



### Adverse Affect

An adverse affect refers to the **diminishment of a property's integrity, with respect to its location, design, setting, materials, workmanship, feeling, or association.**

right-of-way. An adverse visual impact may occur when the project can be seen from the historic resource. Each Build Alternative's 400-foot ROW was buffered by 300 feet on both sides and examined to determine potential impacts on historic resources located outside of the ROW, including lack of access to the resource, a change in the resource's setting, or indirect and cumulative impacts. Known historic and archaeological resources within the project study area were set as constraints during the Alternative Development Process, and

therefore avoided (refer to Chapter 2 or the *Alternative Development Technical Memorandum* for further information).

The No-build Alternative and Alternative 2 would not directly affect any known above-ground historic resources.

Alternative 1 may cause an adverse visual impact to Resource 0918, a house located on State Route 18 southwest of Bennettsville, South Carolina (refer to Figure 3-35). This house is considered eligible for listing on the NRHP as historically significant for its Greek Revival architectural style and its location in a rural setting.

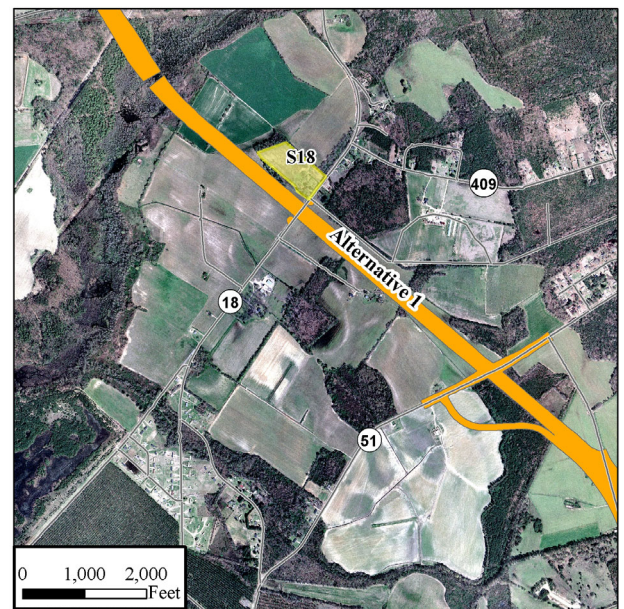


Figure 3-35 Location of Resource 0918



Resource 0918

Alternative 3 would directly impact the property surrounding the McLaurin House (Resource 78002526) located on State Route 40 east of Clio, which is listed on the NRHP since it is an excellent example of Italianate architecture style (refer to Figure 3-36, page 3-124). There are also several outbuildings associated



The McLaurin House

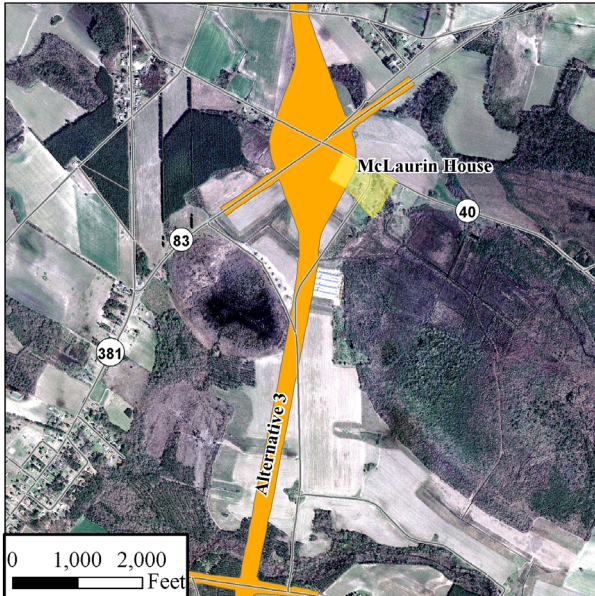


Figure 3-36 Location of the McLaurin House

with the McLaurin House that support the agricultural emphasis of the property. This resource is located east of Clio on State Route 40 East.

Indirect impacts from induced development near aboveground historical resources due to the Build Alternatives could diminish the rural setting that contributes to the historical significance. Based on predicted land use modeling, the potential for induced development may exist in proximity to the following resources:

- Appin Historic District (Resource 82003894), which is listed on the NRHP by Alternatives 1 and 2;
- Archaeological site 38ML108, considered potentially eligible for the NRHP by Alternative 1;
- McLaurin House (Resource 78002526), which is listed on the NRHP by Alternative 3 (refer to Figure 3-36, page 3-123); and,
- Mimosa Plantation (Resource 1107), which is considered eligible for the NRHP by Alternative 3.



The Appin Historic District

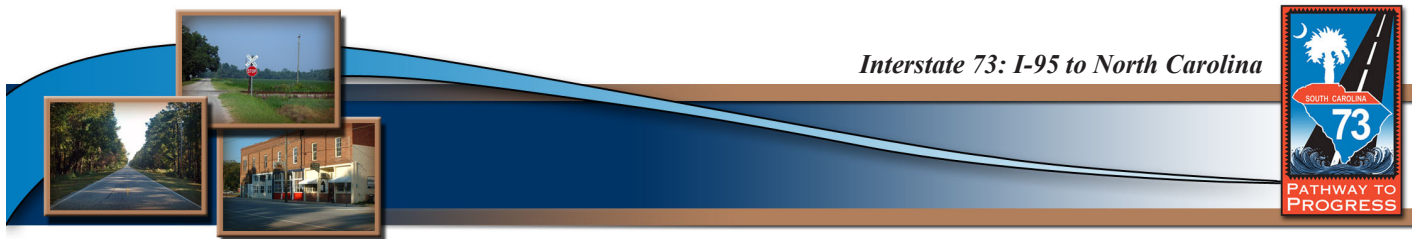


Mimosa Plantation

While special measures are required by federal agencies to avoid and minimize impacts to potentially eligible and NRHP listed sites, there are no such requirements for private developers. Development in the areas of the historic resources could change the rural nature of the viewshed, which in turn may diminish the historical significance of the properties. Similarly, there may be potentially eligible archaeological resources currently unknown along the Build Alternatives, which could be affected by future private development.

### Viewshed

A viewshed includes all of the physical features of a landscape that define a particular landscape type that can be seen from the historic resource. A change in the relationship of a historic resource to its surrounding features can diminish the qualities that make the resource eligible for the NRHP.



### 3.6.5 What known archaeological resources are within the project study area?

There are 205 previously recorded archaeological sites in the South Carolina project study area and 52 in the North Carolina project study area. While the majority have not been evaluated for NRHP eligibility, nine sites were identified as being potentially eligible for listing on the NRHP (refer to Table 3.21, page 3-121). A formal evaluation will take place for these previously recorded sites and any new sites discovered during field testing for the Preferred Alternative prior to the Final EIS. No cemeteries located within one mile of the Build Alternatives were found to be eligible to the NRHP as architectural resources. During the archaeological survey for the Preferred Alternative, cemeteries will be evaluated for eligibility to the NRHP as archaeological resources. For more details on cemeteries located within one mile of the Build Alternatives, refer to the *Cultural Resources Technical Memorandum*.

The No-build Alternative and the Build Alternatives would not directly affect any known archaeological resources.

### 3.6.6 What is the potential for archaeological resources being found in the right-of-way of the Build Alternatives?

An archaeological predictive model was developed for the South Carolina portion of the project study area to determine the potential for archaeological resources being found within the right-of-way of the Build Alternatives. NCDOT determined that the archaeological model would not be used in the North Carolina portion of the project study area due to the proposed project's limited length and cost-effectiveness. Known environmental and cultural attributes typical of the project study area were evaluated according to the different subsistence and mobility patterns of peoples within each prehistoric and historic time period. Environmental variables considered in the model included soil type, the slope of the land, and the presence of water. Additionally, the locations of previously recorded archaeological sites within the project study area were considered in the predictive model. The model ranked each land unit (100 square foot portion of the landscape) with a value of one for lowest probability to a value of 10 for highest probability for finding archaeological resources. Upland sites near surface waters comprise the majority of suitable land surfaces.

Table 3.22 (page 3-126) shows the amount of acreage and percentage within each Build Alternative that would have areas where a highly probability for archaeological resources may be found. Alternative 3 had the highest amount of acreage where potential archaeological resources could be found. Based on the percentage, 79 percent of the right-of-way for Alternative 3 has a high potential for containing archaeological sites. Alternative 2 had the lowest amount of high probability acreage at 804.9 acres, only comprising 51 percent of the right-of-way of the alternative.



**Table 3.22**  
**Archaeological Predictive Model:**  
**High Probability Acreage**

Alternative	Acreage	Percent of Alternative
1	993.0	53%
2 (Preferred)	804.9	51%
3	1,297.9	79%

A detailed archaeological resources survey will be completed for the Preferred Alternative prior to the Final EIS. Any sites found during the survey will be determined for eligibility on the NRHP. SHPO will be consulted if any eligible sites are found during the survey. If sites are found that are within the right-of-way of the Preferred Alternative, then mitigation measures will be coordinated between FHWA, NCDOT, N.C. Historic Preservation Office, SCDOT, and SHPO.

### 3.6.7 What are the potential impacts to historic resources under Section 4(f)?

The No-build Alternative and Alternative 2 would not have any impact on historic resources protected under Section 4(f). Alternative 1 would have a visual impact which might result in a constructive use of Resource 0918, a house located on State Route 18 southwest of Bennettsville, South Carolina, that may potentially be eligible for listing on the NRHP (refer to Figure 3-35, page 3-123). Alternative 3 would directly impact Resource 78002526, the McLaurin House, located east of Clio, South Carolina on State Route 40 East and is NRHP-listed (refer to Figure 3-36, page 3-124).

## 3.7 Hazardous Materials

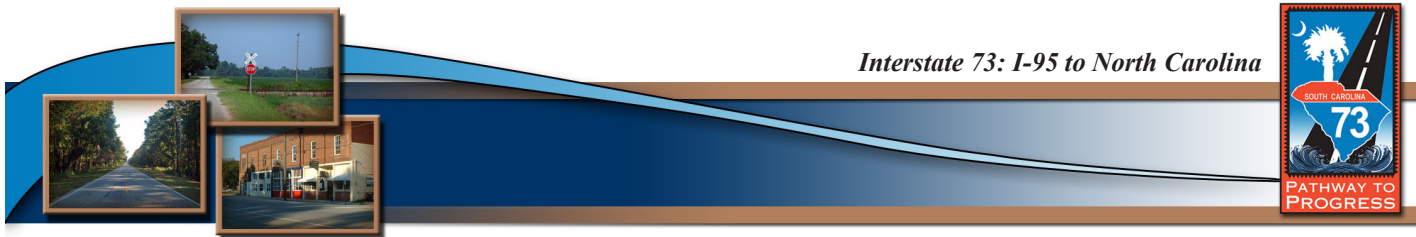
### 3.7.1 What is a hazardous material?

A hazardous material is generally defined as any material that has or will have, alone or when combined with other materials, a harmful effect on humans or the natural environment. Characterized as reactive, toxic, infectious, flammable, explosive, corrosive, or radioactive, a hazardous material may be solid, sludge, liquid, or gas.<sup>57</sup> Hazardous materials and waste sites are regulated primarily by the Resource Conservation and Recovery Act of 1976 (RCRA),

#### Key Point

**Potential hazardous material and waste sites include service stations, landfills, salvage yards, and industrial sites, as well as aboveground and underground storage tanks (ASTs and USTs).**

<sup>57</sup>RCRA Subtitle C, 40 CFR Part 251.



as amended; the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA); and the Superfund Amendments and Reauthorization Act of 1986 (SARA).

### 3.7.2 Are there any potentially contaminated sites located within the project study area?

An assessment of the project study area was performed in order to identify the presence of potential hazardous materials and waste sites. Hazardous materials and waste sites were inventoried based on a review of federal and state records of regulated sites, as well as a windshield survey of the alternative corridors conducted in October 2006 to identify potential sites. Additional information provided by SCDHEC and the North Carolina Department of Environment and Natural Resources (NCDENR) was reviewed. Table 3.23 provides a summary of the potential hazardous materials sites identified during the initial database search.

**Table 3.23**  
**Summary of Hazardous Material Sites Identified within the Project Study Area**

Landfills <sup>1</sup>	14
Hazardous Material Facilities <sup>2</sup>	821
Toxic Release Inventory Sites <sup>3</sup>	4
<b>Total Number of Sites within the Study Area</b>	<b>839</b>

Note: Some sites were identified in multiple databases. Total number of sites (839) accounts for duplicates.

<sup>1</sup> Landfills and solid waste disposal facilities are regulated under RCRA. SCDHEC and NCDENR maintain inventories of permitted and inactive landfills in South Carolina and North Carolina.

<sup>2</sup> Hazardous Material Facilities include hazardous waste sites, hazardous waste generators, Aboveground Storage Tanks (ASTs), Underground Storage Tanks (USTs), leaking USTs, groundwater contaminated sites, releases of oil and hazardous substances and sites proposed to or on the National Priorities List (NPL).

<sup>3</sup> The Toxic Release Inventory (TRI) is maintained by EPA and is an inventory of chemical releases from federal and industrial facilities. The TRI provides information on the release and transfer of toxic chemicals from facilities in any given area.

Source: Wilbur Smith Associates, 2007.

### 3.7.3 Would the Build Alternatives impact potentially contaminated sites in the project study area?

GIS data layers were overlaid onto existing maps of the Build Alternatives to locate the 839 sites and determine which hazardous material and waste sites within the project study area could be impacted. In addition, the GIS information was compared to data collected during the field survey and a building inventory of the project study area.



All hazardous material sites within or immediately adjacent to the 400-foot ROW were assumed to be potentially impacted by the Build Alternatives and are discussed below. Potentially impacted sites were researched in environmental databases containing information about hazardous waste and material sites from multiple regulating state and federal agencies, including the USEPA. The Facility Index System (FINDS) database is a comprehensive listing of facilities regulated by USEPA and refers users to the specific database that pertains to the type of site. Table 3.24 provides a summary of the identified sites potentially impacted by each Build Alternative. Other sites of potential concern located within a 0.5 mile of the Build Alternatives or farther away were not considered to be impacted. These sites are provided in the *Hazardous Materials Technical Memorandum* for informational purposes.

**Table 3.24  
Hazardous Materials and Waste Sites Potentially Impacted by Alternative**

Site	Description	Alt. 1	Alt. 2 (Preferred)	Alt. 3
10078302	Southeastern Carolina Regional Housing Co-op Inc.	X		
10078354	Charlie's Auction and Water System	X	X	X
10078342	Red Bluff Grocery and Grill			X
<b>Total Potentially Impacted Sites per Alternative</b>		<b>2</b>	<b>1</b>	<b>2</b>

### 3.7.3.1 *Alternative 1*

Alternative 1 would impact the Southeastern Carolina Regional Housing Co-op Inc. in Bennettsville, South Carolina and the Charlie's Auction and Water System in Hamlet, North Carolina. The Southeastern Carolina Regional Co-op Inc. would be located within the proposed ROW and was identified on the FINDS database, which referred to it being listed on the South Carolina Environmental Facility Information System (SC-EFIS). Information from the SC-EFIS database indicated that this site was not releasing harmful material and nothing was revealed during the field survey to indicate that the site was contaminated. No other information regarding potential hazardous materials for this site was found.

Charlie's Auction and Water System in Hamlet, North Carolina would be located adjacent to the proposed 400-foot ROW. This site was identified on the Integrated Compliance Information System (ICIS) database, which supports enforcement of and compliance by National Pollutant Discharge Elimination Sites (NPDES). A storage building and two aboveground storage tanks



(ASTs) are located on the property. No other information was found concerning potential hazardous materials that may be at this location. After a review of the available data, there is nothing to indicate that contamination would be an issue at the site.

### 3.7.3.2 *Alternative 2*

Alternative 2 would potentially impact Charlie's Auction and Water System in Hamlet, North Carolina. The site, described in the previous paragraph, would be located adjacent to the proposed ROW of Alternative 2.



*Charlie's Auction and Water System*

### 3.7.3.3 *Alternative 3*

Alternative 3 would impact the previously described Charlie's Auction and Water System in Hamlet, North Carolina. In addition, Alternative 3 would impact the Red Bluff Grocery and Grill in Clio, South Carolina. This site would be located within the proposed 400-foot ROW of Alternative 3 and was identified on the FINDS database, which referred to it being listed on the SC-EFIS. Currently the site is occupied by a convenience store and grill, which contains a gas pump and three ASTs. No other information concerning potential hazardous materials at the site was found. Nothing in the database review or field visit indicated that this site was releasing hazardous material.



*Red Bluff Grocery and Grill*

During field surveys, two additional sites were identified that would be within or adjacent to the proposed ROW and may contain potentially hazardous materials. Central Carolina Gas is located north of U.S. Route 74 and east of N.C. State Route 1807 and would be within the ROW of all the Build Alternatives. This site contains numerous ASTs for propane. The status of this site is unknown, but no record of release or other hazardous materials has been reported at this site to date. Smith's Tire Shop would be located adjacent to the ROW for all three Build Alternatives and is located in front of Charlie's Auction and Water System in Hamlet, North Carolina. This site appears to be vacant, and it is unknown whether any potentially hazardous materials may be present.



## *Interstate 73: I-95 to North Carolina*



Prior to construction of the Preferred Alternative, efforts would be made to avoid these properties. Where potentially contaminated sites could not be avoided, detailed studies would be completed at the sites potentially impacted by the Preferred Alternative to accurately characterize the extent of potential soil and/or groundwater contamination. Discovery of contamination would result in the removal and proper disposal of contaminated soil and/or groundwater within the ROW prior to the initiation of construction activities.