impacts of the Reasonable Alternatives. The refined study area will be used to evaluate the direct impacts of the new location alternatives on the natural and human environments adjacent to the project corridor. These impacts include noise, community impacts, environmental justice, wetlands, threatened and endangered species, water quality, farmlands, cultural resources and hazardous materials.

5.1.6 What is the human environment?

The Council on Environmental Quality (CEQ) states that the “human environment shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment” (40 CFR 1508.14). Evaluation of the human environment includes assessments of existing land use, socioeconomic characteristics and communities and potential changes as a result of the proposed project.

The efforts of transportation agency activities – planning, project development, implementation, operation and maintenance affect communities. The consideration of social and community impacts help decision-makers understand how proposed activities will likely affect communities and provides opportunities for communities to give input. When public agencies and officials understand how decisions affect communities, they can more easily avoid or minimize negative impacts and promote positive impacts.2

5.2 Land Use

Land use patterns and growth trends are key components in understanding, developing and designing an efficient transportation network. Maintaining a regional transportation network goes hand-in-hand with not only land use planning but the overall planning efforts of local and state entities. Community and economic planning studies, along with land use and transportation planning, are initiated by local governing entities and are integrated into guidance documents, including comprehensive plans. Local plans are then integrated into regional transportation plans. When combined, both local and regional goals can be established to determine logical growth and development for an entire area. The study area is located in Charleston County, which is a part of the larger tri-county region that includes Berkeley and Dorchester Counties, see Figure 5-2. These three coun-

2 The CIA Website http://www.ciatrans.net/cia_faq.html#3
B The encyclopedia of earth http://www.oeearth.org/article/Land-useand%20land-cover%20change
ties make up the Berkeley, Charleston, Dorchester Council of Governments (BCDCOG). The BCDCOG acts as the primary agency that coordinates activities associated with the comprehensive planning process for these three counties.

The BCDCOG Transporta.../h...://www.bcdcog.com/publications/Brochures/chatsbrochure.PDF 3/30/2009

Charleston Area Transportation Study (CHATS) currently covers 800 square miles of urban area within the tri-county region. The CHATS Transportation Improvement Plan assists in establishing short- and long-term goals through development of the Long-Range Transportation Plan (LRTP) and the Transportation Improvement Program (TIP).\(^3\)

Transportation needs are developed into a LRTP and used as a guidance document for the region’s growth and proposed regional investments to the transportation system over the next 25 years. CHATS 2030 LRTP, adopted in 2005, includes the Mark Clark Expressway project.

**What is a Comprehensive Plan?**

Comprehensive planning provides the framework of development and preservation for a region over a specific period of time. This type of planning document assists various governmental agencies by providing necessary policies, regulations and budget decisions required to achieve the overall growth for the area. This includes decisions about land use, transportation, public facilities, economic development and other goals that are vital for maintaining a healthy community.

A comprehensive plan generally consists of three main parts: an inventory of existing conditions, a vision/goal and a plan to achieve that goal. The plan takes into account baseline conditions that include environmental constraints, existing infrastructure and public facilities while looking at the pro-
jected growth rates. This process helps determine the requirements necessary to meet predicted growth and maintain the quality of life for area residents.

Comprehensive plans help guide future development to the appropriate areas of a defined region based on available land types, existing or planned future infrastructure while preserving the natural, cultural and aesthetic resources of the area.

Key elements of developing a comprehensive plan include:

- Population and Housing Growth;
- Economic Development & Opportunities;
- Transportation; and
- Vision and Goals.

### 5.2.1 What local planning documents contribute to existing land use planning within the study area?

The project study area is located entirely within the southwestern portion of Charleston County. Along with the Charleston County Comprehensive Plan, several additional community plans are associated with the study area, including the Johns Island Community Plan, the Town of James Island Comprehensive Plan and the City of Charleston Century V City Plan. These plans were reviewed in order to establish the direction and goals of the communities within the study area, which would be used in identifying and analyzing the potential indirect and cumulative impacts of the project.4

#### 5.2.1.1 What is the Charleston County Comprehensive Plan?

In 2007, Charleston County developed a comprehensive inventory of the existing land uses in the unincorporated areas of the county. The inventory was used to update the Charleston County Comprehensive Plan, which was adopted in November 2008. The updated plan identified nine land use strategies, which established goals to protect the natural environment, while providing opportunities for development and economic growth. One of these strategies states, “Coordinate land use patterns with transportation, housing, employment and retail development to provide communities and neighborhoods where people can live and work.”5 The plan details the County’s intent for where and how future growth and development should occur.

The land use inventory noted that approximately 70 percent of the land area in the unincorporated county is either forested or regulated wetlands, marshes and other water features, this includes other land use types, e.g. agriculture, that falls into both category types. Other land uses in the unincorporated portion of the county consists of agricultural (12 percent); residential (9 percent); industrial (2 percent); vacant/undeveloped (5 percent); utilities/transportation (2 percent); and parks and recreation (2 percent).

An important component of the Charleston County Comprehensive Plan is the Urban Growth Boundary (UGB). In 1999, the UGB created a distinct boundary between rural and urban/suburban areas, see Figure 5-3. The overall

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4 NCHRP Report 466, Desk Reference for Estimating the Indirect Effects of Proposed Transportation Projects, Step 2, page 1
5 Charleston County Comprehensive Plan