

Draft Environmental Assessment

# St. Martin Bus/Maintenance Facility Relocation Project

Jackson County, Mississippi

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**FEMA**

**U.S. Department of Homeland Security**  
FEMA-1604-DR-MS  
Transitional Recovery Office – Biloxi, MS

*This document was prepared by*



600 Parsippany Road, Suite 301  
Parsippany, NJ 07054

200 Orchard Ridge Drive, Suite 101  
Gaithersburg, MD 20878

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## ACRONYMS AND ABBREVIATIONS

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ABFE	advisory base flood elevation
amsl	above mean sea level
APE	Area of Potential Effects
BMP	Best Management Practice
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	carbon monoxide
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
dB	decibel
DNL	Day-Night Average Sound Level
EA	Environmental Assessment
EO	Executive Order
EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FPPA	Farmland Protection Policy Act
FIRM	Flood Insurance Rate Map
IBC	International Building Code
MDAH	Mississippi Department of Archives and History
MDEQ	Mississippi Department of Environmental Quality
MDMR	Mississippi Department of Marine Resources
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NISTAC	Nationwide Infrastructure Support Technical Assistance Consultants
NO <sub>2</sub>	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
O <sub>3</sub>	ozone
OSHA	Occupational Safety and Health Administration
Pb	lead
PM <sub>2.5</sub>	particulate matter less than 2.5 microns



## ACRONYMS AND ABBREVIATIONS

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PM <sub>10</sub>	particulate matter less than 10 microns
SHPO	State Historic Preservation Officer
SO <sub>2</sub>	sulfur dioxide
SWPPP	Storm Water Pollution Prevention Plan
THPO	Tribal Historic Preservation Officer
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service



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## **1.0 INTRODUCTION**

On August 29, 2005, Hurricane Katrina struck the Mississippi Gulf Coast, causing extensive damage. Subsequently, a Presidential Disaster Declaration, FEMA-1604-DR-MS, was signed for Katrina.

The Jackson County School District has submitted an application for Federal Emergency Management Agency (FEMA) funding under FEMA's Public Assistance Program being administered in response to FEMA-1604-DR-MS, for the proposed relocation of its St. Martin Bus/Maintenance Facility.

In accordance with the Robert T. Stafford Disaster Relief and Emergency Assistance Act, PL 93-288, as amended, and implementing regulations at 44 Code of Federal Regulations (CFR) Part 206, FEMA is required to review the environmental effects of the proposed action prior to making a funding decision. This Environmental Assessment (EA) has been prepared in accordance with FEMA's National Environmental Policy Act (NEPA) regulations found at 44 CFR Part 10.

## **2.0 PURPOSE AND NEED**

The St. Martin Bus/Maintenance Facility was located on the St. Martin Middle School campus on Lemoyne Boulevard in St. Martin, Mississippi (Figure 1 in Appendix A) and included two one-story buildings used as a bus maintenance building and a bus maintenance shop, respectively. Both buildings were built in the mid-1970s. The facility was located within the 100-year floodplain and the Advisory Base Flood Elevation (ABFE) Zone. On August 29, 2005, Hurricane Katrina made landfall in Mississippi, inundating and destroying the two bus maintenance structures. With damages in excess of the 50% repair/replacement ratio, FEMA's criteria for demolition and replacement of the facilities were met. In accordance with FEMA's policy for FEMA-1604-DR-MS, the former St. Martin Bus/Maintenance Facility site will be returned to grade and revegetated.

The Jackson County School District is currently conducting bus maintenance activities out of a temporary facility to the west of the St. Martin High School on Yellow Jacket Boulevard in Ocean Springs. The need for the project is to provide the school district with a permanent bus maintenance facility in a location that is less prone to flooding.

## **3.0 ALTERNATIVES**

This section describes the alternatives that were considered in addressing the purpose and need stated in Section 2. Two alternatives were evaluated: the No Action Alternative, and the Proposed Action Alternative, which is the relocation of the St. Martin Bus/Maintenance Facility.

### Alternative 1: No Action

Under the No Action Alternative, the St. Martin Bus/Maintenance Facility would not be replaced and the School District would continue to operate out of a temporary facility.



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## Alternative 2: Relocation of St. Martin Bus/Maintenance Facility (Proposed Action)

Under the Proposed Action Alternative, the Jackson County School District would relocate the St. Martin Bus/Maintenance Facility to a site on Elgin Road in Ocean Springs, approximately 6 miles east of the former facility (Figure 2 in Appendix A). The proposed project site is located outside the 100-year floodplain and ABFE. The proposed project site is wooded, bound on the north and west by forest, and on the south and east by Elgin Road, which provides access to the site. The proposed project site is approximately 2,000 feet southeast of the existing St. Martin High School and Junior High School on Yellow Jacket Road in Ocean Springs.

The new facility would be a two-story, 6,387-square-foot, pre-engineered steel building. The first floor will contain two bus repair bays, one service truck bay, an office, restrooms, a lounge area, storage areas, and maintenance areas for carpentry, plumbing, and electrical repairs. The concrete block building will rest on a foundation of 9-inch reinforced concrete slab-on-grade and the facility will be designed to meet the International Building Code (IBC) 2003 at a minimum. An asphalt parking area with 37 spaces will surround the building on three sides. An approximate 20,000-gallon diesel aboveground storage tank (AST) will be installed onsite for the fueling of buses and other school district vehicles. The AST will be placed on a concrete slab within a concrete block secondary containment system.

Approximately 1 foot of existing soil will be removed from the site, prior to 2 feet of fill being added to elevate the entire site to 27 feet. Municipal utility service lines for the facility will be installed along Elgin Road, extending south from the proposed site to where Kippie Cutoff Road intersects with Elgin Road (Figure 3 in Appendix A). Installation of utility lines will not involve any additional land clearing; lines would be installed within the existing gravel and dirt roadway. Approximately 1,700 linear feet of Elgin Road would then be improved from the intersection with Kippie Cutoff Road to 20 feet past the entrance to the proposed project site. Roadway improvements would include paving, striping, and permanent traffic signs. The applicant is proposing to utilize FEMA funding originally appropriated for repairs to approximately 1,900 linear feet of destroyed canopies from the St. Martin Middle School to fund the proposed road improvements.



#### 4.0 AFFECTED ENVIRONMENT AND IMPACTS

The following table summarizes the potential impacts of the Proposed Action Alternative and conditions or mitigation measures to offset those impacts. Following the summary table, any areas where potential impacts were identified will be discussed in greater detail.

Affected Environment	Impacts	Mitigation
<b>Geology and Soils</b>	No impacts to geology are anticipated. Minor impacts to soils may occur during construction	Appropriate Best Management Practices (BMPs), such as installing silt fences and revegetating bare soils, would minimize runoff.
<b>Surface Water</b>	Temporary short-term impacts to downstream surface water are possible during construction activities.	A Stormwater Pollution Prevention Plan (SWPPP) and a National Pollutant Discharge Elimination System (NPDES) permit must be obtained prior to construction. Appropriate BMPs, such as installing silt fences and revegetating bare soils, would minimize runoff.
<b>Groundwater</b>	No impacts to groundwater are anticipated.	None.
<b>Floodplains</b>	No impacts to floodplains would occur.	None.
<b>Waters of the U.S. including Wetlands</b>	No impacts to on-site waters of the U.S., including wetlands, would occur.	Appropriate BMPs, such as installing silt fences and stabilizing soils would minimize runoff into downstream water resources.
<b>Transportation</b>	There would be a minor temporary increase in the volume of construction traffic on roads in the immediate vicinity of the proposed project site. Elgin Road may be temporarily closed or partially closed during roadway improvements.  Minor, long-term impacts to traffic levels on Kippie Cutoff Road and Elgin Road would occur as a result of increased school bus and facility staff accessing the proposed facility.	Construction vehicles and equipment would be stored on-site during project construction and appropriate signage would be posted on affected roadways. Appropriate signage would be posted to designate the approach to the maintenance facility. Roadway improvements are proposed. Additional traffic devices including traffic lights may be installed during or on completion of construction to mitigate the minor long-term impacts to traffic levels.

<b>Affected Environment</b>	<b>Impacts</b>	<b>Mitigation</b>
<b>Public Health and Safety</b>	Construction activities could present safety risks to those performing the activities.	All construction activities would be performed using qualified personnel and in accordance with the standards specified in Occupational Safety and Health Administration (OSHA) regulations. Appropriate signage and barriers would be in place prior to construction activities to alert pedestrians and motorists of project activities.
<b>Hazardous Materials</b>	No hazardous materials or waste impacts are anticipated.  The proposed above-ground storage tank with self containment systems is not anticipated to be an environmental concern.	Any hazardous materials discovered, generated, or used during construction would be disposed and handled in accordance with applicable local, state, and federal regulations.
<b>Socioeconomic Resources</b>	No adverse socioeconomic impacts are anticipated.	None.
<b>Environmental Justice</b>	No disproportionately high or adverse effect on minority or low-income populations is anticipated.	None.
<b>Air Quality</b>	Short-term impacts to air quality would occur during the construction period.	Construction contractors would be required to water down construction areas when necessary; fuel-burning equipment running times would be kept to a minimum; engines would be properly maintained.
<b>Noise</b>	Short-term noise impacts would occur at the proposed project site during the construction period.	Construction would occur during scheduled hours and equipment would meet all local, state, and federal noise regulations.
<b>Biological Resources</b>	Approximately 2.18 acres of forest would be removed. No impacts to federally listed species are anticipated.	None.
<b>Cultural Resources</b>	No impacts to cultural resources are anticipated.	None.

#### 4.1 Geology and Soils

The proposed project site is underlain by coastal deposits, an unconsolidated geologic formation consisting of loam, sand, gravel, and clay (MARIS, 2008).



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The majority of the proposed project site contains soils classified as Prentiss silt loam 0 to 2 percent slope. The Prentiss series consists of deep, moderately well-drained, moderately permeable soils with a semipermeable layer. These soils formed in loamy marine or fluvial sediments. They are on nearly level to sloping terraces and uplands of the Southern Coastal Plain Major Land Resource Area. They have a seasonal water table perched at a depth of 2.0 to 2.5 feet (USDA/NRCS, 1997). The Prentiss Series are listed as non-hydric soils (USDA/NRCS, 2008).

In addition, proposed utility connections would be located in areas with soils classified as Benndale fine sandy loam 0 to 2 percent slope and Harleston fine sandy loam 5 to 8 percent slope. The Benndale series consists of deep, well-drained, moderately permeable soils. They formed in thick beds of sandy loam marine sediments or alluvium. These soils are on nearly level to strongly sloping uplands and terraces of the Southern Coastal Plain and Eastern Gulf Coast Flatwoods Major Land Resource Areas. Slopes range from 0 to 12 percent. The Benndale series are listed as hydric soils (USDA/NRCS, 2008). The Harleston series consists of deep, moderately well-drained, moderately permeable soils. They formed in marine or stream deposits consisting of thick beds of sandy loam. They are on terraces and uplands of the Southern Coastal Plain. Slopes range from 0 to 12 percent. The Harleston series are listed as non-hydric soils (USDA/NRCS, 2008).

The proposed project site has not been previously developed. The proposed project site ranges from approximately 25 to 26 feet above mean sea level (amsl) and slopes from north to south. The area surrounding the proposed project site slopes gently south toward Fort Bayou (Figure 2 in Appendix A).

The Farmland Protection Policy Act (FPPA) states that federal agencies must “minimize the extent to which federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses...” According to the U.S. Department of Agriculture Soil Survey for Jackson County, the proposed project site contains soils classified as prime farmland (USDA/NRCS, 2008). The proposed project site contains Prentiss silt loam soils that are used mostly for woodland and pasture with other uses such as cropland and hayland, Benndale fine sandy loam soils that are used mostly for cropland and pasture with other uses as woodland, and Harleston fine sandy loam soils that are used mostly for woodland and wildlife habitat with other uses such as pasture (USDA/NRCS, 2006).

No Action Alternative – Under the No Action Alternative, no impacts to geology or soils would occur.

Proposed Action Alternative – Under the Proposed Action Alternative, no impacts to geology are anticipated. Minimal disturbance to native soils would occur during the development of the property. Approximately 1 foot of existing soil will be removed from the site, prior to 2 feet of fill being added to elevate the entire site to 27 feet. The applicant would be required to submit a SWPPP. Implementation of appropriate BMPs would be required at the construction location. BMPs could include the installation of silt fences and the revegetation of soils to minimize the potential for erosion.



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On November 13, 2008, a letter requesting project review was sent to the Natural Resources Conservation Service (NRCS). On November 14, 2008, the Farmland Conversion Impact Rating Form AD-1006 was sent to NRCS. In a letter dated November 19, 2008, the NRCS confirmed that prime farmland soils are present on site and a farmland conversion of 2.18 acres would occur. The 12 site assessment criteria were then evaluated and the total site points were determined to be 142.5 when Form AD-1006 was completed. No mitigation is required when total site points are less than 160 (see Appendix B). FEMA has determined that the proposed action is consistent with the FPPA.

## **4.2 Water Resources**

### **4.2.1 Surface Water**

The Clean Water Act (CWA), as amended in 1977, established the basic framework for regulating discharges of pollutants into waters of the United States.

The proposed project site does not contain any surface water resources and is located approximately 0.5 mile north of Fort Bayou. The project site drains to Fort Bayou, Biloxi Bay, and ultimately the Mississippi Sound. A site visit conducted by Nationwide Infrastructure Support Technical Assistance Consultants (NISTAC) and FEMA biologists on October 29, 2008, verified these findings.

No Action Alternative – Under the No Action Alternative, no construction would occur and there would be no adverse impacts to surface water.

Proposed Action Alternative – Under the Proposed Action Alternative, short-term impacts to downstream surface waters could occur during the construction period due to erosion of soils during construction. The applicant would be required to submit a SWPPP and NPDES permit application prior to construction. To reduce impacts to downstream surface water resources, the applicant would implement appropriate BMPs, such as installing silt fences and revegetating bare soils.

On November 13, 2008, letters requesting project review were sent to the U.S. Environmental Protection Agency Water Management Division, the Mississippi Department of Environmental Quality Office of Pollution Control, and the Mississippi Soil and Water Conservation Commission (Appendix B). To date, no responses have been received.

### **4.2.2 Floodplains**

Executive Order (EO) 11988 (Floodplain Management) requires federal agencies to avoid direct or indirect support of development within the 100-year floodplain whenever there is a practicable alternative. FEMA uses Flood Insurance Rate Maps (FIRMs) to identify the regulatory 100-year floodplain for the National Flood Insurance Program. Consistent with EO 11988, both conventional FIRMs and Preliminary Digital FIRMs were examined during the preparation of this EA. The conventional FIRM (FEMA, 1987; Community Panel Number 285256 0160 D) shows the proposed project site as being located in Flood Zone C and the Preliminary Digital FIRM (MDEQ, 2007; Map Number 28059C0291G) shows it as being located in Zone X, both of which are outside of the 100-year and 500-year floodplains. FEMA has also developed ABFE Maps based on a flood frequency analysis completed by FEMA that updates the flood risk data



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with information on storms that have occurred in the past 25+ years, including (but not limited to) Hurricane Katrina. The ABFE map shows that the proposed project site is located outside the ABFE Inland Limit (FEMA, 2006; ABFE Map Number MS-J28).

No Action Alternative – Under the No Action Alternative, no construction would occur and there would be no impacts to floodplains.

Proposed Action Alternative – Under the Proposed Action Alternative, no adverse impacts to the floodplain would occur. Per 44 CFR Part 9, because the proposed project will include installation of an approximate 20,000-gallon diesel aboveground storage tank, the proposed project qualifies as a critical facility, requiring elevation above the 500-year floodplain. The proposed project site is already located outside of the 100-year and 500-year floodplains and ABFE inland limit; development of the site would not impede natural floodplain uses.

#### 4.2.3 Waters of the U.S. including Wetlands

The U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged or filled material into waters of the U.S., including wetlands, pursuant to Section 404 of the CWA. Additionally, EO 11990 (Protection of Wetlands) requires federal agencies to avoid, to the extent possible, adverse impact of wetlands.

The proposed project site is approximately 0.5 mile north of Fort Bayou. A review of the National Wetlands Inventory (NWI) map for the proposed project site indicated that no wetlands are located on the site, although freshwater emergent and forested wetlands occur all around the site (USFWS, 2008b).

A wetland determination was conducted by NISTAC and FEMA biologists on October 29, 2008, and confirmed that no wetlands occur on the proposed project site. The methods and procedures used for this determination are in accordance with the 1987 *Corps of Engineers Wetlands Delineation Manual* (USACE, 1987). The USACE manual requires the presence of all three parameters (greater than 50% dominance of hydrophytic vegetation, evidence of hydric soils, and presence of hydrologic indicators) for an area to be considered a wetland. Hydrophytic vegetation, including inkberry (*Ilex glabra*), loblolly pine (*Pinus taeda*), and sweetbay (*Magnolia virginiana*), and hydrology were present within some rutted areas created by heavy machinery. However, no hydric soils were identified.

The Coastal Zone Management Act (CZMA) enables coastal states, including Mississippi, to designate state coastal zone boundaries and develop coastal management programs to improve protection of sensitive shoreline resources and guide sustainable use of coastal areas. According to the National Oceanic and Atmospheric Administration (NOAA), the proposed project site is located within the Mississippi Coastal Zone (NOAA, 2004).

No Action Alternative – Under the No Action Alternative, no construction would occur and there would be no impacts to waters of the U.S., including wetlands.

Proposed Action Alternative – Under the Proposed Action Alternative, no impacts to wetlands would occur. To reduce impacts to downstream surface water resources, including wetlands, the applicant should implement appropriate BMPs, such as installing silt fences and revegetating bare soils. On November 13, 2008, letters requesting project review were sent to the Mississippi



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Department of Marine Resources (MDMR), Bureau of Wetlands Permitting, and the USACE Mobile District. To date, no responses have been received.

### **4.3 Transportation**

The proposed project site is located on Elgin Road on public trust lands owned by the Jackson County School District. The proposed project site is southeast of the existing St. Martin High School and Junior High School. Access to the proposed project site would be from Elgin Road (Figure 2 in Appendix A).

No Action Alternative – Under the No Action Alternative, no impacts to transportation, site access, or traffic levels are anticipated.

Proposed Action Alternative – There would be a minor temporary increase in the volume of construction traffic on roads in the immediate vicinity of the proposed project site that could potentially result in a slower traffic flow for the duration of the construction phase. To mitigate potential delays, construction vehicles and equipment would be stored on site during project construction and appropriate signage would be posted on affected roadways. Elgin Road is a gravel and dirt roadway not sufficient to carry the increased traffic that would be generated by the new facility. Roadway improvements to 1,700 linear feet of Elgin Road will include paving, striping, and sign installation. Elgin Road may be closed or partially closed during roadway improvements; appropriate signage would be posted to facilitate traffic flow.

Minor, long-term impacts to traffic levels on Kippie Cutoff Road and Elgin Road would occur as a result of increased school bus and facility staff accessing the proposed facility. Additional traffic devices, including traffic lights, may be installed during or on completion of construction to mitigate the minor long-term impacts to traffic levels.

On November 13, 2008, a letter requesting project review was sent to the Mississippi Department of Transportation. To date, no response has been received.

### **4.4 Public Health and Safety**

Safety and security issues considered in this EA include the health and safety of the area residents and the general public and the protection of personnel involved in activities related to the proposed construction.

EO 13045, Protection of Children, requires federal agencies to make it a high priority to identify and assess environmental health and safety risks that may disproportionately affect children. The project is located directly southeast of the existing St. Martin High School and Junior High School.

No Action Alternative – Under the No Action Alternative, no construction would occur and the safety of the general public would remain unchanged.

Proposed Action Alternative – Under the Proposed Action Alternative, construction activities could present safety risks to those performing the activities. To minimize risks to safety and human health, all construction activities would be performed using qualified personnel trained in



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all appropriate safety precautions, including the proper use of the appropriate equipment. Additionally, all activities will be conducted in a safe manner in accordance with the standards specified in OSHA regulations. To alert motorists and pedestrians of project activities, appropriate signage and barriers would be on site prior to and during construction activities.

The construction would occur near the existing St. Martin High School and Junior High School. Appropriate construction barriers including exclusionary fences would be in place to protect the area and students.

#### **4.5 Environmental Justice**

EO 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations) mandates that federal agencies identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations. Socioeconomic and demographic data for the project area were reviewed to determine if the proposed action would have a disproportionate impact on minority or low-income persons.

No Action Alternative – Under the No Action Alternative, there would be no disproportionately high or adverse impacts on minority or low-income populations.

Proposed Action Alternative – Under the Proposed Action Alternative, there would be no disproportionately high or adverse impacts on minority or low-income populations. Implementation of the Proposed Action would more effectively serve all populations in the community by providing a permanent bus/maintenance facility outside of the 100-year floodplain.

#### **4.6 Air Quality**

The Clean Air Act (CAA) requires that states adopt ambient air quality standards. The standards have been established in order to protect the public from potentially harmful amounts of pollutants. Under the CAA, the U.S. Environmental Protection Agency (EPA) establishes primary and secondary air quality standards. Primary air quality standards protect the public health, including the health of “sensitive populations, such as people with asthma, children, and older adults.” Secondary air quality standards protect public welfare by promoting ecosystem health, and preventing decreased visibility and damage to crops and buildings. EPA has set National Ambient Air Quality Standards (NAAQS) for the following six criteria pollutants: ozone (O<sub>3</sub>), particulate matter (PM<sub>2.5</sub>, PM<sub>10</sub>), nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), and lead (Pb). According to the Mississippi Department of Environmental Quality, the entire state of Mississippi is classified as in attainment, meaning that criteria air pollutants do not exceed the NAAQS (MDEQ, 2002).

The proposed project site is located adjacent to the Sandhill Crane National Wildlife Refuge. The U.S. Fish and Wildlife Service (USFWS) conducts periodic controlled burning at the refuge to maintain crane habitat.

No Action Alternative – Under the No Action Alternative, there would be no short- or long-term impacts to air quality because no construction would occur.



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Proposed Action Alternative – Under the Proposed Action Alternative, short-term impacts to air quality could occur during construction. To reduce temporary impacts to air quality, the construction contractors would be required to water down construction areas when necessary to minimize particulate matter and dust. Emissions from fuel-burning internal combustion engines (e.g., heavy equipment and earthmoving machinery) could temporarily increase the levels of some of the criteria pollutants, including CO, NO<sub>2</sub>, O<sub>3</sub>, PM<sub>10</sub>, and non-criteria pollutants such as volatile organic compounds. To reduce the emission of criteria pollutants, fuel-burning equipment running times would be kept to a minimum and engines would be properly maintained.

As the proposed project site is located adjacent to the Sandhill Crane National Wildlife Refuge, air quality at the project site may be temporarily affected by periodic controlled burning at the refuge, requiring facility staff to work indoors during those periods.

#### **4.7 Noise**

Noise is generally defined as unwanted sound. Sound is most commonly measured in decibels (dB) on the A-weighted scale, which is the scale most similar to the range of sounds that the human ear can hear. The Day-Night Average Sound Level (DNL) is an average measure of sound. The DNL descriptor is accepted by federal agencies as a standard for estimating sound impacts and establishing guidelines for compatible land uses. EPA guidelines, and those of many other federal agencies, state that outdoor sound levels in excess of 55 dB DNL are “normally unacceptable” for noise-sensitive land uses including residences, schools, or hospitals (EPA, 1974).

There are noise-sensitive areas within a 1-mile radius of the proposed project site including three schools and sparse residential homes. The St. Martin Bus/Maintenance Facility would be located to the southeast of the St. Martin High School and Junior High School.

No Action Alternative – Under the No Action Alternative, there would be no short- or long-term impact to noise levels because no construction would occur.

Proposed Action Alternative – Under the Proposed Action Alternative, short-term increases in noise levels are anticipated during the construction period. Equipment and machinery utilized on the proposed project site would meet all local, state, and federal noise regulations. Normal activities at the new facility are unlikely to affect other sensitive receptors in the area.

#### **4.8 Biological Resources**

The proposed project site is comprised of a well-drained, gently sloping upland site is dominated by inkberry, loblolly pine, saw greenbriar (*Smilax bona-nox*), southern dewberry (*Rubus trivialis*), and sweetbay.



USFWS lists the following federally endangered (E) and threatened (T) animal species for Jackson County (USFWS, 2008):

Common Name	Scientific Name	Status
Louisiana black bear	<i>Ursus americanus luteolus</i>	T
Piping plover	<i>Charadrius melodus</i>	T (CH)
Gopher tortoise	<i>Gopherus polyphemus</i>	T
Gulf sturgeon	<i>Acipenser oxyrhynchus desotoi</i>	T (CH)
Green sea turtle	<i>Chelonia mydas</i>	T
Loggerhead sea turtle	<i>Caretta caretta</i>	T
Yellow-blotched map turtle	<i>Graptemys flavimaculata</i>	T
Mississippi gopher frog	<i>Rana capito sevosa (DPS)</i>	E
Louisiana quillwort	<i>Isoetes louisianensis</i>	E
Leatherback sea turtle	<i>Dermochelys comacea</i>	E
Kemp's Ridley sea turtle	<i>Lepidochelys kempii</i>	E
Alabama red-bellied turtle	<i>Pseudemys alabamensis</i>	E
West Indian manatee	<i>Trichechus manatus</i>	E
Brown pelican	<i>Pelecanus occidentalis</i>	E
Mississippi sandhill crane	<i>Grus canadensis pula</i>	E(CH)
Red-cockaded woodpecker	<i>Picoides borealis</i>	E
(CH) = listed with critical habitat		

The proposed project site is located adjacent to the Sandhill Crane National Wildlife Refuge, which contains the only population of Mississippi sandhill cranes in the world. Sandhill crane habitat consists of pine savanna – open, nearly treeless, fire-dependent plant communities dominated by well-developed ground cover and some low-growing shrubs with only scattered trees.

The site visit conducted on October 29, 2008, confirmed that the proposed project site does not contain habitat for any federally listed species, including Mississippi sandhill cranes.

No Action Alternative – Under the No Action Alternative, there would be no impacts to biological resources.

Proposed Action Alternative – Approximately 2.18 acres of upland pine forest would be removed for construction of the St. Martin Bus/Maintenance facility. No suitable habitat for any federally listed species is located within the proposed project site; therefore, no impacts to threatened or endangered species are anticipated. However, during the Mississippi sandhill crane nesting season (March 1 – June 30), the USFWS may place restrictions on construction activities, depending on the activity of any Mississippi sandhill cranes near the project site.



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On November 13, 2008, a letter requesting project review was sent to the USFWS Jackson Field Office. To date, no response has been received.

#### **4.9 Cultural Resources**

A FEMA Archeologist and a FEMA Architectural Historian, both qualified in their respective disciplines under the Secretary of the Interior's Professional Qualifications Standards (36 CFR Part 61), conducted an assessment of the project's potential to affect historic properties within the Area of Potential Effects (APE). The APE is the geographic area within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if such properties exist. For archeological resources, the APE consists of the proposed site; for historic architectural resources, the APE is extended out to a 0.5-mile radius around the proposed project site. This APE was previously established through FEMA consultation with the Mississippi State Historic Preservation Officer (SHPO).

On July 30, 2008, the FEMA Archeologist visited the APE to determine if any historic properties listed in or eligible for listing in the National Register of Historic Places (NRHP) were present within the APE. No historic properties were visible within the APE. However, the project area is within a high-probability area for archeological resources as it is located on the terrace of Fort Bayou and at the head of a drainage leading directly into Fort Bayou.

A search of the Mississippi Department of Archives and History (MDAH) site files and maps indicated that four (4) large Phase 1 archeological surveys have been conducted in similar environments within a 2-mile radius of the project area. All have produced negative results. Survey numbers 07-016 and 07-137 were 40-acre assessments done by FEMA contractors in connection with the replacement of local school buildings. Both surveys were conducted less than 1 mile to the west of the APE. Survey number 99-206 was a 200-acre assessment along the terrace of Fort Bayou and conducted less than 1 mile south of the APE. The final assessment, number 84-179, was a small private survey on the south side of Fort Bayou conducted approximately 1 mile south of the APE.

The APE is surrounded by forest on all sides and no residential buildings currently exist within the 0.5-mile radius. The nearest residential buildings are approximately 1 mile south and southeast and are of recent construction.

No Action Alternative – Under the No Action Alternative, no construction would occur and there would be no impacts to archeological or historic architectural resources.

Proposed Action Alternative – Under the Proposed Action Alternative, no impacts to archeological or historic architectural resources are anticipated.

In letters dated December 5, 2008, to the SHPO and the Mississippi Band of Choctaw Indians Tribal Historic Preservation Officer (THPO), FEMA determined that, because 1 foot of soil will be removed from the site, the entire site area should be tested for subsurface cultural resources. In a response letter dated December 12, 2008, the SHPO stated that it would review the results of the Phase I survey. No response from THPO has been received to date.

On August 26, 2008, FEMA archeologists conducted a Phase I survey within the APE. No artifacts were found during pedestrian survey or shovel testing and no standing structures over 50 years of age currently exist within the APE. Therefore, FEMA has determined that no further



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archeological work is needed for the project. The Phase I survey report was submitted to SHPO and THPO for review on January 23, 2009. No responses have been received to date.

If during the course of work, archeological artifacts (prehistoric or historic) or human remains are discovered, the applicant shall stop work in the vicinity of the discovery and take all reasonable measures to avoid or minimize harm to the findings. The applicant shall immediately contact FEMA Historic Preservation staff regarding the findings. Work will not proceed until FEMA Historic Preservation Staff have completed consultation with the SHPO and the THPO.

## **5.0 CUMULATIVE IMPACTS**

According to the Council on Environmental Quality (CEQ) regulations, cumulative impacts represent the “impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).” In accordance with NEPA and to the extent reasonable and practical, this EA considered the combined effect of the Proposed Action Alternative and other actions occurring or proposed in the vicinity of the proposed project site.

Ocean Springs and the entire Mississippi Gulf coast are undergoing recovery efforts after Hurricane Katrina caused extensive damages. The recovery efforts in the area include demolition, reconstruction, and new construction. These projects and the proposed project may have a cumulative temporary impact on air quality, noise, traffic and surface water in Ocean Springs during construction activities. No other cumulative effects are anticipated.

## **6.0 PUBLIC INVOLVEMENT**

FEMA is the lead federal agency for conducting the NEPA compliance process for the proposed project in Ocean Springs, Mississippi. It is the goal of the lead agency to expedite the preparation and review of NEPA documents and to be responsive to the needs of the community and the purpose and need of the proposed action while meeting the intent of NEPA and complying with all NEPA provisions.

Jackson County School District will notify the public of the availability of the draft EA through publication of a public notice in a local newspaper. FEMA will conduct an expedited public comment period commencing on the initial date of publication of the public notice.

## **7.0 AGENCY COORDINATION AND PERMITS**

The following agencies and organizations were contacted by letter requesting project review during the preparation of this EA. Responses received to date are included in Appendix B.

- U.S. Army Corps of Engineers, Mobile District, Alabama
- U.S. Department of Agriculture, Natural Resources Conservation Service
- U.S. Environmental Protection Agency, Region 4, Water Management Division
- U.S. Fish and Wildlife Service, Jackson Field Office



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- Mississippi Department of Agriculture and Commerce
  - Mississippi Department of Archives and History
  - Mississippi Band of Choctaw Indians
  - Mississippi Department of Environmental Quality, Office of Pollution Control, Environmental Permits Division
  - Mississippi Department of Marine Resources, Bureau of Wetlands Permitting
  - Mississippi Department of Transportation, Environmental Division
  - Mississippi Soil and Water Conservation Commission

In accordance with applicable local, state, and federal regulations, the applicant would be responsible for acquiring any necessary permits prior to commencing construction at the proposed project site.

## **8.0 CONCLUSIONS**

No impacts to geology, groundwater, floodplains, waters of the U.S. including wetlands, hazardous materials, socioeconomics, environmental justice, threatened or endangered species, or cultural resources are anticipated under the Proposed Action Alternative.

During the construction period, short-term impacts to soils, surface water, transportation, air quality, and noise are anticipated. Short-term impacts will be mitigated utilizing BMPs, such as silt fences, proper equipment maintenance, and appropriate signage. A long-term impact to biological resources would occur with the conversion of 2.18 acres of upland pine forest to the bus/maintenance facility.

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## 9.0 REFERENCES

- Environmental Protection Agency (EPA). 1974. *EPA Identifies Noise Levels Affecting Health and Welfare*. <http://www.epa.gov/history/topics/noise/01.htm>. Accessed June 16, 2008.
- Federal Emergency Management Agency (FEMA). 1987. *Flood Insurance Rate Map, Jackson County, Mississippi (Unincorporated Areas)*. Community Panel Number 285256 0160 D. Map Revised September 4, 1987.  
<http://msc.fema.gov/webapp/wcs/stores/servlet/FemaWelcomeView?storeId=10001&catalogId=10001&langId=-1>. Accessed October 30, 2008.
- FEMA. 2006. *Hurricane Katrina Surge Inundation and Advisory Base Flood Elevation Maps, Jackson County, Mississippi*. Map Number MS-J28. January 6.  
[http://www.fema.gov/hazard/flood/recoverydata/katrina/katrina\\_ms\\_jackson.shtm](http://www.fema.gov/hazard/flood/recoverydata/katrina/katrina_ms_jackson.shtm)  
Accessed October 30, 2008.
- Jackson County Road Department. 2007. *Jackson County Four-Year Road Plan FY 2007-2010*. February 5.  
<http://www.co.jackson.ms.us/DS/images/RoadDepartment/Four%20Year%20Road%20Plan%202007-2010.pdf>. Accessed November 4, 2008.
- Mississippi Automated Resource Information System (MARIS). 2008.  
*Surface Geology*. <http://www.maris.state.ms.us/HTM/DownloadData/Statewide-Theme.htm>. Accessed April 24, 2008.
- Mississippi Department of Environmental Quality (MDEQ). 2002. *New Air Quality Standards*.  
[http://deq.state.ms.us/MDEQ.nsf/page/Air\\_NewAirQualityStandardsandAttainment?OpenDocument](http://deq.state.ms.us/MDEQ.nsf/page/Air_NewAirQualityStandardsandAttainment?OpenDocument). Accessed November 11, 2008.
- MDEQ. 2007. *Federal Emergency Management Agency Preliminary Flood Insurance Rate Map, Jackson County, Mississippi and Incorporated Areas*. Map Number 28059C0291G. November 16. <http://geology.deq.ms.gov/floodmaps/status.aspx?county=Jackson>  
Accessed October 30, 2008.
- National Oceanic and Atmospheric Administration (NOAA). 2004. *State Coastal Zone Boundaries*. <http://coastalmanagement.noaa.gov/mystate/docs/StateCZBoundaries.pdf>. Accessed October 30, 2008.
- U.S. Army Corps of Engineers (USACE). 1987. *Corps of Engineers Wetland Delineation Manual*.
- U.S. Census Bureau. 2000. Population and Income. <http://www.census.gov/>. Accessed November 3, 2008.
- U.S. Department of Agriculture, Natural Resources Conservation Service (USDA/NRCS). 1997  
<http://www2.ftw.nrcs.usda.gov/osd/dat/P/PRENTISS.html>. Accessed October 31, 2008
- USDA/NRCS. 2006. Soil Survey of Jackson County, Mississippi.  
<http://soildatamart.nrcs.usda.gov/Manuscripts/MS059/0/Jackson.pdf>

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USDA/NRCS. 2008.

<http://soildatamart.nrcs.usda.gov/Download.aspx?Survey=MS045&UseState=MS>.  
Accessed April 24, 2008.

U.S. Fish and Wildlife Service (USFWS). 2007. *National Wetlands Inventory Maps*.

<http://wetlandsfws.er.usgs.gov/wtlnds/launch.html>. Accessed October 30, 2008.

USFWS. 2008. *Mississippi: List of Threatened and Endangered Species by County*. June.



## Appendix A

### Figures

**Appendix B**  
**Agency Coordination**