Bibb	Bib soils consist of very deep, poorly drained, moderately permeable soils that formed in stratiffied loamy and sandy alluvium. These soils are on flood plains of streams in the Coastal Plain. Slopes range from 0 to 2 percent. K factor is 0.20.
Cowarts	Cowarts soils consist of very deep, well-drained and moderately well-drained soils on ridge tops and side slopes on uplands of the Coastal Plain. They formed in loamy marine sediments. Slopes range from 1 to 60 percent. K factor is 0.15.
Esto	Esto soils consist of deep, well-drained, slowly permeable soils that formed in clayey marine sediments of the Coastal Plain. Slopes range from 2 to 25 percent. K factor is 0.28.
Fuquay	Fuquay soils consist of very deep, well-drained soils with deep or very deep, common internal free water occurrence. The soils formed sandy over loamy marine deposits or fluvio-marine deposits on marine terraces, uplands, and flats. Slopes range from 0 to 10 percent. K factor is 0.10.
Lucy	Lucy soils consist of very deep, well-drained, moderately permeable soils on uplands. They formed in sandy and loamy marine and fluvial sediments of the Southern Coastal Plain. Slopes range from 0 to 45 percent. K factor is 0.10.
Nankin	Nankin soils consist of deep, well-drained, moderately slowly permeable soils on uplands of the Coastal plain. The series is formed in stratified loamy and clayey marine sediments. Slopes range from 0 to 60 percent. K factor is 0.32.
Troup	Troup soils consist of deep, somewhat excessively drained, moderately permeable soils with thick sandy surface and subsurface layers and loamy sub-soils. They formed in unconsolidated sandy and loamy marine sediments on Coastal Plain uplands. Slopes range from 0 to 40 percent. K factor is 0.10.

Source: *USDA NRCS. Official Soil Series Descriptions [Online WWW]. Available URL:* http://soils.usda.gov/technical/classification/osd/index.html

**The higher the value, the more susceptible the soil is to sheet and rill erosion by water (USDA NRCS 2006).*

APPENDIX D

DISTRIBUTION LIST

The following provides the distribution list for the NOA of the Final EA and Draft FNSI.

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Chattahoochee County
County Manager
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Fort Benning, GA 31905

USFWS, Regional RCW Recovery & Longleaf Pine Coordinator
Mississippi Field Office
6578 Dogwood View Parkway
Jackson, MS 39213

GSWCC, Region 5
4344 Albany Highway
Dawson, GA 39842

* GA DNR, EPD
2 Martin Luther King Jr. Drive, SE
Suite 1152 East
Atlanta, GA 30334

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Ground Level
Atlanta, GA 30334

GA DNR
*Parks, Recreation & Historic Sites
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* U.S. EPA Region IV Administrator
ATTN: Gwendolyn Keyes Fleming
61 Forsyth Street SW
Atlanta, GA 30303

USDA NRCS State Office
Water Resources
355 East Hancock Avenue
Suite 13
Athens, GA 30601

USDI, Office of Environmental Policy & Compliance
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Georgia Wildlife Federation
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Covington, GA 30014

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1130 17th Street NW
Washington, DC 20036

The Nature Conservancy
Chattahoochee Fall Line Office
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Columbus, GA 31905

Southern Environmental Law Center
127 Peachtree Street
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Atlanta, GA 30303-1840

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Atlanta, GA 30309

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Cultural Preservation Officer
Alabama/Quassarte Tribe of Oklahoma
P.O. Box 187
Wetumka, OK 74880

* Mr. Bryant Celestine
Tribal Historic Preservation Officer
Alabama-Coushatta Tribe of Texas
571 State Park Road 56
Livingston, TX 77351

* Ms. LaDonna Brown
Historic Preservation Officer
Chickasaw Nation
P.O. Box 1548
Ada, OK 74820-1548

* Mr. Henry Harjo
Representative
Kialegee Tribal Town
P.O. Box 332
Wetumka, OK 74883

* Mr. Robert Thrower
Tribal Historic Preservation Officer
Poarch Band of Creek Indians
5811 Jack Springs Road
Atmore, AL 36502

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P.O. Box 1498
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Thlopthlocco Tribal Town
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Okemah, OK 74859

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Command -- Atlantic Region
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705 Washington Boulevard
Fort Eustis, VA 23604

COL Jeffery Fletcher
Garrison Commander
Maneuver Center of Excellence
1 Karker Street
Fort Benning, GA 31905

MG Robert B. Brown
MCoE Commanding General
Maneuver Center of Excellence
1 Karker Street
Fort Benning, GA 31905

Office of the Staff Judge Advocate
6450 Way Street
Bldg. 2839
Fort Benning, GA 31905

Office of the TRADOC Engineer
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661 Sheppard Place
Fort Eustis, VA 23604 - 1626

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ATTN: Sue Burdick
7441 Custer Road -- Bldg 2670
Fort Benning, GA 31905

Department of Emergency Services
Building 215
Wold Avenue
Fort Benning, GA 31905

*USACE Savannah District -- DoD Schools
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100 W. Oglethorpe Avenue
P.O. Box 889
Savannah, GA 31402 - 0889

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Columbus, GA 31901

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Columbus, GA 31994

WXTX TV 54 (FOX)
Attn: Legal
6524 Buena Vista Road
Columbus, GA 31994

WLTZ TV 38 (NBC)
ATTN: Legal
6140 Buena Vist Road
Columbus, GA 31907

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