



Table 2.6
Three Reasonable Alternatives Matrix
Interstate 73 EIS: North Carolina to I-95

Category	Unit of Measure	Alternative		
		1	2 (Preferred)	3
System Linkage		Yes	Yes	Yes
Economic Development		Yes	Yes	Yes
Improved Access for Tourism		Yes	Yes	Yes
Increased Safety on Existing Roads		Yes	Yes	Yes
Multimodal Planning		Yes	Yes	Yes
Length	Miles	40.6	36.8	37.2
Design Criteria	Meets/Does Not Meet	Meets	Meets	Meets
Constructability	Ranking	1	1	1
Construction Cost (year 2012)	\$ Millions	1,210	1,080	1,190
Threatened and Endangered Species	Yes (#) / No	No	No	No
Species of Concern	Yes (#) / No	No	No	No
Wetlands	Acreage	167.7	114.3	116.0
Fill	Acreage	161.9	107.0	114.4
Bridge	Acreage	5.8	7.3	1.6
Wetland Quality	Value	1,205.2	768.1	729.3
Fill	Value	1,157.6	736.2	714.6
Bridge	Value	47.6	31.9	14.7
Streams				
Total Crossings	# of Crossings (Linear Feet)	15 (4,566)	24 (8,143)	24 (10,062)
Perennial	# (Linear Feet)	6 (1,666)	10 (3,778)	7 (3,555)
Intermittent	# (Linear Feet)	9 (2,900)	14 (4,365)	17 (6,507)
Water Quality				
Outstanding Resource Water	# of Crossings	0	0	0
303(d) Impaired (2006 Draft List)	# of Crossings	0	0	0
Habitat	Unique	No	No	No
Uplands (Fill Only)	Acreage	1,952.6	1,800.8	1,845.6
Floodplains	Acreage	64.0	25.0	23.0
Hazardous Material Sites	#	1	1	2
Parks and Wildlife Refuges				
Historical Structures	Yes (#) / No	Auction Water - Hamlet	Auction Water - Hamlet	Auction Water - Hamlet & Red Bluff Grocery
High Potential Area for Archaeological Sites	#	No	No	No
Noise (R= Residential)	#	1 Visual Impact S-18 House	0	1 Direct Impact McLaurin House
Farmland	Acreage	993.0	804.9	1297.9
Prime	#	6 R	3 R	2 R
Unique	Acreage	1,705	1,505	1,582
Statewide Important	Acreage	824	805	961
Poultry Farm	Acreage	0	0	0
Hog Farm	Acreage	881	700	621
Community Impacts	#	7	8	6
Total Relocations	#	Aaron's Temple, Bennettsville, Blenheim, Brightsville, Chavistown, Hamlet, Salem	Adamsville, Bennettsville, Brightsville, Clio, Dunbar, Hamlet, Hebron, Newtonville	Adamsville, Bennettsville, Brightsville, Clio, Hamlet, Newtonville
Residential Relocations	#	71	41	40
Commercial Relocations	#	69	35	36
Environmental Justice	# of Block Groups	2	6	4
Airports	#	7	8	10
Fire Stations	#	0	0	0
Schools	#	0	0	0
Churches	#	0	0	1
Cemeteries	#	0	0	Community House of Prayer
Railroad Crossings	#	4	4	0
Gas Line Crossings	#	3	2	5



Alternatives were first evaluated against how well they addressed the needs for the project. In that regard, the Reasonable Build Alternatives were generally very similar, they all provided interstate connectivity, the traffic benefits were relatively similar, they all provided similar economic benefits, and they each provided for multimodal planning. Next, the reasonable Build Alternatives were evaluated based upon public input, agency concerns, as well as quantitative and qualitative benefits and impacts that would result from each of them. After careful consideration of all of these factors, a Preferred Alternative was identified.

Key Point

The FHWA and SCDOT refer to the alternative that best meets the proposed project's Purpose and Need, as well as minimizes potential impacts to the human and natural environments as the Preferred Alternative. The USACE utilizes the term Proposed Alternative to describe this alternative.

2.6.1 How would the reasonable Build Alternatives meet the primary needs of the project?

There are three reasonable Build Alternatives and the No-build Alternative. The No-build Alternative does not satisfy the Purpose and Need for the project, but would avoid some of the impacts that the reasonable Build Alternatives would have. The No-build Alternative establishes a baseline condition against which the reasonable Build Alternatives can be compared. The purpose of the project is to provide an interstate link between proposed I-73, between I-95 and the Myrtle Beach region, and the North Carolina I-73/I-74 corridor to improve economic opportunities, access for tourism, improve safety of existing roadways, and provide multimodal planning. The No-build Alternative would not fulfill the purpose of the project or any identified needs. At the same time, the changes of land use, impacts to wetlands, noise impacts anticipated from the reasonable Build Alternatives would not occur with the No-build Alternative.

2.6.1.1 How do the reasonable Build Alternatives meet the primary need of system linkage?

It is essential that the project improve national and regional connectivity by providing a direct link between proposed I-73, from I-95 and the Myrtle Beach region, and the I-73/I-74 corridor in North Carolina. Each of the three reasonable Build Alternatives would provide the direct link stated as one of the project's primary needs. This direct link would reduce the travel time between I-95 and I-74. As shown in Table 2.7 (refer to page 2-33), the travel times between I-95 and I-74 would decrease from between 5 to 20 minutes for the approximate 40 mile distance. A trip from I-95 to I-74, without I-73, would take approximately 45 to 50 minutes, whereas with I-73 the trip would take between 30 to 40 minutes. Alternative 1 would save an estimated 10 minutes per vehicle for an estimated 29,600 vehicles per day, while Alternatives 2 and 3 would save an estimated 15 minutes per vehicle for an estimated 33,100 and 32,800 vehicles per day, respectively. The travel efficiency improvement results in economic benefits to the users of the facility which are outlined in Table 2.8 (refer to page 2-33).



Table 2.7
Minimum Trip Time Between I-95 and I-74 in Year 2030

	No-build Alternative	Alternative 1	Alternative 2 (Preferred)	Alternative 3
Minimum Travel Time (Minutes)	45-50	35-40	30-35	30-35
Average Annual Daily Traffic Volume (vehicles per day)	--	29,570	33,108	32,815

Table 2.8
Economic Impact Summary in 2030 from Travel Efficiencies*
(Alternatives compared to No-build)

Variable	Alternative 1	Alternative 2 (Preferred)	Alternative 3
Gross Regional Product (Millions of Dollars, 2007)	563	695	597
Personal Income (Millions of Dollars, 2007)	208	256	223
Total Employment (Permanent full-time)	606	787	668
Population	836	1,032	862

*output from REMI model

2.6.1.2 How do the reasonable Build Alternatives meet the primary need of economic development?

The other primary need identified was the ability to enhance economic opportunities in South Carolina. In general, there are four categories of benefits that arise from transportation investments including:

- Travel Efficiencies: Benefits that accrue to potential facility users upon project completion. These are measured in terms of travel time savings, vehicle operating cost savings, accident savings and emission benefits.



- Construction Impacts: Impacts that arise as a result of the expenditures on local labor and materials to build the facility.
- Operating and Maintenance Impacts: Benefits that arise from the expenditures on local labor and supplies to operate and maintain the facility upon completion.
- Strategic Development Impacts: The economic development impacts associated with attracting and retaining business activity as a result of increased accessibility, mobility and connectivity.

An analysis was performed that examined two of sources of potential economic impacts arising from I-73: travel efficiencies and strategic development benefits. The economic impact evaluation involves the estimation of the nature and magnitude of potential transportation efficiency gains and an assessment of the strategic development economic impact.

Travel Efficiency

The results are based on a forecast period between 2015 and 2035. These estimates represent only the economic impacts arising from travel efficiency savings and strategic development opportunities. They do not include benefits arising from construction and operations and maintenance impacts due to data limitations, as well as the short-term nature of construction benefits and the substitution effects related to operating and maintenance. It should be noted that the analysis of travel efficiency savings does not include Richmond County, North Carolina due to the lack of a traffic model for the area. Because the forecasts presented in this report represent only two categories of the above-listed benefits (travel efficiencies and strategic development impacts), the results of this study should be considered as conservative estimates.

The travel efficiency benefits arose as a result of savings accruing to users of the facility such as travel time savings, vehicle operating costs savings and accident savings. The Project Team used output generated by the travel demand model to model the economic impacts of travel changes using a regional economic model developed by Regional Economic Models Incorporated (REMI). This model estimated the economic impacts associated with travel efficiencies, i.e., reduced travel time, vehicle operating costs and other direct user benefits (refer to the *Economic Analysis Technical Memorandum*).

In general, Table 2.8 shows that all I-73 reasonable Build Alternatives yield substantial economic benefits arising from travel efficiencies. The impacts indicated for each reasonable Build Alternative are increases over the No-Build Alternative. The economic benefits from the increased travel efficiency would result in \$563 to \$695 million over a 15 year time period. Table 2.8 shows the changes for two economic indicators: gross regional product (GRP) and personal income. The GRP is the regional counter part of Gross Domestic Product at the national level that represents final products and services sold to domestic and international markets. It is



defined as the dollar value of all final goods and services that are produced within a given period of time.¹ The GRP includes such economic generators as employee compensation, commercial taxes, and property income. The GRP over the 20-year period is forecasted to range between about \$74.6 million (Alternative 1) and \$78.1 million (Alternative 3). Among the three reasonable Build Alternatives, Alternative 2 potentially generates more benefits than the other reasonable Build Alternatives.

Strategic Development

The estimation of development benefits that arise as a result of improved accessibility and connectivity was derived using the Economic Development and Growth Evaluation (EDGE) model. The output of this model is the Strategic Development benefits that arise as a result of improving the accessibility and connectivity to regions which may currently be underserved. These benefits result from the ability of the new facility to generate more traffic as opposed to moving existing traffic more efficiently. Since access to the proposed interstate would be fully-controlled, interchanges were anticipated to be the main points of development. Existing water and sewer infrastructure, as well as current development, were determined to be features that would attract development. Table 2.9 presents the estimated GRP impact for each reasonable Build Alternative based on the area's economic output. Table 2.10 quantifies the projected employment impact from the reasonable Build Alternatives between 2015 and 2030. The product of the number of jobs and the industrial wage yields an increase in income ranging from \$27.3 million to \$30.5 million annually (refer to Table 2.11).

Table 2.9
Strategic Development GRP Impact from 2015-2035*
(Alternatives compared to No-build)

	Alternative 1	Alternative 2 (Preferred)	Alternative 3
Gross Regional Product (Millions of Dollars, 2007)	74.6	76.4	78.1

*Output from EDGE model

Table 2.12 (refer to page 2-37) displays the combined income and employment impacts for each of the three reasonable Build Alternatives. The impacts indicated for each reasonable Build Alternative are increases over the No-Build Alternative. As indicated, all reasonable Build Alternatives give rise to substantial economic benefits for the region. Alternative 2 would

¹ Merriam Webster, "Gross domestic product." Referenced on June 6, 2007 from <http://www.merriam-webster.com>.



Table 2.10
Strategic Development Employment Increases by Alternative and County
(permanent full-time jobs)

County	Alternative 1	Alternative 2 (Preferred)	Alternative 3
Dillon County, South Carolina	74	77	81
Marlboro County, South Carolina	356	386	326
Richmond County, North Carolina	95	95	95
Total	525	558	502

Table 2.11
Strategic Development Annual Income Increases by Alternative and County
(millions of dollars)

County	Alternative 1	Alternative 2 (Preferred)	Alternative 3
Dillon County, South Carolina	6.3	4.6	8.6
Marlboro County, South Carolina	21.1	21.4	20.6
Richmond County, North Carolina	1.3	1.3	1.3
Total	28.7	27.3	30.5

have the highest increase to annual personal income and higher benefits to the area for total employment. All reasonable Build Alternatives are projected to have a positive economic impact on the region, while the magnitude of that impact between alternatives is similar, Alternative 2 is slightly higher than the other alternatives. However, given the magnitude of the impacts relative to the overall area economy, the difference between the reasonable Build Alternatives is not enough to be the deciding factor in determining which reasonable Build Alternative is preferred.



Table 2.12
Economic Impact Summary in 2030 by Alternative

	Alternative 1	Alternative 2 (Preferred)	Alternative 3
Travel Efficiency			
Personal Income (Millions of Dollars, 2007)	208	256	223
Total Employment (Permanent full-time)	606	787	668
Strategic Development			
Personal Income (Millions of Dollars, 2007)	28.7	27.3	30.5
Total Employment (Permanent full-time)	525	558	502
Total			
Personal Income (Millions of Dollars, 2007)	236.7	283.3	253.5
Total Employment (Permanent full-time)	1,131	1,345	1,170

2.6.2 How would the reasonable Build Alternatives meet the secondary needs of the project?

2.6.2.1 How would the reasonable Build Alternatives improve access for tourism?

Improved access is often measured in terms of increased capacity or travel efficiency. One measure typically used to gauge the effectiveness of proposed roadway improvements is the volume to capacity ratio (V/C). The volume of current or projected traffic is compared with the capacity of a roadway or a system of roadways. The roadway network that was modeled for this project is not a congested network. That means that the traffic volume on the roadways in the network is below the capacity of the roadways. Thus, the V/C ratio would not measure the traffic benefits.

For this project, the traffic benefits result from increased efficiency in travel. To measure the effectiveness of the proposed facility to improve access for tourism, the Vehicle Hours Traveled



(VHT) for the average annual daily traffic (AADT) on the project study area roadway network was determined for each reasonable Build Alternative (refer to Table 2.13). For a congested network, the VHT should decrease with the addition of a new roadway facility.

The VHT for this project increased. This is because I-73 would induce more trips into the project study area, thus more vehicle hours of travel. These are vehicles that would alter travel routes to take advantage of the improved efficiency (shorter travel times) of I-73. The improved efficiency is demonstrated by the ratio of vehicle miles traveled (VMT) to VHT, shown in Table 2.13. This shows the average speed of each trip in the network within the study area increased. Although the difference between the highest speed (60.7) and the lowest (60.2) for the entire traffic network of the reasonable Build Alternatives is slight, the difference between the No-build (56.6) and the lowest of the reasonable Build Alternatives (60.2) demonstrates the increase in efficiency of travel. This results in a substantial savings, especially when evaluated in light of the number of miles per day traveled on the network.

Table 2.13
Vehicle Miles Traveled (VMT) and Vehicle Hours Traveled (VHT) in Network for Alternatives using Average Annual Daily Traffic Volumes (Year 2030)

Alternative	VMT	VHT	VMT/VHT
No-Build	3,381,078	59,698	56.6
1	4,062,263	67,430	60.2
2 (Preferred)	4,247,924	69,996	60.7
3	4,168,522	68,842	60.6

This impact on the local road network is even more evident when the I-73 trips are taken out of the calculations. The reduction in VMT and VHT without I-73 shows the amount of traffic taken off the rest of the network (reduction in vehicle hours traveled) because of I-73 (refer to Table 2.14, page 2-39). The influence of I-73 on travel speed is shown in the drop in the average network speeds with the I-73 trips removed.

The ability to reduce the time required to travel to a destination is a benefit to the traveling public, which includes tourist traffic.

2.6.2.2 How would the reasonable Build Alternatives incorporate multimodal planning?

Planning for future provision of a multimodal facility within the interstate corridor was identified as a secondary need for the project. An ultimate 400-foot typical section was developed to accommodate the number of lanes needed for the future traffic volumes as well as a multimodal corridor (refer to Figure 1-4, page 1-6). Overpasses, interchanges, and access ramps would require modification when installing a future multimodal facility, such as rail. Bridges



Table 2.14
Vehicle Miles Traveled (VMT) and Vehicle Hours Traveled (VHT) in Network for Alternatives using Average Annual Daily Traffic Volumes with I-73 Traffic Removed (Year 2030)

Alternative	VMT	VHT	Difference from No-build		VMT/VHT
			VMT	VHT	
No-Build	3,381,078	59,698	--	--	56.6
1	2,874,387	49,633	-506,691	-10,065	57.9
2 (Preferred)	3,028,802	51,842	-352,276	-7,856	58.4
3	2,927,326	50,735	-453,752	-8,963	57.7

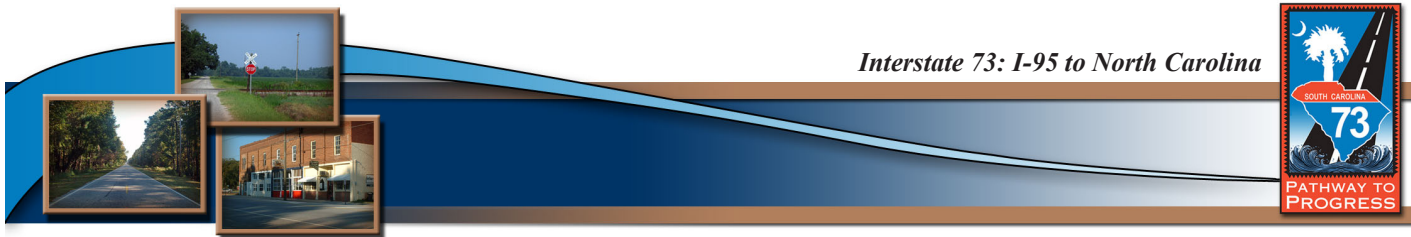
and overpasses would be retrofitted to accommodate the increased height and length that would be needed to meet installation criteria for rail, while the railroad would be designed out of the existing right-of-way at the interchanges. Alignment of the rail would pose additional challenges for access ramps and frontage roads.

In terms of multimodal planning, the reasonable Build Alternatives would have the ability to accommodate future facilities equally. Each of the three reasonable Build Alternatives would be primarily on new location, which would provide the most flexible design for installing future multimodal facilities due to the use of conventional interchanges.

2.6.3 How were the reasonable Build Alternatives compared in terms of human and environmental impacts?

Each of the reasonable Build Alternatives would have different types of impacts and somewhat different benefits. Chapter 3 provides the details for the potential impacts associated with each of the reasonable Build Alternatives, including the No-build. Indirect and cumulative impacts for the reasonable Build Alternatives were evaluated and had similar impacts for each category evaluated (refer to Chapter 3).

Guidelines established by the USEPA and the USACE pursuant to Section 404(b)(1) of the *Clean Water Act* were followed during the development of each of the reasonable Build Alternatives. No practicable alternative exists that would avoid wetland impacts yet satisfy the Purpose and Need for the project. This is due to the fact that the project is a linear transportation project that would traverse a relatively long distance (approximately 40 miles) across a landscape in which wetlands and streams are abundant. In some cases they are present as unavoidable linear features that cross



the entire project study area in an orientation that is perpendicular to the path of the reasonable Build Alternatives (i.e. the Crooked Creek System and the Three Creeks System). The methodology that was utilized to develop the reasonable Build Alternatives placed greater importance on avoidance of wetland impacts than on avoidance of any other single impact category. The project has been designed and would be constructed in such a way that it would be in conformance with applicable State and Federal laws and regulations. A plan for mitigating unavoidable wetland impacts has been developed that will replace impacted wetlands so that there will be no net loss in wetland function or value as a result of the project (refer to Chapter 3, Section 3.12.10, beginning on page 3-196). This mitigation plan has been developed in close coordination with interested State and Federal resource and regulatory agencies.

2.6.4 How have the USACE Public Interest Review Factors been addressed?

As discussed in Chapter 1, section 1.2.2.2, page 1-10, the USACE's Public Interest Factors were also used to evaluate the potential impacts upon the Waters of the United States and how this impact would affect the interests of the public. Many of the USACE's Public Interest Factors were quantified and compared during the designation of preliminary Build Alternatives and reasonable Build Alternatives, including; wetlands, historic properties, fish and wildlife, floodplains, land use, recreation, water supply, water quality, food and fiber production (farmland), and considerations of property ownership (relocations) refer to Table 2.4 and Table 2.6 on pages 2-18 and 2-31 respectively. For more details regarding any of the Public Interest Review Factors, refer to the sections detailed in Table 2.15 (refer to page 2-41).

The guidance provided by the USACE entitled *Environmental Assessment, 404(B)(1) Analysis, Finding of No Significant Impact (FONSI), and Statement of Findings* explains aesthetics as to whether the project "generally fit(s) the current state of the area," whether the "project is a 'first', (as) it could cause disharmony from aerial or adjacent property view," and in terms of landscaping. The land use of the project study area is primarily rural in character, dotted with small towns and cities such as Bennettsville, Blenheim, Clio, McColl, and Tatum. The construction of any reasonable Build Alternative would alter the current state of the area as it would be the first multi-lane controlled access facility in the area. It is anticipated that the adjacent property would have an altered view, as the proposed facility may be in view.

The remaining factors of shore erosion and accretion, as well as flood hazards (i.e. hurricane evacuation) would not be impacted by the project. The project would not be located in the vicinity of the ocean shore.



Table 2.15
USACE Public Interest Review Factors

Public Interest Review Factor	Reference
Conservation	Chapter 3, Section, 3.12.10, page 3-196
Economics	Chapter 1, Section 1.3.4, page 1-12 & Chapter 3, Section 3.1.11, page 3-18 & Chapter 3, Section 3.3, page 3-103
Aesthetics	Refer to explanation below and on page 2-42 & Chapter 3, Section 3.2, page 3-29
General Environmental Concerns	Chapter 3, Section 3.7, page 3-126
Wetlands	Chapter 3, Section 3.12, page 3-176
Historic Properties	Chapter 3, Section 3.6, page 3-119
Fish and Wildlife	Chapter 3, Section 3.12, page 3-176 and Section 3.14, page 3-209, & Section 3.16, page 3-221
Flood Hazards	Chapter 3, Section 3.19, page 3-278
Floodplains	Chapter 3, Section 3.19, page 3-278
Land Use	Chapter 3, Section 3.1, page 3-1
Navigation	Chapter 3, Section 3.22.3, page 3-288
Shore Erosion and Accretion	Not Impacted by Proposed Project
Recreation	Chapter 3, Section 3.4, page 3-116 and Section 3.5, page 3-118, & Section 3.20, page 3-283
Water Supply	Chapter 3, Section 3.17, page 3-251 & Section 3.18, page 3-255
Water Quality	Chapter 3, Section 3.17, page 3-251 & Section 3.18, page 3-255
Energy Needs	Chapter 3, Section 3.21.2, page 3-285
Safety	Chapter 1, Section 1.3.6, page 1-29
Food and Fiber Production	Chapter 3, Section 3.10, page 3-152
Mineral Needs	Chapter 3, Section 3.23, page 3-289
Considerations of Property Ownership	Chapter 3, Section 3.2, page 3-29

2.6.5 How would the reasonable Build Alternatives compare in terms of human and environmental impacts?

All of the reasonable Build Alternatives satisfied the Purpose and Needs for the project. System linkage and multimodal planning would be provided by any of the reasonable Build Alternatives. As previously indicated, all alternatives give rise to substantial economic benefits for the region. Alternative 2 would have the highest increase to annual personal income and higher benefits to the area for total employment. However, this variability was not enough to be the deciding factor in determining the Preferred Alternative.



Induced impacts for several categories were also looked at between the reasonable Build Alternatives. Potential land use, wildlife habitat, wetlands, streams, water quality impacts were all areas that showed very little differentiation between the alternatives. In fact, based upon past and current growth trends, the No-Build Alternative, which served as a baseline for future impacts, showed substantially more land use impacts than did any of the reasonable Build Alternatives by themselves. The categories that served to distinguish the alternatives from one another were natural resource related (wetlands, streams, and farmland) and human resource related (communities, public input, and cost).

2.6.5.1 Alternative 1

Alternative 1 is approximately 40.6 miles in length, the longest of three reasonable Build Alternatives (3.8 miles longer than the Preferred Alternative) (refer to Figure 2-10). This alternative would have 167.7 acres of wetland impacts, over 50 acres more than the Preferred Alternative, and the wetlands potentially impacted have the highest value rating (1,205.2). Alternative 1 would have the most total relocations (71), 30 additional than the Preferred Alternative. It would have the highest cost (\$1.21 billion, year 2012) over \$130 million more than the Preferred Alternative. It would impact the greatest amount of total farmland (1,705 acres), approximately 200 acres more than the Preferred Alternative and would impact 824 acres of prime farmland. It would have 15 stream crossings impacting an estimated 4,566 linear feet of streams, which is the least amount of all the reasonable Build Alternatives. It would impact 39 additional acres of floodplain than the Preferred Alternative. It would cross major stream/wetland systems such as Little Reedy Creek, Three Creeks, Muddy Creek, Crooked Creek, and Herndon Branch. It would also impact approximately 914.3 acres of wildlife habitat (refer to Chapter 3, page 3-241). The USFWS and SCDNR expressed concern that Alternative 1 crosses major stream/wetland systems and could have a potential for more habitat fragmentation than the other reasonable Build Alternatives.

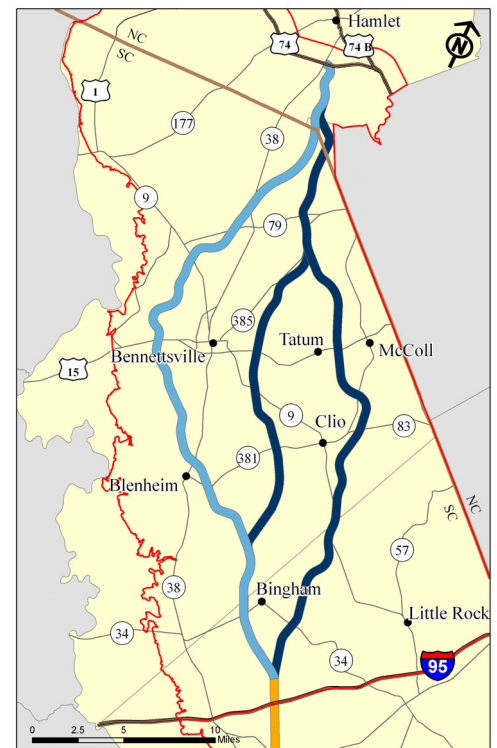


Figure 2-10 Alternative 1

This alternative would provide better access to the Marlboro County Industrial Park, Chesterfield and Darlington Counties than the other reasonable Build Alternatives. Since it is located adjacent to Bennettsville, existing infrastructure would be available for economic development. The SCDOC supported Alternative 1 due to its location near Bennettsville and available infrastructure.



However, the close proximity of the alternative to the Marlboro County Airport could limit future expansion of the facility. Alternative 1 is located closer to the floodplain of the Great Pee Dee River that may encourage development in the floodplain, which was a concern of the USFWS and SCDNR.

The citizens of Minturn submitted a petition with 106 signatures (refer to *Public Involvement Technical Memorandum*) requesting that this route, the far western route, be selected as the Preferred Alternative. Other comments were received from local governments adjacent to the project study area. Chesterfield County Council, Chesterfield Town Council, Cheraw Town Council, and Society Hill Town Council all passed resolutions endorsing the western route of Alternative 1 (refer to Chapter 4, Section 4.7, page 4-8).

Based upon coordination with the State Historic Preservation Office (SHPO), this alternative would also be expected to have the potential for negative visual impacts to a home located on S-18 on the southern side of Bennettsville (refer to Chapter 3, Section 3.6, page 3-117). In addition, SCDAH stated that Alternative 1 and Alternative 3 had the most potential for impacts to historic structures.

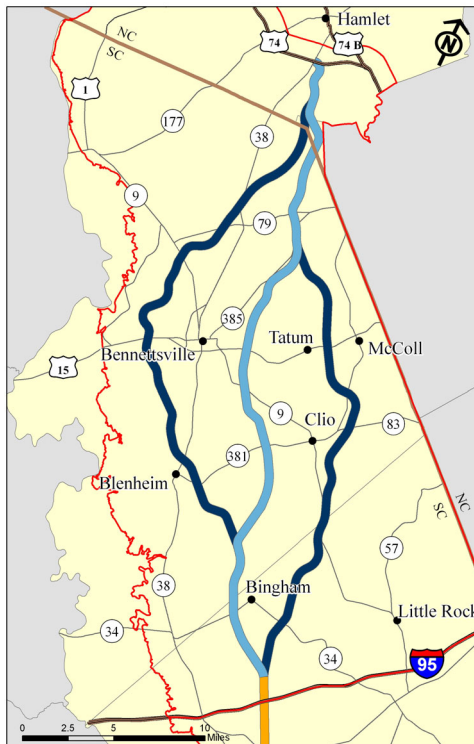


Figure 2-11 Alternative 2

2.6.5.2 Alternative 2

Alternative 2 is approximately 36.8 miles in length, the shortest of three reasonable Build Alternatives (refer to Figure 2-11). This alternative would have the least amount of wetland impacts (114.3 acres), the least amount of total farmland (1,505 acres), and the least amount of prime farmland (805 acres), and low total relocations (41). It would have the least cost (\$1.08 billion, year 2012) and would have 24 stream crossings impacting 8,143 linear feet of streams. It would impact 25 acres of floodplain due to its crossing stream/wetland systems such as Little Reedy Creek, Hagins Prong, Cottingham Creek, and Beverly Creek. This alternative would also cross Crooked Creek in the northern portion of the project study area, but would avoid a second, wider, crossing of the Crooked Creek system north of Bennettsville. It would also impact approximately 869.3 acres of wildlife habitat.

This alternative is located adjacent to Bennettsville on the east side and has existing infrastructure available for economic development. In addition, it is centrally located within the project study area to more equally serve the population centers of Bennettsville, Tatum,



Blenheim, and Clio. The SCDOC supported Alternative 2 due to its location near Bennettsville and available infrastructure.

The citizens of Minturn, along with their petition (refer to *Public Involvement Technical Memorandum*) requesting that the far western route be selected as the Preferred Alternative, stated that Alternative 2 was unanimously endorsed if the far western route was not chosen. The City of Bennettsville and the Town of Blenheim submitted letters from their respective mayors unanimously supporting the central route, Alternative 2 (refer to Chapter 4, Section 4.7, page 4-8).

2.6.5.3 Alternative 3

Alternative 3 is approximately 37.2 miles in length (0.4 miles longer than the Preferred Alternative) (refer to Figure 2-12). The proposed alternative would have 116.0 acres of wetland impacts, only 1.7 acres more than the Preferred Alternative, and the wetlands potentially impacted have the lowest value rating (729.3). Although Alternative 3 would have the fewest relocations (40), it would impact the Red Bluff Grocery, located at the intersection of S.C. Route 83 and State Road 40, and the Community House of Prayer located on S.C. Route 34. Both of these facilities are considered to be important community assets and would result in a negative effect on each associated community. In addition, the property associated with the McLaurin House, which is listed on the NRHP (refer to Chapter 3, Section 3.6.4, page 3-123), would be impacted by Alternative 3, due to avoidance of wetlands on both sides of the farm. This property includes four poultry barns that would require relocation as an additional cost to the project.

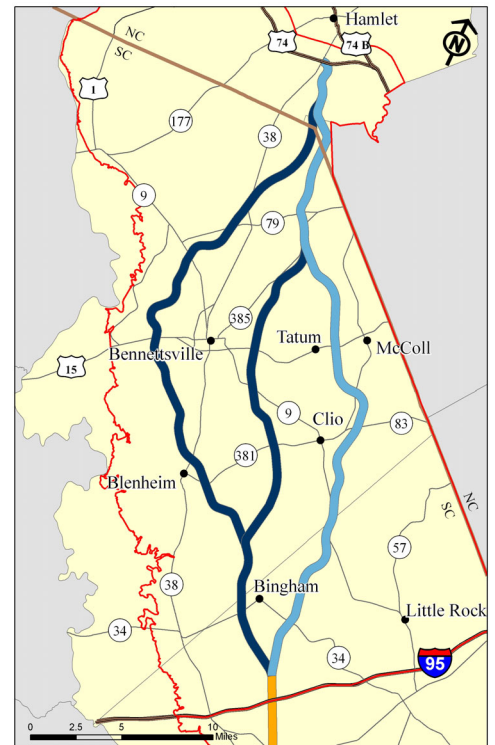


Figure 2-12 Alternative 3

Alternative 3 would have a high cost similar to Alternative 1 (\$1.19 billion, year 2012) over \$100 million more than the Preferred Alternative. It would impact the 1,582 acres total farmland, the highest amount of prime farmland (961 acres), which is 156 acres more than the Preferred Alternative. It would have 24 stream crossings impacting the 10,062 linear feet of streams, which is 1,919 linear feet more than the Preferred Alternative and the highest amount of all the reasonable Build Alternatives. It would have the least impact to floodplains (23 acres) and would also impact approximately 668.4 acres of wildlife habitat. Alternative 3 would cross the stream/wetland systems of Little Reedy Creek, Reedy Creek, Beverly Creek, and Crooked Creek.



Alternative 3 would be located over five miles from Bennettsville, therefore existing infrastructure would not be readily available for economic development.

The citizens of Minturn submitted a petition with 106 signatures (refer to *Public Involvement Technical Memorandum*) requesting that this route, the far eastern route, not be selected as the Preferred Alternative. Other comments were received from the members of the ACT including:

- USDA NRCS did not support the potential impact of Alternative 3 to the poultry operation associated with the McLaurin House;
- SCDOC stated that Alternative 3 would have the least potential for economic development due to its location and that a major investment would be necessary to upgrade and install the infrastructure needed to attract economic development;
- SCDAH stated that Alternative 1 and Alternative 3 had the most potential for indirect impacts to historic structures; and,
- SCDNR stated concern about the crossing of Reedy Creek by Alternative 3, while the other reasonable Build Alternatives did not impact Reedy Creek.

2.6.6 Which reasonable Build Alternative was designated as the Preferred Alternative?

As discussed previously, each of the reasonable Build Alternatives would equally meet the primary needs of the project by providing a the direct link between future I-73 South (from I-95 to the Myrtle Beach area) and the I-73/I-74 Corridor in North Carolina, while providing economic development opportunities. The secondary needs of the project, improved access for tourism, increased safety on existing roads, and multimodal planning, would be met by all of the reasonable Build Alternatives. The reasonable Build Alternatives were then compared based upon public input, agency concerns, potential impacts to the human and natural environment, and qualitative benefits and impacts that would result from each of them. After careful consideration of all of these factors, a Preferred Alternative was identified.

Alternative 2 is the Preferred Alternative because it would have the least amount of wetland impacts (114.3 acres), the least impact to total farmland (1,505 acres), the least impact to prime farmland (805 acres), the lowest cost, low relocations, would not directly affect any known historic resources, be in close proximity to existing infrastructure, would be centrally located to serve the communities of the project study area more equally, and is supported by agencies, local governments, and the public. The three reasonable Build Alternatives all have some features that are favorable and advantageous, but when compared with Alternative 2, the other reasonable Build Alternatives were less suitable.

Alternative 1 would have the highest wetland impacts (167.7 acres), the highest cost (\$1.21 billion), the most relocations (71), the highest impact to farmland (1,705 acres), the most floodplain impacts



(64 acres), and would potentially have a visual impact to a historic home located on S-18. Concerns were expressed by USFWS and SCDNR concerning the crossing of major wetland systems and the potential for habitat fragmentation that would be caused by Alternative 1. At public meetings many people spoke against Alternative 1 due to the potentially detrimental impacts to farming operations in the area.

Key Point

Chapter 3 will discuss the potential impacts of the three reasonable Build Alternatives, hereinafter referred to as the Build Alternatives, in further detail.

Alternative 3 would have the highest linear feet of stream impact (10,062), the greatest impact to prime farmland (961 acres), would impact the property associated with the McLaurin House that listed on the NRHP resulting in a Section 4(f) impact, would impact a poultry operation, the Red Bluff Grocery, the Community House of Prayer, and would be removed from existing infrastructure that would limit potential future economic development. Concerns were expressed by SCDOC regarding Alternative 3 based on its distance from available infrastructure.