



**Table 2.5**  
**Alternatives Considered by the ACT**

Alternative	Reason for Elimination
1	Eliminated in favor of keeping Alternative 3 that had lower overall impacts
2	Eliminated in favor of keeping Alternative 4 that had lower overall impacts
3	Recommended for further study
4	Recommended for further study
5	Recommended for further study
6	Eliminated in favor of keeping Alternative 4 that had lower overall impacts

### 2.5.3 How were preliminary interchange locations designated?

Initial criteria for developing preliminary interchange locations were proposed as follows:

- Provide access to primary roadway routes, i.e. interstates, U.S. Routes, and S.C./N.C. Routes;
- Provide a minimum spacing of two miles between interchanges;
- Ensure a reasonable expenditure of public funds;
- Provide a maximum spacing of eight miles between interchanges to provide system linkage, ease of maintenance, increased safety, and opportunities for economic development;
- Provide interchanges where higher traffic volumes warrant; and,
- Minimize impacts.

The reasonable Build Alternatives were then evaluated with the preliminary locations of interchanges taken into consideration to determine potential impacts to the categories listed previously, as well as potential impacts to communities and relocations.

### 2.5.4 What modifications were made to the reasonable Build Alternatives based on input?

As a result of the public and agency comments, the reasonable Build Alternatives were evaluated to further minimize impacts and to respond to input. The CAT identified several communities that were assigned a high value to avoid potential impact, however not every community in the project



study area had been identified prior to the Public Information Meetings. At the Public Information Meetings, citizens were asked to define the communities in which they lived. As a result, several communities were identified that were not included in the CAT. This public input resulted in the modification of alternatives to avoid communities that were not previously identified, such as Aarons Temple. A field visit was conducted with the ACT on September 13 and 14, 2006, and with the North Carolina resource agencies on December 6, 2007, to review areas of special interest indicated by the agencies. Agency comments and information collected during the field visits were also used to modify the reasonable Build Alternatives.

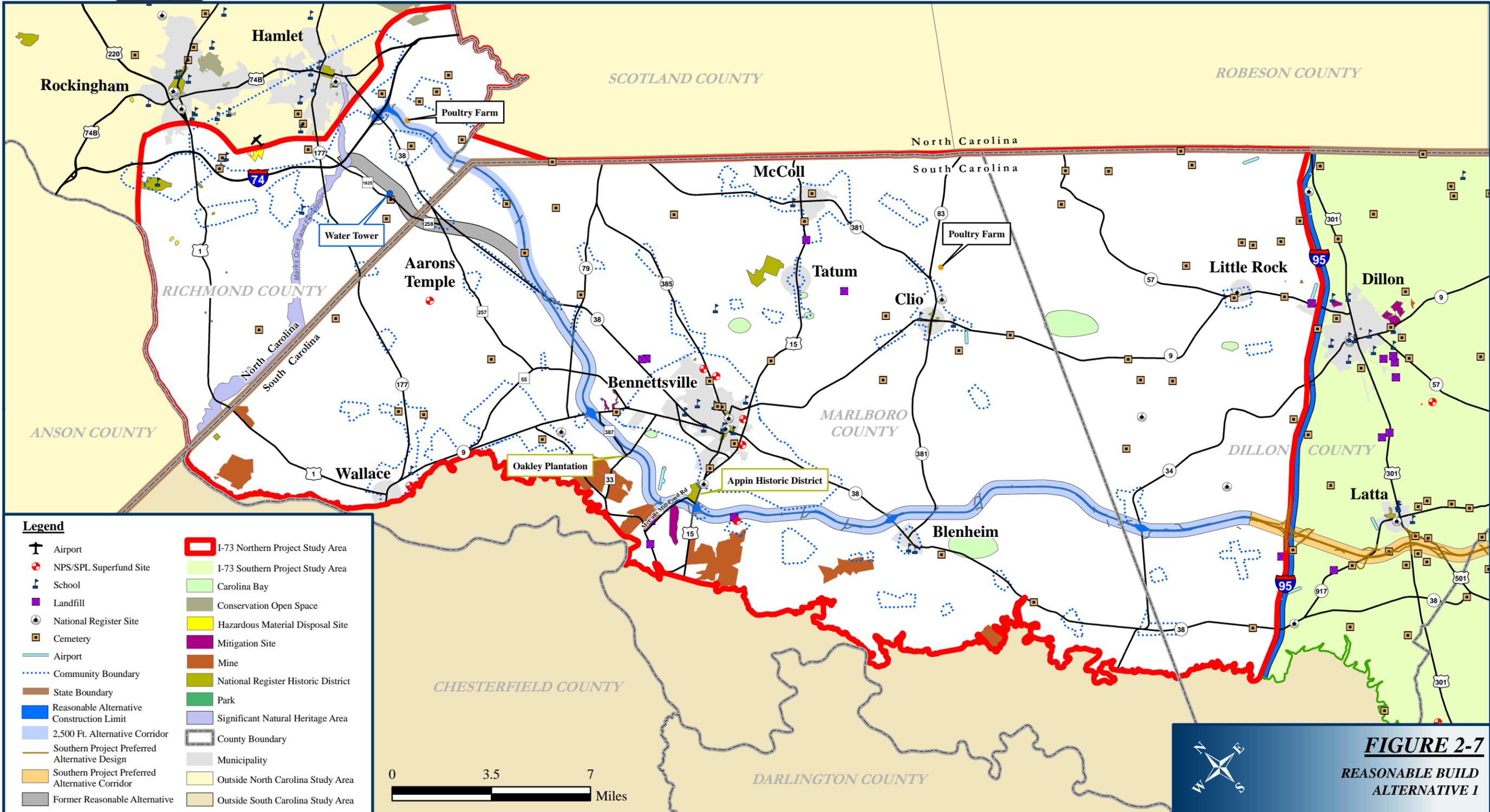
As discussed previously, while the anticipated right-of-way would be between 300 and 400 feet depending on the use of frontage roads, a 2,500-foot wide corridor was used to illustrate each alignment and to provide adequate space for modifications based on public input, agency comments, and the results of field surveys. Modifications made within the 2,500-foot corridor could be done without consultation with the ACT. Major modifications that would fall outside the 2,500-foot corridor would be presented to the ACT for discussion.

#### *2.5.4.1 Alternative 1*

Alternative 1 is the western route. It begins at the northern end of the interchange with I-95, which is the terminus of the Southern Project of I-73. It extends to the northwest to the western side of Bingham where it has an interchange with S.C. Route 34. It continues northwest where it has an interchange with S.C. Route 38 on the eastern side of Blenheim and another with U.S. Route 15/401 west of Bennettsville. North of Bennettsville it continues in a northern direction where it has an interchange at S.C. Route 9. It extends north to an interchange with I-74 near Hamlet, North Carolina.

Alternative 1 was modified in the vicinity of Blenheim at the crossing of S.C. Route 38 and S.C. Route 381. This modification was implemented to provide an improved angle for the proposed interchange. The revision was necessary to improve constructability and safety. The angle at which Alternative 1 would have crossed S.C. Route 38 and S.C. Route 381 would have created a complex interchange design that would have been more costly to construct and would not have provided the best situation for drivers.

The Appin farmhouse is a site currently listed on the NRHP that is located west of Bennettsville on U.S. Route 15/U.S. Route 401 (refer to Figure 2-7). Comments received from local residents requested that an area west of the Appin farmhouse, which includes a mill race/spillway, be evaluated for its potential historic significance. It was determined that the boundary for the Appin farmhouse would be expanded to encompass McCalls Mill Pond and the mill race/spillway. Since the property was determined eligible for listing on the NRHP, avoidance was required



**Legend**

Airport	I-73 Northern Project Study Area
NPS/SPL Superfund Site	I-73 Southern Project Study Area
School	Carolina Bay
Landfill	Conservation Open Space
National Register Site	Hazardous Material Disposal Site
Cemetery	Mitigation Site
Airport	Mine
Community Boundary	National Register Historic District
State Boundary	Park
Reasonable Alternative Construction Limit	Significant Natural Heritage Area
2,500 Ft. Alternative Corridor	County Boundary
Southern Project Preferred Alternative Design	Municipality
Southern Project Preferred Alternative Corridor	Outside North Carolina Study Area
Former Reasonable Alternative	Outside South Carolina Study Area



**FIGURE 2-7**  
REASONABLE BUILD  
ALTERNATIVE 1



unless it was demonstrated that no prudent or feasible alternative existed to avoid the property. The design in this area was limited due to close proximity of the airport to the north, a mitigation site to the west, a residential area to the southwest, and Bennettsville to the east. Despite these limitations, the alternative was modified to avoid potential impacts to the mill race/spillway.

The Oakley Plantation is located northwest of Bennettsville at the intersection of State Road 33 (Waffer Road) and State Road 387 (David's Pond Road) (refer to Figure 2-7, page 2-24). This site was determined eligible for listing on the NRHP and as such modification was developed to avoid potential impacts to the property. This modification was determined to be approximately 0.1 mile longer, have 3.2 acres less of wetland impact, and impact one additional residence.

A modification was developed approximately 1.5 miles south of I-74 in the vicinity of State Road 258 to avoid the potential relocation of a church, multiple residences, and a water tower (refer to Figure 2-7 on page 2-24). The proposed modification was implemented to avoid these relocations.



*Foundation of former mill at McCall's Mill Pond*



*Oakley Plantation*

A concern was expressed by NCDOT and N.C. Natural Resource Agencies that Alternatives 1 and 2 would impact Mark's Creek, which is a significant natural heritage area in North Carolina (refer to Figure 2-7 on page 2-24). During quantifications of the reasonable Build Alternatives, it was determined that the western interchange that connected Alternative 1 and Alternative 2 to

I-74 would impact more wetlands, streams, farmlands, relocations, and floodplains than the eastern interchange. A modified alignment was developed to connect Alternative 1 to the eastern interchange. This resulted in a savings of approximately 37 acres of wetlands, 2,190 linear feet of streams, 164 acres of total farmland, 96 acres of prime farmland, seven relocations, and 24.5 acres of floodplains. In addition, the Richmond County Industrial Park located on the northern side of I-74 in North Carolina would not be impacted with the revised alternative. Approximately 69 acres of additional uplands would be impacted due to the modification. This interchange would

### Significant Natural Heritage Area

Areas designated by N.C. Department of Environment and Natural Resources, the Division of Parks and Recreation, and the Natural Heritage Program that contain ecologically significant natural communities or rare species



incorporate the N.C. Route 38 interchange, which would allow access between I-73, I-74, and N.C. Route 38. The proposed change was presented to the ACT on May 9, 2007, and unanimous consensus was reached to accept the proposed modification. Alternative 1 was revised to eliminate use of the western interchange in favor of the eastern interchange (refer to Figure 2-7 on page 24).

#### *2.5.4.2 Alternative 2*

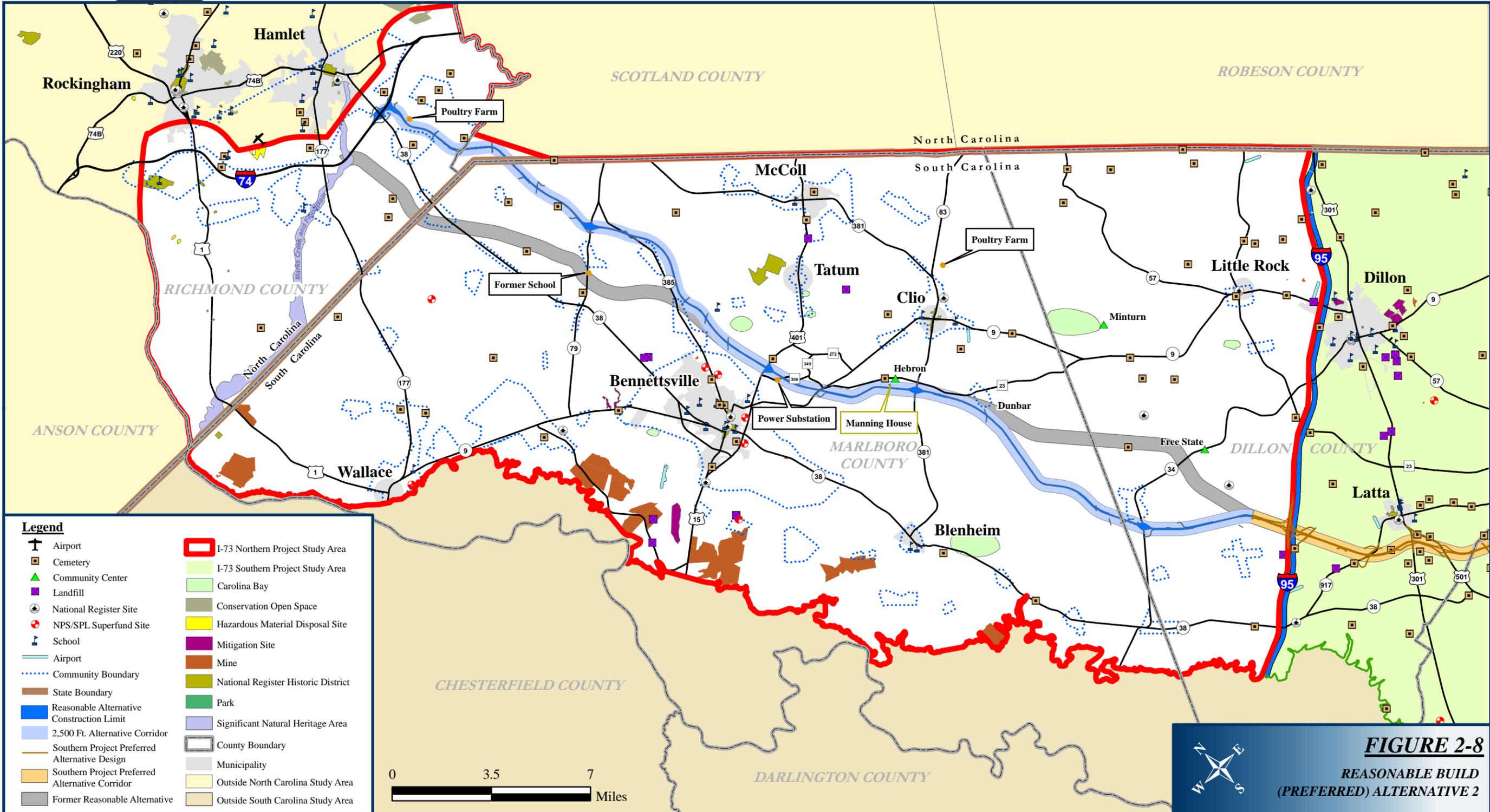
Alternative 2 is the central route. It also starts at the northern end of the interchange with I-95, which is the terminus of the Southern Project of I-73. It extends to the northwest following the alignment of Alternative 1 on the western side of Bingham where it has an interchange with S.C. Route 34. It follows the alignment of Alternative 1 approximately 3.5 miles north of Bingham where it turns north and has an interchange with S.C. Route 381 between Blenheim and Clio. It continues northwest where it has another interchange with U.S. Route 15/401 east of Bennettsville. An interchange is also provided at S.C. Route 79, north of Bennettsville, and with I-74 near Hamlet, North Carolina.

A meeting was held with the community of Minturn on January 9, 2007. At this meeting, it was suggested that Alternative 2 be modified from I-95 to south of Dunbar to follow the alignment of Alternative 1 and then crossover eastward to connect to the existing Alternative 2 alignment (refer to Figure 2-8). The modified Alternative 2 was determined to minimize potential impacts to all categories with the exception of 62.1 additional acres of impact to farmland of statewide importance. The modification would impact 15.2 less acres of wetlands, 51.3 fewer acres of prime farmland, one acre less of floodplains, and save four relocations. In addition, the modified alignment was anticipated to avoid any potential impacts to Free State, a minority community along S.C. Route 34 (refer to Chapter 3, Section 3.2.6.2, page 3-39). The comparison was presented to the ACT on February 22, 2007 and the modification to Alternative 2 was approved by a unanimous consensus vote.

Another modification was developed south of U.S. Route 15/U.S. Route 401 along State Road 356, between Bennettsville and Tatum. The modified alignment would avoid a power substation, avoid impacting a minority community located in the vicinity of S.C. Route 9 and State Road 23, and improve the design of Alternative 2.

A former school, located northeast of Bennettsville on the southern side of S.C. Route 79 was determined to be potentially eligible for listing on the NRHP (refer to Figure 2-8). A modification was developed to avoid potential impacts to the property due to its NRHP eligibility.

As discussed previously for Alternative 1, Alternative 2 also would have impacted Mark's Creek, which is a significant natural heritage area in North Carolina (refer to Figure 2-8). A



**FIGURE 2-8**  
**REASONABLE BUILD**  
**(PREFERRED) ALTERNATIVE 2**



modified alignment was developed to connect Alternative 2 to the eastern interchange. The modified alternative would impact approximately 44 less acres of wetlands, 2,391 fewer linear feet of streams, 122 fewer acres of total farmland, 90 less acres of prime farmland, save six relocations, and impact 23.9 less acres of floodplains. Similar to Alternative 1, the modification would avoid impacting the Industrial Park located on the northern side of I-74 in North Carolina. Approximately 79 acres of additional uplands would be impacted due to the modification. The proposed change was presented to the ACT on May 9, 2007, and unanimous consensus was reached to accept the proposed modification. Alternative 2 was revised to eliminate use of the western interchange in favor of the eastern interchange (refer to Figure 2-8 on page 2-27).

#### 2.4.4.3 *Alternative 3*

Like to the other reasonable Build Alternatives, Alternative 3 begins at the northern end of the interchange with I-95, which is the terminus of the Southern Project of I-73. Alternative 3, the eastern route, extends to the north crossing between Bingham and Little Rock where it has an interchange with S.C. Route 9. It continues to the north, passing west of the Alford Plantation, to an interchange with S.C. Route 83 east of Clio. Alternative 3 continues northwest to an interchange between Tatum and McColl on U.S. Route 15/401 and then follows the same alignment as Alternative 2, including an interchange at S.C. Route 79 and another at I-74 near Hamlet, North Carolina.

The original alignment of Alternative 3 would have impacted the Alford Plantation, which had been determined to be eligible for listing on the NRHP (refer to Figure 2-9 on page 2-30). Since the property is eligible, avoidance is required unless it is demonstrated that no prudent or feasible alternative exists to avoid the property. As a result, a modification was developed to avoid impact to the Alford Plantation. The modification resulted in an 11.6 acre reduction in wetland impacts, lowered the wetland value by 187.5, 81.3 acres less prime farmlands, 3.6 acres less of farmland of statewide importance, lowered floodplain impacts by 9.3 acres, and would relocate one less resident.



*Alford Plantation*

The modified Alternative 3 minimized potential impacts to all categories. In addition, the modified alignment was anticipated to avoid potential impacts to Free State, a minority community east along S.C. Route 34. The comparison was presented to the ACT on February 22, 2007 and the modification to Alternative 3 was approved by a unanimous consensus vote.



Alternative 3 was modified east of Bennettsville near the intersection of State Road 17 and State Road 28 (refer to Figure 2-9). A poultry farm located on S.C. Route 83 could not be avoided due to the presence of wetlands on both sides of the proposed route. The modification minimized potential relocations in the vicinity of Adamsville Crossroads and provided a better crossing of the railroad near U.S. Route 15/U.S. Route 401 between Tatum and McColl.

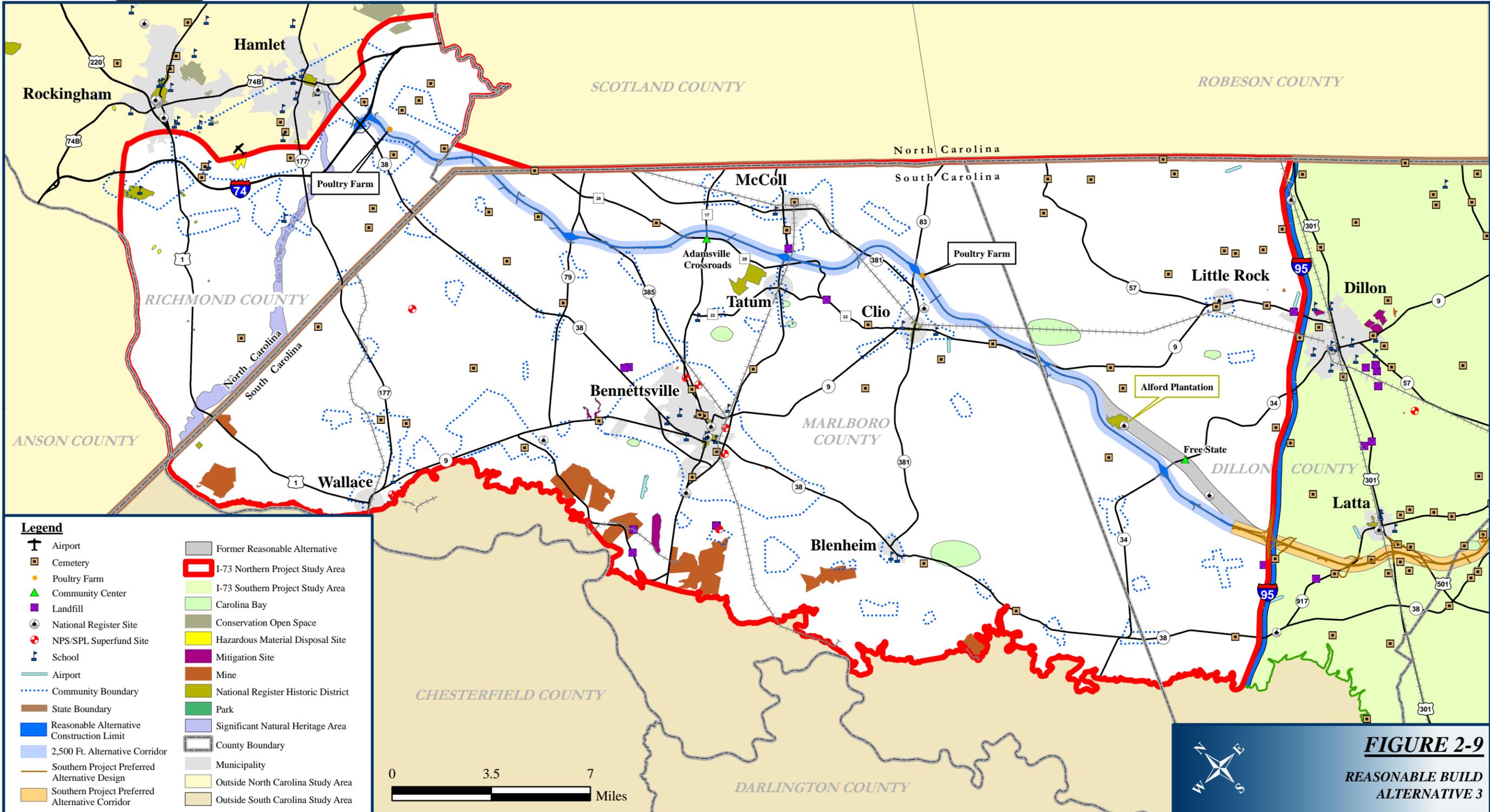
A modification was developed to avoid the potential impact of Alternative 3 on another large poultry operation. The facility is located approximately one mile south of I-74 in the vicinity of N.C. Route 38 (refer to Figure 2-9). The relocation of such a large farming facility would increase the cost of the project and could negatively affect the economy of the area. Since one of the project's primary needs is economic development, a modification was developed to avoid potential impacts to the poultry farm.

## 2.6 How were the three reasonable Build Alternatives evaluated to designate the Preferred Alternative?

Following the modifications of the three reasonable Build Alternatives, in coordination with the ACT, the evaluation was expanded to include the comprehensive list of categories. In addition, more specific data about each alternative, including preliminary construction limits and bridge lengths were estimated to provide a more accurate representation of potential impacts. The categories discussed previously were utilized, as well as the following resources to evaluate the three reasonable Build Alternatives in further detail:

- Hazardous Material Sites;
- Areas with a High Probability for Archaeological Sites (acres);
- More detailed information from Community Impact Assessment;
- Land Use;
- Economics;
- Noise;
- Biotic Communities;
- Species of Concern;
- Air Quality;
- Indirect Impacts;
- Cumulative Impacts; and,
- Cost.

Based on the information presented in Table 2.6 (refer to page 2-31) each of the three reasonable Build Alternatives was evaluated to determine the Preferred Alternative. The Alternative Evaluation Categories were used to compare the reasonable Build Alternatives against one another. The reasonable Build



**FIGURE 2-9**

**REASONABLE BUILD  
ALTERNATIVE 3**