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**DORN VETERANS AFFAIRS MEDICAL CENTER,
COLUMBIA, SOUTH CAROLINA
ETHANOL-85 (E85) FUELING STATION EA**

Prepared for

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National Energy Business Center

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LIST OF ACRONYMS

ARPA	Archeological Resources Protection Act
AST	Above Ground Storage Tank
AT/FP	Antiterrorism/Force Protection
BMPs	Best Management Practices
CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CWA	Clean Water Act
E85	Ethanol 85 Fuel
EA	Environmental Assessment
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FFV	Flex Fuel Vehicle
NAAQS	National Primary and Secondary Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Agency
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
PPA	Pollution Prevention Act

RCRA	Resource Conservation and Recovery Act
SF	Square Feet
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SPCC	Spill Prevention, Control and Countermeasure
USFWS	U.S. Fish and Wildlife Service
UST	Underground Storage Tank
VA	U.S. Department of Veterans Affairs
VAMC	VA Medical Center
VHA	Veterans Health Administration

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1.0 PURPOSE AND NEED

1.1 INTRODUCTION

In response to recent federal initiatives, the Department of Veterans Affairs (VA) is considering alternatives for reducing the intensity of fossil fuel use at its facilities. In accordance with these initiatives, the VA proposes to install and operate ethanol-85 (E85) fueling stations at many of its VA medical centers (VAMCs). The VAMCs have most of the flex-fuel vehicles (FFVs) that are used by VA personnel such as ambulances, cars, trucks and buses. In addition, VAMCs are often near or collocated with other regional VA facilities whose personnel would also have access to an E85 station once installed. The purpose of installing E85 fuel tanks at VAMC campuses is to support the existing VHA FFV fleets that are currently underutilized owing to lack of E85 availability, and to reduce the number of DOE waivers that are currently needed by the VA to comply with Section 701 [42 U.S.C. 6374(a)(3)(E)] of the Energy Policy Act of 2005 requiring federal fleets to replace petroleum use with alternative fuels. If FFVs are eventually phased out and replaced with hybrid vehicles, any E85 tank could be used for gasoline (E10) and almost all hybrid vehicles run on gasoline. There is some interest in fueling hybrids with E85 (Flex Fuel hybrids), but they are not widely available at this time.

The Veterans Health Administration (VHA) FY2009 Minor Construction budget included \$7 million for constructing alternative fuel stations. However, that amount was insufficient to adequately fund E85 fueling stations on all VAMC campuses. To facilitate their decision-making, the VA commissioned a study to identify optimal locations for constructing fueling stations within the limits of available funding. The results of this study gave priority to 92 facilities distributed among 44 states (Versar 2009).¹ To evaluate and address the potential environmental impacts of this action, a program-wide analysis has been prepared in accordance with the National Environmental Policy Act (NEPA). The *Program-wide Analysis of Environmental Impacts from E85 Alternative Fueling Facilities at Veterans Affairs Medical Centers throughout*

¹ The VHA has acquired additional funding for the project since the 2009 study resulting in more sites being considered for E85 fueling stations than were initially identified. However, the total number of sites evaluated has not changed because some of the original candidate sites have been dropped after further consultation.

the U.S. examines the potential environmental impacts of installing and operating E85 fueling stations at VAMCs at the priority facilities; it is included as Appendix A of this site-specific EA.

1.2 BACKGROUND

The program-wide analysis provides an overall assessment of impacts of the proposed action from a programmatic, or national, perspective and identifies the key regulatory requirements under which the NEPA process must be implemented. The program-wide analysis considers three technological alternatives for installing an E85 fueling station: (1) installation of an above ground storage tank (AST); (2) installation of an underground storage tank (UST); and (3) conversion of an existing UST to E85 fuel, as well as the No-action Alternative to not install E85 at any of the VAMCs. Given the scope of what is being proposed at each facility, the environmental resources at most VAMCs would be affected similarly, regardless of what technological alternative was used. However, for many resources, the alternatives may have different effects at the regional or local level, and these site-specific effects are addressed in each site-specific EA. In addition, each EA considers any alternative locations for siting the E85 fueling station at individual VAMCs.

This site-specific EA has been prepared in the same accord as the program-wide analysis, but it will focus on the environmental issues that are specific to the William Jennings Bryan Dorn VAMC surroundings and existing environmental resources beyond what is considered in the program-wide analysis. The William Jennings Bryan Dorn VAMC is located at 6439 Garners Ferry Road, in Columbia, South Carolina, and will herein be referred to as the Dorn VAMC. The focus of this EA is the potential effects of the Proposed Action on existing conditions related to cultural resources, aquatic resources, solid and hazardous materials and wastes, as well as terrestrial natural resources. It also identifies any mitigation that would be required to enable the installation of the E85 fueling station at the proposed site.

The Council on Environmental Quality (CEQ) develops implementation regulations and oversees the efforts of federal agencies as they implement their NEPA programs. CEQ issued NEPA implementation regulations in 1978, which are included in Title 40, Code of Federal Regulations

(CFR), Parts 1500-1508. This site-specific EA is tiered from the program-wide analysis and complies with the NEPA, CEQ regulations, and VA regulations for implementing the NEPA (38 CFR Part 26). It also addresses all applicable laws and regulations, including but not limited to the following:

- National Historic Preservation Act (NHPA)
- Archeological Resources Protection Act (ARPA)
- Clean Air Act (CAA)
- Clean Water Act (CWA)
- Endangered Species Act (ESA)
- Pollution Prevention Act (PPA)
- Resource Conservation and Recovery Act (RCRA)

The program-wide analysis is included as Appendix A of this site-specific EA. The draft site-specific EA will be made available to local, state, federal, and tribal government agencies for a 30-day comment review period to meet the intent of National Environmental Policy Act (NEPA) and 38 CFR 26.9. Agency coordination and scoping comments will be included in Appendix B of the Final EA.

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2.0 PROPOSED ACTION

Under the Proposed Action, up to a 5,000 gallon E85 AST alternative fueling station would be installed and operated at the Dorn VAMC campus located in Columbia, South Carolina (Figure 2-1). Figure 2-2 shows an aerial view of the campus and surrounding area. The proposed location for the fueling area is adjacent to the Mechanical Shop (Building T25) highlighted in Figure 2-3. Improvements of infrastructure would not be required to accommodate access for vehicles or fuel delivery trucks. The proximity to existing electrical power, required safety setbacks from buildings and property lines, and the VA Antiterrorism/Force Protection (AT/FP) requirements were considered during the site selection process. Preference was given to locating the E85 fueling station near an existing fueling area on campus.

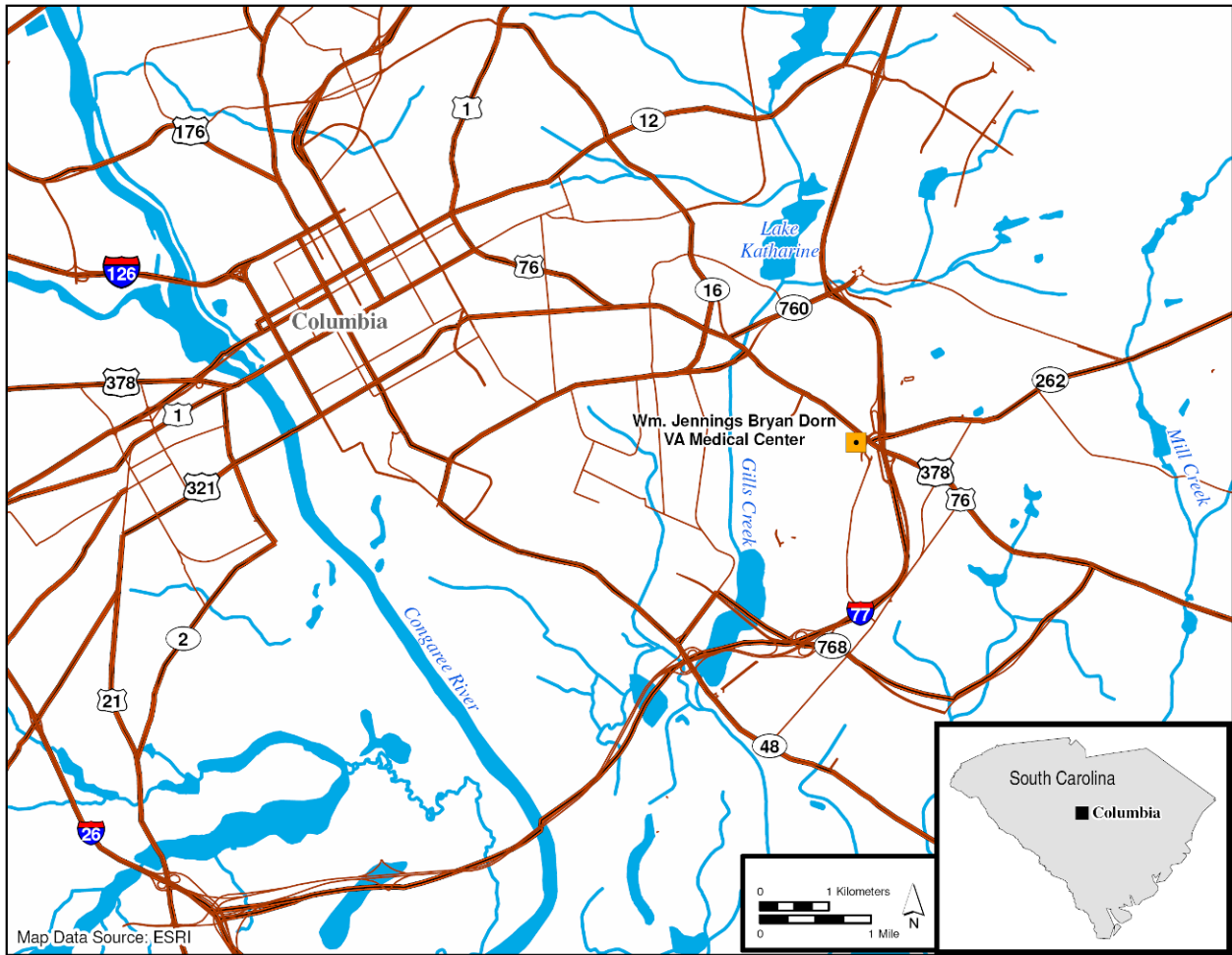


Figure 2-1. Regional map showing general location of the Dorn VAMC

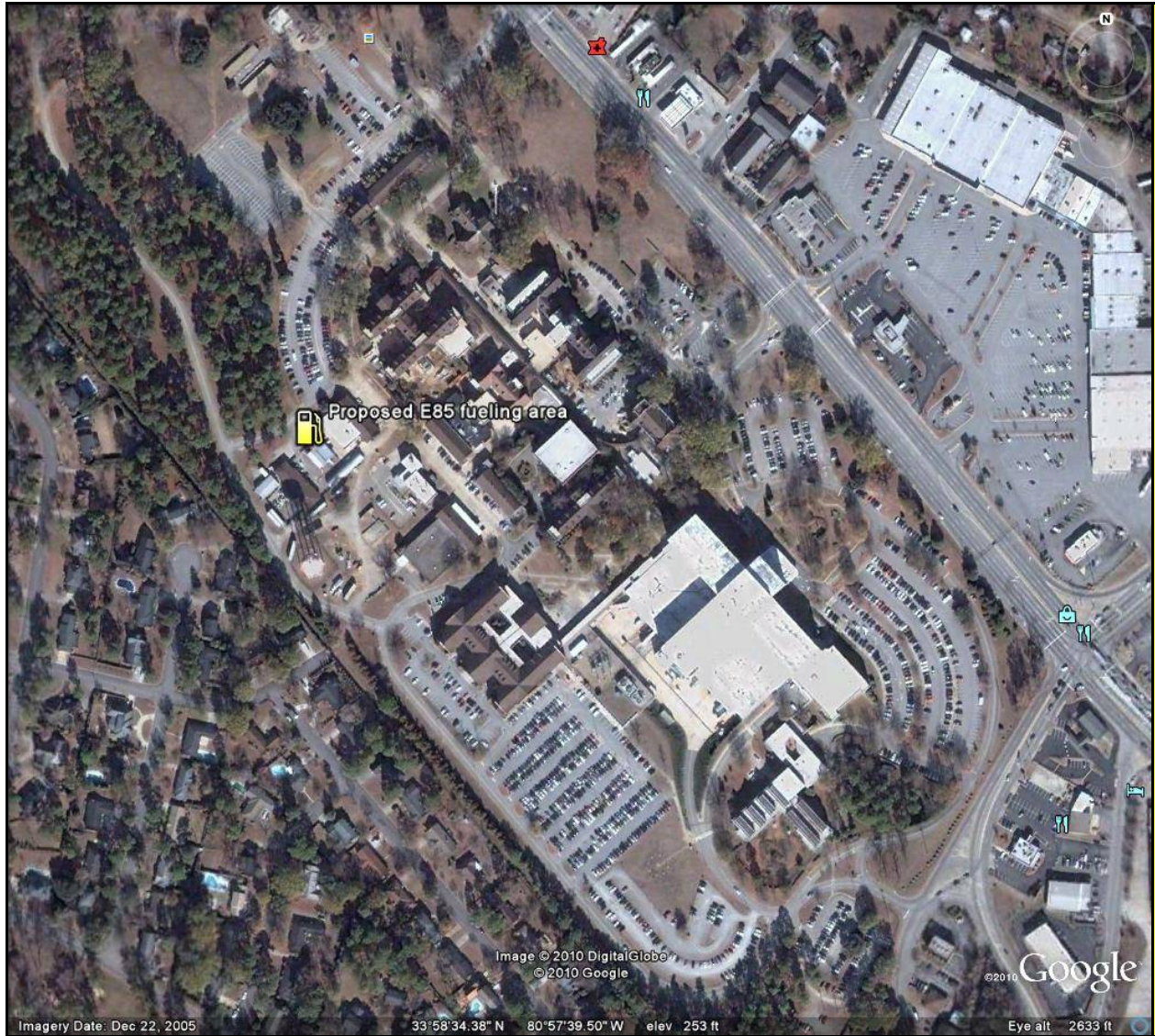


Figure 2-2. Aerial view of the Dorn VAMC showing the layout of the campus and the proposed location of the E85 AST

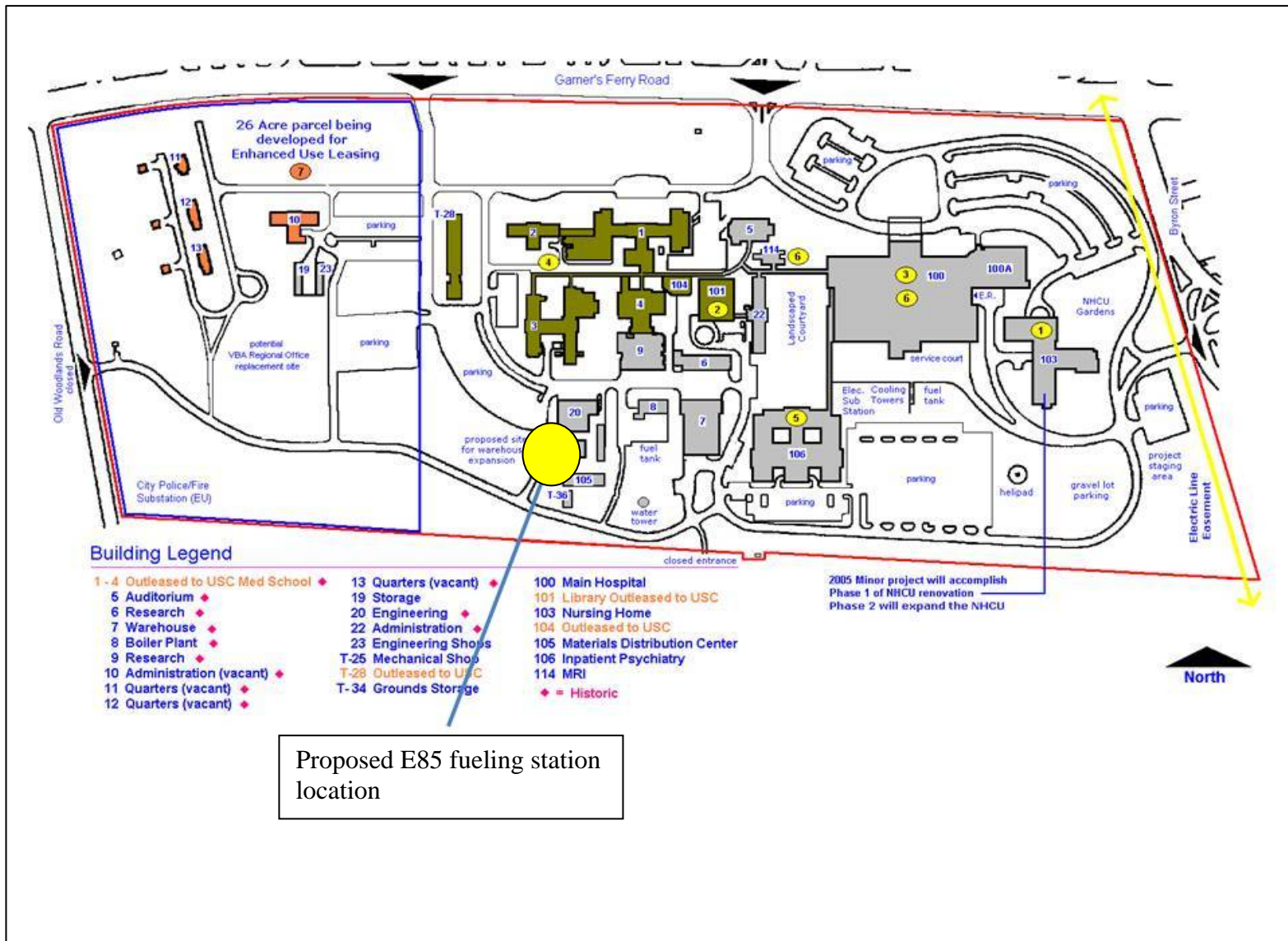


Figure 2-3. Facility map highlighting the preferred site for the E85 fueling station at the Dorn VAMC adjacent to Building T25

3.0 ALTERNATIVES

3.1 NO-ACTION ALTERNATIVE

CEQ regulations prescribe analysis of the No-action Alternative, which serves as the benchmark against which the environmental, social, and economic effects of the Proposed Action and other reasonable alternatives can be evaluated. In this site-specific EA, the benchmark is not to install an alternative E85 fueling station on the Dorn VAMC campus. The No-action Alternative would not support the existing VHA FFV fleets that are currently underutilized owing to lack of E85 availability, nor would it reduce the number of VA waiver requests to DOE under Section 701 of EPACT 2005. It would also not help the VA to meet the sustainability goals of EO 13514 for federal agencies, which include using vehicles that reduce the agency's total consumption of petroleum products for fleets of motor vehicles by a minimum of 2% annually through the end of fiscal year 2020, compared to the baseline of fiscal year 2005.

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4.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

4.1 NOISE

4.1.1 Affected Environment

The potential impacts of noise associated with the construction and operation of an E85 fueling station are addressed in the program-wide analysis (Appendix A). The Dorn VAMC provides hospital care and medical services to veterans and maintaining a serene environment for patients is important. Noise is generally regulated by a local ordinance that is established by a village, town, or city, or other local jurisdiction. Noise ordinances often relate to land use zoning with different maximum levels prescribed for residential, commercial, and industrial areas. Some noise ordinances impose restrictions by time of day with reduced noise levels during nighttime hours.

4.1.2 Environmental Consequences

4.1.2.1 Proposed Action

The various equipment options and related activities associated with the Proposed Action are expected to result in only minor increases in noise levels for the operation of an E85 fueling station. Short-term but measurable increases in noise levels are expected during construction. The relationship between noise level and distance from a vehicle is evaluated under a worst-case scenario in the program-wide analysis, and the traffic associated with the proposed fueling would not have a significant noise impact at any sensitive receptor. Additionally, the proposed fueling station at the Dorn VAMC would be located where facility operations and maintenance are collocated, which is set apart from the patient care buildings.

4.1.2.2 No-action Alternative

The installation and operation of an E85 fueling station at the Dorn VAMC would not occur; therefore, there would be no impacts due to noise under the No-action Alternative. All VA

personnel that currently operate FFVs at the facility would continue to use E85 fuel resources from offsite fueling stations.

4.2 AESTHETICS AND VISUAL RESOURCES

4.2.1 Affected Environment

The significance of potential effects on aesthetics and visual resources is based on the level of sensitivity in the areas affected by the Proposed Action. Visual sensitivity is defined as the degree of public interest in a visual resource and the concern over potential adverse changes in the quality of that resource. The Dorn VAMC campus is in an urban setting with the hospital and other medical facilities on maintained, landscaped grounds. Some areas of the campus may have historically significant buildings or structures that are currently listed, or are eligible for listing, on the National Register of Historic Places, or they may be recognized by state historical preservation agencies. Cultural and historical resources at the Dorn VAMC are discussed in Section 4.6.

4.2.2 Environmental Consequences

4.2.2.1 Proposed Action

Effects on aesthetics and visual resources as a result of the Proposed Action are not anticipated at the Dorn VAMC. The campus currently has an existing fueling area on site and the proposed E85 station would be collocated within this area. The surrounding viewshed was considered when selecting the site for the fueling area.

4.2.2.2 No-action Alternative

The installation and operation of an E85 fueling station at the Dorn VAMC would not occur; therefore, there would be no impacts on aesthetics and visual resources under the No-action Alternative. All VA personnel that currently operate FFVs at the facility would continue to use E85 fuel resources from offsite fueling stations.

4.3 AIR QUALITY

4.3.1 Affected Environment

Federal law designates six air pollutants as criteria contaminants and requires special measures to limit their presence in the nation's air: sulfur dioxide; nitrogen dioxide; ozone; carbon monoxide; particulate matter (fine particles less than 2.5 microns in size as PM_{2.5} and coarser particles up to 10 microns in size as PM₁₀); and lead. The U.S. Environmental Protection Agency (EPA) sets the National Ambient Air Quality Standards (NAAQS) for air pollutants as required under the Clean Air Act (CAA), last amended in 1990 (40 CFR part 50). Parts of the country where the air quality standards are exceeded for one or more of the criteria pollutants are designated as non-attainment areas. The EPA requires each state government to adopt a State Implementation Plan (SIP) that prescribes control strategies to reduce air pollution in nonattainment areas and to evaluate periodically the effectiveness of the strategies prescribed in its SIP. The Dorn VAMC is located in Richland County, South Carolina, which is not designated as a non-attainment area for any of the six criteria contaminants.

4.3.2 Environmental Consequences

4.3.2.1 Proposed Action

Potential emissions due to operation of an E85 fueling stations are described in detail in the program-wide analysis. The CAA requires some gasoline dispensing facilities located in areas classified as extreme, severe, serious or moderate nonattainment of the 1-hour ozone standard, to have Stage II vapor recovery systems in place and operational depending on tank size and throughput requirements which vary by state. Since the majority of E85 fuel capable vehicles have onboard refueling vapor recovery systems installed, the U.S. EPA will allow states flexibility to exempt E85 refueling equipment from Stage II vapor recovery requirements, consistent with its December 12, 2006, memorandum (U.S. EPA 2006). However, the state makes the final decision in their SIP. Air emission requirements for South Carolina are listed in the Appendix of the program-wide analysis.

No significant effects on air quality are anticipated from the Proposed Action. The VA FFVs would need to access E85 whether or not it is available at the Dorn VAMC. Having the E85 station located on site would reduce the distance VA employees would need to travel to refuel. Since model year 2000, fuel tank venting has been controlled by onboard refueling vapor recovery devices installed in all cars running on E85 or gasoline. Evaporative emissions from fuel or vapor leaks are less prevalent due to ongoing improvements in leak-resistant materials and fittings.

4.3.2.2 No-action Alternative

The installation and operation of an E85 fueling station at the Dorn VAMC would not occur; therefore, there would be no impacts on air quality under the No-action Alternative. All VA personnel that currently operate FFVs at the facility would continue to use E85 fuel resources from offsite fueling stations.

4.4 SOCIOECONOMICS

4.4.1 Affected Environment

The program-wide analysis defines socioeconomic aspects of the environment, including those pertaining to environmental justice and disproportionate risks to children, and identified laws and regulations affecting these resources. In brief, socioeconomic comprises the basic attributes and resources associated with the human environment, particularly population and economic activity. Economic activity typically encompasses employment, personal income, and economic growth. Factors that affect these fundamental socioeconomic components also influence other issues such as housing availability and the provision of public services. The Dorn VAMC is located in the eastern part of Columbia, South Carolina.

Columbia is the state capital and largest city in South Carolina. As of the census of 2000, there were 113,278 people, 42,245 households, and 22,136 families residing in the city. The population density was 928.6 people per square mile (358.5/km²). There were 46,142 housing units at an average density of 368.5/sq mi (142.3/km²). The racial makeup of the city was 49.22% White,

45.98% African American, 1.73% Asian, 0.25% Native American, 0.09% Pacific Islander, 1.36% from other races, and 1.36% from two or more races. Hispanic or Latino of any race were 3.03% of the population.

There were 42,245 households out of which 25.4% had children under the age of 18 living with them, 31.5% were married couples living together, 17.6% have a female householder with no husband present, and 47.6% were non-families. 37.0% of all households were made up of individuals and 9.8% had someone living alone who was 65 years of age or older. The average household size was 2.21 and the average family size was 2.97.

In the city the population was spread out with 20.1% under the age of 18, 22.9% from 18 to 24, 30.1% from 25 to 44, 16.6% from 45 to 64, and 10.3% who were 65 years of age or older. The median age was 29 years. For every 100 females there were 96.2 males. For every 100 females age 18 and over, there were 93.4 males.

The median income for a household in the city was \$31,141, and the median income for a family was \$39,589. Males had a median income of \$30,925 versus \$24,679 for females. The per capita income for the city was \$18,853. About 17.0% of families and 22.1% of the population were below the poverty line, including 29.7% of those under the age of 18 and 16.9% ages 65 or older.

4.4.2 Environmental Consequences

4.4.2.1 Proposed Action

The installation and operation of an up to 5,000 gallon AST E85 fueling station at the Dorn VAMC likely would not significantly impact socioeconomic conditions in the surrounding area. If anything, employment and economic conditions within the region of influence would realize short-term, beneficial effects from the additional labor needed to construct the E85 fueling station and install the AST. The benefits would be short-term as existing facilities management personnel would be responsible for maintaining the E85 fueling station once it is operational; the addition of full-time personnel at the VAMC is not anticipated. Because of its location and enclosed campus-like setting, the addition of an E85 fueling station to the VAMC likely would

not adversely affect minority or low-income populations, nor pose any additional environmental risk to the health and safety of children. In summary, no significant effects on socioeconomic conditions likely would result under the Proposed Action other than potentially short-term beneficial effects during the construction and installation of the E85 fueling station.

4.4.2.2 No-action Alternative

The installation and operation of an up to 5,000 gallon AST E85 fueling station at the Dorn VAMC would not occur; therefore, there would be no impacts on socioeconomics under the No-action Alternative. All VAMC personnel that currently operate FFVs would continue to use E85 fuel resources from offsite fueling stations. In addition, there would be no potentially short-term, beneficial effects on employment and economic conditions from the installation of an E85 fueling station.

4.5 TRANSPORTATION

4.5.1 Affected Environment

The Dorn VAMC is located on a campus that is convenient to the surrounding community. The campus has a network of roadways accessible through multiple entry points and parking areas distributed around the hospital and other medical facilities. The campus is located within easy access to I-77. Campus facilities providing infrastructure support are set apart from other facilities. The VAMC currently maintains a boiler plant, emergency generators, and already receives regularly scheduled fuel deliveries.

4.5.2 Environmental Consequences

4.5.2.1 Proposed Action

The installation and operation of the E85 fueling station requires adequate area for infrastructure and setbacks from buildings and other properties. The proposed site for the fueling station at the Dorn VAMC is appropriate for such use, and has adequate space for fueling FFVs as well as accommodating fuel delivery trucks. No effects on transportation or traffic patterns are

anticipated including any additional influx of FFVs from other federal fleets that might use the alternative fueling station.

4.5.2.2 No-action Alternative

The installation and operation of an E85 fueling station at the Dorn VAMC would not occur; therefore, there would be no impacts on transportation under the No-action Alternative. All VA personnel that currently operate FFVs at the facility would continue to use E85 fuel resources from offsite fueling stations.

4.6 CULTURAL AND HISTORICAL RESOURCES

4.6.1 Affected Environment

The program-wide analysis provides definitions of cultural and historical resources, and in general terms, describes the federal and state regulatory frameworks that are responsible for managing and protecting these resources. As noted in the program-wide analysis, the National Historic Preservation Act of 1966 (NHPA) is the primary federal law that implements regulations affecting cultural and historical resources, and encourages states to develop programs supporting historic preservation. The State Historic Preservation Office (SHPO) of South Carolina is the agency responsible for cultural and historical resources within the state, which includes reviewing potential impacts from new federal projects (<http://shpo.sc.gov/>).

As part of the review process for this site-specific EA, a consultation letter will be sent to the SHPO to ascertain whether there are any cultural and historical resources of concern in the vicinity of the proposed project area. The Dorn VAMC is located in the southeast part of Columbia, South Carolina, where it is surrounded mainly by residential and business districts. The nearest listed NRHP property to the VAMC is the Woodlands property located approximately ¼ mile to the west of the campus facilities. The locations of other culturally significant properties as well as important archeological sites, will be identified pending SHPO review of the project.

Some VAMCs built in the early 20th Century have historically significant buildings or structures that are currently listed, or are eligible for listing, on the NRHP, or they may be recognized by the SHPO. However, most VAMCs have areas developed for facility infrastructure, such as boiler plants and storage areas, are usually set apart from hospital and other patient care buildings. Because of their reliance on emergency transportation and other transportation needs of hospital staff, many VAMCs already maintain their own fueling stations, which have existing ASTs and USTs. The Dorn VAMC currently already provides conventional fueling service to its personnel. The site proposed for installation of the E85 AST is near the existing fueling station and adjacent to the engineering building and mechanical shop (Buildings 20 and T-25).

4.6.2 Environmental Consequences

4.6.2.1 Proposed Action

The installation and operation of an E85 AST fueling station at the Dorn VAMC would not significantly impact cultural and historical resources. The proposed location for the E85 AST is in an area of the VAMC that already has fueling services and provides other facilities support as well. No effects on listed NRHP properties are anticipated as they are far enough away from the proposed site. At present, there are no known archeological resources in the vicinity of the project. The use of an AST would result in minimal ground disturbance thereby lessening potential effects on archeological resources. Coordination with the SHPO will identify other buildings and structures at the Dorn VAMC that may be considered eligible for listing on the NRHP as well as any areas of concern for archaeological resources.

4.6.2.2 No-action Alternative

The installation and operation of E85 fueling station at the Dorn VAMC would not occur; therefore, there would be no impacts on cultural and historic resources under the No-action Alternative. All VA personnel that currently operate FFVs at the facility would continue to use E85 fuel resources from offsite fueling stations.

4.7 GEOLOGY AND SOILS

4.7.1 Affected Environment

The program-wide analysis provides a definition of geological resources including soils, and discussed how these resources are usually characterized. Geological resources typically consist of surface and subsurface materials and their inherent properties. Soil structure, elasticity, strength, shrink-swell potential, and erodibility all determine the suitability of the ground to support buildings and structures. With respect to construction, soils are typically described in terms of their type, slope, physical characteristics, and relative compatibility or limitations with regard to particular construction activities and types of land use. Areas with predominantly wet or unstable soils (e.g., organic soils and certain clays and sands) were not considered for E85 tank installation because these areas could be in regulated wetlands or may not meet certain structural engineering requirements for installing an AST. The area of the Dorn VAMC proposed for E85 AST installation is presently used to support facility engineering and grounds maintenance.

4.7.2 Environmental Consequences

4.7.2.1 Proposed Action

The installation and operation of an up to 5,000 gallon AST E85 fueling station at the Dorn VAMC would not significantly impact geological resources and soils. The installation of up to an up to 5,000 gallon AST would require a small amount of temporary ground disturbance, which would follow state and local regulations and in accordance with best management practices (BMPs) for controlling sediment and erosion. All county, state, and local permits for earthwork and development would need to be obtained prior to construction at the facility. In addition, subsurface sampling and testing of soil materials may be required if the site of the tank installation has a history of contaminants or hazardous material use. Additional precautions for removal and disposal of soil may be necessary. Soil suspected of contamination must be tested and disposed of in accordance with applicable federal, state, and local laws and regulations.

4.7.2.2 No-action Alternative

The installation and operation of an up to 5,000 gallon AST E85 fueling station at the Dorn VAMC would not occur; therefore, there would be no impacts on geology and soils under the No-action Alternative. All VA personnel that currently operate FFVs at the facility would continue to use E85 fuel resources from offsite fueling stations.

4.8 GROUNDWATER AND WATER QUALITY

4.8.1 Affected Environment

The program-wide analysis provides a definition of groundwater resources and water quality, and in general terms, described the state and federal regulatory authorities responsible for administering these resources. In South Carolina, the Department of Health and Environmental Control, Bureau of Water manages and regulates groundwater issues (<http://www.scdhec.gov/environment/water/reg.htm>). Most groundwater protection programs within the Bureau of Water focus on the protection of the quality and quantity of South Carolina's groundwater resources.

The Dorn VAMC is located about two miles to the east of the Broad River, in Columbia, South Carolina. Based on its proximity, groundwater flow in vicinity of the VAMC facility is likely toward the Broad River.

4.8.2 Environmental Consequences

4.8.2.1 Proposed Action

The installation and operation of an up to 5,000 gallon AST E85 fueling station at the Dorn VAMC would not have significant effects on groundwater resources and water quality. As described in the program-wide analysis, potential effects on groundwater resources and water quality from E85 AST are not likely as the site already has existing fueling facilities in an area that is used for similar purposes. Provided the E85 tank is sited properly and a state-certified Spill Prevention, Control and Countermeasure Plan (SPCC Plan) is followed, there would be no effects on groundwater resources and water quality.

4.8.2.2 No-action Alternative

The installation and operation of an up to 5,000 gallon AST E85 fueling station at the Dorn VAMC would not occur; therefore, there would be no impacts on groundwater and water quality under the No-action Alternative. All VA personnel that currently operate FFVs at the facility would continue to use E85 fuel resources from offsite fueling stations.

4.9 WETLANDS, FLOODPLAINS, AND SURFACE WATERS

4.9.1 Affected Environment

The program-wide analysis provides definitions of wetlands, floodplains and surface waters, and in general terms, described the state and federal regulatory authorities responsible for administrating these resources. Wetlands are not regulated by the state in South Carolina. The Charleston District, U.S. Army Corps of Engineers is responsible for federal regulation of wetlands in this region, under Section 404 of the federal Clean Water Act.

According to National Wetland Inventory (NWI) mapping, there are no vegetated wetlands on or directly adjacent to the Dorn VAMC campus. Several small parcels of palustrine shrub-scrub wetlands (indicated as PSS1B) and one parcel of palustrine forested wetlands (indicated as PFO1A), however, are mapped several miles to the east of the campus (Figure 4-1). According to floodplain maps issued by the Federal Emergency Management Agency (FEMA), the Dorn VAMC is outside of any area that would be inundated by a 100-year flood (Figure 4-2).

4.9.2 Environmental Consequences

4.9.2.1 Proposed Action

The installation and operation of an up to 5,000 gallon AST E85 fueling station at the Dorn VAMC would not have significant effects on wetlands, floodplains, and surface water resources. None of these resources are on or proximate to the facility and the proposed location of the AST. Provided the up to 5,000 gallon AST for E85 fuel is sited properly and a state-certified SPCC Plan is followed, there would be no adverse effects on these resources.

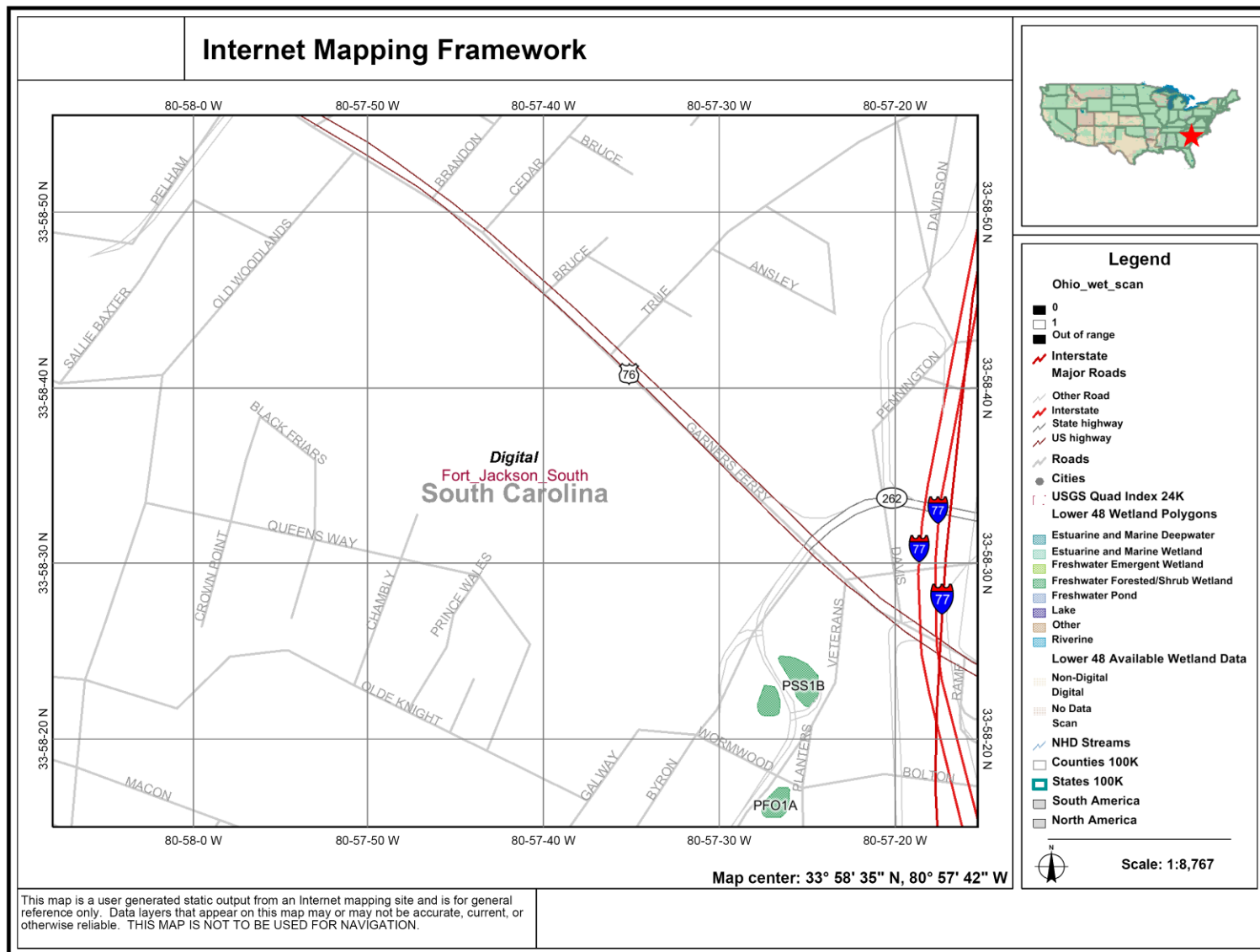


Figure 4-1. Mapped wetlands in the immediate vicinity of the Dorn VAMC, SC facility, according to the U.S. Fish and Wildlife Service National Wetland Inventory mapping.

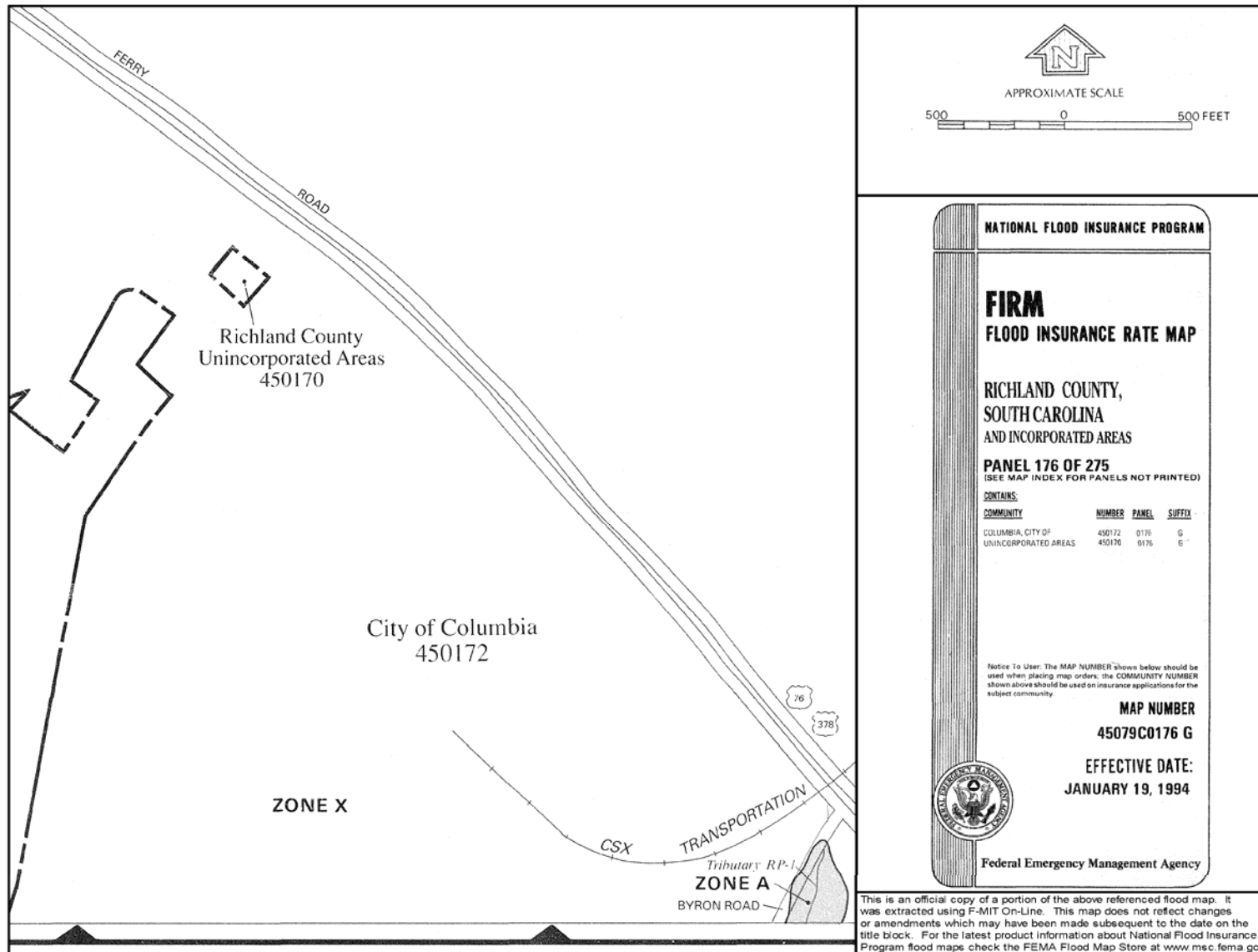


Figure 4-2. Mapped floodplains in the immediate vicinity of the Dorn VAMC, SC facility, according to the Federal Emergency Management Agency.

4.9.2.2 No-action Alternative

The installation and operation of an up to 5,000 gallon AST E85 fueling station at the Dorn VAMC would not occur; therefore, there would be no effects on wetlands, floodplains, or surface waters under the No-action Alternative. All VA personnel that currently operate FFVs at the facility would continue to use E85 fuel resources from offsite fueling stations.

4.10 VEGETATION AND LAND USE

4.10.1 Affected Environment

The affected environment for vegetation consists of those areas potentially subject to ground disturbance as a result of the Proposed Action. The program-wide analysis provides a description of the general land use categories. Management plans and zoning regulations determine the type and extent of land use allowable in these specific areas and are often intended to protect specially designated or environmentally sensitive areas and sensitive noise receptors.

The Dorn VAMC is located in a relatively urban setting, consisting largely of man-made features such as buildings, parking lots, roads, lawns, etc. The majority of vegetation cover at the facility consists of maintained lawns with scattered clusters of landscaping trees. One small woodlot is located in the southeastern part of the facility, along Byron Road. None of the individual trees on the campus appear to be of particularly notable size.

4.10.2 Environmental Consequences

4.10.2.1 Proposed Action

Under the Proposed Action, an up to 5,000 gallon AST E85 fueling station would be constructed and operated in the vicinity of the existing paved area between Building 20 and Building T25 in the south-central part of the campus. As described in the program-wide analysis, potential effects on vegetation and land use resources from E85 tank installation and operation are largely minimal because of the previously developed nature of these locations. Further, given the minimal permanent footprint required for the 5,000 gallon AST fueling station (about 222 SF), no

significant impact to the surrounding area vegetation and land cover is expected. No significant vegetation or land use impacts are anticipated at the Dorn VAMC, given that the area is currently developed and used for similar facility operations.

4.10.2.2 No-action Alternative

The installation and operation of an up to 5,000 gallon AST E85 fueling station at the Dorn VAMC would not occur; therefore, there would be no effects on land use or vegetation under the No-action Alternative. All VA personnel that currently operate FFVs at the facility would continue to use E85 fuel resources from offsite fueling stations.

4.11 WILDLIFE

4.11.1 Affected Environment

The program-wide analysis provides a definition of wildlife resources, and in general terms, described the roles and regulations administered by federal and state agencies responsible for the management of wildlife species. As part of this site-specific EA, the USFWS and the South Carolina Department of Natural Resources will be consulted to identify wildlife species that potentially could be affected by the installation and operation of an E85 fueling station at the Dorn VAMC. Nonetheless, wildlife resources at the Dorn VAMC are likely to be minimal because of its relatively urban setting. Wildlife at the site would most likely consist of species that are very adaptable to human-influenced environments (e.g., European starling; house sparrow; gray squirrel; woodchuck; house mouse, etc.).

4.11.2 Environmental Consequences

4.11.2.1 Proposed Action

The installation and operation of an up to 5,000 gallon AST E85 fueling station at the Dorn VAMC would not have significant effects on wildlife resources. Although responses from the USFWS and the South Carolina Department of Natural Resources are pending, it is unlikely that

wildlife resources or their habitats would be affected by the Proposed Action given the urban setting and very small size of the project footprint within a previously developed area.

4.11.2.2 No-action Alternative

The installation and operation of an up to 5,000 gallon AST E85 fueling station at the Dorn VAMC would not occur; therefore, there would be no effects on wildlife under the No-action Alternative. All VA personnel that currently operate FFVs at the facility would continue to use E85 fuel resources from offsite fueling stations.

4.12 THREATENED AND ENDANGERED SPECIES

4.12.1 Affected Environment

The program-wide analysis provides a definition of threatened and endangered species, and in general terms, described the roles and regulations administered by federal and state agencies responsible for the management of these species. As part of this site-specific EA, the USFWS and the South Carolina Department of Natural Resources will be consulted to identify federal and state-listed threatened and endangered species that potentially could be affected by the installation and operation of an E85 fueling station at the Dorn VAMC.

4.12.2 Environmental Consequences

4.12.2.1 Proposed Action

The installation and operation of an up to 5,000 gallon AST E85 fueling station at the Dorn VAMC would not likely have significant impacts on threatened and endangered species. Although responses from the USFWS and the South Carolina Department of Natural Resources are pending, it is unlikely that any threatened or endangered species or their habitats would be affected by the Proposed Action given the urban setting and the very small size of the project.

4.12.2.2 No-action Alternative

The installation and operation of an up to 5,000 gallon AST E85 fueling station at the Dorn VAMC would not occur; therefore, there would be no effects on threatened and endangered species under the No-action Alternative. All VA personnel that currently operate FFVs at the facility would continue to use E85 fuel resources from offsite fueling stations.

4.13 SOLID AND HAZARDOUS MATERIALS AND WASTES

4.13.1 Affected Environment

The program-wide analysis provides a general description of solid and hazardous materials and wastes that may be encountered on a VAMC campus. Potential sources of hazardous materials and wastes that may be encountered at the facility include, but are not limited to, USTs and ASTs; use, storage, and disposal of medical waste; materials suspected to contain asbestos or lead; and known spills and releases. Most VAMC facilities already have petroleum USTs and ASTs as part of their existing fueling capabilities, or that contain diesel fuel for emergency generators or fuel oil for boilers to provide heat. The Dorn VAMC currently has tanks used for gasoline and diesel on site. South Carolina regulations pertaining to USTs and ASTs are summarized in the Appendix of the program-wide analysis.

4.13.2 Environmental Consequences

4.13.2.1 Proposed Action

Federal and state regulations for petroleum ASTs are summarized in the Program-wide analysis. Impacts from hazardous materials and wastes at the Dorn VAMC are likely to be minimal providing that all appropriate state and federal regulations are followed. Excavation would be required for the installation of the UST, and subsurface investigation may be necessary. If contamination is suspected or discovered, then suspect soil would be field screened, segregated, sampled for disposal characterization, and disposed of appropriately following South Carolina regulations. Provided the E85 tank is properly sited, state and federal regulations are followed,

and a state-certified SPCC Plan is in place, then no significant impacts due to solid and hazardous materials or wastes are anticipated.

4.13.2.2 No-action Alternative

The installation and operation of an E85 fueling station at the Dorn VAMC would not occur; therefore, there would be no impacts due to solid and hazardous materials or wastes under the No-action Alternative. All VA personnel that currently operate FFVs at the facility would continue to use E85 fuel resources from offsite fueling stations.

4.14 SAFETY

4.14.1 Affected Environment

Safety considerations associated with the installation of an up to 5,000 gallon AST E85 fueling station are addressed in the program-wide analysis. The safety standards for handling and storing E85 are the same as those for gasoline. The Dorn VAMC already maintains and operates fueling facilities, and therefore has procedures in place affecting safety at these facilities. The facility has an existing SPCC Plan, but the addition of a 5,000 gallon AST would require that it be amended.

The National Fire Protection Agency (NFPA) has two standards that apply to fuel ethanol blends: NFPA 30, "Flammable and Combustible Liquids Code," and NFPA 30A, "Automotive and Marine Service Station Code." These codes contain information on refueling facilities, storage, and handling requirements for all flammable and combustible liquids (DOE 2006). NFPA assigns ethanol fuels, including E100 and E85, to the same class as gasoline. Minimum NFPA safety setbacks for ASTs are highlighted in Table 3.3 of the program-wide analysis (Appendix A).

4.14.2 Environmental Consequences

4.14.2.1 Proposed Action

Under the Proposed Action, the Dorn VAMC would have to amend its current SPCC Plan. The amendment would have to be done within six months, and certified by a professional engineer or be self certified if the facility meets the specified criteria for self certification. Recent regulations will allow a facility to self certify a SPCC Plan providing: 1) it does not exceed 10,000 gallons of aboveground storage capacity; 2) no tank is bigger than 20,000 gallons; 3) no spill is greater than 1,000 gallons; or 4) no two spills exceeding 42 gallons have occurred within 12 months (Tier 1 certification). The facility can complete the Tier 1 checklist and self certify both the plan and amendments if it meets the Tier 1 criteria. Providing all state and federal AST regulations are followed and the facility SPCC Plan is amended, no significant effects on safety are expected.

4.14.2.2 No-action Alternative

The installation and operation of an up to 5,000 gallon AST E85 fueling station at the Dorn VAMC would not occur; therefore, there would be no effects on safety under the No-action Alternative. All VA personnel that currently operate FFVs at the facility would continue to use E85 fuel resources from offsite fueling stations.

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5.0 CUMMULATIVE EFFECTS

5.1 CUMMULATIVE EFFECTS SUMMARY

The program-wide analysis provides a definition of cumulative effects; a general description of past, present, and reasonably foreseeable actions relevant to cumulative effects; and a broad analysis of cumulative impacts between those actions and the Proposed Action. Potential mitigation measures to offset and cumulative impacts at the Dorn VAMC are described below.

5.2 MITIGATION SUMMARY

Effects on historic and cultural resources from the Proposed Action require review by the SHPO. Therefore, the assessment of potential effects on archeological and architectural resources is pending. Given the proposed location of the fueling station and the small footprint required for an AST, it is unlikely that cultural or historical resources would be affected.

The facility has an existing SPCC Plan, but the addition of up to a 5,000 gallon AST would require that it be amended. The amendment would have to be done within six months, and certified by a professional engineer or be self certified if the facility meets the specified criteria for self certification.

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7.0 REFERENCES

Versar, Inc. 2009. Determination of Optimal Location for Alternative Fueling Stations. Prepared for Department of Veterans Affairs Veterans Health Administration, under contract no. VA-776-09-RQ-0066, by Versar, Inc. Germantown, MD.

Versar, Inc. 2010. Program-wide analysis for the Proposed E85 Alternative Fueling Stations at VAMCs Throughout the U.S. Prepared for Department of Veterans Affairs Veterans Health Administration, under contract no. VA-776-09-RQ-0066, by Versar, Inc., Columbia, MD.

U.S. EPA Memorandum, "Removal of Stage II Vapor Recovery in Situations Where Widespread Use of Onboard Refueling Vapor Recovery is Demonstrated," U.S. EPA Office of Air Quality Planning and Standards, December 12, 2006.

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APPENDIX A
PROGRAM-WIDE ANALYSIS OF
ENVIRONMENTAL IMPACTS FROM E85
ALTERNATIVE FUELING FACILITIES AT
VETERAN AFFAIRS MEDICAL CENTERS THROUGHOUT THE U.S.

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APPENDIX B
AGENCY COORDINATION AND SCOPING COMMENTS
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