



The feasibility study recognized that there had been some improvements to roads in the project study area; however, the improved roads were predicted to have capacity problems along some segments by the year 2025, based on traffic modeling. Future traffic projections indicated that I-73 would divert traffic from existing roadways, which would improve capacity and reduce traffic congestion.¹⁰

North Carolina completed a feasibility study in 2005 that evaluated alternatives for the proposed I-74 in Columbus and Brunswick Counties, North Carolina, located in the southeastern portion of the state. The study was an initial step in the planning and design and described the project, costs, and identified potential problems that required consideration.

The *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users* (SAFETEA-LU) was passed by Congress and signed into law on August 10, 2005. SAFETEA-LU acknowledges the prior purpose for, and designation of, I-73 as a High Priority Corridor, along with designating it as a project of “national and regional significance” (23 U.S.C. §101(2005)). In addition, SAFETEA-LU provides earmarks for the I-73 project in South Carolina. At the state level, Concurrent Resolution H 3320 passed by the South Carolina General Assembly in 2003 states “that the members of the General Assembly express their collective belief and desire that the Department of Transportation should consider its next interstate project as one that provides the Pee Dee Region with access to the interstate system.”¹¹ Both Congress and the South Carolina General Assembly have appropriated money to SCDOT to study the potential corridor for the proposed I-73.

1.1.4 Who is responsible for this project?

The SCDOT, in partnership with the FHWA, recognizes the need for transportation improvements from I-74 to I-95 and the Myrtle Beach area. This FEIS is being prepared by the SCDOT for the FHWA in accordance with the *National Environmental Policy Act of 1969*, as amended (NEPA); the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 CFR §§1500-1508); and, the FHWA environmental impact and related procedures (23 CFR §771). A Notice of Intent was published in the Federal Register on July 22, 2005 (refer to Appendix A). In addition, this FEIS is being prepared to satisfy the requirements of the U.S. Army Corps of Engineers (USACE). The FHWA must have an approved FEIS and signed ROD prior to the final design activities, property acquisition, purchase of construction materials, or commencement of project construction (23 CFR §771.113).

¹⁰ *Ibid.*

¹¹ South Carolina Legislature Website, Legislation Webpage, http://www.scstatehouse.net/cgi-bin/query.exe?first=DOC&querytext=H%203320&category=Legislation&session=ALL&conid=2479514&result_pos=0&keyval=1153320 (April 3, 2008).



The USACE accepted the invitation of FHWA to be a cooperating agency, which enabled it to have input to ensure that the FEIS also met its requirements. The FHWA has also extended invitations and the following agencies have accepted the request to participate as cooperating agencies (refer to Appendix A):

- United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS);
- United States Fish and Wildlife Service (USFWS);
- United States Environmental Protection Agency (USEPA);
- National Oceanic and Atmospheric Administration, National Marine Fisheries Service (NMFS or NOAA Fisheries);
- South Carolina Department of Archives and History (SCDAH);
- South Carolina Department of Commerce (SCDOC);
- South Carolina Department of Health and Environmental Control (SCDHEC);
- South Carolina Department of Natural Resources (SCDNR); and
- South Carolina Department of Parks, Recreation, and Tourism (SCPRT).

Cooperating Agency

According to the CEQ, a cooperating agency is any agency (including state, local, and tribal governments or agencies) that has legal jurisdiction or special expertise regarding specific environmental concerns for the project. The full definition can be found in 40 CFR §1508.5, and the cooperating agency process is described in §1501.6.

The proposed project will attempt to conserve the natural environment, community values, and cultural resources by minimizing impacts to the natural and human environment. Other ways include avoidance of sensitive areas and minimization of impacts where these areas cannot be avoided. Meaningful participation from the public, interested stakeholders, and resource agencies will be encouraged to ensure that both natural and human interests are addressed.

Environmental Impacts to be Studied

1.2 Why study impacts to the environment?

This FEIS has been prepared to comply with NEPA, which requires that a detailed analysis be prepared if any federal agency is undertaking a “major federal action significantly affecting the quality of the human environment”.¹² In this detailed study, the federal agency must include an assessment of the impacts to the environment from the proposed action and any adverse effects that cannot be avoided should the proposed action be implemented.¹³ In addition, the agency must include any alternatives to the proposed action, the relationship between short-term uses of the environment and long-term productivity due to the proposed action, and any irreversible or irretrievable commitment of resources if the proposed action were to occur.¹⁴ The purpose of NEPA documents is to provide the decision makers

¹² 42 U.S.C. §4332(C)(2).

¹³ 42 U.S.C. §4332(C)(2)(i)-(iii).

¹⁴ 42 U.S.C. §4332(C)(2)(iii)-(v).



with the best available information so that agency personnel can make an informed decision about the project. The intent of NEPA is to promote better decision making by federal agencies when they undertake actions that may have effects on the environment.

The CEQ, the regulating agency for NEPA, has developed a set of regulations that provide detailed information about implementation of NEPA. These regulations have specific requirements of what should be included in an EIS (40 CFR §1502).

1.2.1 What type of impacts will be evaluated?

There are three types of impacts that may occur when an action takes place: direct impacts, indirect impacts, and cumulative impacts. Each are defined and discussed below. The terms “impact” and “effect” are used interchangeably throughout this document since they share the same meaning according to the CEQ regulations (40 CFR §1508.8).

Direct impacts are defined by the CEQ as impacts “which are caused by the action and occur at the same time and place” (40 CFR §1508.8(a)). For example, a direct impact to a resource such as wetlands would be a loss of acreage due to the construction of the road.

Indirect impacts are defined in 40 CFR §1508.8(b) as those impacts “which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.” An example of an indirect effect under this definition would be downstream impacts to wetland hydrology caused by construction of a stream crossing that altered water flow patterns.

The CEQ defines cumulative impacts in 40 CFR §1508.7 as an “impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” An example of a cumulative impact would be loss of habitat from a current project added to changes resulting from past and future projects in the project study area, such as timber harvesting or agricultural practices.

Impacts are analyzed to determine how an alternative may affect resources if it were implemented. Each alternative that is under consideration may have impacts of varying degrees. These variances, or differences, are used by the decision makers to evaluate and compare each alternative.



1.2.2 How are impacts evaluated?

1.2.2.1 How does FHWA evaluate impacts?

FHWA has developed a set of regulations (23 CFR §771) to further guide its agency in applying NEPA and CEQ regulations. In addition, FHWA published Technical Advisory T 6640.8A in 1987 to help further guide the agency in preparation of NEPA documents, as well as *Position Paper: Secondary and Cumulative Impact Assessment in the Highway Project Development Process*¹⁵ for further guidance on indirect and cumulative impacts. Guidance for noise abatement due to construction and highway traffic noise and mitigation of environmental impacts to privately-owned wetlands can be found in 23 CFR §772 and §777, respectively.

FHWA uses the term “secondary” for indirect impacts, and gives it similar meaning as the CEQ regulations. Indirect and cumulative impacts must be addressed when doing a project, especially in terms of the impacts from induced growth (i.e. new businesses, industry, residences). FHWA must incorporate indirect and cumulative impacts from induced growth, but is not responsible for mitigating actions that are beyond its control.¹⁶ This requires FHWA to evaluate the possibility of induced growth; however, FHWA is not responsible for mitigating for the growth since a third party would be performing the action.

1.2.2.2 How does USACE evaluate impacts?

The USACE evaluates the direct, secondary, and cumulative impacts of a proposed project upon waters of the United States and how this would affect the interests of the public. Factors used when evaluating the public interest include conservation, safety, economics, aesthetics, wetlands, general environmental concerns, land use, historic properties, fish and wildlife values, flood hazards, floodplain values, navigation, shore erosion and accretion, recreation, water quality, water supply and conservation, energy needs, food and fiber production, mineral needs, considerations of property ownership, and the general needs and welfare of the people. Each factor is weighted based on the importance and relevance of the factor in

USACE’s Public Interest Factors

- | | |
|--|----------------------|
| Conservation | Economics |
| Aesthetics | Wetlands |
| General Concerns | Flood Hazards |
| Historic Properties | Floodplains |
| Fish & Wildlife | Land Use |
| Navigation | Recreation |
| Water Quality | Mineral Needs |
| Energy Needs | |
| Safety | |
| Food & Fiber Production | |
| Shore Erosion & Accretion | |
| Water Supply & Conservation | |
| Property Ownership | |
| Needs & Welfare of the People | |

¹⁵ FHWA, HEP-32, (April, 1992).

¹⁶ DOT v. Public Citizen, 541 U.S. 752, 124 S. Ct. 2204 (2004).



relation to the proposed project. In addition, comments from federal, state, and local agencies, especially those who have special expertise and the public are evaluated and given appropriate weighting. The USACE balances the public interest factors, weighing the benefits of the proposed project against its detriments. Along with this public interest review, the USACE will also evaluate a permit application for all work that occurs in waters of the United States, including wetlands, pursuant to the requirements of Section 10 of the *Rivers and Harbors Act* and/or Section 404 of the *Clean Water Act*. Once the public interest review and the regulatory review are completed, a final decision is made on the permit application. A permit application would be approved unless the proposed project was found to be contrary to the public interest and/or the applicable regulatory requirements of Section 10 of the *Rivers and Harbors Act* and/or Section 404 of the *Clean Water Act*.

1.2.2.3 How does SCDHEC evaluate impacts?

SCDHEC considers four main issues when evaluating impacts for a proposed project. According to SCDHEC Regulation 61-101, these include determining if the project is water dependent, the project's intended Purpose, if there are feasible alternatives to the project, and an evaluation of the potential water quality impacts.¹⁷ SCDHEC will review and evaluate the proposed project for consistency with Section 401 of the *Clean Water Act*.

Purpose and Need

1.3 What is the Purpose of I-73 and why do we Need the project?

The Purpose of the proposed project is to provide an interstate link between the southernmost proposed segment of I-73 (between I-95 and the Myrtle Beach Region) and the North Carolina I-73/I-74 Corridor, to serve residents, businesses, and travelers while fulfilling congressional intent in an environmentally responsible and community sensitive manner.

The following primary and secondary Needs have been identified in conjunction with the proposed federal action, which are in accordance with FHWA guidelines. The degree to which the project will serve the primary Needs identified below will receive greater emphasis than the secondary Needs in the alternatives and impacts analysis.

Primary and Secondary Needs

A *Primary Need* is an essential need for the project that must be met.

A *Secondary Need* is a need of lesser importance that may be met indirectly when the project is completed and the primary needs are fulfilled.

¹⁷ SCDHEC, "R. 61-101 Water Quality Certification," <http://www.scdhec.gov/environment/water/regs/r61-101.pdf> (April 9, 2008).



1.3.1 What are the primary project Needs?

- **System Linkage** – Improve national and regional connectivity of northeastern South Carolina by providing a direct link between the future I-73 segment from I-95 to the Myrtle Beach Region and the I-73/I-74 Corridor in North Carolina.
- **Economic Development** – Enhance economic opportunities and development in counties with high unemployment and low income in northeastern South Carolina and southeastern North Carolina.

1.3.2 What are the secondary project Needs?

- **Improved Access for Tourism** – This project would allow improved access to and from tourist destinations in the eastern part of South Carolina as well as the Hamlet area in North Carolina.
- **Increased Safety on Existing Roads** – This project would increase the safety of the current roads through the project study area by moving a significant volume of local, out-of-state, and commercial traffic to an interstate designed for a higher volume of traffic.
- **Multimodal Planning** – This project would accommodate the future provision of a multimodal facility within the interstate corridor.

1.3.3 What is system linkage?

This project provides an opportunity to address the most significant link lacking in the interstate system in South Carolina. The proposed project would connect I-95 and I-73 South to I-74. SAFETEA-LU focuses resources on interstate projects that would provide linkage between other existing interstates (§1302(b)(2)(A)). The I-73/I-74 Corridor would also serve as a means of moving people and goods between the southeast and midwest United States more efficiently. This is a priority of SAFETEA-LU, integrating regions and providing greater mobility of people and goods to promote economic growth. Currently, S.C. Route 9 and S.C. Route 38 are the main routes between the I-73/I-74 Corridor and I-95 in South Carolina. These roads do not adequately provide a link between the two interstates, nor do they provide the most efficient movement of people and goods within and outside of the region. This project would address these deficiencies.

System Linkage

This project would improve the national and regional connectivity of northeastern South Carolina by providing a direct link between I-73 and I-95 in Dillon County and the I-73/I-74 Corridor.



1.3.4 How would this project affect economic development?

This project would occur mainly in northeast South Carolina, but extends into North Carolina, near the city of Hamlet. The counties of Dillon and Marlboro in South Carolina, and Richmond and a very small portion of Scotland Counties in North Carolina comprise the project study area (refer to Figure 1-5). Based on the 2000 U.S. Census Data, all four counties are experiencing high unemployment rates, high rates of people living below the poverty level, and low median incomes when compared to their respective states and the United States. This project can improve opportunities for economic development within the region to help bring needed jobs and income to these counties.



Figure 1-5 Project Study Area Counties

Having an interstate would provide a tool that would help these counties to recruit new businesses and industries by virtue of linkage with the interstate system. Although the presence of an interstate alone is not enough to create a substantial number of new jobs, it is one of the key factors that industries and businesses look for when siting a facility. Certainly interstate construction by itself does not necessarily lead to economic growth (i.e. Dillon County, with I-95, is still below average in employment and income). However, the presence of an interstate is a necessary component of the infrastructure needed to attract new businesses to an area. This interstate would be an added advantage to local and state officials in their efforts to pursue companies that may be looking to relocate to this area.

Economic Development

This project would provide opportunities for economic development in Richmond and Scotland Counties in North Carolina as well as Marlboro and Dillon Counties in South Carolina.

It is also anticipated that the new interstate facility would stimulate the development of tertiary services to the area in close proximity to the corridor. Convenience services such as restaurants, gas stations, and motel/hotel accommodations would provide additional employment and income to the neighboring communities. Opportunities for development of tourist-friendly establishments and recreational facilities would likely increase with an interstate connecting the I-73/I-74 Corridor to I-95.



SAFETEA-LU identifies selection factors that are used to determine where to apply federal resources with regard to highway projects, several of which are focused on economic development in regions. One selection factor is to determine whether the project would allow regional integration to spur economic development and growth, especially in areas that are not adequately served by existing roads (23 U.S.C. §101 (2005)). This interstate connection would provide better connectivity of the project study area with other regions of the United States and Canada to facilitate easier movement of goods and people. Other selection factors of SAFETEA-LU focus on more efficient movement of commercial freight through a corridor (23 U.S.C. §101 (2005)). This project would improve the efficiency of moving goods to and from the project study area by providing a direct, high-speed road connection, which would reduce the travel and delivery times for commercial freight.

High priority corridors are those proposed in areas where a new interstate highway would foster economic growth and interstate commerce in an area currently underserved by the interstate system (SAFETEA-LU §1302(b)(2)). For example, there is currently only 0.2 mile of interstate highway (I-95) in Marlboro County.¹⁸ This is located where the borders of Dillon, Florence, and Marlboro Counties meet. This interstate is situated in an area adjacent to the Great Pee Dee River that is predominantly wetland,¹⁹ and therefore, it has not been conducive to development. Scotland, Richmond, and Marlboro Counties currently lack major interstate facilities through their counties. This project would provide a new interstate within the counties in the project study area and fulfill the intent expressed in SAFETEA-LU.

1.3.4.1 Who lives in Dillon, Marlboro, Richmond, and Scotland Counties, and what population characteristics shape these counties?

The 2000 U.S. Census population density of the four counties illustrates the rural characteristic of the project study area (refer to Figure 1-6). Based on the 2000 U.S. Census, population growth in Dillon and Marlboro Counties has been slow over the preceding three decades (refer to Table 1.1 and Chart 1.1), in fact both counties have even shown population declines between 1980 and 2000.²⁰ Richmond County has experienced moderate population growth among counties in the project study area, over twice the amount of Dillon and Marlboro Counties, while Scotland County has experienced the most growth at 25.2 percent. Scotland County

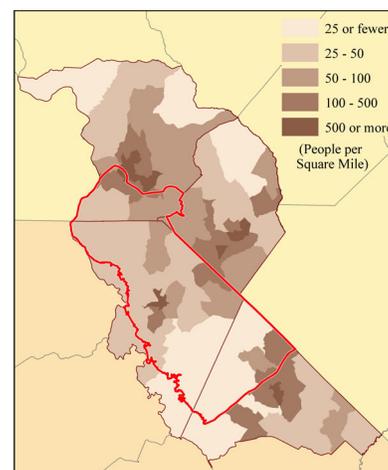


Figure 1-6 Population Density of the Project Study Area

¹⁸ Marlboro County, *2001 Marlboro County Comprehensive Plan*.

¹⁹ USFWS, *National Wetlands Inventory*, <http://wetlandsfws.er.usgs.gov/> (April 29, 2008).

²⁰ U.S. Census Bureau, *2000 U.S. Census: American Fact Finder, Demographic Highlights*, <http://factfinder.census.gov/home/saff/main.html?lang=en> (May 1, 2008).

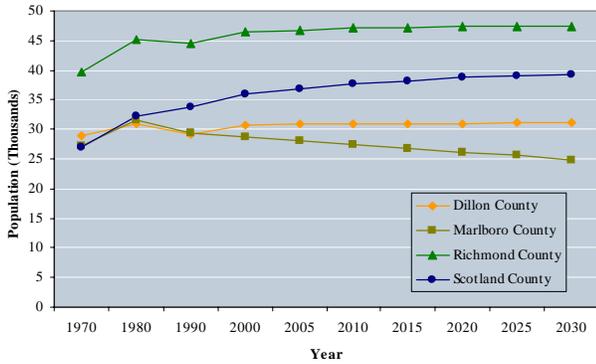


Chart 1.1 Past and Projected Population: 1970-2030

has had more than four times the amount of population growth when compared to Dillon and Marlboro Counties, and over 11 percent more growth than Richmond County. All four counties in the project study area lag behind the population growth rates of their respective states, with Dillon and Marlboro Counties growth rates being almost nine times less than that of South Carolina. Richmond County has experienced over 22 percent less growth than that of North Carolina, while Scotland County has experienced almost 11 percent less population growth than the state.

Table 1.1
Project Study Area Population Growth

	1970	1980	1990	2000	Percent Change (1970-2000)
Dillon County	28,838	31,083	29,114	30,722	6.1
Marlboro County	27,151	31,634	29,361	28,818	5.8
Richmond County	39,889	45,161	44,518	46,564	14.3
Scotland County	26,929	32,273	33,754	35,998	25.2
North Carolina	5,084,411	5,880,095	6,628,637	8,049,313	36.8
South Carolina	2,590,713	3,120,729	3,486,703	4,012,012	35.4

Source: U.S. Census Bureau, American Fact Finder, Census 2000.

Table 1.2 (refer to page 1-16) provides population forecasts through 2030 based on the 2005 South Carolina Statistical Abstract²¹ and 2005 North Carolina State Demographics.²² It is anticipated that Dillon and Richmond Counties would experience a small amount of population growth, while Marlboro County is projected to lose almost 14 percent of its population by 2030. Scotland County is predicted to have the most growth at 8.6 percent. Projected growth in each county is significantly less than the growth that has occurred in each respective county between 1970 and 2000. The decrease in projected population in Marlboro County is consistent with the declining population trend that occurred between 1980 and 2000. Projected population growth for all four counties in the project study area is anticipated to be significantly less than projected

²¹ South Carolina Budget and Control Board, Office of Research and Statistics, *2005 South Carolina Statistical Abstract*, Table 5, <http://www.ors2.state.sc.us/abstract/chapter14/pop5.php> (May 1, 2008).

²² North Carolina, Office of State Budget and Management, *Population Estimates and Projections*, http://www.osbm.state.nc.us/ncosbm/facts_and_figures/socioeconomic_data/population_estimates.shtm (May 1, 2008).



Table 1.2
Project Study Area Population Forecasts, 2000 2030
Population Forecasts, In Thousands

	2000 (actual)	2005	2010	2015	2020	2025	2030	Overall Percent Change
Dillon County*	30.72	30.82	30.88	30.95	31.01	31.07	31.15	1.4
Marlboro County*	28.82	28.12	27.48	26.84	26.19	25.55	24.89	-13.6
Richmond County**	46.56	46.67	47.11	47.17	47.39	47.38	47.39	1.8
Scotland County**	35.99	36.84	37.75	38.26	38.81	39.14	39.36	8.6
North Carolina**	8,049.3	8,682.1	9,349.2	10,022.7	10,709.7	11,398.3	12,090.1	33.4
South Carolina*	4,012.0	4,230.0	4,589.3	4,687.9	4,916.9	5,145.9	5,371.2	25.3

* Source: SCBCB, Office of Research and Statistics (SCORES), 2005 South Carolina Statistical Abstract.

** Source: 2005 North Carolina State Demographics.

growth of their respective states between 2000 and 2030. This may be due to the lack of employment opportunities throughout the project study area when compared to that of their respective states. This results in a pattern of people moving out of the project study area to pursue other employment opportunities.

The Cities of Dillon, Bennettsville, Rockingham, and Laurinburg are the respective county seats for Dillon, Marlboro, Richmond, and Scotland Counties (refer to Table 1.3). According to the 2000 U.S. Census, Richmond County has the largest population of all counties in the project study area with over 46,000 people, while Marlboro County has the smallest population with almost 29,000 people.²³ All counties are similar in terms of the percentage of people over 65 and percent of households with school-age children. Marlboro County has the highest percentage of minorities at 56 percent while Richmond County has the lowest percentage of minorities at 35 percent.

²³ U.S. Census Bureau, 2000 U.S. Census: American Fact Finder, Demographic Highlights, <http://factfinder.census.gov/home/saff/main.html?lang=en> (May 1, 2008).



Table 1.3
Demographic Composition of Communities in the Project Study Area

	2000 Population	Percent Minority	Percent over 65	Percent HH w/ school-age children
Dillon County	30,722	50%	12%	42%
Communities				
<i>Dillon</i>	6,316	46%	16%	43%
Latta	1,410	42%	18%	24%
Floydale	991	19%	13%	41%
Marlboro County	28,818	56%	12%	39%
Communities				
<i>Bemettsville</i>	9,425	25%	15%	36%
Blenheim	137	57%	20%	25%
Clio	774	64%	23%	35%
McColl	2,498	34%	12%	51%
Tatum	69	25%	14%	35%
Richmond County	46,564	35%	14%	37%
Communities				
East Rockingham	3,885	18%	14%	34%
Hamlet	6,018	38%	17%	35%
<i>Rockingham</i>	9,672	34%	18%	35%
Scotland County	35,998	49%	11%	40%
Communities				
East Laurinburg	295	17%	20%	27%
Gibson	584	50%	17%	43%
<i>Laurinburg</i>	15,874	50%	14%	37%
Maxton	2,551	75%	13%	40%
Wagram	801	55%	15%	38%

Source: U.S. Census Bureau, American Fact Finder, Census 2000.
Notes: Bolded, italicized community names indicate county seats.
HH defined as households.



1.3.4.2 What are some of the social and housing characteristics of Dillon, Marlboro, Richmond, and Scotland Counties?

As shown in Table 1.4, the median age for those living in the project study area is similar, ranging from 34 to 36 years in age, while 11 to 14 percent of the population is over 65 years old, which is consistent with those demographics for North Carolina and South Carolina.²⁴ According to the 2000 U.S. Census, the average household size for the four-county project study area ranges from 2.5 to 2.7. Homes with no phone service range from six percent in Richmond County to 11 percent in Marlboro County, higher than their respective states. Those with no vehicle range from 10 percent in Scotland County to 18 percent in Marlboro County, which is also higher than the averages for North Carolina and South Carolina.

Table 1.4
Demographic Characteristics of Counties in the Project Area

	Dillon	Marlboro	Richmond	Scotland	NC	SC
Median Age	34	35	36	35	35	35
Population over 65	12%	12%	14%	11%	12%	12%
Average household size	2.7	2.6	2.5	2.6	2.5	2.5
No vehicle	15%	18%	12%	10%	8%	9%
No phone service	10%	11%	6%	8%	3%	4%

Source: U.S. Census Bureau, American Fact Finder, Census 2000, Demographic Profile Highlights.

Figure 1-7 shows the 2000 median household income of the counties in the project study area based on the U.S. Census, while Chart 1.2 illustrates the comparison to their respective states and the nation.²⁵ In 2000, each county had a lower median household income than that of their respective state, as well as the United States. Dillon and Marlboro Counties incomes average more than \$10,000 below the median household income of South Carolina and \$15,000 below that of the national median. The median income of Richmond County, North Carolina was more than \$10,000 below the median household income of North Carolina and \$13,000 below that of the nation. The median income for Scotland County was approximately \$8,000 below that of North Carolina and \$10,000 below that of the national median.

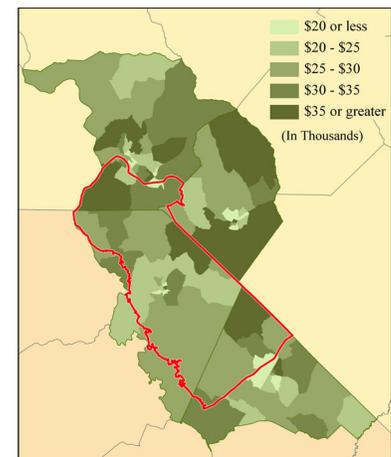


Figure 1-7 Median Household Income of the Project Study Area

²⁴ Ibid.

²⁵ Ibid.

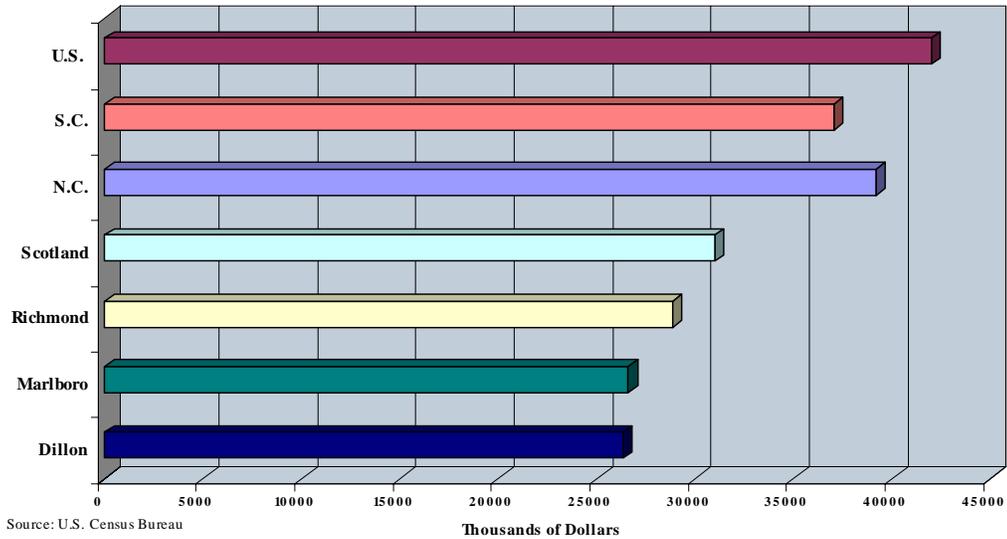


Chart 1.2 2000 Median Household Income

Table 1.5 lists some of the housing characteristics of counties in the project study area based on data from the 2000 U.S. Census.²⁶ Over 57 percent of the homes built in Dillon, Richmond, and Scotland Counties were built before 1979, while 29 percent of homes in Marlboro County were built before 1979. The percentage of single-family structures in all four counties is higher when compared to the number of mobile homes, with Dillon County having the highest percentage of mobile homes in the project study area. The median home value ranges from \$54,900 in Marlboro County to \$73,200 in Scotland County. Those living in the same residence for more than ten years range from 44 to 47 percent in Dillon, Marlboro, and Richmond Counties, while only 37 percent of those in Scotland County had lived at the same residence for more than ten years.

Table 1.5
Housing Characteristics of Counties in the Project Study Area

	Dillon	Marlboro	Richmond	Scotland
Single family structures	57%	64%	66%	63%
Mobile homes	33%	24%	23%	24%
Median value of homes	\$60,700	\$54,900	\$59,300	\$73,200
Home built before 1979	59%	29%	67%	57%
Owner occupied	72%	71%	72%	69%
Owner lived in home more than 10 years (as of 2000)	44%	47%	44%	37%

Source: U.S. Census Bureau, American Fact Finder, Census 2000, Demographic Profile Highlights.

²⁶ *Ibid.*



In terms of educational levels, over 60 percent of those living in each county in the project study area that are 25 or older have a high school diploma, with Scotland County having the highest percentage at 71.4 percent based on the 2000 U.S. Census Data.²⁷ Table 1.6 shows the educational attainment levels for those living in the project study area. Based on the 2000 U.S. Census, those 25 or older possessing a four-year college degree range from 8.3 percent of the population in Marlboro County to 15.9 percent of the population in Scotland County. Both the percentage of those with a high school and those with a college degree are below the percentages of their respective states and that of the nation, while the percentages of those with less than a 9th grade education were higher in the project study area.

Table 1.6
Project Study Area Educational Attainment Levels

County	4-year College Degree	High School Graduate or Equivalent	Less than a 9 th Grade Education
Dillon	9%	61%	11%
Marlboro	8%	61%	15%
Richmond	10%	69%	11%
Scotland	16%	71%	10%
North Carolina	23%	78%	8%
South Carolina	20%	76%	8%
U.S. Average	24%	80%	8%

Source: U.S. Census Bureau, American Fact Finder, Census 2000, Demographic Profile Highlights.

Table 1.7 lists some of the job training and adult education programs available in or near the project study area. Adult education and job training options range from technical courses to four-year degrees, as well as general education degrees, career training, resume and interview preparation, and adult literacy programs.

1.3.4.3 What are the employment characteristics in Dillon, Marlboro, Richmond, and Scotland Counties?

How has employment changed in the four counties?

Based on the data from the South Carolina Employment Security Commission and the Employment Security Commission of North Carolina, most jobs in the four-county area are located in Richmond County, which has approximately 6,700 to 9,600 more jobs than the other three counties. Chart 1.3 shows the total employment numbers from 2000 to 2007 for the four-county area. Richmond

²⁷ Ibid.

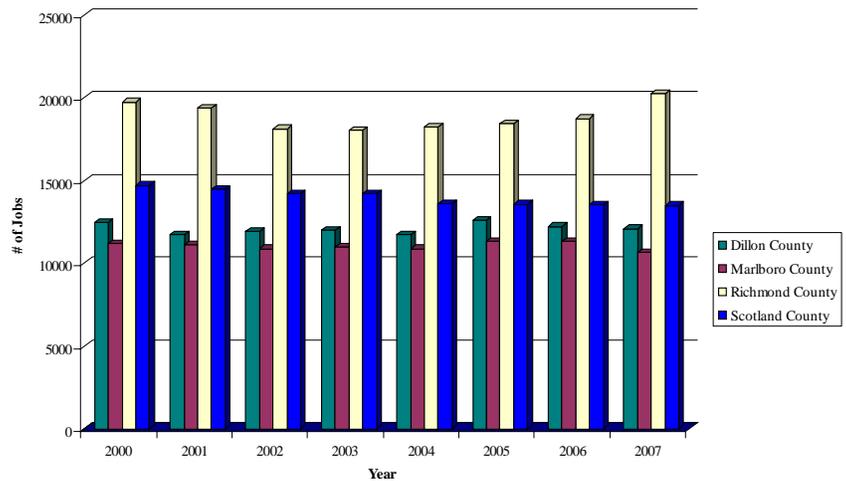


Table 1.7
Project Study Area Job Training/Adult Education Options

Name	Location	Type
Eastern Carolina CDC – Marlboro	Bennettsville, SC	Job Training
Coker College	Cheraw, SC	College
Northeastern Technical College	Cheraw, SC	Technical College
Dillon One-Stop Workforce Center	Dillon, SC	Job Training
The Center for Accelerated Technical Training	Dillon, SC	Job Training
Dillon Technology Center	Dillon, SC	Adult Education/ Technical Training
Florence – Darlington Technical College	Florence, SC	Adult Education/ Technical College
Francis Marion University	Florence, SC	College
McLeod School of Medical Technology	Florence, SC	Job Training
Richmond Community College	Hamlet, NC	College
St. Andrews Presbyterian College	Laurinburg, NC	College
Robeson Community College	Lumberton, NC	College
University of North Carolina at Pembroke	Pembroke, NC	College

Source: S.C. Employment Security Commission and the Employment Security Commission of North Carolina.

County was the only county to have an increase in total employment between 2000 and 2007, with a 2.6 percent increase.²⁸ The other three counties had a decrease in total employment between 2000 and 2007, with Dillon County having a 3.1 percent decrease, Marlboro County having a 4.6 percent decrease, and Scotland County having an 8.1 percent decrease.^{29,30}



Source: South Carolina Employment Commission, Employment Commission of North Carolina

Chart 1.3 Total Employment by County

²⁸ Employment Security Commission of North Carolina, Labor Market Information Website, *Workforce Information*, <http://www.ncesc.com/lmi/workForceStats/workForceMain.asp> (May 1, 2008).

²⁹ *Ibid.*

³⁰ S.C. Employment Security Commission, Labor Market Information, Economic Data Website, *Labor Force and Employment: January 1990 to March 2008*, <http://www.sces.org/lmi/data/labor-force/lf.asp> (May 1, 2008).



What are the employment characteristics for the four-county area?

The top employment sectors are similar for each of the four counties according to 2000 U.S. Census Data, with manufacturing, education, health and social services, and retail trade employing the majority of the counties' labor forces. Charts 1.4 through 1.7 show the breakdown of employment by sectors based on the 2000 U.S. Census Data for each county.

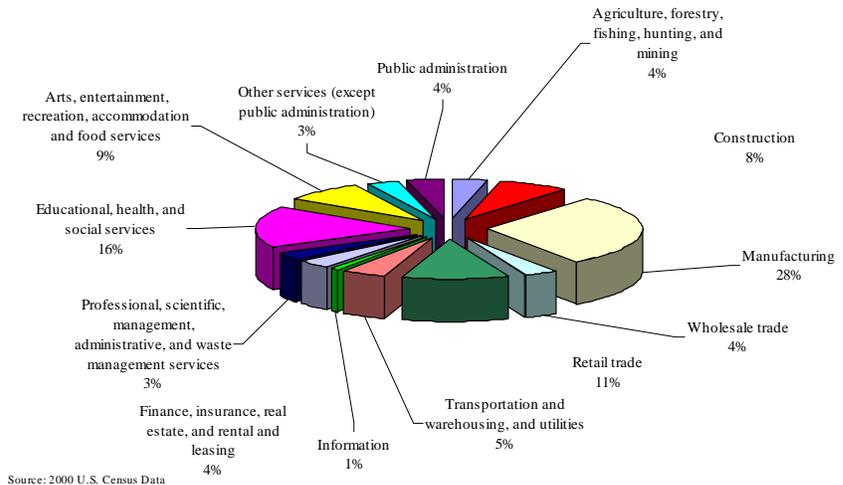


Chart 1.4 Dillon County Employment by Industry

The top twenty employers for each county are listed in Tables 1.8 and 1.9 (refer to pages 1-24 and 1-25).^{31,32} Manufacturing companies, educational services, healthcare, and retail companies have the highest number of employees in each of the counties along with positions at city, county, and state governments.

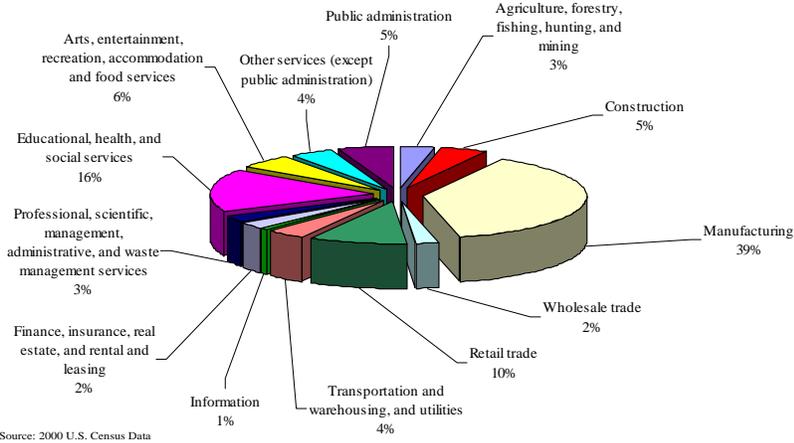
While only employing a small percentage of those working in the project study area, the agriculture industry is important to the economy of the four counties. Marlboro County ranked 1st in South Carolina for the total value of cotton and cotton seed sales in 2002, while Dillon County is ranked 4th in South Carolina and 34th in the nation for total value of tobacco sales.³³ Scotland County ranked 27th in North Carolina for total value of cotton and cotton seed sales, and Richmond County ranked 16th in North Carolina and 144th in the nation for total value of poultry and egg sales.³⁴

³¹ S.C. Employment Security Commission, Labor Market Information, Top 20 Employers by County, (January to March 2007), <http://www.sces.org/lmi/data/Top/index.htm> (April 18, 2008).

³² Employment Security Commission of North Carolina, Labor Market Information Website, Largest Employers by County, (September 2006) <http://jobs.esc.state.nc.us/lmi/largest/largest.pdf> (April 18, 2008).

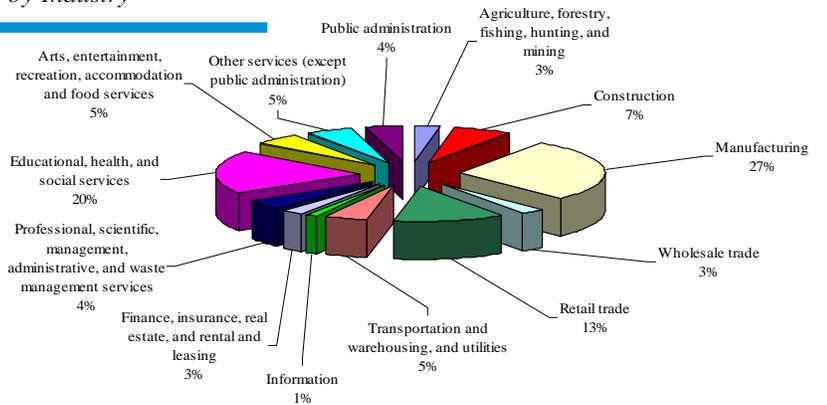
³³ USDA, 2002 Census of Agriculture, County Profiles.

³⁴ *Ibid.*



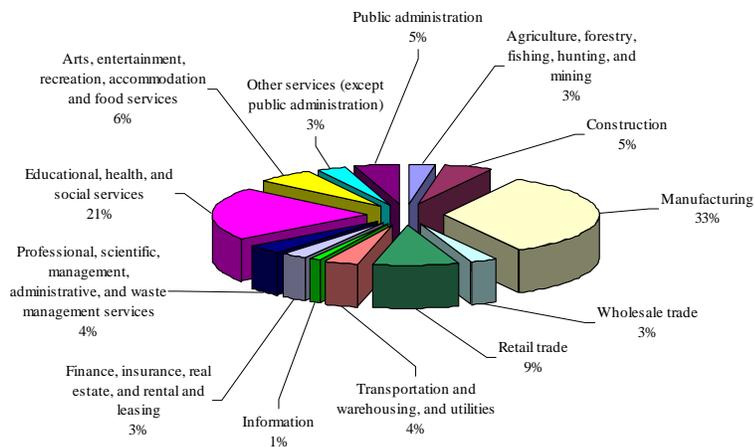
Source: 2000 U.S. Census Data

Chart 1.5 Marlboro County Employment by Industry



Source: 2000 U.S. Census Data

Chart 1.6 Richmond County Employment by Industry



Source: 2000 U.S. Census Data

Chart 1.7 Scotland County Employment by Industry



**Table 1.8
Top Twenty Employers in Dillon and Marlboro Counties***

Dillon County (Employer – Business type)	Marlboro County (Employer – Business type)
Perdue Farms Inc. – Poultry processing	Marlboro County Board of Education – Education
Lake View School District #1 – Education	Mohawk Industries – Carpet yarn manufacturing
Wix Filtration Corporation – Oil/air filters	Domtar Paper Company LLC – Paper and pulp
Unifi Manufacturing Inc – Synthetic yarn	Musashi South Carolina – ATV parts
McLeod Medical Center Dillon – Healthcare	Marley Engineered Products LLC – Electric resistance heater manufacturing
Franco Manufacturing Company Inc. – Comforter manufacturing	U.S. Department of Justice – Federal prison corrections
Flying J Inc. – Fuel service	S.C. Department of Corrections – State prison corrections
County of Dillon – Government services	Unaka Company Inc – Packaged food
Anvil Knitwear – Knitwear manufacturing	Chesterfield/Marlboro LP – Healthcare
Stone Container Corporation – Corrugated packaging	Marlboro County Council – Government services
Mohawk – Carpet yarn manufacturing	JL Anderson Company – Brick manufacturing
The Schafer Company Inc. – Tourism	City of Bennettsville – Government services
Wal-mart Associates Inc. – Retail services	Dundee Manor LLC – Healthcare
Cooke Associates of Fork Inc. – Healthcare	Ox Bodies Inc. – Heavy-duty truck bodies
City of Dillon – Government services	Rockwell Automation Dodge – Vehicle parts
Herald Office Supply Company – Business forms	Priority One Home Healthcare – Healthcare
Pee Dee Home Healthcare Inc. – Healthcare	Camp Bennettsville Inc. – Recreational services
SCDOT – Government services	C &M Foods Inc. – Frozen foods
Dillon Healthcare Inc. – Healthcare	Pacific MDF Products Inc. of SC – MDF board manufacturing
South of the Border Restaurants Inc. – Tourism	International Cup Corporation – Vending cups

*Source: South Carolina Employment Security Commission, as of 2007.



**Table 1.9
Top Twenty Employers in Richmond and Scotland Counties***

Richmond County (Employer – Business type)	Scotland County (Employer – Business type)
Richmond County Schools – Education	Scotland County Schools – Education
Perdue Products Inc. – Poultry processing	West Point Home, Inc. – Towel manufacturing
First Health of the Carolinas Inc. – Healthcare	Scotland Memorial Hospital Corporation – Healthcare
State of North Carolina – Government services	The Mega Force Staffing Group, Inc. – Professional staffing services
Burlington Industries V, LLC – Textile manufacturing	Saint Andrews Presbyterian College – Education
County of Richmond – Government services	State of North Carolina – Government services
Wal-mart Associates Inc. – Retail services	Wal-mart Associates, Inc. – Retail services
Hanesbrands Inc. – Hosiery manufacturing	County of Scotland – Government services
Sandhills Regional Medical Center – Healthcare	Pilkington North America – Glass product manufacturing
Richmond Technical College – Education	Butler Manufacturing Co. – Steel building manufacturing
UCO Fabrics, Inc. – Fabric manufacturing	Crestline Homes Inc. – Modular home manufacturing
Owens-Illinois Closure Inc. – Recycled glass and bottle manufacturing	Olsten Staffing Services Corp. – Professional staffing services
Hood Packaging Corp. – Paper/plastic packaging	Employment Control Inc. – Professional staffing services
Richmond Yarns – Yarn	Hanesbrands Inc. – Hosiery manufacturing
Laurel Hill Paper Company Corp. – Recycled paper products	Meritor Transmission Corp. – Automotive parts
City of Rockingham – Government services	Manis Custom Builder Inc. – Modular home manufacturing
The Mentor Network – Education	Eaton Corporation – Machinery part manufacturing
Food Lion LLC – Grocery shipment/services	FCC of North Carolina LLC – Vehicle part manufacturing
Lowes Home Centers Inc. – Retail services	McCarter Electrical Company – Electric/security/telecommunications wiring
Britthaven Inc. – Healthcare	City of Laurinburg – Government services

*Source: Employment Security Commission of North Carolina, as of September 2006.



1.3.4.4 What are the unemployment rates and poverty levels in Dillon, Marlboro, Richmond, and Scotland Counties?

According to the 2000 U.S. Census, Dillon, Marlboro, and Scotland Counties had unemployment rates of 5.2 percent, 4.5 percent, and 5.8 percent, respectively. These were higher than that of the nation at 4.2 percent, while Richmond County's unemployment rate (3.9 percent) was lower than the nation's.³⁵ Figure 1-8 illustrates the percent unemployment within the four county area based on the 2000 U.S. Census.

Chart 1.8 shows the trend in unemployment levels from 2000 to 2007, based on data obtained from the South Carolina Employment Security Commission³⁶ and the Employment Security Commission of North Carolina.³⁷ Unemployment rates have increased since 2000, with all counties having unemployment levels over nine percent in 2003, (Dillon had 9.5 percent, Marlboro had 13.1 percent, Richmond had 10.1 percent, and Scotland had 11.6 percent). Unemployment rates went down in most of the counties in the project study area in 2007 with Richmond County having the lowest unemployment rate at 7.3 percent, Dillon having 9.3 percent, Scotland County having 12.2 percent, and Marlboro County having 12.2 percent. These counties' percentages are high when compared to those of North Carolina (4.7 percent), South Carolina (5.9 percent), and the United States (4.6 percent).

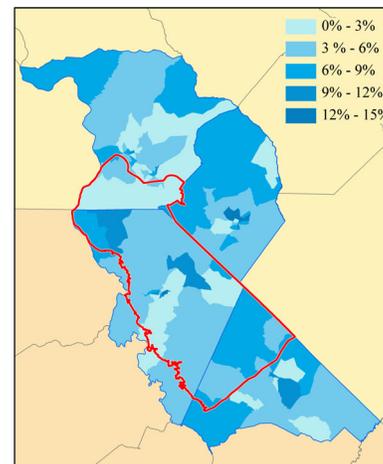
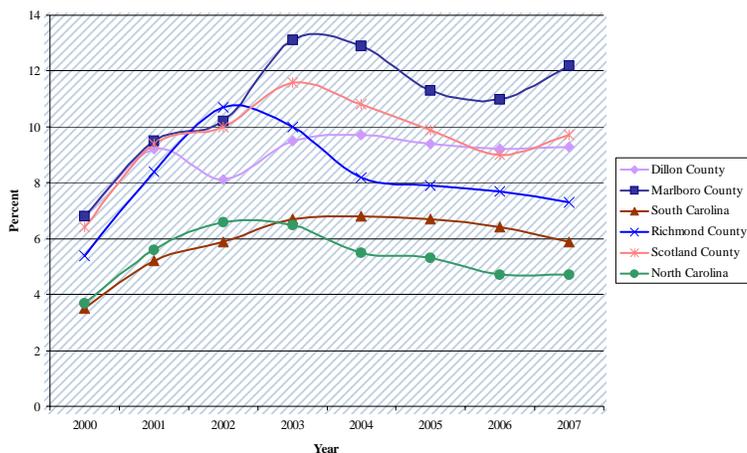


Figure 1-8 Percent Unemployed within Project Study Area



Source: South Carolina Employment Commission, Employment Commission of North Carolina

Chart 1.8 2002 to 2006 Project Study Area Unemployment Levels (by Percent)

Richmond County having the lowest unemployment rate at 7.3 percent, Dillon having 9.3 percent, Scotland County having 9.7 percent, and Marlboro County having 12.2 percent. These counties' percentages are high when compared to those of North Carolina (4.7 percent), South Carolina (5.9 percent), and the United States (4.6 percent).

According to the U.S. Census Bureau, a county is considered poor if 20 percent or more of the population residing within that county is below the poverty threshold. Figure 1-9 illustrates the 2000 U.S. Census percent population below the poverty level within the project study area. In 2000, Both

³⁵ U.S. Census Bureau, 2000 U.S. Census.

³⁶ S.C. Employment Security Commission, *Labor Force and Employment Annual Averages*, <http://www.sces.org/lmi/data/labor-force/lf.asp> (April 17, 2008).

³⁷ Employment Security Commission of N.C., *Civilian Labor Force Estimates for NC Counties for 2003*, <http://eslmi40.esc.state.nc.us/ThematicLAUS/clfasp/CLFAASY.asp> (April 17, 2008).

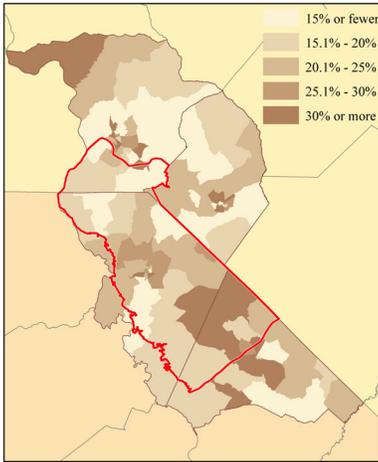


Figure 1-9 Population Below Poverty Level

Dillon (24.2 percent) and Marlboro (21.7 percent) Counties were considered poor by this standard, while Richmond County was on the threshold, with 19.6 percent of its population living below the poverty level (refer to Chart 1.9). Scotland County had 20.6 percent of its population living below the poverty level in 2000.³⁸ All four counties had higher percentages of their population living below the poverty level when compared to their respective states, with 14.1 percent of South Carolina’s population living below the poverty level, and 12.3 percent of North Carolina’s population living below the poverty level. In addition, all four counties had either similar or greater percentages living below the poverty level when compared to that of the nation (at 12.4 percent) in 2000.³⁹

The high unemployment rate, lower median incomes, and increased poverty are attributed to a variety of factors in the project study area. The trends for each county in the project study area are generally the same. For example, over the past few years, Marlboro County has experienced high levels of unemployment and poverty due to plant closures and the agricultural transition from tobacco to cotton as a main cash crop. The slow transition from tobacco to cotton after the federal government tobacco buyout has been a contributing factor to the recent trend in the percentage of people living below the poverty level.⁴⁰ There also have been recent layoffs in the last few years from companies such as the Delta Finishing Plant and Ox Bodies. Job growth rate has been historically lower in this area due to its distance from metropolitan areas.⁴¹

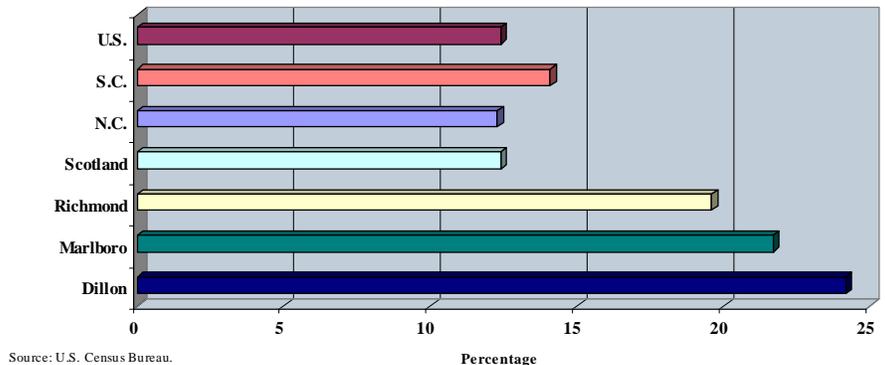


Chart 1.9 Percent Below Poverty Level in 2000

³⁸ U.S. Census Bureau 2000, *State and County Quickfacts*, <http://quickfacts.census.gov/qfd/index.html> (April 3, 2008).

³⁹ *Ibid.*

⁴⁰ Butch Mills, Executive Director, Marlboro County Economic Development Partnership, personal communication, April 22, 2008.

⁴¹ *Ibid.*



The number of jobs in Marlboro County increased between 2006 and 2007, partly due to new expansions by Mohawk Mills, Musashi Company, and SO PAK CO (Unaka Company). Flakeboard-Carolina Particle Board has recently expanded its operations, and may add approximately 35 new positions. In addition, two new businesses to be announced in the summer of 2008, are locating in Marlboro County and are expected to create over 200 new jobs in the area.⁴²

1.3.5 Would this project benefit travel and tourism in the four-county area?

The project study area has a rich heritage and is dotted with many sites of historical importance. All counties in the project study area have historic districts that are listed on the National Register of Historic Places (NRHP).

Dillon County has two historic districts in the vicinity of the project study area, one in the City of Dillon and another in the Town of Latta. Three historic districts are located in the portion of Marlboro County that is in the project study area, including Bennettsville, Clio, and Tatum. Richmond County has two historic districts in and near the project study area, one in Hamlet and another in Rockingham. These historic districts were designated for their architectural styles, along with historical events or being historical points of commerce and trade. Some of the buildings in these historic districts are part of what is known as the Cotton Trail. The Cotton Trail is a ninety-mile driving trail through Marlboro and Darlington Counties that has specific stops to view historic sites and natural landmarks. Bennettsville is one stop along the Cotton Trail that has many historic buildings such as the Jennings-Brown House, D.D. McColl Historic House, Evans Metropolitan AME Zion Church, and the Murchison School.⁴³ Clio is another stop on the Cotton Trail that is in the project study area, and also has historic buildings representing the architectural styles of the late nineteenth and early twentieth century.

Tourism Impacts

This project would improve access for tourism in the eastern part of South Carolina as well as in the Hamlet area in North Carolina.



Lake Paul Wallace
Bennettsville, South Carolina

Recreational and wildlife viewing areas also exist in the project study area. Lake Paul Wallace, located in Bennettsville, is managed by the SCDNR. Activities such as fishing, swimming, boating, and bird watching are available in and around this 600-acre lake.⁴⁴

⁴² *Ibid.*

⁴³ South Carolina Cotton Trail Website, <http://www.sccottontrail.org/home.html> (April 3, 2008).

⁴⁴ City of Bennettsville Tourism Website, "Recreation Webpage", http://www.visitbennettsville.com/visit_recreation.php (April 3, 2008).



Travel and tourism is important to the economy of South Carolina, and accommodating tourists attracted to this area is vital. This industry is the number one employer and fourth largest generator of gross state product in South Carolina.⁴⁵ In 2006, tourists spent \$9.1 billion in South Carolina.⁴⁶ Sales tax paid by visitors was over \$253 million (11.4 percent of total sales tax collections), and overall state and local government revenues generated by tourism were over \$1 billion.⁴⁷ Economic development in the Myrtle Beach Region is anticipated to continue and the proposed I-73 linkage to the I-73/I-74 Corridor would help to accommodate this growth.

Access to the Myrtle Beach area for out-of-state travelers is critical to maintain the economy of the state. Approximately 32 percent of the \$9.1 billion spent by tourists in the state in 2006 was in Horry County.⁴⁸ In 2004, almost 70 percent of those employed in the Grand Strand area were in retail and wholesale trade, and service industries.⁴⁹ According to the 2007 Myrtle Beach Statistical Abstract, there were an estimated 13.8 million visitors to the area in 2005, and each spent an average of \$118.80 per person per day.⁵⁰ Approximately 90 percent of the visitors, 12.4 million, travel to the area via automobile.⁵¹ In 2004, the American Automobile Association (AAA) ranked Myrtle Beach as the fourth most popular driving destination in the United States, behind the major metropolitan areas of Orlando, Florida, Anaheim, California, and Las Vegas, Nevada.⁵² Myrtle Beach is the only one of these areas not directly linked to a major interstate corridor.

Tourism is based on the concept of a location being a desirable vacation destination. The Atlantic Ocean and an abundance of golf courses and shopping opportunities add to the attraction of the Myrtle Beach area as a destination of choice. Reaching the destination with efficiency and ease is a part of the overall vacation experience. According to the 2007 Myrtle Beach Statistical Abstract, the top ten states of visitor inquiry origin in 2005 included North Carolina, New York, Ohio, Pennsylvania, Virginia, Georgia, South Carolina, Tennessee, Illinois, and Michigan.⁵³ The proposed project would enable tourists from these and other states to access the area more efficiently.

U.S. Routes and state roads provide current access through these counties between the I-73/I-74 Corridor and the portion of proposed I-73 between I-95 and the Myrtle Beach area. This project

⁴⁵ S.C. Budget and Control Board, Office of Research and Statistics, *South Carolina Statistical Abstract 2005*.

⁴⁶ SCPRT, *The Economic Impact of Domestic Travel Expenditures of South Carolina Counties in 2006* (August 2007).

⁴⁷ S.C. Budget and Control Board, Office of Research and Statistics, *South Carolina Statistical Abstract 2005*.

⁴⁸ SCPRT, *The Economic Impact of Domestic Travel Expenditures of South Carolina Counties in 2006* (August 2007).

⁴⁹ Myrtle Beach Area Chamber of Commerce, *Statistical Abstract for the Myrtle Beach Area of South Carolina, 18th ed.*, (October 2007).

⁵⁰ *Ibid.*

⁵¹ *Ibid.*

⁵² AAA, *AAA Travel Agency Sales Strong for 2004; Cruises, European Destinations Once Again Top Agent's List*, (May 19, 2004).

⁵³ Myrtle Beach Area Chamber of Commerce, *Statistical Abstract for the Myrtle Beach Area of South Carolina 18th ed.*, (October 2007).



would link the southern portion of I-73 to the I-73/I-74 Corridor, which would provide interstate access throughout the entire northeast portion of South Carolina and beyond to the Myrtle Beach area. This access would allow visitors to reach their vacation destinations in the eastern portion of South Carolina more easily.

1.3.6 How would this project increase safety on current roads in the project study area?

The main roads between the I-73/I-74 Corridor and I-95 in Dillon County are S.C. Route 38 and U.S. Route 1 to S.C. Route 9. These roads are used by local residents, out-of-state tourists traveling through the project study area, as well as commercial vehicle traffic moving goods into or out of northeastern South Carolina.

Safety

This project would increase the safety of the current roads through the project area by moving a significant volume of local, out-of-state, and commercial traffic to an interstate designed for a higher volume of high-speed traffic.

Safety is a concern on roadways, especially those with out-of-state and commercial traffic as well as uncontrolled access and frequent stop and go conditions. This project would improve safety on the current roads by reducing the volume of traffic on them and provide a route with more consistent speed and capacity for local, out-of-state, and commercial traffic into and throughout the project study area. Most highways in the project study area are two-lane roads not divided by a median or barrier.⁵⁴ Some portions of these roads have been upgraded to

four-lane highways; however, these roads do not meet the safety standards of an interstate. The current roads in the project study area have uncontrolled access, which means cars can enter and leave along these roads where curb cuts are provided, at side roads and driveways.⁵⁵

An interstate is designed with controlled access at specific locations (interchanges) and opposing lanes are normally separated by a barrier (i.e. concrete wall, guardrail) or median for improved safety. In addition, there are restrictions on what vehicles can use the interstate. Most interstates are limited to use by automobiles and large trucks and not by bicyclists or farm tractors. The roads in the project study area are not restricted, which means cars and large trucks driving at a higher speed may have to slow down when behind a bicyclist or a tractor until they can safely pass. In addition, cars and trucks traveling through the project study area would have to slow or stop



A Car Passing Farm Equipment within Project Study Area

⁵⁴ The LPA Group and Wilbur Smith Associates, *Existing Road Inventory and Data Collection, Marlboro County*, (April 2005).

⁵⁵ *Ibid.*



when waiting for vehicles to turn off the main roads into driveways or onto secondary roads. The speed limits of roads in the project study area vary from 25 to 60 miles per hour depending on location, whereas an interstate would have a consistent speed, normally of 65 or 70 miles per hour.⁵⁶ The capacity on S.C. Routes 9 and 38, combined, are currently 35,600 cars per day, while a new interstate would have a vehicle capacity of 58,600 cars per day.⁵⁷ With this interstate present, the volume of traffic would be reduced on state highways, which would improve efficiency on the local traffic network. According to traffic modeling done for the project, the Preferred Alternative would significantly reduce average annual daily traffic volumes on S.C. Route 38, S.C. Route 9, and U.S. Route 1 (refer to Table 1.10 and the *Traffic Technical Memorandum* for more information).

Table 1.10
2030 Estimated Reduction in Average Annual Daily Traffic Volumes*

Roadway	No-build	Build	AADT Reduction
S.C. Route 38			
South of Bennettsville, South Carolina	14,500	3,300	11,200
North of Bennettsville, South Carolina	10,900	1,500	9,400
S.C. Route 9			
East of Bennettsville, South Carolina	4,700	3,400	1,300
U.S. Route 1			
North of Cheraw, South Carolina	16,900	10,200	6,700

*based on non-tolled facility
Source: The LPA Group Incorporated

Accident data compiled by the South Carolina Department of Public Safety (SCDPS) from 1996 to 2005 were evaluated for the main routes through the project study area linking I-74 to I-95.⁵⁸ There were 794 accidents on S.C. Route 38 between the North Carolina border and I-95 resulting in 14 deaths and 635 injuries. Almost 57 percent of these accidents were due to reasons that would be addressed by a controlled access facility including: failure to yield the right-of-way, too fast for conditions/excessive speeding, disregarding traffic sign or signal, improper turn, and improper passing/lane change. Since it is a major travel route, SCDPS data from U.S. Route 1 from the North Carolina border to Wallace was combined with data from S.C. Route 9 from Wallace to I-95. A total of 1,277 accidents occurred from 1996 to 2005 on these routes, resulting in 19 deaths and 556 injuries. Over 50 percent of the accidents that occurred (similar to the aforementioned list) were of the type that would be addressed if the route were a controlled access facility.

⁵⁶ *Ibid.*

⁵⁷ Rob Dubnicka, Director of Traffic Engineering, The LPA Group, Personal Communication.

⁵⁸ S.C. Department of Public Safety, Office of Highway Safety, Traffic Accident Data 1996 to 2005 for S.C. Route 38 from the North Carolina border to I-95, U.S. Route 1 from the North Carolina border to Wallace, S.C., and S.C. Route 9 from Wallace to I-95.



1.3.7 How would the project incorporate multimodal planning?

The Texas Transportation Institute found that in 2005, Americans lost 4.2 billion hours sitting in traffic jams.⁵⁹ Traffic congestion is not limited to urban areas, rural roadways leading to popular tourist destinations also experience congestion during peak seasons.⁶⁰ In 2005, AAA, along with the American Highway Users Alliance and the Road Information Program, released a study ranking the top summer traffic bottlenecks in the United States, which coincided with popular vacation areas.⁶¹ The traffic bottlenecks were ranked based on information from the FHWA, state departments of transportation, and the travel and tourism industry. The study found that traffic volumes on rural roads increased by 29 percent from 1990 to 2002, while traffic volumes on urban roads only increased by 18 percent.⁶² The drive on U.S. Route 501 to Myrtle Beach was the 23rd worst in the top 25 rankings for vacation travel delays and congestion.⁶³

Multimodal Planning

This project would accommodate the future provision of a multimodal facility within the interstate corridor.

One Need of the proposed action is to provide a corridor to accommodate a future multimodal facility. By providing for a multimodal facility, future visitors to the Myrtle Beach area could be served by high-speed rail rather than by car or airplane. Although at this point in the planning process a specific multimodal component has not been designated, the proposed project provides additional right-of-way corridors that will allow for future rail facilities.

On October 20, 1992, under ISTEA, the USDOT announced the designation of the Southeast High-Speed Rail (HSR) corridor connecting Charlotte, North Carolina, Richmond, Virginia, and Washington, District of Columbia. On December 1, 1998, under TEA-21, the Southeast HSR corridor was extended from Charlotte, North Carolina, through Greenville, South Carolina, and Atlanta, Georgia, to Macon, Georgia; and from Raleigh, North Carolina, through Columbia, South Carolina, and Savannah, Georgia, to Jacksonville, Florida.⁶⁴ HSR, as a mode of transportation, has the potential to provide an efficient, reliable, safe, and affordable alternative to highway and airport congestion. In order to implement the development of the Southeast HSR corridor, the Southeastern Economic Alliance was created consisting of 16 cities across six Southeast states. In 1999, the SCDOT

⁵⁹ Texas Transportation Institute, The Texas A&M University System, *The 2007 Urban Mobility Report*, (September 2007).

⁶⁰ Jeff Paniati, Turner-Fairbank Highway Research Center, November/December 2004 Newsletter, "Operational Solutions to Traffic Congestion," <http://www.tfrc.gov/pubrds/04nov/01.htm> (April 3, 2008).

⁶¹ AAA, American Highway Users Alliance, and Road Information Program, *Are we There Yet? A Report on Summer Traffic Bottlenecks and Steps Needed to Ensure that Our Favorite Vacation Destinations Remain Accessible*, 2005, <http://www.tripnet.org/SummerTrafficBottlenecksStudy063005.pdf> (April 30, 2008).

⁶² *Ibid* at p. 6.

⁶³ *Ibid* at p. 9.

⁶⁴ Federal Railroad Administration Website, <http://www.fra.dot.gov/us/content/650> (April 3, 2008).



Tier EIS

Tiering integrates the planning and NEPA processes in two phases: a first tier that focuses on broad, overall issues (i.e., general location) and a second tier focuses on impacts from a specific action.

Commission passed a resolution in favor of the Southeast HSR corridor and supporting extensions of the HSR system to Charleston, South Carolina, and Myrtle Beach, South Carolina.

A Tier I EIS was completed for the corridor between Washington, D.C., and Charlotte, North Carolina, in 2002, identifying a preferred route for the rail system. The Tier II Draft EIS for the segment from Petersburg, Virginia (and possibly Richmond, Virginia), to Raleigh, North Carolina, is currently underway and is expected to be completed in August 2009 with public hearings scheduled for December 2009.⁶⁵ A Tier I EIS is expected to be completed in the summer of 2008 for the linking of Hampton Roads and Richmond, Virginia area to the Southeast HSR corridor and public hearings are being scheduled.⁶⁶

A feasibility study for high-speed rail between Charlotte, North Carolina, and Macon, Georgia, was completed in 2004 and concluded that the most cost-effective design would allow speeds between 79 and 90 miles per hour.⁶⁷ The North Carolina, South Carolina, and Georgia Departments of Transportation are also continuing to study the suitability and costs of HSR from Charlotte, North Carolina, to Macon, Georgia.

Because the alignment of the Southeast HSR corridor could come near the ultimate I-73 Corridor, this project seeks to proactively plan for future transit options by preserving a corridor within the proposed I-73 right-of-way. This rail corridor could provide a connection between the HSR line and the Myrtle Beach Region. The future rail for this project study area would be limited to a design speed of 79 miles per hour, which is slightly higher than the proposed design speed of 75 miles per hour for I-73. Any future rail project would be required to undergo a separate NEPA analysis and Section 404 permitting process prior to construction.

Tolls

1.4 Will I-73 be a Toll Road?

Although I-73 has been designated to receive approximately \$90 million in federal earmarks and an additional \$2.5 million in state funding from the South Carolina General Assembly, it will not be enough to construct this project.

Earmark

An Earmark refers to money that has been reserved or set aside for a particular purpose.

⁶⁵ Southeast Highspeed Rail Organization Website, <http://www.sehsr.org/> (April 3, 2008).

⁶⁶ Michael Knott, Manager of Rail Development, Virginia Department of Rail and Public Transportation, Personal communication, April 21, 2008.

⁶⁷ *Ibid.*



Traditionally, roadway construction has been financed using the money raised by taxes levied on fuel. The federal government provided the largest share of the money, typically 80 percent, while the state and/or local governments provided the balance. The projected highway needs for South Carolina total more than \$59.7 billion over the next twenty years (2005 dollars). The FHWA funding projections for South Carolina over that time are \$10.5 billion and state highway funding projections are roughly \$8.9 billion.⁶⁸ This leaves a projected funding shortfall of over \$40 billion. SCDOT, along with the Metropolitan Planning Organizations (MPO) and Council of Governments (COG), identified interstate improvement and construction projects throughout the state. These needed interstate improvements, which include widening existing interstates, improving existing interchanges, and construction of new interstates, are estimated to cost approximately \$10.5 billion (2005 dollars, I-73 is one of the projects listed).

The gap between state needs and the available funding is not unique to South Carolina. High infrastructure demands nationwide have led to a wide disparity between the cost of roadway improvement needs and the amount of money available for financing projects. This has resulted in a movement toward the use of innovative finance techniques and other methods of project delivery such as the design/build approach, as explained in Section 1.5, (refer to page 1-37). In an effort to take advantage of every opportunity to attract the funds necessary for the project, all available means to provide the financing for this project will be explored.

Congress also has recognized this gap and has enacted changes in federal legislation to permit the use of innovative financing. Previous highway bills began addressing innovative financing by permitting the establishment of State Infrastructure Banks (SIB's) which allow the use of federal funds to make loans to projects which require additional funding to advance the projects in a timely manner. South Carolina has the most successful SIB in the country, assisting in the financing of over \$3 billion of projects in the state. However, these loans require some form of revenue to pay debt service over the life of the bonds, which are issued by the bank. Loan repayments have included local fees and taxes as well as state truck registration fees, gas tax, and future federal highway funds.

Another useful financing tool has involved the establishment of loan and credit assistance programs under the Transportation Infrastructure Finance and Innovation Act (TIFIA). This program provided a much needed federal loan, which allowed construction to begin on the Arthur Ravenel, Jr. Bridge in Charleston, for example. The funds to repay the loan included a combination of future state highway funds, local county funds, and funds from the State Ports Authority.

The advent of innovative financing tools has generated more interest in the use of tolls as a financing mechanism in many parts of the United States. Until recently, tolls were not allowed on interstate facilities except on new highway bridges or tunnels. A major change occurred as a part of the 1998

⁶⁸ SCDOT, *20 Year Needs Analysis* (January 2005).



highway bill (TEA-21), which established a toll pilot program. This program allowed tolling on up to three existing interstate facilities to fund needed construction or rehabilitation on interstate highway corridors that could not otherwise be maintained or improved.

SAFETEA-LU (passed in 2005) continued this trend by providing states an opportunity to allow tolling on new facilities that use federal funds (Interstate System Construction Toll Pilot Program). This program included the following requirements:

- States or interstate compacts of states may apply;
- Tolling must be the most efficient and economical way to finance the project;
- Automatic toll collection is required (see later discussion of toll collection);
- There may be no requirement to block improvements to competing facilities;
- Revenues may only be used for debt service, reasonable rate of investment of private equity, and for operation and maintenance costs.

The South Carolina General Assembly passed Bill H4422 on January 24, 2006, which stated that “the Department of Transportation may impose and collect a toll on the proposed I-73 corridor upon completion of this highway project. This toll must be used to pay for the cost of planning, right-of-way acquisitions, financing, construction, operation, and other expenses associated with this highway project, and for the removal of the tolls upon payment of all such costs.” The FHWA and SCDOT are evaluating the possibility of using tolls to pay for part or all of the interstate construction, in accordance with SAFETEA-LU (23 U.S.C. §129 (2005)).

Innovative ways of financing roadway construction are currently being utilized throughout South Carolina, including the issuance of bonds that are paid back over time to pay for the construction of projects. These bonds can be paid back in a variety of ways, such as using future federal funds. Many localities are also joining in funding roads previously funded entirely by the state. One example is the hospitality fees Horry County used to match State Infrastructure Bank funds to construct the Road Improvement and Development Effort (RIDE) program. Several counties have assessed a local option sales tax to assist in meeting highway transportation demands, including York, Beaufort, Horry, and Charleston Counties. SCDOT has also constructed the first road in the state funded with revenues from tolls (the Cross Island Expressway on Hilton Head Island) and licensed a private entity, the Connector 2000 Association (a 401C(3) corporation), to build and operate a second toll road, the Southern Connector in Greenville County.

A recent innovation in the United States has been the sale of a “concession” to a private entity to finance, design, and operate a toll facility. This method provides a private organization the opportunity to obtain a lease to build and/or operate a roadway facility for a period of time. To date, concessionaires have been international investors who have acquired a portfolio of toll facilities in those countries which are



anticipated to provide sizeable returns on investment over a long period (i.e. 75 to 99 years). The stability provided by the portfolio as a whole has attracted large investors, such as pension funds, which heretofore have not been attracted to toll road investment. In most cases, the facility is or will be a toll road that provides the long-term return on investment.

In some cases the concession has been deemed of such value that the concessionaire has provided the owner an upfront payment for the long-term lease. An example of this is the Chicago Skyway, where a private firm paid over \$1.8 billion for a 99-year lease to operate the facility. The amount paid for a concession is directly related to the amount of money anticipated to be generated over the life of the lease. A second example involves the construction of a new facility in Texas. The Trans-Texas Corridor Initiative has resulted in an agreement with a concessionaire giving them the right to finance and construct \$6 billion in infrastructure projects (toll roads) in the I-35 Corridor. In return, the concessionaire is paying \$1.2 billion for the concession rights. It should be noted that the creation of such a concession often entails restrictions on improvements to competing routes to protect the potential revenue stream for a leased facility.

The previous examples are among only a few throughout the country that provide the opportunity for such a large upfront payment to the owner. However, that approach may be applied to construction of I-73. Based on the above discussion, there appear to be five general approaches to financing I-73:

1. traditional financing with 80 percent federal and 20 percent state or local funding;
2. publicly issued bonds backed by future revenue; either from federal funding, toll revenue, local funds or some combination of the two;
3. a combination of 1 and 2;
4. a public/private partnership involving some level of private and public funds; and,
5. use of the concession approach involving a lease to a private entity in return for the right to finance, design, and build the road.

The last four options would probably involve toll financing. Each of these financing mechanisms is dependent upon the potential future revenues, either from federal allocations, other taxes, or tolls.

The amount of money that can be borrowed is limited by projections of these future revenues. An evaluation of the potential toll revenues, called an investment grade toll study, is a way to project the future revenues. It would be performed by the entity interested in financing the project. The revenue obtained by tolling can vary depending upon the toll rate, traffic volume, and competing untolled routes. These factors are often interrelated, i.e. the availability of competing routes can affect the traffic volumes on a tolled facility.



The method of tolling can also affect the toll revenues. For example, a “closed system” with a toll required at most entrances and exits along a road would normally generate more money than an “open system” with a limited number of toll booths at specific locations. The closed system would generally involve traditional toll booths where users pay cash by the trip and could also contain electronic toll lanes which accommodate frequent users who can pay tolls electronically without the delay of stopping at a toll booth. An open system would eliminate cash booths and would require all users to have an electronic toll tag. Clearly this presents a problem on a facility like I-73 that will have a significant number of non-local users. In the future, many anticipate a regional or even national system of electronic toll tags which can be used at all toll facilities in the region or ultimately in the United States. This would make the open system more attractive. Finally a discount for local traffic, either based upon number of trips per month or use of an electronic transponder, would affect projected revenue.

This FEIS was prepared based upon the impacts of a non-tolled highway. This provides a “worst-case” analysis for most impact categories, which are based upon traffic volumes. Further NEPA analysis would be completed if the facility is tolled in the future. It is anticipated that by tolling the interstate, traffic volumes would decrease. A reduction in traffic volume would be expected to reduce the project’s economic benefits, depending upon the amount of the reduction. The percentage of this decrease for I-73 could be estimated at 40 percent for long distance trips and 70 percent for local trips of the untolled traffic volume, depending upon the toll cost and method of collecting the toll. Once a decision is made on tolling, an investment grade toll study would be anticipated. This study would provide traffic volumes that could be used to re-evaluate project impacts and benefits.

Construction

1.5 How would the road be constructed?

There are several options for this project to move through construction. It may be completed in phases, such as S.C. Route 31 (Carolina Bays Parkway), or all at once like S.C. Route 22 (Veterans Highway). The traditional method is design/bid/build, which involves as a first step the preparation of design construction plans. Right-of-way would be acquired toward the later stages of the roadway design and would generally be obtained before construction commenced. The project would be advertised and construction firms would bid to construct a project for a specific dollar amount. The SCDOT would select a firm based upon these bids.

A second option is the design/build approach, where those bidding on the contract may be responsible for some portion of the right-of-way purchase and for both designing and building a project. The SCDOT selects one firm based upon factors which may include qualification and experience, time to construct the project, and cost.



If the project should be constructed as a public private partnership (PPP) or as a concession, that entity would be responsible for most or all right-of-way acquisition and would probably use the design/build approach.

How would traffic be maintained during construction of the Preferred Alternative?

Extreme caution must be taken during the design and construction of the proposed project to ensure that a safe facility is provided to the traveling public. A minimum design speed of 45 miles per hour is necessary to be maintained in the construction area in order to minimize undue traffic backups and delays, where appropriate.

Traffic congestion could occur, particularly near proposed interchanges and crossovers where new construction would be in the vicinity of existing facilities. Shifting traffic during the various phases of construction may be required and could cause a potential for accidents due to motorists unfamiliarity with the facility as it changes. A conflict between construction traffic, such as large hauling trucks and construction tractors, and the traveling public could increase the risk of accidents and potential fatalities in the work zone area. Construction activity could warrant the placement of more rigid traffic control apparatus such as temporary concrete barriers that would create an obstacle, but reduce the potential for injury or fatalities should an accident occur.

Temporary detours could be needed as part of maintenance of traffic during construction, particularly at interchanges and crossover locations. Existing facilities could be closed for brief periods of time, as approved by SCDOT and NCDOT. Detours could also be utilized in areas where construction activities would lead to a reduced number of lanes on an existing facility. This would help reduce traffic congestion in the vicinity of construction. Any detours and maintenance of traffic layouts proposed by the contractor would be reviewed and approved by SCDOT and NCDOT. Temporary detours and closures of facilities could lead to more inconveniences for local residents and travelers throughout the areas of construction. Businesses along these roadways could experience a loss of revenue during construction due to the inconvenience placed on customers to access these businesses.

Access roads could be utilized to maintain existing connections that would otherwise be lost due to construction of the project. Measures that could be incorporated to provide maintenance of traffic include temporary lane closures, temporary relocation of roads, or construction of temporary structures. The speed limits in the construction work zone areas should generally be lower than the posted speed limit on the existing facility. The construction of the interchanges may be completed in stages and the contractor would be required to use typical maintenance of traffic layouts or submit site-specific layouts for review. The contractor would also be required to comply with Section 104.07, Maintenance and Maintaining Traffic, 107.06, Sanitary Health and Safety Provisions, and



Section 107.09, Public Convenience and Safety of the *South Carolina Highway Department Standard Specifications for Highway Construction*.⁶⁹

Summary

The Purpose of this project is to provide an interstate link between the southernmost proposed segment of I-73 and the I-73/I-74 Corridor to serve residents, businesses, and travelers while fulfilling congressional intent in an environmentally responsible and community sensitive manner. The I-73 project is part of a congressionally designated National High Priority Corridor and a project of national and regional significance. It is also supported by the South Carolina General Assembly.

This project is primarily needed to improve the national and regional connectivity of South Carolina and enhance economic opportunities and development in the project study area. This project will also improve access for tourism in the project study area and the eastern part of the state, increase safety on existing roads in the project study area, and accommodate for future multimodal transportation in the Southeastern United States.

⁶⁹ SCDOT, *SCDOT 2007 Standard Specifications for Highway Construction*, http://www.scdot.org/doing/StandardSpecifications/pdfs/2007_full_specbook.pdf (May 1, 2008).



Interstate 73 FEIS: I-95 to North Carolina



This page intentionally left blank.