

# **Draft Environmental Assessment**

**Reconstruction of the Winston Medical Center Campus**

**Winston County, Mississippi**

**September 2015**



**FEMA**

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## ACRONYMS AND ABBREVIATIONS

|                   |   |
|-------------------|---|
| APE               | Area of Potential Effect                        |
| BFE               | Base Flood Elevation                            |
| 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                                 |
| dB                | Decibel(s)                                      |
| EA                | Environmental Assessment                        |
| EO                | Executive Order                                 |
| EPA               | U. S. Environmental Protection Agency           |
| FEMA              | Federal Emergency Management Agency             |
| FIRM              | Flood Insurance Rate Map                        |
| FPPA              | Farmland Protection Policy Act                  |
| MDAH              | Mississippi Department of Archives and History  |
| MDEQ              | Mississippi Department of Environmental Quality |
| NAAQS             | National Ambient Air Quality Standards          |
| NEPA              | National Environmental Policy Act               |
| NHPA              | National Historic Preservation Act              |
| NO <sub>2</sub>   | Nitrogen Dioxide                                |
| NO <sub>x</sub>   | Oxides of Nitrogen                              |
| NPDES             | National Pollutant Discharge Elimination System |
| NRCS              | Natural Resources Conservation Service          |
| NRHP              | National Register of Historic Places            |
| NWI               | National Wetlands Inventory                     |
| O <sub>3</sub>    | Ozone   |
| Pb                | Lead  |
| PEI               | Pritchard Engineering, Inc.                     |
| PL                | Public Law                                      |
| PM <sub>2.5</sub> | Particulate Matter less than 2.5 Microns        |
| PM <sub>10</sub>  | Particulate Matter less than 10 Microns         |

## ACRONYMS AND ABBREVIATIONS

|                 |  |
|-----------------|--|
| SHPO            | State Historic Preservation Officer          |
| SO <sub>2</sub> | Sulfur Dioxide                               |
| STP             | Shovel Test Pit                              |
| SWPPP           | Stormwater Pollution Prevention Plan         |
| THPO            | Tribal Historic Preservation Officer         |
| USACE           | U. S. Army Corps of Engineers                |
| USCB            | U. S. Census Bureau                          |
| USDA            | U. S. Department of Agriculture              |
| USFWS           | U. S. Fish and Wildlife Service              |
| USGS            | U. S. Geological Survey                      |
| WMC             | Winston Medical Center                       |
| WCMF            | Winston County Medical Foundation            |
| WMCTF           | Winston Medical Center Transitional Facility |
| WOUS            | Waters of the United States                  |

DRAFT

## 1.0. INTRODUCTION

On April 28, 2014, an EF-4 tornado touched down in Leake County, MS and carved a 34-mile path through Leake, Neshoba, Winston, and Attala counties. The tornado caused millions of dollars in damage and 12 people in the affected counties lost their lives. Under the authority of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (“Stafford Act”, Public Law (PL) 93-288, as amended), the President declared a federal disaster, DR 4175-MS, on April 30, 2014, authorizing federal funds for Individual Assistance (12 counties), Public Assistance (10 counties), and Hazard Mitigation Grant Program funds statewide. The tornado made a direct hit on the Winston Medical Center (WMC) campus, located at 562 East Main Street in Louisville, Mississippi (33.124147, -89.036112), Figures 1-3 in Appendix A). WMC sustained major damage to several buildings, including the main facility, the 120-bed nursing home, the dialysis center and the outpatient surgery center. The damages forced the temporary closure of the complex and caused employment disruption for over 200 hospital staff. The Winston County Medical Foundation (WCMF) applied for Public Assistance funds to repair to pre-disaster condition the existing nursing home building and re-design the hospital campus to better serve the community’s healthcare needs.

Three weeks after the event, a temporary facility provided by FEMA was opened approximately two miles away from the original site to serve the people of the Louisville area until the WMC is rebuilt. The temporary hospital had 10 beds, a five bed emergency department, an x-ray unit, a lab unit, and a pharmacy unit. On April 1, 2015, the Winston Medical Center Transitional Facility (WMCTF), located at 923 South Church Avenue in Louisville, opened its doors to serve patients during the rebuilding phases at the old location. WMCTF allows WCMF to offer additional services at a centralized, but temporary location. While continuing to provide health care from the WMCTF, the Foundation is focused on rebuilding the hospital. Pursuant to this goal, WCMF applied for federal funding for the reconstruction of the hospital and several outbuildings damaged or destroyed by the incident under FEMA’s Public Assistance Alternate Procedure program (PAAP).

In accordance with the Stafford Act and regulations promulgated pursuant thereto and codified in Title 44 of the Code of Federal Regulations (CFR), Part 206, FEMA is required to review the environmental impacts of the proposed action prior to making a decision regarding whether to provide funding for the project. This Environmental Assessment (EA) has been prepared in accordance with the implementing requirements of the National Environmental Policy Act, PL 91-190, as amended, and regulations adopted pursuant thereto (44 CFR Part 10).

## **2.0. PURPOSE AND NEED**

Under Title IV of the Stafford Act, Public Assistance disaster relief funds are to be utilized for local, county, and state governments to provide emergency services and debris removal, as well as funding the repair of infrastructure such as roads, bridges, hospitals, and public buildings, in the event of a declared disaster. Additionally, Public Assistance funds may be disbursed to Private Non-profit 501(c)3 entities when they provide “critical services”, including emergency medical care.

The destruction of the WMC has reduced the pre-disaster capacity of medical and health related services and facilities to the residents of Louisville and the surrounding county. Prior to the event, WMC was a full service facility that served as Winston County's only hospital, offering 24/7 emergency room care, inpatient hospital care, inpatient geriatric care, long-term care and a wide range of outpatient services. In addition to offering a wide range of inpatient and outpatient services, the WMC provided 24/7 care for up to 120 senior citizens at the WMC Nursing Home.

Currently, the community’s healthcare needs are being met through the use of a temporary facility or by utilizing facilities outside of Winston County. The next nearest, full-service hospital facility is located in Starkville, MS (Oktibbeha County Hospital Regional Medical Center) which is approximately 30 miles north. The destruction of the hospital created a secondary hardship as a result of employment disruption for approximately 200 Winston County residents.

## **3.0. ALTERNATIVES**

Section 102 of NEPA requires that all federal agencies identify alternatives to a proposed action during the scoping phase of an undertaking. Three alternatives are addressed in this EA: (1) the no action alternative, where the WMC would not be rebuilt; (2) the repair to pre-disaster condition alternative where the campus would be reconstructed in the original footprint; and (3) the preferred action alternative, where the WMC campus is redesigned and expanded.

### **3.1. Alternative 1: No Action**

Under the no action alternative, WMC would not be rebuilt. The temporary facility would either close or be converted to a permanent facility operating at approximately 25% of the capacity for trauma and inpatient services as the original hospital. WMC staff laid off as a result of the tornado would not be re-hired. This alternative would result in further health, economic, and personal hardships for residents of the area and would strain the city and county’s social and economic infrastructure.

### **3.2. Alternative 2: Repair Campus to Pre-Disaster Condition**

Under this alternative, the campus would be reconstructed to pre-disaster condition. All buildings except the dialysis center and nursing home wings B and C would be demolished and the buildings would be reconstructed in the original footprint.

The reconstruction includes seven locations (Figures 3-4, Appendix A).

Site 1, Main Hospital: The main hospital building would be on a reinforced concrete slab-on-grade foundation covering 43,886 square feet with a one-story attached emergency wing, measuring approximately 17,411 square feet.

Site 2, Nursing home wing A: The wing would be a single-story brick concrete-frame structure covering 13,437 square feet.

Site 3, Outpatient clinic: The clinic would be a one-story brick building with slab on grade foundation. The building is approximately 15,981 square feet.

Site 4, Maintenance building: Reconstruction of a 40' x 50' two-story steel and metal frame building.

Site 5, Purchasing building: Reconstruction of 100' x 40' metal frame building on concrete slab.

Site 6, Utility shed: Reconstruction of 11'6" x 20' metal frame building on concrete slab with overhead door.

Site 7, Repairs throughout the hospital campus. Various repairs would be done on the grounds, to include repairs to lighting (light posts, flood lights, walkway luminaries, spot lights), repairs to 15 linear feet of wooden fence, a gazebo roof, 2 flag poles, parking surface, signage, 35 linear feet of metal railing, 153 linear feet of retaining wall, and a 1000 square foot section of the concrete drive for hospital access. These repairs would be to pre-disaster condition.

While the original structures met the previous standards for Winston County's healthcare needs, many community healthcare shortfalls were identified in a Community Needs Assessment (WMC 2013) and would remain unaddressed. For example, the needs assessment identified Alzheimer's disease as the third most prevalent cause of death in Winston County, and recommended a targeted assessment of caregiver needs for Alzheimer's patients. Any remedies for those caregiver needs could be limited in their implementation due to lack of resources and space.

### **3.3. Alternative 3: Construct New WMC Campus (Preferred Action Alternative)**

Under the preferred action alternative, WCMF would construct the medical facilities on an expanded campus of 19.3 acres. The reconstructed medical campus would be located at its original site at 526 East Main St. and on adjoining property purchased by Winston County. As in the second alternative, all existing campus buildings except for nursing home wings B and C and the dialysis center, plus three homes on the adjoining property would be demolished.

The project would include the construction of eight new buildings (Figure 6, Appendix A).

Site 1, Winston Medical Center -Main Hospital: The main hospital building would be a two-story building consisting of approximately 61,750 square feet. This building would be of steel frame construction with face brick exterior cladding and a low-slope modified bitumen roof.

Site 2, Nursing Cottages: The community houses would be a series of three one-story facilities totaling approximately 52,000 square feet. These facilities represent an expansion of the nursing home and would house approximately 72 additional patient beds. The structures would be comprised of a combination of steel frame and light gauge metal truss construction with face brick exterior cladding.

Site 3, Administration Building: The administration building would be one-story and contain approximately 9,400 square feet of multipurpose space. This building would be constructed with a combination of steel framing and light gauge metal trusses with face brick exterior cladding and a pitched, shingled roof.

Site 4, Medical Office Building: The medical office building would be a one-story building measuring approximately 14,500 square feet and would be built with a combination of steel framing and light gauge metal framing with face brick exterior cladding and a low-slope modified bitumen roofing system.

Site 5, Outpatient Therapy Building: The outpatient therapy facility would be a one-story facility consisting of approximately 3,500 square feet. This facility would also be constructed using a combination of steel framing and light gauge metal framing with face brick exterior cladding and a low-slope modified bitumen roofing system.

Site 6, Utility Shed: The shed would be a multi purpose space. The building would be one-story consisting of approximately 8,000 square feet of storage and office space. This would be a steel framed building with face brick exterior cladding and a low-slope modified bitumen roofing system.

Site 7, Ancillary facilities: The construction plans for the new WMC campus also include the paving of parking lots, roads, and service areas throughout the hospital campus, as well as new or upgraded utility systems to accommodate the new facilities. Construction of a new lake approximately three acres in size and installation of approximately 12,091 square feet of new parking and 19,166 square feet of new sidewalks and walking paths would occur in the floodplain on the easternmost portion of the site.

The preferred action alternative would construct an upgraded, modern facility and would provide more space and resources to recruit additional physicians. The upgraded campus allows for expanded medical services, such as outpatient care, and provides an opportunity for the WMC to address multiple community needs identified during the health needs assessment (WMC 2013). The addition of the lake would provide recreational and physical fitness opportunities for patients, residents of the nursing homes, and the public, in accordance with the need to increase wellness opportunities for residents of Winston County identified in the health needs assessment.

#### **4.0. AFFECTED ENVIRONMENT AND POTENTIAL IMPACTS**

##### **Site Description**

The proposed site for alternatives 2 and 3 is located in Township 15N, Range 12E, Section 35 of the Louisville 7.5" USGS Topographic quadrangle. This location is bounded on the north by East Main Street, also named State Highway 14. The western boundary of the site abuts a sparsely populated mixed residential/commercial area, while the southern boundary is adjacent to stands of planted pine and an intermittent stream flowing into Town Creek. The eastern edge of the project area is bounded by a forested parcel running along the Town Creek canal (see Figures 1-3 in Appendix A).

WMC campus is situated on a series of small terraces rising from the Town Creek floodplain. The western section was formerly planted in loblolly pine with associated undergrowth, but nearly all the trees were removed by the previous landowner. Ground cover for the site consists of bare soil, planted lawn or ornamental landscaping. The area along the floodplain is covered in grasses and shrubs typical of floodplain environments in Mississippi. No streams or wetlands are situated on the site, but two intermittent streams and Town Creek are adjacent to the location.

The majority of the site has been developed for approximately 60 years. The original WMC building was constructed in 1958, with additional buildings added as late as 2011. Auxiliary features of the built environment include several parking areas and retaining walls designed to prevent erosion from the top of the second terrace. Three houses dating from 1950-1960 are located west of the WMC campus facing north toward Highway 14. All standing structures including the WMC suffered damages from the 2014 tornado.

**Table 1. Summary of Environment and Impacts.**

| Affected Environment            | Impacts   | Mitigation  |
|---------------------------------|---|---|
| <p><b>Geology and Soils</b></p> | <p><b>No Action Alternative:</b> No impacts to geology would occur.</p> <p><b>Repair to Pre-disaster Condition:</b> No impacts to geology would occur. Minor temporary impacts to soils may occur during construction. No permanent impacts to soils would occur.</p> <p><b>Preferred Action Alternative:</b> For the majority of the site, minor temporary impacts to soils would occur during construction. Rosebloom series soils on the eastern section of the site would be removed during the excavation of the lake and used as fill on top of Sweatman (&lt;5% slope) series soils for raising building foundations. Per the geotechnical survey, the soils on site exhibit high shrink-swell potential and must be mitigated for volume change thru landscaping, compaction, and use of aggregate.</p> | <p>Appropriate Best Management Practices (BMPs) required by the MDEQ (2012) such as installing silt fences, providing temporary soil stabilization during construction, and vegetating bare soils would help minimize potential soil erosion. PEI completed a plan for site stabilization that included earthwork and grading, foundation preparation through use of aggregate and compaction, and landscaping to alleviate any inherent shrink-swell present in site location soils.</p> |

| Affected Environment        | Impacts   | Mitigation   |
|-----------------------------|---|--|
| <p><b>Surface Water</b></p> | <p><b>No Action Alternative:</b> No impacts to surface water would occur.</p> <p><b>Repair to Pre-disaster Condition:</b> Minor temporary impacts to surface water may occur during construction due to stormwater runoff. There would be no permanent impacts to surface waters as a result of this project.</p> <p><b>Preferred Action Alternative:</b> Minor temporary impacts to existing surface waters may occur during construction due to stormwater runoff. Additionally, construction of the lake would create three acres of surface water on the site.</p>  | <p>The applicant would prepare a Stormwater Pollution Prevention Plan (SWPPP) and obtain a National Pollutant Discharge Elimination System (NPDES) permit for the project. Appropriate BMPs, required by MDEQ (2012), such as installing silt fences, temporary soil stabilization during construction and vegetating bare soils would help minimize runoff. BMPs recommended by the EPA (1999) for wet detention ponds such as planting aquatic fauna on the bank and routine dredging would minimize impacts to surface waters off-site.</p> |
| <p><b>Floodplains</b></p>   | <p><b>No Action Alternative:</b> No impacts to floodplains would occur. Natural floodplain functions would be preserved.</p> <p><b>Repair to Pre-disaster Condition:</b> No impacts to floodplains would occur. Natural floodplain functions would be preserved.</p> <p><b>Preferred Action Alternative:</b> No fill would be placed in the regulatory floodplain. A portion of the floodplain will be converted to a three acre lake with hardened infrastructure, such as walkways and parking lot facilities, which would impact natural floodplain functions. Recreational opportunities and wildlife habitat would increase, while an estimated ½ acre of surface filtration would decrease. The lake would serve as a detention basin for stormwater runoff, which may decrease flows into Town Creek. The parking lot facilities and the walkways potentially would be vulnerable to damage from flooding.</p> | <p>The water level of the lake would depend exclusively on stormwater runoff and serve as a retention basin. As a result, this feature would help compensate for the increased runoff caused by the addition of hardened materials in the floodplain and help minimize the risk of additional flooding in nearby areas.</p> <p>To minimize negative impacts to floodplain functions, as a condition of the grant, only pervious materials will be used for the hardened surfaces within the floodplain.</p>                                    |

| Affected Environment | Impacts   | Mitigation   |
|----------------------|---|--|
| <b>Groundwater</b>   | <p><b>No Action Alternative:</b> No impacts to groundwater would occur.</p> <p><b>Repair to Pre-disaster Condition:</b> No impacts to groundwater would occur.</p> <p><b>Preferred Action Alternative:</b> No impacts to groundwater would occur.</p>   | None   |
| <b>Wetlands</b>      | <p><b>No Action Alternative:</b> No impacts to wetlands would occur.</p> <p><b>Repair to Pre-disaster Condition:</b> No impacts to wetlands would occur.</p> <p><b>Preferred Action Alternative:</b> No impacts to wetlands would occur.</p>  | None   |
| <b>Traffic</b>       | <p><b>No Action Alternative:</b> No impacts to traffic would occur.</p> <p><b>Repair to Pre-disaster Condition:</b> There would be a temporary increase in the volume of traffic on roads in the immediate vicinity of the project site during construction. There would also be a return to pre-disaster traffic levels following project completion.</p> <p><b>Preferred Action Alternative:</b> There would be a temporary increase in the volume of traffic on roads in the immediate vicinity of the project site during construction. There is the potential for a slight increase in traffic levels following project completion due to expanded capacity of the new campus and public use of the lake and recreational areas.</p> | Appropriate signage would be posted on affected roadways in order to make motorists and pedestrians aware of the presence and movement of large machinery and job-related traffic. |

| Affected Environment                | Impacts  | Mitigation  |
|-------------------------------------|--|-------------|
| <p><b>Environmental Justice</b></p> | <p><b>No Action Alternative:</b> A disproportionately high and adverse effect on minority or low-income populations would occur. Minority and low-income populations who may not be able to afford higher costs associated with travel due to the absence of local healthcare resources would continue to experience a lack of accessible healthcare services.</p> <p><b>Repair to Pre-Disaster Condition:</b> No disproportionately high or adverse effect on minority or low-income population members would be anticipated. All residents of Winston County would benefit from the project and its implementation would not adversely affect any single group or class of persons.</p> <p><b>Preferred Action Alternative:</b> No disproportionately high or adverse effect on minority or low-income population members would be anticipated. All residents of Winston County would benefit from the project and its implementation would not adversely affect any single group or class of persons.</p> | <p>None</p> |
| <p><b>Air Quality</b></p>           | <p><b>No Action Alternative:</b> No impacts to air quality would occur.</p> <p><b>Repair to Pre-disaster Condition:</b> Temporary impacts to air quality could occur during the construction period.</p> <p><b>Preferred Action Alternative:</b> Temporary impacts to air quality could occur during the construction period.</p>  | <p>None</p> |

| Affected Environment                                   | Impacts   | Mitigation  |
|--|---|---|
| Noise  | <p><b>No Action Alternative:</b> No impacts to noise would occur.</p> <p><b>Repair to Pre-disaster Condition:</b> Temporary noise impacts would occur at the project site during the construction period.</p> <p><b>Preferred Action Alternative:</b> Temporary noise impacts would occur at the project site during the construction period.</p>   | None  |
| Threatened and Endangered Species and Critical Habitat | <p><b>No Action Alternative:</b> This alternative would have no effect on threatened or endangered species, or critical habitat, protected by Federal law.</p> <p><b>Repair to Pre-disaster Condition:</b> No threatened or endangered species or critical habitat is present in the project area. The project would have no effect on threatened or endangered species or critical habitat.</p> <p><b>Preferred Action Alternative:</b> Per field survey completed 09/09/2015, no threatened or endangered species or critical habitat are present in the project area. The project will have no effect on threatened or endangered species or critical habitat.</p> | None  |
| Historic Properties                                    | <p><b>No Action Alternative:</b> No adverse effect to historic properties.</p> <p><b>Repair to Pre-disaster Condition:</b> As all work would take place in previously disturbed ground, there would be no effect to historic properties.</p> <p><b>Preferred Action Alternative:</b> There would be no effect to historic properties. An archaeological survey conducted 09/08-09/10/2015 discovered one site, which is ineligible for listing on the NRHP. An architectural survey showed no buildings were eligible for listing on the NRHP.</p>  | During construction, if any cultural resources are encountered, all activity onsite shall cease immediately and SHPO, MEMA, and FEMA shall be notified. |

| Affected Environment                                   | Impacts  | Mitigation   |
|--|--|--|
| <p><b>American Indian Cultural/Religious Sites</b></p> | <p><b>No Action Alternative:</b> No impacts to American Indian Cultural/Religious Sites would occur.</p> <p><b>Repair to Pre-disaster Condition:</b> No impacts to known American Indian Cultural/Religious Sites would occur. Consultation completed with all federally-recognized tribes with interests in Winston County.</p> <p><b>Preferred Action Alternative:</b> No impacts to known American Indian Cultural/Religious sites would occur. Consultation completed with all federally recognized tribes with interests in Winston County.</p> | <p>During construction, if any cultural resources are encountered, all activity onsite shall cease immediately and SHPO, MEMA, and FEMA shall be notified.</p> |

#### 4.1. Geology and Soils

The project lies within the Eastern Gulf Coastal Plain, which stretches from the Gulf of Mexico north into Tennessee, and from Louisiana to the Florida Panhandle (NRCS 2007). Winston County lies in the North Central Hills ecoregion of Mississippi. This area is characterized by Wilcox formation rolling hill and valley topography. The generally acidic soils are host to hardwood and loblolly pine forests. The project area rises from the floodplain valley of Town Creek to a series of terraces, at approximately 510 and 520 feet AMSL.

Geologically, the project site is located near the eastern edge of the Mississippi Embayment system. Most of the bedrock is sedimentary Cretaceous marls and sandstones. The Wilcox formation consists of Eocene-era deposits of sandy soils underlying silty clays. The Wilcox formation often contains deposits of lignite within the clays (Cushing, Boswell, and Hosman 1964). Wilcox Formation clay deposits were present approximately 12 feet below ground surface on the project site (PEI 2015).

The soils at the project site consist of two series: Rosebloom silt loam and Sweatman fine sandy loam (NRCS 2007; Figure 4, Appendix A). Rosebloom soils are frequently flooded alluvial soils located mainly on floodplains. Rosebloom soils are poorly drained and meet hydric soil criteria. Sweatman fine sandy loams consist mainly of sandy marine deposits and are found on upland ridges on slopes less than ten percent. These are well-drained soils that often boast loblolly and shortleaf pine forests. Sweatman soils present on the project area are eroded and present a shallow (less than six inches deep) soil profile.

Pritchard Engineering, Inc. (PEI) performed a geotechnical survey of the project site in April 2015. Twelve borings were conducted on various locations on the construction site (PEI 2015: Appendix E). The survey revealed that soft soils were present over the majority of the site and the area exhibited a high degree of water migration on the project site. PEI completed a plan for site stabilization that included earthwork and grading, foundation preparation through use of aggregate and compaction, and landscaping to alleviate any inherent shrink-swell present in site location soils.

The Farmland Protection Policy Act (FPPA), PL 110-246, requires Federal agencies to minimize their contributions to the degradation of farmland in the United States through conversion from agricultural to residential or commercial usage. Since the project site is within the Louisville City limits, the site is not considered Prime or Unique farmland.

**No Action Alternative:** Under the no action alternative, no construction would occur and there would be no impacts to geology or soils.

**Repair to Pre-disaster Condition:** Under this alternative, construction would take place on previously disturbed ground, and no long-term effects to geology or soils would be expected. Although minor, temporary impacts in the form of soil erosion could occur, implementation of BMPs as proscribed by MDEQ (2012) would mitigate those effects.

**Preferred Action Alternative:** Under the preferred action alternative, no impacts to geology would occur. Reconstruction of the building would not create subsurface disturbance deep enough to impact geologic resources. For the majority of the site, minor temporary impacts to soils would occur during construction. Rosebloom series soils on the eastern section of the site would be removed during the excavation of the lake and used as fill on top of Sweatman (<5% slope) series soils for raising building foundations. Per the geotechnical survey, the soils on site exhibit high shrink-swell potential and must be mitigated for volume change thru landscaping, compaction, and use of aggregate.

## **4.2. Water Resources**

### **4.2.1. Surface Water**

Surface water refers to stream, lakes, rivers, and reservoirs. Surface water provides up to 80% of water used by the public for agriculture, power generation, and the drinking water supply (USGS 2010). Discharge of pollutants into surface waters is monitored by the NPDES under the auspices of Section 402 of the Clean Water Act (as amended, 2002). Oversight of these regulations is delegated to the Mississippi Department of Environmental Quality (MDEQ, 2012). Additionally, the discharge of dredged material or fill into Waters of the United States (WOUS) is administered by the US Army Corps

of Engineers (USACE) under Section 404 of the Clean Water Act. In 2002, the EPA and the USACE issued a final rule defining “fill” as “any material placed into waters of the U.S. where the material has the effect of ...changing the bottom elevation of a water” (Federal Register 2002: 31330). According to this rule, fill includes construction materials and overburden discharged into waters of the U.S.

The proposed location for the WMC is located on a series of gradually sloped terraces above Town Creek. Town Creek is a second-order tributary of Nanih Waiya Creek, which is a minor tributary of the Pearl River. Town Creek runs roughly north and south and is situated approximately 500 ft. east of the construction site. Additionally, two intermittent streams, discharging into Town Creek, are immediately north and south of the WMC campus.

**No Action Alternative:** Under the no action alternative, no construction would occur and there would be no impacts to surface water resources.

**Repair to Pre-disaster Condition:** Under this alternative, stormwater discharge and minor sediment erosion could temporarily affect Town Creek or its tributaries. Prior to construction, the applicant would prepare a Stormwater Pollution Prevention Plan (SWPPP) and obtain a Large Construction Stormwater General Permit (LCGP) from MDEQ. The SWPPP would specify BMPs specific to the project site and potential pollutants from the project. BMPs would likewise prevent discharge of fill from construction into Town Creek. No long-term discharge of fill is anticipated from this alternative.

**Preferred Action Alternative:** Under the preferred action alternative, stormwater discharge and minor sediment erosion could temporarily affect Town Creek or its tributaries. Prior to construction, the applicant would prepare a SWPPP and obtain an LCGP permit from the Mississippi Department of Environmental Quality (MDEQ). The SWPPP would specify BMPs specific to the project site and potential pollutants from the project. BMPs would likewise prevent discharge of fill from construction into Town Creek. No long-term discharge of fill is anticipated from the Preferred Action. Construction of the lake creates a new source of surface water, and could negatively affect surface waters adjacent to the project area from pollution and runoff. As a condition of the grant, the BMPs as described by the EPA (1999), such as regular removal of sediment and introduction of aquatic fauna, would mitigate adverse effects to surface water resources.

#### **4.2.2. Floodplains**

Executive Order (EO) 11988 (Floodplain Management) requires federal agencies to avoid direct or indirect support of development within the floodplain whenever there is a practicable alternative. The reconstruction of the hospital will meet the definition of a “critical action” as defined in 44 CFR Part 9, “Floodplain Management and Protection of Wetlands”. Critical actions are those taken by FEMA that extend the life or function of critical facilities, such as hospitals or fire departments. Critical actions

require flood protections to the 0.2 percent level, as the risk of flooding is too great a threat. Flood Insurance Rate Maps (FIRMs) were examined during the preparation of this EA (Figure 8, Appendix A). The majority of the project site (approximately 14 acres) is located in an area designated as Flood Zone X (unshaded), meaning an area of minimal flood hazard with an annual chance of flooding less than 0.2 percent. The eastern section (approximately 6 acres) of the site lies within the boundaries of an area designated as Flood Zone AE, meaning an area of increased flood hazard with an annual chance of flooding of 1.0 percent.

**No Action Alternative:** Under the no action alternative, no construction would occur and there would be no impacts to the floodplain. Natural floodplain functions would be preserved.

**Repair to Pre-disaster Condition:** Under this alternative, no additional construction would occur in the floodplain and there would be no impacts to the floodplain. Natural floodplain functions would be preserved.

**Preferred Action Alternative:** Under the preferred action alternative, impacts to the floodplain would occur. The proposed project would involve the construction of a lake with hardened infrastructure, including walkways and multiple parking lot facilities within the 1.0 percent chance floodplain. Construction of the lake would require the excavation and removal of soil and would include hardened walkways around the lake perimeter. The parking lot facilities would also be constructed of hardened materials. Per a conversation with Leo Wood (Project Manager with Broadus and Associates) on 9/24/15, no fill would be placed in the regulatory floodplain.

As the reconstruction of the hospital will fall into the definition of a “critical action”, all construction in the floodplain must be elevated above the 0.2 percent flood elevation. To minimize impacts from flooding, all excavated soil from the lake would be removed and deposited on the main construction site to ensure all buildings are above the 0.2 percent chance floodplain elevations (see Appendix F, Floodplain Documentation). The water level of the lake would rely exclusively on stormwater runoff and serve as a retention basin. According to the National League of Cities (NLC), “Retention ponds are one of the most common forms of stormwater management and are designed to treat and store stormwater runoff that eventually empties into a receiving water body. Stormwater runoff is excess precipitation that flows into water bodies and local storm sewer systems largely due to the prevalence of hardened surfaces, such as impervious concrete. Large quantities of water that would ordinarily be absorbed into the ground in the natural environment instead enter streams and lakes. Stormwater runoff collects pollutants, chemicals and debris as it flows over paved surfaces and into water bodies. It also causes erosion, decreases groundwater recharge and alters aquatic environments” (NLC 2013).

Common benefits associated with retention ponds, in general, are improved water quality in surrounding water bodies, aesthetic appeal, increased biodiversity, provision of wildlife habitat, water conservation,

flood prevention as stormwater quantity reductions minimize the risk of flooding in nearby areas, and minimization of erosion (NLC 2013).

The lake feature would help compensate for the increased runoff caused by the addition of hardened surfaces within the floodplain and would help minimize the risk of additional flooding in nearby areas. To further minimize the impact of the hardened surfaces on water filtration, only pervious materials would be used within the floodplain.

Indirect impacts include supporting the ongoing occupancy on the floodplain that occurs within the project area. Although the project will require additional development in the floodplain, the project would increase recreational and physical fitness opportunities for patients and residents of Winston County. On June 16, 2015, Leo Wood met with the Louisville Floodplain Manager (Kenny Morris) to review the construction plans. Mr. Morris had no issues with the plans (See Appendix F). FEMA has determined that there are no practicable alternatives to locating the actions outside of the floodplain and still meet the proposed purpose in relation to the larger project and the community's needs.

#### **4.2.3. Groundwater**

The Mississippi Embayment Aquifer System is the major freshwater aquifer system beneath the project area (U. S. Geological Survey, 1998). This aquifer system extends eastward from Arkansas to northwestern Mississippi and is comprised of six hydrogeographic units. Winston County is situated above the Lower Wilcox aquifer. This unit is located on Wilcox formation sands, and is fairly thin (less than 200 feet thick in most locations; USGS 1998). All public drinking water in Winston County comes through a system of groundwater wells, but no sole-source aquifer is designated in Winston County (EPA 2015; MS Department of Health 2015). Groundwater well testing conducted by MDEQ revealed a typical well depth of 406 feet in Winston County (MDEQ 2011). The aquifer is recharged primarily by precipitation.

**No Action Alternative:** Under the no action alternative, no construction would occur and there would be no impacts to groundwater resources or to a sole source aquifer.

**Repair to Pre-disaster Condition:** Under this alternative, no impacts to groundwater resources or to a sole source aquifer are anticipated, since the depth of the construction would not affect the potable aquifer and no well sites are located on the property.

**Preferred Action Alternative:** Under the preferred action alternative, no impacts to groundwater resources or to a sole source aquifer are anticipated, since the depth of the construction would not affect the potable aquifer and no well sites are on the property.

#### **4.2.4. Wetlands**

As designated in Section 404 of the Clean Water Act, the U. S. Army Corps of Engineers (USACE) regulates the discharge of dredged and fill material into jurisdictional Waters of the United States (WOUS), including wetlands. E.O. 11990 (Wetland Protection) further requires Federal agencies to avoid, to the extent possible, adverse impacts to wetlands. The National Wetlands Inventory (NWI) is maintained by the USFWS to document mapped wetlands in the United States. The NWI indicates a small pond is present approximately 200 feet south of the project area, but no other mapped jurisdictional wetlands are present on the project area (see Figure 6 in Appendix A).

**No Action Alternative:** Under the no action alternative, no construction would occur and there would be no impacts to wetlands.

**Repair to Pre-disaster Condition:** As no jurisdictional wetlands are present on or adjacent to the project area, there would be no impacts to wetlands.

**Preferred Action Alternative:** As no jurisdictional wetlands are present on or adjacent to the project area, there would be no impacts to wetlands.

### **4.3. Traffic**

State Highway 14 is the main ingress/egress into the city for the eastern portion of the County. The section of Highway 14 adjacent to the project area is a two-lane asphalt road. The Mississippi Department of Transportation (MDOT) has surveyed Annual Average Daily Traffic (AADT) at two locations near the project area: Site 800310, approximately 2 miles east of the project area, and site 800280, approximately 0.5 mile west of the project area. Traffic counts for 2012 were 3200 (site 800300) and 7200 (site 800280). Traffic counts for site 800280 reflect increased traffic in Louisville's active downtown area, while those for the eastern site represent a distinctive drop in traffic density away from the town center.

**No Action Alternative:** Under the no action alternative, no construction would occur and there would be no impacts to traffic.

**Repair to Pre-disaster Condition:** Under this alternative, short-term impacts to traffic and site access are anticipated during the construction of the proposed project. There would be a minor temporary increase in the volume of construction traffic on roads in the immediate vicinity of the project site, which could potentially result in a slower traffic flow for the duration of the construction phase. To mitigate

potential delays and as a condition of the grant, construction vehicles and equipment would be stored on site during project activities, and appropriate signage would be posted on affected roadways.

Post-construction, traffic volumes in the vicinity of the project site and any increased traffic on Church Street due to the temporary facility would return to pre-disaster levels.

**Preferred Action Alternative:** Under the preferred action alternative, short-term impacts to transportation and site access are anticipated during the construction of the proposed project. There would be a minor temporary increase in the volume of construction traffic on roads in the immediate vicinity of the project site, which could potentially result in a slower traffic flow for the duration of the construction phase. To mitigate potential delays and as a condition of the grant, construction vehicles and equipment would be stored on site during project activities, and appropriate signage would be posted on affected roadways.

Post-construction, any increases in traffic volumes on Church Street due to the temporary facility would return to pre-disaster levels. Traffic volumes in the vicinity of the project site could slightly increase due to increased capacity of the new facility and public usage of the lake and recreational area.

#### **4.4. Environmental Justice**

Executive Order 12898 instructs Federal agencies to identify and address, as appropriate, disproportionately high and adverse effects to the health and environment of minority and low-income populations through their actions, policies, and programs. To assess potential adverse effects from the project, socioeconomic and demographic data from the U.S. Census was examined to assess any such impacts from the alternatives.

The city of Louisville and its immediate surroundings was divided into two tracts for the 2010 census. Tract 4503 includes the western portion of the city and its immediate surroundings, while tract 4504 included the eastern half of the city and adjacent areas. The Winston Medical Center lies in tract 4504 (See Figure 10, Appendix A). This tract accounts for 19.6% of the total population according to the 2010 Census data. Both tracts combined contained a total of 7,700 persons. The city of Louisville and its immediate surroundings has a higher percentage of minority residents than both Winston County, and the state populations. Additionally, while the percentage of the population over the age of 65 years is slightly lower than that of Winston County as a whole, it is above the percentage for the state.

Median household income in the city of Louisville is 39.5% lower than the state median household income and 23.4% lower than that of Winston County. The number of persons below the poverty level is almost double that of the state of Mississippi. In 2010, the poverty threshold for a family of four was \$22,491 (Table 2). This information indicates that most of the city population is in a lower income range

than the state as a whole. Additionally, approximately two hundred WMC staff were laid off after the tornadoes, and approximately 60 remain unemployed.

**Table 2. Winston County Demographic Data.**

| <b>Demographic</b>                       | <b>State of Mississippi</b> | <b>Winston County</b> | <b>City of Louisville</b> |
|--|-----------------------------|-----------------------|---------------------------|
| Total Population (2013 Estimate)         | 2,992,206                   | 18,727                | 6,421                     |
| Estimated Annual median household income | \$39,031                    | \$30,821              | \$23,613                  |
| Percent of Persons below poverty level   | 22.7%                       | 29.8%                 | 42.3%                     |
| Percent Minority (non-white)             | 40.2%                       | 47.9%                 | 63.5%                     |
| Percent over age 65 years                | 13.9%                       | 17.5%                 | 15.0%                     |

*Source: U.S. Department of Commerce, U.S. Census Bureau, "Quick Facts", 2010 Census of Population and Housing.*

**No Action Alternative:** The consequences of no action would be an adverse effect on minority and low income populations. The WMC serves both the city of Louisville and the majority of Winston County; the closest hospital is approximately 30 miles north, in Starkville, MS. This increased cost of travel for healthcare would have a negative impact on low-income populations. Additionally, not rebuilding the nursing home would negatively impact members of the community requiring that type of care and their families. Finally, as WMC employed approximately 200 persons prior to the event, not rebuilding the hospital would negatively impact the unemployment rates and negatively impact incomes of a significant number of persons in the county.

**Repair to Pre-disaster Condition:** This alternative would not have a disproportionately high or adverse effect to low income or minority populations, as the rebuilding of the hospital in its original footprint would restore medical services to the area. This alternative allows WMC to rehire many personnel who have been laid off, providing a beneficial effect to the county's economy.

**Preferred Action Alternative:** The preferred action alternative would not have a disproportionately high or adverse effect to low income or minority populations. The new hospital design allows for significant upgrades to the Winston County healthcare system, including greater patient capacity and more modern facilities, than the previous campus. Additionally, the additional space would allow the facility to hire more staff, providing a beneficial effect to the county's economy. Access to quality local healthcare would attract businesses siting within Winston County.

## 4.5. Air Quality

First adopted in 1970, the Clean Air Act (CAA) sets standards for air pollutants from both mobile and stationary sources in the U.S. Administered by the EPA, the standards were established to protect the public from harmful emissions contributing to poor air quality. Amendments in 1977 and 1990 targeted newly defined sources of air pollution, such as acid rain, while promoting alternative fuel usage. The EPA has set National Ambient Air Quality Standards (NAAQS) for the following six criteria pollutants: ozone (O<sub>3</sub>); particulate matter, including particles at least 2.5 microns but less than 10 microns in size (PM<sub>2.5</sub>) and those 10 microns or larger in size (PM<sub>10</sub>); nitrogen dioxide (NO<sub>2</sub>); carbon monoxide (CO); sulfur dioxide (SO<sub>2</sub>); and lead (Pb). Winston County is currently classified as “in attainment” according to the EPA NAAQS Greenbook (2015), meaning it meets current government air quality standards.

**No Action Alternative:** Under the no action alternative, no construction would occur and there would be no impacts to air quality.

**Repair to Pre-disaster Condition:** Under this alternative, short-term minor impacts to air quality could occur during the construction period. No long-term impacts to air quality are anticipated to result from implementation of the project.

**Preferred Alternative:** Under the preferred action alternative, short-term minor impacts to air quality could occur during the construction period. No long-term impacts to air quality are anticipated to result from implementation of the project.

## 4.6. Noise

The Oxford English Dictionary defines noise as a “sound... that is loud or unpleasant, or causes a disturbance” (OED 2014). Sound is commonly measured in decibels (dB), measured on a logarithmic scale. In 1974, under the auspices of the Noise Control Act (42 U.S.C. § 4901), the EPA defined acceptable levels for outdoor (55 dB) and indoor (45 dB) levels of noise. These levels are the minimal standard for prevention of interference in daily activities.

**No Action Alternative:** Under the no action alternative, no construction would occur and there would be no changes in noise levels.

**Repair to Pre-disaster Condition:** Under this alternative, short-term increases in noise levels could be expected to occur during the construction period. No long-term increases in noise levels are anticipated as a result of the proposed project.

**Preferred Action Alternative:** Under the preferred action alternative, short-term increases in noise levels could be expected to occur during the construction period. No long-term increases in noise levels are anticipated as a result of the proposed project.

#### **4.7. Biological Resources**

The USFWS lists one federally-recognized threatened species that may occur in Winston County (USFWS, 2013). The Northern Long-eared Bat (*Myotis septentrionalis*) generally chooses to hide in crevices or under the bark of trees, either alone or in a colony. During the winter months, the bats hibernate into caves or abandoned mines. Occasionally, the bats will choose to roost in structures such as barns or abandoned buildings.

FEMA staff conducted a site survey for the Northern Long-eared Bat on September 9, 2015. Habitats of potential interest included the abandoned homes and a shed adjacent to one structure. Additionally, potential roosting areas in trees were surveyed. No trees providing potential roosting habitat were observed. Additionally, FEMA staff inspected all standing structures for evidence of bat habitation, but no evidence was observed. FEMA has determined there will be no effect to threatened or endangered species and no critical habitat occurs within the project site.

**No Action Alternative:** Under the no action alternative, no construction would occur and there would be no impacts on biological resources.

**Repair to Pre-disaster Condition:** Under this alternative, no impacts to threatened or endangered species would occur. All construction would occur within the original footprint.

**Preferred Action Alternative:** A site survey concluded that no species are present at the project site. No impacts to threatened or endangered species would occur.

#### **4.8. Cultural Resources**

The National Historic Preservation Act of 1966 (NHPA), as amended, established that Federal agencies should consider adverse effects of Federal actions to historic properties. The NHPA created the National Register of Historic Places (NRHP), with criteria to discern cultural resources that are eligible for placement on the Register. Section 106 of the NHPA and 36 CFR 800 describes the process through which Federal agencies identify eligible and potentially eligible properties within the Area of Potential Effect (APE). When NRHP-eligible properties are present, Federal agencies must assess the effect of the undertaking and consider ways to minimize or mitigate potential adverse effects.

Between September 8-10, 2015, FEMA archaeologists conducted a Phase I survey of approximately 13 acres of previously unsurveyed land for the WMC (Figure 11, Appendix A). A total of 79 shovel test locations were investigated on the site. Four locations were positive for cultural materials; this site was designated WMC-001 (22Wi 921). Site delineations were truncated on the western side due to lack of “right of entry” for those parcels. One diagnostic artifact, a French Colonial gunflint, was recovered in location WMC009; four ceramic sherds were recovered in three surrounding locations. Although the gunflint indicates either a historic Indian or historic French Colonial occupation period, the site lacks integrity and is ineligible for listing on the National Register of Historic Places (See Appendix D).

FEMA performed an architectural recordation of three standing structures on the adjoining property during the cultural resource survey. The examination revealed that the damage from the same tornado and subsequent repair attempts rendered those houses ineligible for listing on the NRHP under any criteria. FEMA made a finding of “no historic properties affected”.

**No Action Alternative:** No historic properties would be affected.

**Repair to Pre-disaster Condition:** Prior to the event, there were several buildings on the campus. This alternative would utilize the existing disturbed ground with any additional ground disturbance limited to minor grading. In December 2014, FEMA consulted with the Mississippi Department of Archives and History (MDAH) and all tribes with interests in the area. Consultation included the Mississippi Band of Choctaw Indians, Choctaw Nation of Oklahoma, Jena Band of Choctaw Indians, Alabama Coushatta Tribe of Texas, Kialegee Tribal Town, Seminole Nation of Oklahoma, and the Tunica Biloxi Tribe of Louisiana. MDAH, the Mississippi Band of Choctaw Indians, the Jena Band of Choctaw, and the Choctaw Nation of Oklahoma concurred that the project would have no effect to historic properties in January 2015.

**Preferred Action Alternative:** The cultural resource survey revealed no archaeological sites or standing buildings eligible for listing on the NRHP within the proposed project location. As no historic properties or archaeological sites eligible for listing on the NRHP are located in the Area of Potential Effect (APE) of the undertaking, FEMA has determined there would be no effect to historic properties from the preferred action alternative. FEMA consulted with MDAH, the Mississippi Band of Choctaw Indians, Choctaw Nation of Oklahoma, Jena Band of Choctaw Indians, Alabama Coushatta Tribe of Texas, Kialegee Tribal Town, Seminole Nation of Oklahoma, and the Tunica Biloxi Tribe of Louisiana in September 2015. MDAH concurred with FEMA’s finding of no effect to historic properties in October 2015.

## 5.0. CUMULATIVE IMPACTS

According to the Council on Environmental Quality (CEQ) Regulations, cumulative impacts represent the “impact on the environment that 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 impacts of the alternatives and other actions occurring or proposed in the vicinity of the project site.

Winston County and the city of Louisville are undergoing recovery efforts after the tornado on April 28, 2014 caused extensive damages. The recovery efforts in these areas include demolition and construction. These projects in addition to the proposed project may have a cumulative temporary impact on air quality in the immediate project areas by increasing criteria pollutants during demolition and construction activities.

**No Action Alternative:** Under the no action alternative, no construction would occur. A disproportionately high and adverse effect on minority or low-income populations would occur and continue to impact future generations. Minority and low-income populations who may not be able to accommodate higher travel costs associated with the absence of local healthcare resources would experience a lack of accessible healthcare. Additionally, with the absence of a local medical community and adequate health care infrastructure, it is unlikely that businesses, retirees, or new citizens would consider moving into the community.

**Repair to Pre-disaster Condition:** Under this alternative, construction would take place on previously disturbed ground, and no long-term environmental or historic impacts are expected. No disproportionately high or adverse effect on minority or low-income population members would be anticipated. All residents of Winston County would benefit from the project and its implementation would not adversely affect any single group or class of persons.

**Preferred Action Alternative:** Under the preferred action alternative, no long-term environmental or historic impacts would occur. No disproportionately high or adverse effect on minority or low-income population members would be anticipated. All residents of Winston County would benefit from the project, and its implementation would not adversely affect any single group or class of persons.

## **6.0. PUBLIC INVOLVEMENT**

FEMA is the lead Federal agency responsible for conducting the NEPA compliance process for the proposed project. A review of documentation provided by WCMF contained minutes and agendas regarding a series of meetings held during the creation of the Recovery Support Strategy in 2014. Key to this strategy was the creation of the Medical and Community Strategic Planning Committee, which met weekly for six weeks during the creation of the RSS, and which contributed to the development of the proposed project. All meetings were held in the Louisville Town Hall and were open to the public for input. Announcements of the meetings were placed in the Winston County Journal, available in print and online.

FEMA has selected an expedited 7-day public comment period commencing on the initial date of publication of the public notice given prior opportunity for public comments and widespread community awareness of the damaged hospital. The Winston County Medical Foundation notified the public of the availability of the draft EA through publication of a public notice in a local newspaper of general circulation.

## **7.0. AGENCY COORDINATION**

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

- Mississippi Department of Archives and History
- Mississippi Band of Choctaw Indians
- Choctaw Nation of Oklahoma
- Jena Band of Choctaw Indians
- Alabama Coushatta Tribe of Texas
- Kialegee Tribal Town
- Seminole Nation of Oklahoma
- Tunica Biloxi Tribe of Louisiana

## **8.0. CONCLUSIONS**

FEMA has determined that no significant impacts to geology, groundwater, socioeconomic resources, architectural or archaeological resources would occur under the preferred alternative. During the construction period, impacts to soils, surface water, transportation, air quality, and noise levels are anticipated. To minimize these impacts and meet compliance requirements, the following conditions

would apply to the project. Documentation of compliance must be submitted to MEMA and FEMA.

In accordance with applicable local, State, and Federal regulations, the applicant is responsible for acquiring any necessary permits prior to commencing construction at the project site.

The applicant shall implement all appropriate Best Management Practices (BMPs) as required by the MDEQ (2012), such as installing silt fences, providing temporary soil stabilization during construction, and vegetating bare soils to minimize potential soil erosion.

To mitigate any impacts from using on-site soils as fill, the applicant shall stabilize the site as recommended by the geotechnical survey, including earthwork and grading, foundation preparation through use of aggregate and compaction, and landscaping to alleviate any inherent shrink-swell present in site location soils

The applicant shall prepare a Stormwater Pollution Prevention Plan (SWPPP) and obtain a National Pollutant Discharge Elimination System (NPDES) permit for the project. The applicant shall implement all appropriate BMPs as recommended by the EPA (1999) for wet detention ponds.

All hardened surfaces, such as walkways or parking lots, within the regulatory floodplain must be composed of pervious materials to allow for water filtration.

Appropriate signage shall be posted on affected roadways in order to make motorists and pedestrians aware of the presence and movement of large machinery and job-related traffic.

During construction, if unexpected discoveries of archaeological or historical materials or human remains are made, all activity onsite shall cease immediately; and MDAH, MEMA, and FEMA shall be notified.

Documentation of compliance with the above conditions is required and must be provided to MEMA and FEMA.

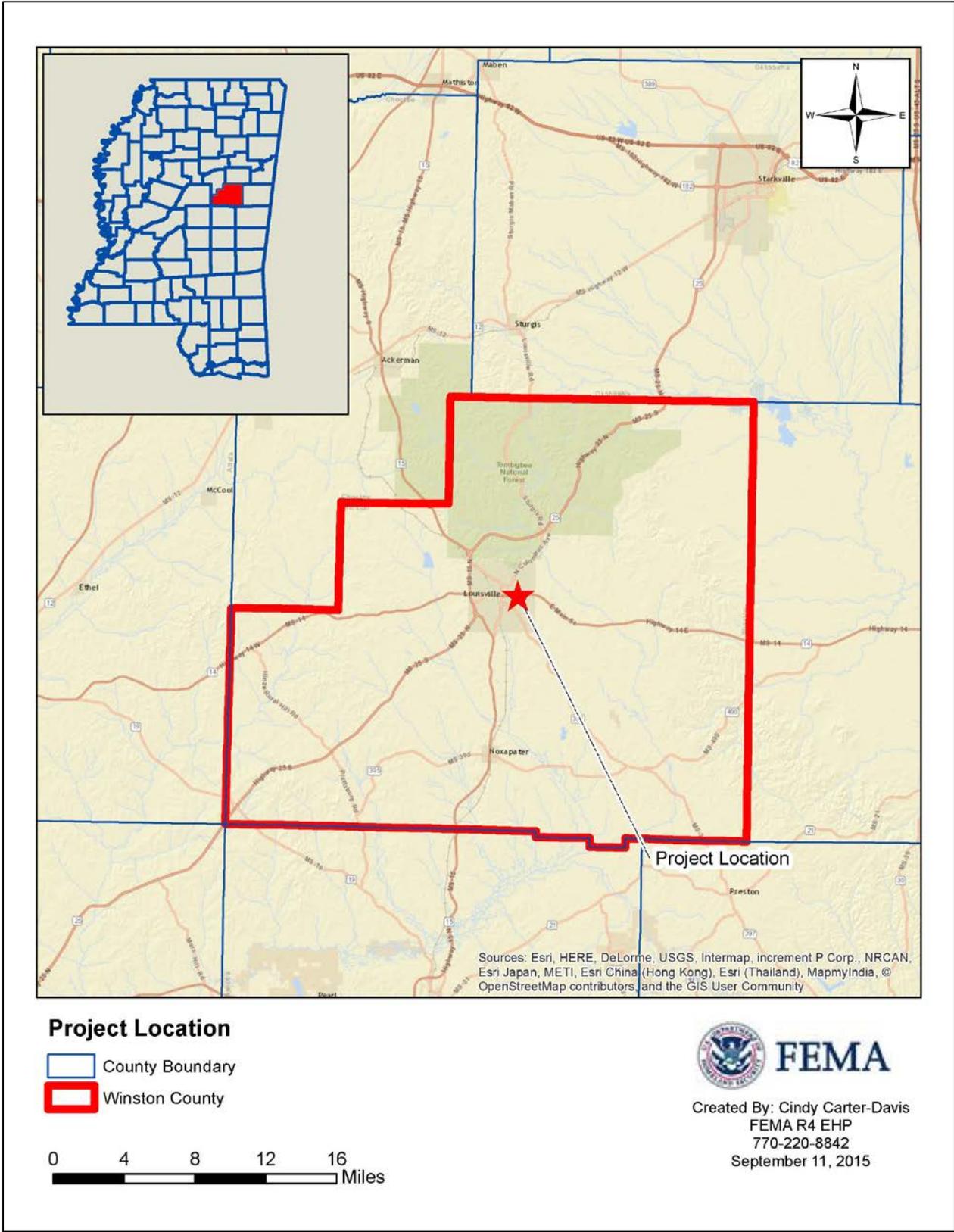
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# **Appendix A**

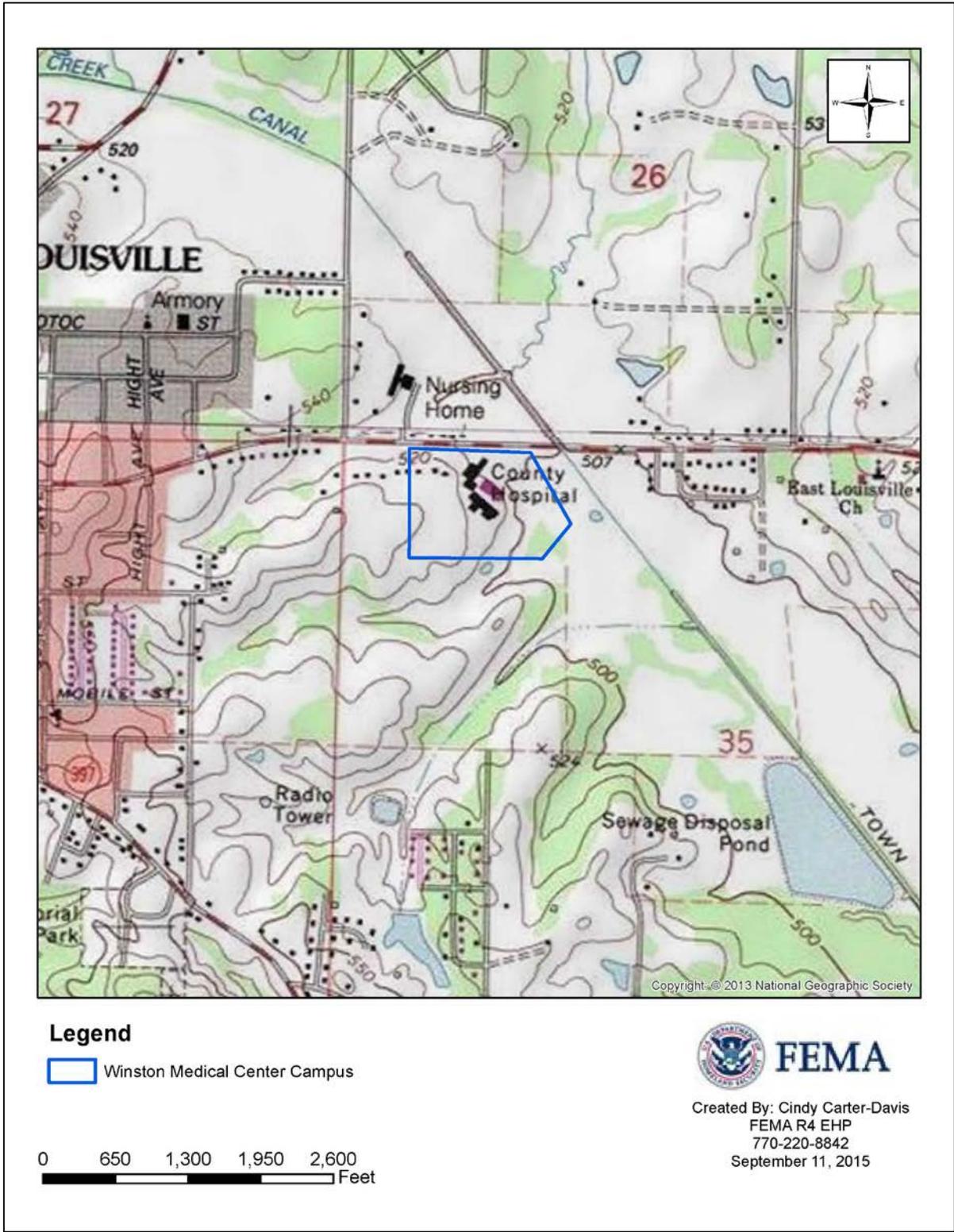
## **Figures**



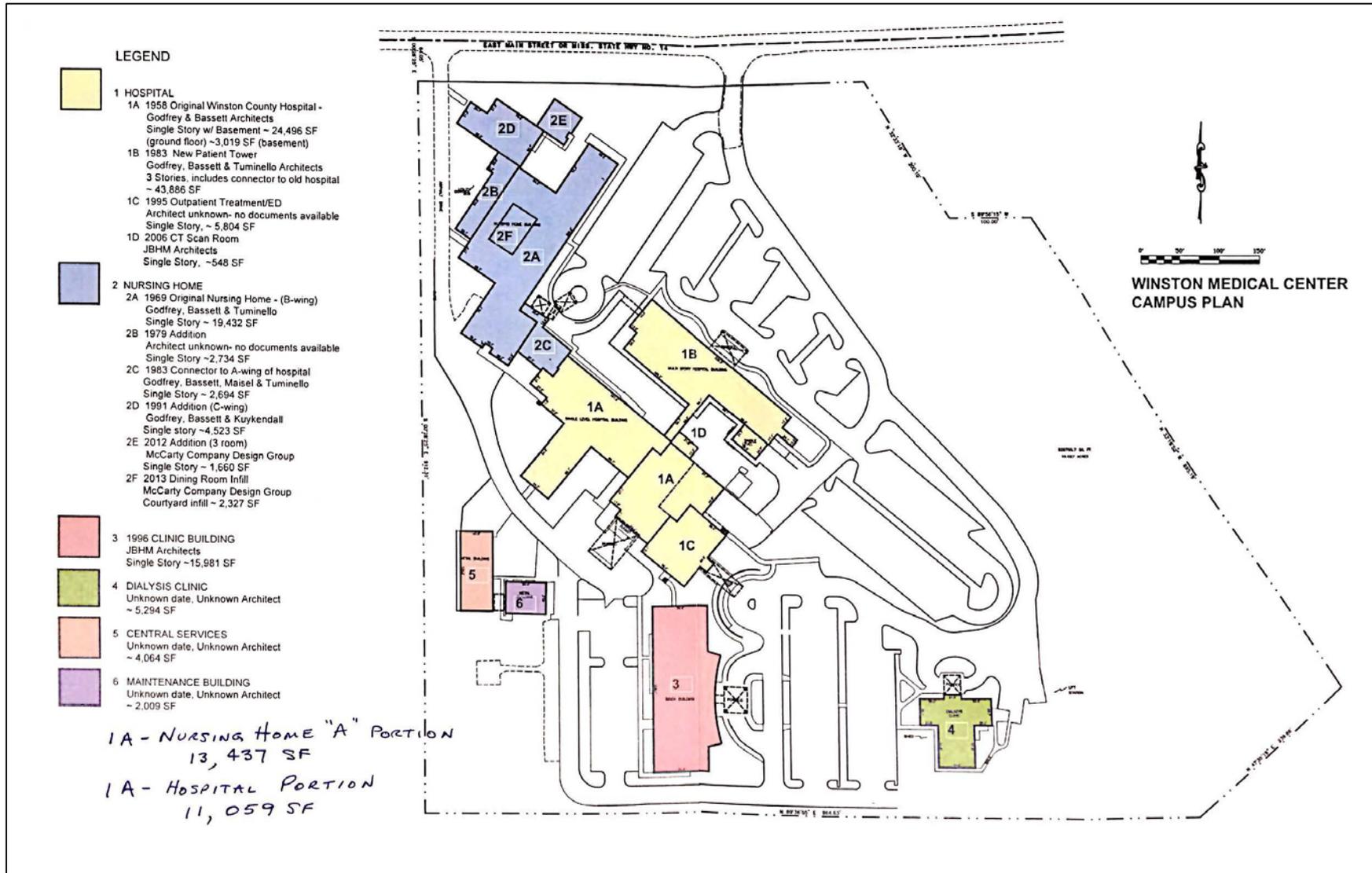
**Figure 1: Project Location.**



**Figure 2:** Aerial View of Project Area



**Figure 3: USGS Topographic Map (USGS 1983).**



**Figure 4.** Site Plan of “Repair to Pre-disaster” Alternative.



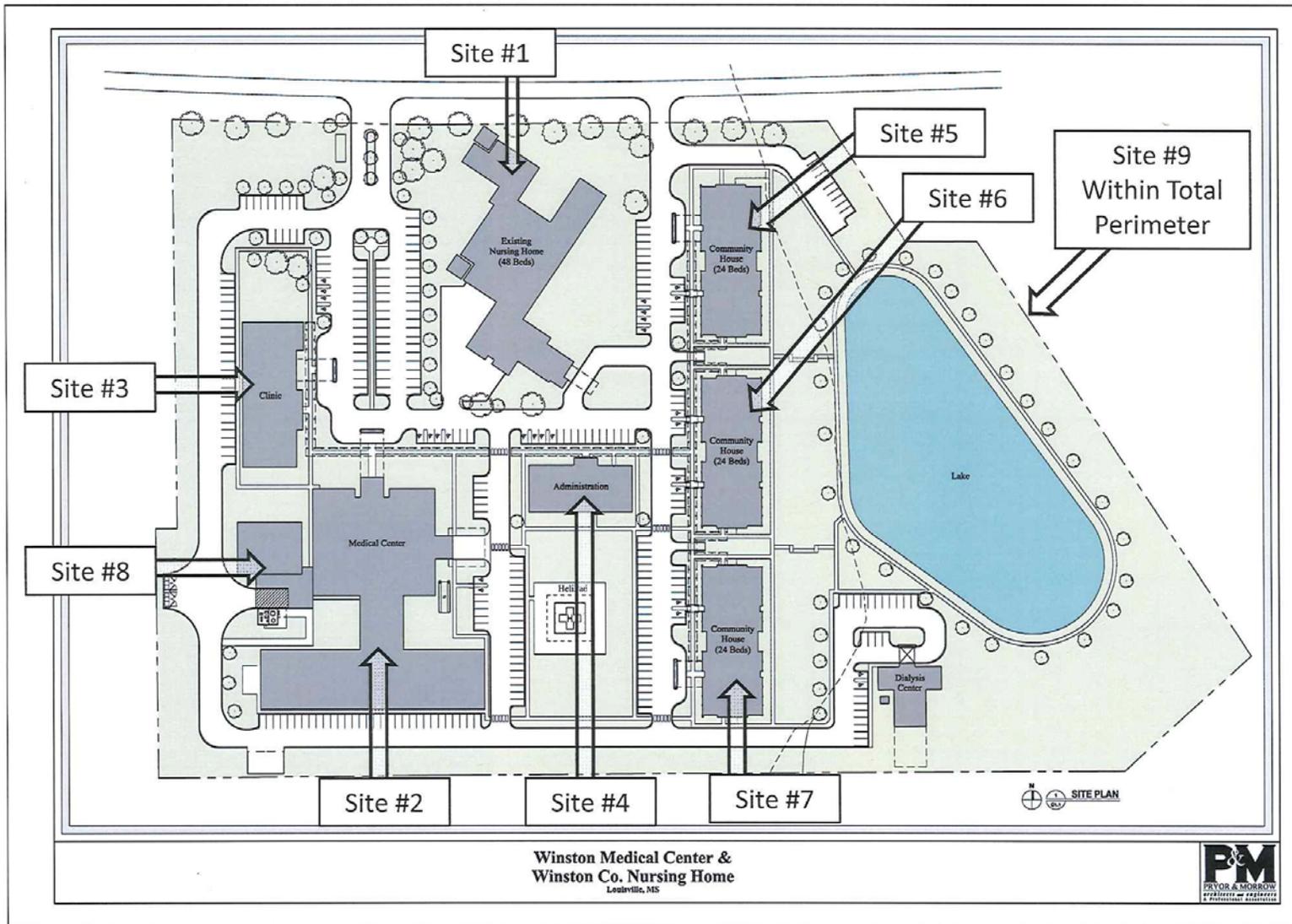
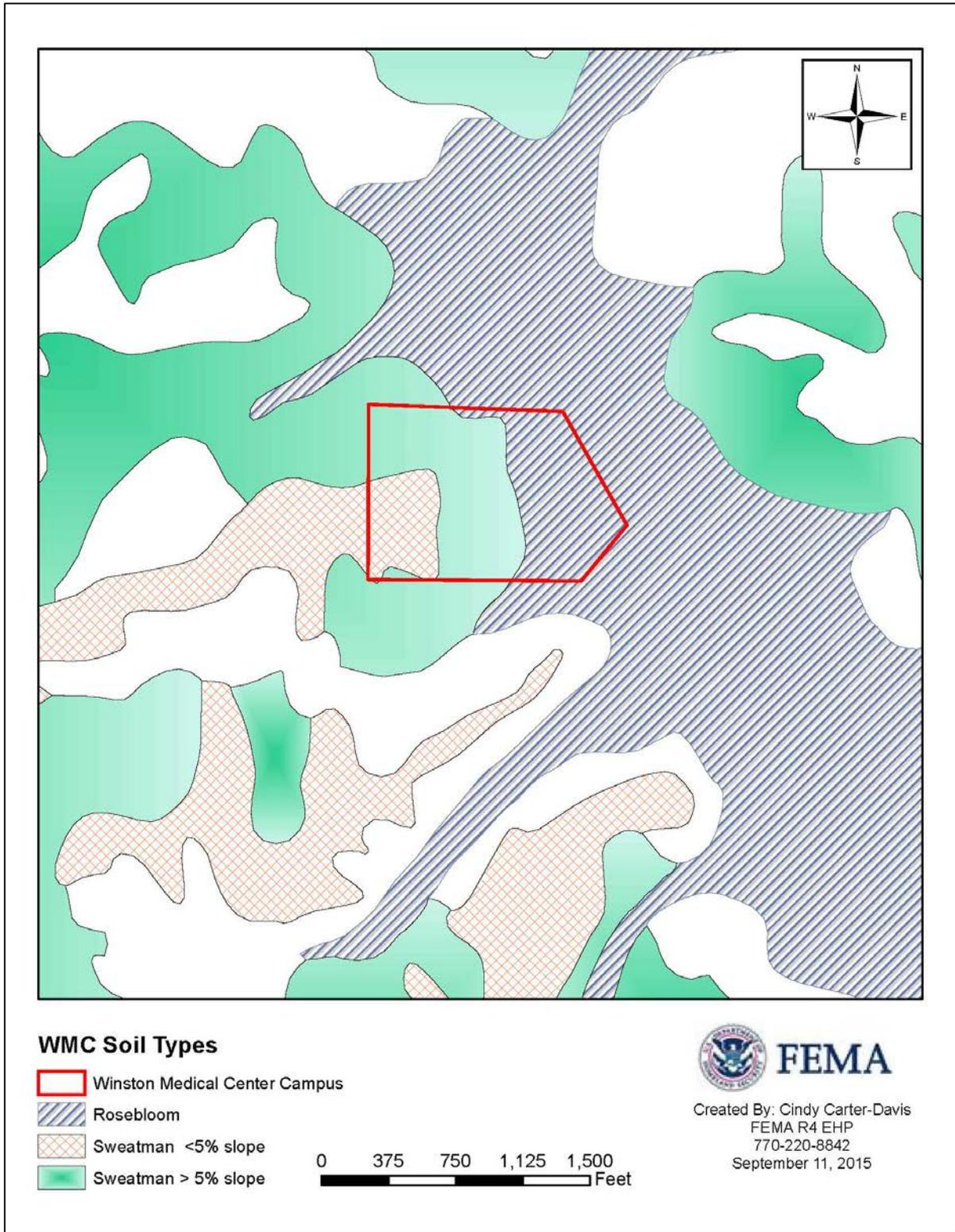


Figure 6. Site Plan, Preferred Action Alternative.



**Figure 7: Winston Medical Center Soil Types.**





U.S. Fish and Wildlife Service  
**National Wetlands Inventory**

Winston County  
Medical center

Aug 28, 2015



**Wetlands**

-  Freshwater Emergent
-  Freshwater Forested/Shrub
-  Estuarine and Marine Deepwater
-  Estuarine and Marine
-  Freshwater Pond
-  Lake
-  Riverine
-  Other

**Riparian**

-  Herbaceous
-  Forested/Shrub

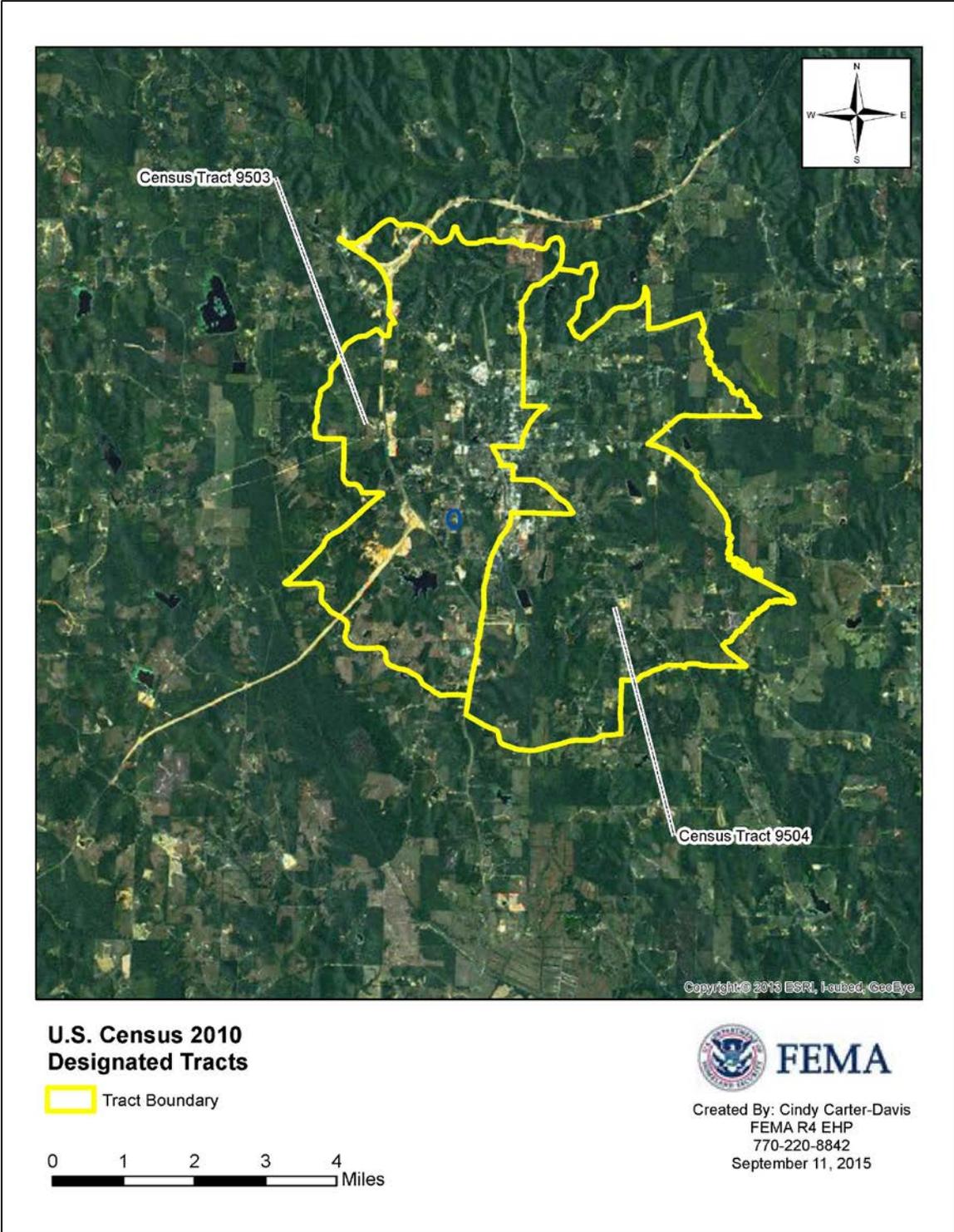
**Riparian Status**

-  Digital Data

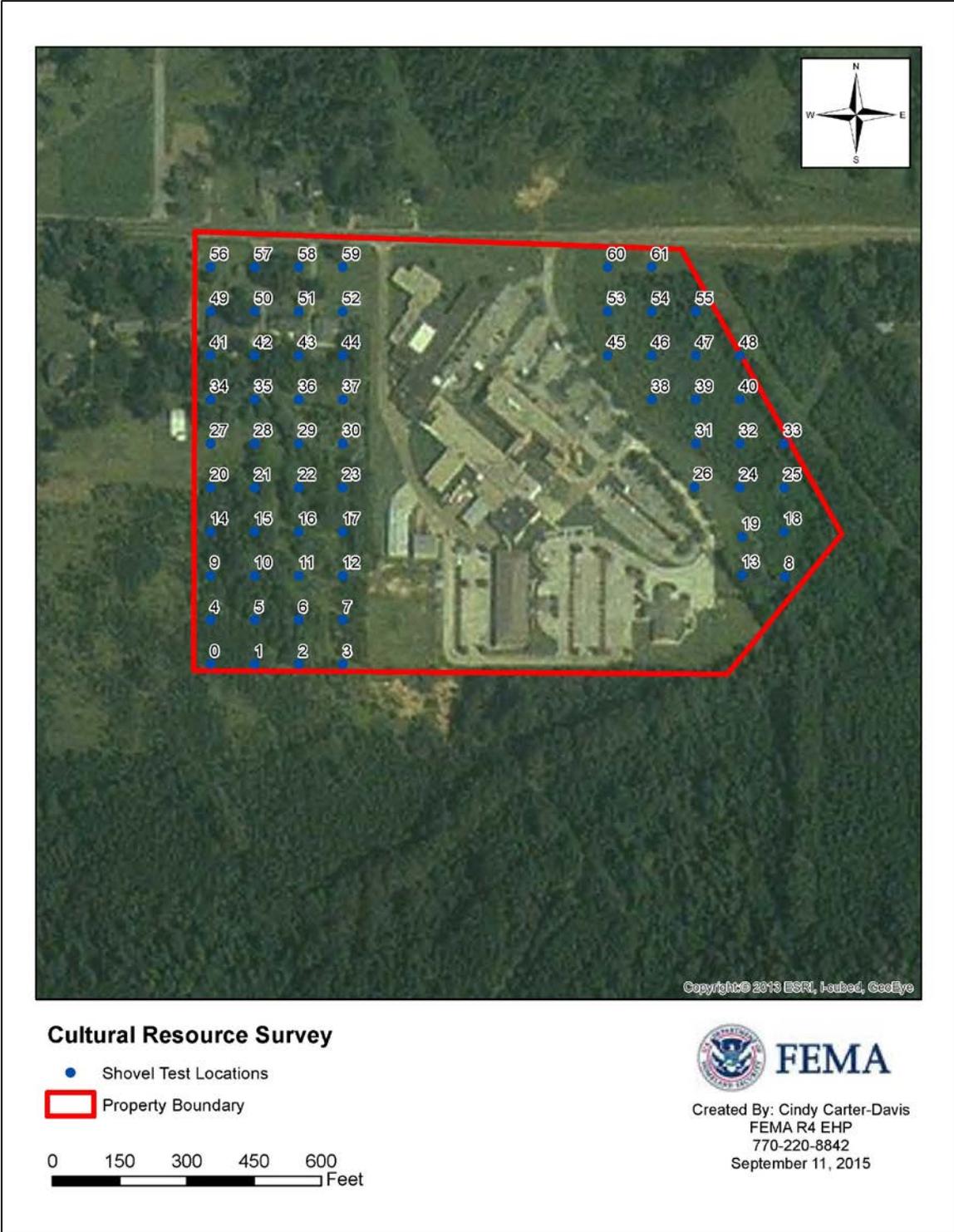
User Remarks:

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

**Figure 9:** USFW Wetlands map for Project Area



**Figure 10: U.S. Census Tracts, 2010.**



**Figure 11:** Cultural Resource Survey Area.

## **Appendix B**

### **Consultation**

DRAFT

**Appendix C**  
**Agency Coordination**

**Appendix C**  
**Eight-Step Planning Process for Floodplains**

**Eight-Step Planning Process for Floodplains and Wetlands  
Winston Medical Center Campus**

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| <p><b>Step 1:</b> Determine whether the Proposed Action is located in a wetland and/or the 1 percent chance floodplain (0.2 percent chance floodplain for critical actions), and whether it has the potential to affect or be affected by a floodplain or wetland.</p> | <p><b>Project Analysis:</b> Winston County is a participant in good standing with the National Flood Insurance Program (NFIP). According to Federal Emergency Management Agency (FEMA) mapping, the majority (14 acres) of the proposed project is located in Flood Zone X (unshaded) and not within the 1 percent chance floodplain (FEMA Flood Insurance Rating Map (FIRM) Number 28159C0231C, September 17, 2010.)</p> <p>Approximately six (6) acres of the proposed project area is located in Flood Zone AE within the 1 percent chance floodplain. (FEMA Flood Insurance Rating Map (FIRM) Number 28159C0231C, September 17, 2010.)</p> <p>The proposed project would involve the construction of facilities on a site where a portion is located within the 1 percent chance floodplain. The proposed Winston Medical Center Campus (critical action) would be constructed on the western portion of the site, outside of the 1 percent chance floodplain.</p> <p>Construction of parking lot facilities (12,091 square feet) and a three (3) acre lake with 19,166 square feet of walkways and sidewalks is proposed for construction within the 1 percent chance floodplain but in the flood fringe, outside of the floodway where flood waters are typically fast flowing. This location would greatly reduce the potential to affect or be affected by the floodplain.</p> <p>According to National Wetlands Inventory Maps and a site visit conducted by FEMA staff on September 3, 2015, the proposed project site contains no wetlands.</p> |
| <p><b>Step 2:</b> Notify public at earliest possible time of the intent to carry out an action in a floodplain or wetland, and involve the affected and interested public in the decision-making process.</p>  | <p><b>Project Analysis:</b> The Winston County Medical Foundation will notify the public of the availability of the draft EA through publication of a public notice in a newspaper of general circulation when the EA is made available for public review.</p>   |
| <p><b>Step 3:</b> Identify and evaluate practicable alternatives to locating the Proposed Action in a floodplain or wetland.</p>   | <p><b>Project Analysis:</b> The Applicant considered the following alternatives in selecting the proposed action:</p> <p><i>No Action Alternative:</i> Under the No Action Alternative, no construction would occur and there would be no impacts to the floodplain. Natural floodplain functions would be preserved, but the</p>  |

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|  | <p>healthcare of the community would continue to be impaired.</p> <p><i>Rebuild Campus to Pre-disaster Condition:</i> Under this Alternative, no additional construction would occur in the floodplain and there would be no impacts anticipated. Natural floodplain functions would be preserved., but no expansion of the hospital would occur and the identified healthcare needs of the community would not be met.</p>  |
| <p><b>Step 4:</b> Identify the full range of potential direct or indirect impacts associated with the occupancy or modification of floodplains and wetlands, and the potential direct and indirect support of floodplain and wetland development that could result from the Proposed Action.</p> | <p><b>Project Analysis:</b> The modification of a portion of the floodplain into a lake and the addition of hardened surfaces would potentially have a negative impact on the floodplain.</p> <p>Indirect impacts include supporting the ongoing occupancy on the floodplain that occurs within the project area.</p> <p>Positive direct support is anticipated as a result of the lake serving as a detention basin for stormwater runoff which could decrease peak flows into Town Creek.</p> <p>Positive indirect support would include the provision of recreational and physical fitness opportunities to existing populations in the local area.</p> <p>The project has no direct or indirect wetland impacts.</p> |
| <p><b>Step 5:</b> Minimize the potential adverse impacts from work within floodplains and wetlands (identified under Step 4), restore and preserve the natural and beneficial values served by wetlands.</p>   | <p><b>Project Analysis:</b> To minimize impacts to the floodplain, the Winston County Medical Foundation would remove all fill from the floodplain and would depend only on natural stormwater runoff to control water levels in the lake. Pervious materials would be used for the walkways and parking lots in all areas of the regulatory floodplain.</p>   |
| <p><b>Step 6:</b> Reevaluate the Proposed Action to determine: 1) if it is still practicable in light of its exposure to flood hazards; 2) the extent to which it will aggravate the hazards to others; 3) its potential to disrupt floodplain and wetland values.</p>                           | <p><b>Project Analysis:</b> Only the parking lots and lake would be located within the 1 percent chance floodplain. The parking lot facilities and lake would be located in the flood fringe, outside of the floodway where flood waters are typically fast flowing. The project is not anticipated to aggravate hazards to others within the 1 percent chance floodplain because pervious pavement materials would be used on the parking lot and walkways and the lake would act as a retention basin for stormwater runoff.</p>   |

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| <p><b>Step 7:</b> If the agency decides to take an action in a floodplain or wetland, prepare and provide the public with a finding and explanation of any final decision that the floodplain or wetland is the only practicable alternative. The explanation should include any relevant factors considered in the decision-making process.</p> | <p><b>Project Analysis:</b> A public notice will be published informing the public of FEMA’s decision to proceed with the project. This notice will include rationale for floodplain impacts; a description of all significant facts considered in making the determination; a list of the alternatives considered; a statement indicating whether the action conforms to State and local floodplain protection standards; a statement indicating how the action affects the floodplain; and a statement of how mitigation will be achieved.</p> |
| <p><b>Step 8:</b> Review the implementation and post-implementation phases of the Proposed Action to ensure that the requirements of the EOs are fully implemented. Oversight responsibility shall be integrated into existing processes.</p>  | <p><b>Project Analysis:</b> This step is integrated into the NEPA process and FEMA project management and oversight functions.</p>   |

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**Appendix D**  
**Cultural Resources Survey**

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**Appendix E**  
**Geotechnical Report**

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**Appendix F.**  
**Floodplain Documentation**

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