goal of the boundary is to promote infill and redevelopment in order to control normal urban sprawl. Since then, the UGB has been incorporated into other plans, including the City of Charleston Century V City Plan and Johns Island Comprehensive Plan. The majority of the study area is located within the UGB.

The UGB falls within City of Charleston, Johns Island, the Town of James Island and West Ashley. Each of these agencies has the power to determine how and where development will occur within their jurisdiction. In order for the UGB to be effective in regulating where and how growth occurs, cooperation on the parts of these agencies is required. Although the boundaries are recognized by the various jurisdictional entities, no formal agreement is in place and these agencies have the power to change and modify the boundary.

Additionally, the comprehensive plan identified special planning areas that included rural areas targeted for major developments on large tracts of lands and urban/suburban areas experiencing immediate development pressures. Special Planning Areas have been divided into three parts: Major Planning Efforts, Area Plans and Special Corridors. Of these special planning areas, six are located within the scoping area, including:

- Johns Island Area Plan - three areas along River Road between Evans Way to near Hanscombe Point Road; Edenvale Road between Bohicket Road to River Road; and Kitford Road;
- Bees Ferry Road Area Plan - located in West Ashley;
- Belgrade Road Area Plan - located in West Ashley east of I-526 and Sam Rittenberg Boulevard (SC Route 7);
- Savage Road Area Plan - located in West Ashley west of I-526 and north of U.S. 17;
- Maybank Highway Special Corridor - located on Johns Island from entryway onto the island to intersection with Main Road; and
- Main Road Special Corridor - located in West Ashley at the intersection of Bees Ferry Road south to intersection with Maybank Highway (SC Route 700) on Johns Island.

These areas have been identified as experiencing growth and development and recommendations have been made to further study these areas and to coordinate with the public and affected agencies, including the various jurisdictions for these areas to provide consistency in land use planning. Locations of these areas are shown in Figure 5-4.

In addition, two special corridors, the Maybank Highway Corridor Overlay District and Main Road Overlay District, have been identified because there are inconsistencies between the various plans. The City of Charleston and Johns Island plans have recently been revised and incorporated design standards and land uses that are different from those in the Charleston County plan.

Special Planning Areas: These are areas that have been identified as having development pressures and would require further land use study. Consistent and coordinated land use plans are recommended.

Overlay District- A zoning code or district which is available as an option to the underlying zoning.

6 Charleston County, South Carolina: Comprehensive Plan Update Adopted November 18, 2008 Chapter 3 page 28-29
7 Charleston County, South Carolina: Comprehensive Plan Update Adopted November 18, 2008 p-30
C Charleston County Comprehensive Plan
Chapter 5.
Existing Conditions and Environmental Consequences

FIGURE 5-4
SPECIAL PLANNING AREAS

Legend
- Freeway/Expressway
- Primary Highway
- State/County Road
- Urban Growth Boundary
- Study Area
- Citadel Mall

Gathering Places
- Community
- Industrial Districts
- Neighborhood Village

Special Corridors
- Special Corridors
- Savage Rd Area
- Greenway
- Belgrade Ave Area
- Johns Island Area
The comprehensive plan takes into account the information and trends concerning the following key elements in the study area:

**Population Growth**

The potential for population growth is a key element in land use planning. The comprehensive plan has established historic, present and future projections for population growth within the area. It is anticipated that an annual growth rate of 1.7 percent will occur between 2007 and 2020, resulting in 85,000 new residents and a total population of 425,000 for the county. It is predicted that 70 percent of this population increase would live in the incorporated areas, requiring 30,000 new housing units. The remaining 30 percent would live within the unincorporated areas, creating a need for 12,000 new housing units.

The comprehensive plan determined that the unincorporated part of the county will accommodate growth through the year 2020 and beyond with a low density of one home per 25 acres. However, using a high-density residential scenario for future land use planning would allow for greater capacity in years to come.

**Economic Opportunities**

Economic development within the county will also play an important factor in future land uses. The economic goal for the county is to “continue to promote the development and maintenance of all infrastructures including: services, amenities and transportation networks that support economic development activities. This would include capital improvement plans and coordinated priority investment.” Several areas were identified for economic growth within the comprehensive plan. These include:

- the I-26 corridor from Ladson through the Charleston Neck with a mix of business parks and industrial sites at the former Navy Base;
- the Charleston International Commerce Park, next to the Charleston International Airport;
- along I-526 from I-26 to U.S. 17 with Class A office complexes;
- along Henry Tecklenberg Drive containing medical services;
- future West Ashley Traffic Circle at Glenn McConnell Parkway and Bees Ferry Road;
- future East Edisto Business Park in Ravenel;
- business and office complexes in Mt. Pleasant; and
- businesses and offices within West Ashley and Charleston peninsula.

The employment growth has been projected at 1.9 percent annually, with the majority of the commercial growth to occur within the municipalities.

**Transportation Plan**

Transportation is one of the most important elements in overall planning for a region. The ability to move both goods and people from one place to the next is a key factor in growth and economic stability for an area. A transportation
network that offers choices in modes of transportation is crucial to the overall health of the communities, residents and businesses that the transportation network serves. Transportation planning for Charleston County is a combined effort among the BCDCOG, South Carolina Department of Transportation (SCDOT), Federal Highway Administration (FHWA), the Charleston Area Regional Transportation Authority (CARTA) and the Rural Transportation Management Agency (RTMA).11

The Transportation Advisory Board (TAB) was created to guide the development of the transportation element for the comprehensive plan. TAB developed seven values to be used in evaluating projects:12

1. Maintaining and completing existing infrastructure;
2. Environmental impact;
3. Projects that include interconnectedness to communities;
4. Projects with regional benefits;
5. Projects that provide the greatest significance to the most people;
6. Projects with the capacity to leverage other funding sources; and
7. Projects that are multi-modal and/or multipurpose.

The completion of the Mark Clark Expressway project is one of the three high-priority regional projects identified in the Charleston County Comprehensive Transportation Plan. The South Carolina State Transportation Infrastructure Bank (SIB) voted to commit a total of $420 million to Charleston County for the completion of the Mark Clark Expressway project. In 2004, Charleston County voters approved a Half-Cent Sales Tax. These funds would be used on various types of projects including transportation projects and green space acquisition. The RoadWise Program was created to manage the transportation program.13 Major roadway projects within the Study Area included the Cross Island Expressway (areas south of Maybank Highway between Bohicket Road and River Road) and the widening of Maybank Highway (from Stono River Bridge to Main Road).14

**The Vision and Goals**
The land use goals for Charleston County are as follows: “Land resources will accommodate high quality growth in a way that respects the unique character of different parts of the county, promotes economic opportunity where appropriate, respects private property rights, is coordinated with the provisions of the community facilities and protects natural resources.”15 The vision of the comprehensive plan in regards to the land use element is to provide the highest level of public facilities and services, including capacity of roadways, water, sewer, and recreation areas and community facilities in order to meet the needs of existing and future populations. The vision also ensures that new development will not create a negative impact on the character of the area and that the natural environment will be protected. The plan would define the UGB and coordinate with the various entities to maintain and enhance the character of the county in both the rural and urban/suburban areas.

11 Ibid pg 80
12 Ibid pg 80
13 Ibid pg 81
14 Ibid pg 88
15 Ibid pg 26
5.2.1.2 What is the Johns Island Community Plan?

The most recent Johns Island Community Plan was adopted in November 2007 by the City of Charleston. The plan focuses primarily on those lands within the UGB adopted by Charleston County in 1999. A total of 48,670 acres make up Johns Island, with 10,469 acres located within the UGB. The 10,469 acres contain 3,873 parcels, of which 62 percent are located within the incorporated area of the City of Charleston.\(^\text{16}\)

**Population Growth**

In the plan, the BCDCOG predicted that the population would double for a total growth of 15,230. However, current population projections, noted in the Johns Island Community Plan, estimate that by 2015 the island will have 20,000 residents. This would surpass the original projection by 31 percent.\(^\text{17}\)

**Economic Opportunities**

The Johns Island Community Plan focuses on meeting the needs of the residents to provide for economic opportunities, while preserving the character of the island. The UGB also establishes the location and limitations for this type of development and land use. It promotes that studies should be conducted in designating work zones for two areas on Johns Island. One work zone is located near the middle of Maybank Highway and the second would be adjacent to Johns Island Executive Airport. By designating these areas for commercial development, residential development in these areas would be discouraged. The plan also lists the future connection to downtown Charleston via the Mark Clark Expressway project as one of its strengths for economic development.\(^\text{18}\)

**Transportation Plan**

The transportation portion of the plan acknowledges the traffic congestion on key routes and at key intersections in the area, like Maybank Highway and the intersections of River Road, Main Road and Bohicket Road. It was also assumed that with the enforcement of the UGB development, both residential and commercial would be limited and therefore, would also limit traffic generated by future development. It recognized that the alternative forms of transportation on Johns Island are deficient in terms of multi-modal options. One of the key preservation issues as it deals with roadways is the preservation of tree canopies, which is an important component to this area's character. The extension of Mark Clark Expressway to Johns Island was recognized and discussed during planning workshops throughout the plan update. It was agreed and noted in the plan that development on Johns Island is inevitable, whether or not the Mark Clark Expressway project is built. It was also discussed that if built, attention would be needed to ensure the efficient operation of an interchange of the proposed Mark Clark Expressway and Maybank Highway.\(^\text{19}\)

**The Vision and Goals**

The overall plan has remained basically the same over the years in order to protect the Johns Island setting, including its character, agricultural heritage, cultural and natural resources. Its main focus is to manage and direct future growth on the island by using the UGB to efficiently and logically develop the suburban areas while protecting and maintaining the overall rural setting of the island.

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\(^{16}\) Johns Island Community Plan

\(^{17}\) Ibid pg 3

\(^{18}\) Ibid pg 18

\(^{19}\) Ibid pg 21
5.2.1.3 What is the Comprehensive Plan for the Town of James Island?

The Town of James Island Comprehensive Plan, November 2006, noted that around 1973, the City of Charleston began the annexation of parts of James Island. This annexation continued over the years, granting zoning to vacant tracts of land. The creation of dense development resulted in additional traffic and congestion for James Island. In May 2002, the Town of James Island formally received its charter. In 2006, the Secretary of State certified the boundaries of the new town and the comprehensive plan was created to service the needs of the town's residents.20

**Population Growth**
According to the comprehensive plan, the population is projected to almost double by the year 2015 to 43,595. Single-family residential development is the predominant land use on the island. It was anticipated that with the addition of 14,000 new residents, an additional 5,000 new homes would be required. The majority of this growth is targeted along Riverland Drive, Fort Johnson Road, Grimball Road and bordering the Clark Sound.21

**Economic Opportunities**
Approximately 4,000 new jobs were also projected for the island between 1990 and 2015. Existing commercial corridors were identified as Folly Road and Maybank Highway. The comprehensive plan defined the type of commercial development for the area as neighborhood centers and highway commercial. It was also noted that there were several abandoned and under utilized centers that exist on the island. The majority of the commercial growth would be expected along the Maybank Highway, Folly Road and areas adjacent to the James Island Bridge and the Mark Clark Expressway.22

**Transportation Plan**
Discussion of the specific transportation projects in the comprehensive plan is limited. However, transportation is discussed generally, acknowledging the congestion on the island and suggesting the need for roadway improvement for this area. It stipulates that new road construction should be designed with the natural topography in mind in order to minimize impacts to vegetation and natural features of the area.

**The Vision and Goals**
One of the main goals for the area is to preserve the characteristics of this historic sea island, while ensuring that growth occurs in a responsible and logical manner. The use of innovative techniques would be required to achieve quality developments while at the same time protecting the unique attributes of the area.23 It was stated that areas already zoned as agriculture should be maintained as such.

5.2.1.4 What is the City of Charleston Century V City Plan?

Today, the economy for this area is steadily expanding due to manufacturing, the South Carolina State Ports Authority, the medical industry and tourism. The City of Charleston Century V City Plan is the City of Charleston's comprehensive planning document, which was adopted in 2000. It builds upon previous planning documents and considered planning through 2015. The plan is considered a working document that is constantly evolving.

20 Ibid
21 Ibid pg 28
22 Ibid pg 28
23 Comprehensive Plan Town of James Island, SC November 2006 pg 5

Draft Environmental Impact Statement
Page 5-13

Chapter 5,
Existing Conditions and Environmental Consequences
Although the document is approximately ten years old, it is still used as a guide and was taken into consideration during the updates of both the Charleston County Comprehensive Plan and the Johns Island Comprehensive Plan.

Key issues outlined within the document include:

- urban growth - keeping rural areas rural and creating more park spaces;
- city development - infill development and instituting gathering places;
- mobility - providing transportation options;
- workplaces (work center/zones) - provide a workplace supportive environment; and
- municipal services and facilities - assuring quality services to residents.24

The plan establishes that urban growth should be managed in order to protect the natural environment within the municipal boundaries. Development within the city is focused on maintaining existing neighborhoods and promoting infill and redevelopment. The plan also targets the development of new gathering places throughout the city.

**Gathering places**

The City of Charleston Century V City Plan identified “important intersections, well-located infill or redevelopment sites, or part of new neighborhoods” as potential gathering places.25 There are a total of 20 gathering places within the study area. There are nine neighborhood/village and four community sites in West Ashley, two community and one neighborhood/village sites on Johns Island and two community and two neighborhood/village sites on James Island. The locations of these sites are shown in Figure 5-4. The purpose of this land use element is to promote infill of mixed-use development. It would also facilitate the use of alternate modes of transportation, such as walking and bicycling between different land uses.

**Work Centers**

The study area includes one urban center and two industrial districts. The City of Charleston Century V City Plan has identified these areas as having large concentrations of employment. The Citadel Mall District, which is the second largest concentration of jobs within the city, has been identified as an urban center located within the study area. Of the two industrial districts, one is located near the intersection of Maybank Highway and Folly Road and the other is located near the intersection of Ashley River Road (SC Route 61) and Wappoo Road.

**Work Zones**

The study area includes two work zones which are located on Johns Island. The work zones are located along Maybank Highway and are identified as work centers in the City of Charleston Century V City Plan. The purpose for identifying these areas as work zones is to establish these areas for economic development while deterring residential development.

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24 City of Charleston Century V City Plan
25 Ibid, page 23
The plan also focuses on providing economic growth and sustainability for residents by encouraging an environment that is agreeable to a wide range of businesses. To enhance this type of land use, the plan also ensures that there are several different transportation options for moving within and between neighborhoods. This also includes effective mobility across the city and county. Lastly, municipal services would be maintained at a high standard by planning capital improvements supporting the growth of the city.

**Population Growth**
According to the plan, the population for the year 2000 was 96,650 with an estimated population of 104,108 in the year 2003 and 138,741 in the year 2015. In reviewing current data, this seems to be consistent with the actual growth rate, including the projected population of 121,569 in the year 2008. This has and will continue to be a rapid growth rate for this area. Areas that are targeted for an increase in growth include the incorporated areas of James Island and West Ashley.26

**Economic Opportunities**
The major economic activity outside of downtown Charleston and within the study area is the Citadel Mall District of West Ashley, where U.S. 17 and Sam Rittenberg Boulevard meet the existing Mark Clark Expressway. This is the second largest concentration of jobs in the city. The top three employers within the city include the Medical University of South Carolina (MUSC), Care Alliance Health Services and the City of Charleston.27

**Transportation Plan**
The number of waterways, associated marshes, wetlands and various other natural features create a challenge for building a viable transportation network within this region. This is mainly due to the limited number of crossings connecting the various islands to the mainland and the distance between these crossings. The plan noted that between the years 1990 and 2015, the vehicle miles traveled would increase by 75 percent. Normal solutions for these types of conditions include widening existing roadways and/or creating new facilities. However, this is not a readily available solution for this area.28

Mass transit options are provided by CARTA, which offers public transportation for the area. This mode of transportation has been noted as most effective for trips to and from work due to locations of the major employment centers along the existing roadway network.

**The Vision**
Major goals of the plan include the use of the UGB to limit growth outside of the boundary in rural areas, in order to protect the natural resources, maintain a lush, green environment and promote infill and revitalization of existing developable areas within the boundary. Additionally, the plan would guide the development of transportation options for moving residents within neighborhoods, between neighborhoods and across the city and the region. Additional concepts taken into account during planning included the preservation of old railroad right of way corridors for light rail, promoting walk-able communities, higher density development and identifying optimal routes for bicycles and pedestrians. Water transportation, including water taxi and ferry services, was also recommended to be established,

26 Ibid pg 50
27 Ibid pg 44
28 Ibid pg 35
especially at peak times for traffic volumes. One noted recommendation of the plan for the street network was “to determine the overall costs and benefits of completing the final two sections of the Mark Clark Expressway.”

5.2.1.5 What comprehensive plans take West Ashley into account?

West Ashley, a suburb of the City of Charleston, is defined as the area bordered by the Ashley River and the AIWW. It is one of the oldest developments in Charleston and the closest to the downtown area. The area includes residential developments, golf courses and historic and natural recreational sites. The proximity to the downtown area coupled with the aforementioned amenities makes West Ashley a popular place to live.

West Ashley is not a self-governed entity and therefore, does not have a separate comprehensive planning document. The majority of West Ashley is within the incorporated limits of the City of Charleston and it is covered by the city’s planning and zoning documents. The majority of the collected information for West Ashley originated from the City of Charleston Century V City Plan. Additionally, planning documents such as the Greenbelt Comprehensive Plan and the Long Savannah Plan were used to provide a solid picture of the land use planning for this section of the study area.

One of the newest developments for this area is Long Savannah, a 3,300-acre development that, when completed, will include 1,831 acres of park. Long Savannah will be a mixed-use development with 6,100 residential units and 700,000 square feet of office and commercial space.

The West Ashley traffic circle is an alternative traffic control and traffic calming scenario. The traffic circle, located at the intersection of Glenn McConnell Parkway and Bees Ferry Road, is under development and would become a major hub for goods and services.

Population Growth
West Ashley is one of the fastest growing areas within the City of Charleston. Between 1990 and 1998, 2,393 new dwelling units were constructed in West Ashley. U.S. Census Bureau data showed a population of 54,000 in the year 2000 and projections for the year 2008 indicated a population of 55,353. At the time the plan was released, West Ashley was noted as the most populated area of the City of Charleston, with the peninsula being the second most populated. The population of West Ashley is also expected to double that of the peninsula by 2015.

Economic Opportunities
West Ashley is the second largest employment district within the city. The Citadel Mall District located in West Ashley is identified as a work center. This area is supported by the city to promote continued growth and development of these areas.

Transportation Plan
The transportation plan for West Ashley was included as part of the City of Charleston Century V City Plan. The majority of the existing street network in West Ashley is made up of neighborhood streets. Today, several of these streets function as connectors that move traffic across the area. As traffic increases, the transportation facility loses its ability to
handle current traffic volumes. Standard solutions normally include widening existing roadways and/or building new roadways. However, due to the numerous natural and man-made constraints, this is not a readily available solution for this area.\footnote{Ibid pg 40}

CARTA provides public transportation for the area. This type of alternative transportation has been noted as most effective with trips to and from work due the locations of the employment centers along the major roadway network. West Ashley also provides connections to both the Town of James Island and Johns Island.

**The Vision**

One of the goals of the City of Charleston is to improve and extend the West Ashley Greenway so it connects all of West Ashley with the peninsula.\footnote{Ibid pg 44}

**5.2.1.6 What are the existing land uses types within the study area?**

Land use types for the study area were obtained from existing Geographic Information Systems (GIS) data maintained by Charleston County, combined with parcel and zoning data from the City of Charleston. The National Wetland Inventory spatial data was also used to determine natural areas. Land use types and acreage were calculated using GIS, see Figure 5-5. The two main land use types consist of natural areas at 33 percent and residential areas at 37.6 percent of the total land in the study area. Agricultural and commercial land uses are approximately nine percent each. Industrial and special purpose uses, such as churches, government and green spaces, were calculated at one percent each. The various land use types, acres and percent contained within the study area are shown in Table 5.1.

<table>
<thead>
<tr>
<th>Land Use Type</th>
<th>Acres</th>
<th>% Percent Study Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>6,620.96</td>
<td>17.6%</td>
</tr>
<tr>
<td>Commercial</td>
<td>1,844.25</td>
<td>9.8%</td>
</tr>
<tr>
<td>Hotel</td>
<td>23.72</td>
<td>0.1%</td>
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<tr>
<td>Land Only</td>
<td>2,644.04</td>
<td>7.0%</td>
</tr>
<tr>
<td>Residential</td>
<td>14,190.04</td>
<td>37.6%</td>
</tr>
<tr>
<td>Restaurant</td>
<td>68.02</td>
<td>0.2%</td>
</tr>
<tr>
<td>Special Purpose</td>
<td>695.07</td>
<td>1.8%</td>
</tr>
<tr>
<td>Warehouse</td>
<td>76.56</td>
<td>0.2%</td>
</tr>
<tr>
<td>Undefined</td>
<td>370.23</td>
<td>1.0%</td>
</tr>
<tr>
<td>Recreation/Parks</td>
<td>906.68</td>
<td>2.4%</td>
</tr>
<tr>
<td>Natural Areas*</td>
<td>12,449.87</td>
<td>33.1%</td>
</tr>
</tbody>
</table>

\*Natural areas calculated separately and would overlap undefined, agricultural, park and recreational areas

Source: Charleston County Tax Parcel Data

\footnote{Ibid pg 40}
Legend

- Freeway/Expressway
- Primary Highway
- State/County Road
- Study Area
- Agriculture
- Restaurant
- Commercial
- Hotel
- Warehouse
- Land Only
- Undefined
- Residential
- Recreation/Parks
- Natural Areas
- Open Water
- Sandy Area
- Bay/Estuary
- Forested Wetland
- Non-Forest Wetland
- Figure 5-5: General Land Use Types

Chapter 5
Existing Conditions and Environmental Consequences

Freeway/Expressway
Primary Highway
State/County Road
Study Area
Agriculture
Restaurant
Commercial
Hotel
Warehouse
Land Only
Undefined
Residential
Recreation/Parks
Natural Areas
Open Water
Sandy Area
Bay/Estuary
Forest Wetland
Non-Forest Wetland

Legend

0 0.5 1 1.5 Miles

Downtown Charleston
Daniel Island
West Ashley
Johns Island
James Island
James Island City Park
Dill Sanctuary
WESLEY DR
FOLLY RD (S.C. 171)
MAYBANK HWY (S.C. 700)
U.S. 17 (Savannah Hwy)
MAIN RD (Road S-20)
BEES FERRY RD
RIVER RD
RIVERLAND DR
CENTRAL PARK R
DILL SANCTUARY
James Island Co.
Park
BAY/ESTUARY
FORESTED WETLAND
NON-FORESTED WETLAND
OPEN WATER
SANDY AREA

FIGURE 5-5
GENERAL LAND USE TYPES

Miles
5.2.1.7 What is the predicted growth and land use changes for the study area?

The study area has experienced an aggressive growth rate in recent past years and is predicted to have an even greater growth rate through 2035 when compared to both the Charleston County and BCD region. The 2035 growth predictions were derived from forecasted household, population and employment data by zone, as well as existing and committed residential developments. This data was gathered from the Updated CHATS Travel Demand Model and development studies. The studies reviewed to update the land use data in the model include:

- Community Impact Analysis: Estimates the level of growth and development on Johns Island with and without Mark Clark Expressway project;
- Johns Island Community Plan (City of Charleston);
- Maybank Highway traffic study (RoadWise);
- James Island / Folly Road interchange (RoadWise);
- Cross Island Parkway traffic study;
- Bees Ferry traffic study;
- Glenn McConnell Parkway at I-526 traffic study: Long Savannah development; and
- I-26 Relocation Study.

Many of the forecasts from these studies are based on estimates from the private development community and are subject to change. It is predicted that the population within the study area would grow by 85.2 percent by the year 2035, as shown in Table 5.2.

<table>
<thead>
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<th></th>
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<tbody>
<tr>
<td>BCD Region</td>
<td>549,033</td>
<td>771,140</td>
<td>222,107</td>
<td>40.5</td>
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<tr>
<td>Charleston County</td>
<td>309,969</td>
<td>386,140</td>
<td>76,171</td>
<td>24.6</td>
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<tr>
<td>Study Area</td>
<td>57,007</td>
<td>105,585</td>
<td>48,578</td>
<td>85.2</td>
</tr>
</tbody>
</table>

Source: Updated CHATS Travel Demand Model

Future land uses outlined in the Charleston County Comprehensive Plan Update “Urban/Suburban Future Land Use Detail” are limited to the identified special planning areas. These areas are those that are experiencing immediate development pressures. Two special planning areas, the Maybank Highway Corridor Overlay District and the Folly Road Overlay District, have been identified within the study area.

In reviewing existing and future land use designations for these areas, it appears that the majority of the changes would be the transition of vacant lots, agricultural and residential to commercial uses adjacent to the corridor. Additionally, vacant lots located further from the corridor would be designated as future residential areas. The future trend appears to be changing the various types of land use to that which both complements surrounding land use and provides better cohesion to residential areas.
Although some parcels may change land use categories, it is anticipated that the overall land use plan should remain consistent due to well-defined comprehensive plans, including the establishment of the UGB defining where and how development will occur. Also, the majority of the project boundary is located within the city limits and is covered by the City of Charleston’s zoning ordinances. This zoning is reflected in the Charleston County Parcel data defining the general land use within the study area. Prior to changes in zoning, a process must be followed to petition these changes. This process would include public involvement and public comments to determine if changes would be supported. The various comprehensive plans provide additional guidance to the needs, the direction and the locations of future growth for the area.

5.2.2 How would the No-build Alternative impact land use?

As stated in Chapter 2, Need for and Purpose of the Project, estimates show population growth to be a 19% increase by 2035 on James Island, 172% on Johns Island and 81% in West Ashley. These estimates show that the area will continue to grow with or without the construction of the Mark Clark Expressway project. This growth is largely guided by the common theme that is prevalent in the various comprehensive plans: preservation of the natural surroundings, providing recreational facilities and activities and providing infrastructure to support growth.

The No-build Alternative would have a marginal impact on land use changes for the area. The UGB mentioned previously has been established and is recognized by the various governing entities within the study area. The UGB coupled with strict zoning ordinances have already identified and regulate land use for the area. The UGB’s main goal is to encourage revitalization and infill for future development within its boundary. This boundary has been established to assist and control where development can occur in order to protect the rural areas within Charleston County, reducing urban sprawl.

One major effect the No-build Alternative would have on the area would be a decrease in mobility, reducing the effectiveness of moving people, goods and services within the region. The UGB goal for infill and revitalization could also be limited due to mobility issues.

5.2.3 How would the Reasonable Alternatives impact land use?

Charleston County, Johns Island, James Island and the City of Charleston are all very proactive in land use planning. They continue to strategically develop comprehensive planning documents that are coupled with regulatory boundaries, including zoning and the UGB. These initiatives allow the flexibility for growth and development within the area while maintaining a high-quality lifestyle for the residents and visitors. Because intersections/interchanges at U.S. 17 and Folly Road are common to all alternatives, they are discussed collectively in Section 5.2.3.1. Table 5.3 provides the percentage of land use for each alternative that would need to be converted to a transportation use.

Alternative A:
Alternative A would be constructed as a controlled-access facility, allowing access to the roadway at three interchanges, U.S. 17, Maybank Highway and Folly Road. Land use changes would be minimal along most of the alignment as the roadway would be elevated for the majority of its length, allowing travel over both existing infrastructure and natural features within the area.
Maybank Highway Interchange (East of River Road)
Alternative A would provide for a new interchange on Maybank Highway, east of River Road on Johns Island. Land use types, as defined by Charleston County land use data, surrounding this interchange consist of agricultural, undevelopable, vacant-commercial and land-only. The majority of the land use to be impacted would be undevelopable parcels.

Alternative B:
Alternative B would be constructed as a controlled-access facility, allowing access to the roadway at three interchanges: U.S. 17, Maybank Highway, and Folly Road. Land use changes would be minimal along most of the alignment as the roadway would be elevated for the majority of its length, allowing travel over both existing infrastructure and natural features within the area.

Maybank Highway (West of River Road)
Alternative B would require a new interchange on Maybank Highway west of River Road on Johns Island. Land uses around this interchange would consist of agricultural, commercial, residential, undevelopable, vacant-commercial and land-only. Due to the location of this interchange, changes could occur with the conversion of surrounding residential land to commercial uses.

Alternative C:
Alternative C would be constructed as a controlled-access facility, allowing access to the roadway at three interchanges: U.S. 17, Maybank Highway, and Folly Road. Land use changes would be minimal along most of the alignment as the roadway would be elevated for the majority of its length, allowing travel over both existing infrastructure and natural features within the area.

Maybank Highway Interchange (East of River Road)
Alternative C would provide for a new interchange on Maybank Highway east of River Road on Johns Island. Land use types surrounding this interchange consist of agricultural, undevelopable, vacant-commercial and land-only. The majority of the land use to be impacted would be undevelopable parcels.

Alternative D:
Alternative D would be constructed as a controlled-access facility, allowing access to the roadway at three interchanges: U.S. 17, Maybank Highway, and Folly Road. Land use changes would be minimal along most of the alignment as the roadway would be elevated for the majority of its length, allowing travel over both existing infrastructure and natural features within the area. Alternative D would have two spurs connecting the road to Johns Island.

Spur A
Alternative D will use this interchange to connect with River Road and Maybank Highway. The first section of Spur A is a partial interchange located at River Road. Land use surrounding this interchange consists of vacant residential, land-only, undevelopable and residential. The majority of the land use surrounding this interchange to be impacted is vacant residential and residential. The second partial interchange for Spur A would be located at Maybank Highway. Land use surrounding this interchange consists of vacant commercial, commercial, undevelopable, agriculture and residential. The majority of the land use surrounding this interchange is residential, commercial and vacant commercial. There is potential for portions of the residential land use to be converted to commercial uses, as this area has high visibility that appeals to commercial and retail-type businesses.
**Spur B**

Alternative D will use this interchange to connect with River Road, south of Maybank Highway. Land use surrounding this interchange consists of commercial, vacant residential, residential and agricultural. The majority of the land use surrounding this interchange that would be impacted is commercial, vacant residential and residential. There is a potential for portions of these residential land use types to be converted to commercial uses due to the proposed interchange.

**Alternative E:**

Alternative E would be constructed as a controlled-access facility, allowing access to the roadway at three interchanges: U.S. 17, Maybank Highway, and Folly Road. Land use changes would be minimal along most of the alignment as the roadway would be elevated for the majority of its length, allowing travel over both existing infrastructure and natural features within the area.

**Spur A**

Alternative E will utilize this interchange to connect with River Road and Maybank Highway. The first section of Spur A is a partial interchange located at River Road. Land use surrounding this interchange consists of vacant residential, land-only, undevelopable and residential. The majority of the land use surrounding this interchange to be impacted is vacant residential and residential. The second partial interchange for Spur A would be located at Maybank Highway. Land use surrounding this interchange consists of vacant commercial, commercial, undevelopable, agricultural and residential. The majority of the land use surrounding this interchange is residential, commercial and vacant commercial. There is potential for portions of the residential land use to be converted to commercial uses as this area has high visibility that appeals to commercial and retail-type businesses.

**Alternative F:**

Alternative F would be constructed as a parkway facility with limited controlled-access. The parkway would be built with a greater percentage of the roadway at grade than any of the controlled-access facilities and would provide more connections to the existing roadway network. Therefore, it may induce more land use changes than the controlled-access facilities.

On Johns Island, this alternative would provide two connector roads tying into River Road, one north of Maybank Highway and one south of Maybank Highway. The land adjacent to the connector roads falls within the UGB and has the potential for change to other land uses. However, with county and city zoning and the UGB in place, the area is regulated and any land use changes would require a formal process that includes public involvement and input from the communities prior to changes for existing land use designations.

On James Island, this alternative would intersect Riverland Drive and several other local roads. Alternative F would incorporate the existing Central Park Road as part the alignment for this alternative. Local access and at-grade intersections may provide a higher appeal to commercial and retail facilities. This effect could promote the conversion of existing non-commercial properties to commercial and retail land uses.

**Connector A**

Connector A is an at-grade facility connecting to River Road, north of Maybank Highway. Land use sur-
rrounding this interchange consists of vacant residential, land-only, undevelopable and residential. The majority of the land use surrounding this interchange to be impacted is vacant residential and residential.

**Connector B**
Connector B is an at-grade facility connecting to River Road, south of Maybank Highway. Land use surrounding this interchange consists of vacant residential, land-only, undevelopable and residential. The majority of the land use surrounding this interchange to be impacted is vacant residential and residential.

**Alternative G:**
Alternative G would be constructed as a parkway facility with limited controlled-access. The parkway would be built with a greater percentage of the roadway at grade than any of the controlled-access facilities and would provide more connections to the existing roadway network. Therefore, it may induce more land use changes than the controlled-access facilities.

On Johns Island, this alternative would provide two connector roads tying into River Road, one north of Maybank Highway and one south of Maybank Highway. The land adjacent to the connector roads falls within the UGB and has the potential for change to other land uses. However, with county and city zoning and the UGB in place, the area is regulated and any land use changes would require a formal process that includes public involvement and input from the communities prior to changes for existing land use designations.

On James Island, Alternative G would intersect Riverland Drive and several other local roads. Local access and at-grade intersections may provide a higher appeal to commercial and retail facilities. This effect could promote the conversion of existing non-commercial properties to commercial and retail land uses.

**Connector A**
Connector A is an at-grade facility connecting to River Road, north of Maybank Highway. Land use surrounding this interchange consists of vacant residential, land-only, undevelopable and residential. The majority of the land use surrounding this interchange to be impacted is vacant residential and residential.

**Connector B**
Connector B is an at-grade facility connecting to River Road, south of Maybank Highway. Land use surrounding this interchange consists of vacant residential, land-only, undevelopable and residential. The majority of the land use surrounding this interchange to be impacted is vacant residential and residential.

5.2.3.1 **Identical Interchanges for all Reasonable Alternatives**
All of the build alternatives require the two existing interchanges at Mark Clark Expressway/U.S. 17 and Folly Road/James Island Connector to be modified. Since the interchanges already exist, changes to the land use types for these areas should remain consistent with existing and future land use plans for the area. The modification to these interchanges would be minor compared to a new location interchange. New location interchanges have the potential to encourage commercial and retail development due to the high visibility and increased access to the surrounding parcels of land.
**Mark Clark Expressway/U.S. 17 Interchange**
All build alternatives would require the modification of this interchange. The interchange configuration would also be the same for each of the seven build alternatives. The majority of the land use at this intersection is commercial and retail with residential areas south of U.S. 17. This area has been heavily developed and further development would only consist of infill development or revitalization, which is consistent with land use plans.

**James Island Connector/Folly Road**
All build alternatives would require the modification of this interchange. The interchange configuration would remain the same for Alternatives A through E. Alternatives F and G would be an at-grade intersection and would vary slightly due to how the alignment connects to the existing James Island Connector. Land uses within this area consist mainly of residential, apartments, commercial and retail land use types. This area has already been developed. Further development would only consist of infill or revitalization, which is consistent with land use plans. No major changes in land use are anticipated.

<table>
<thead>
<tr>
<th>Table 5.3</th>
<th>Land Uses to be Converted by the Reasonable Alternatives</th>
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<tbody>
<tr>
<td>Alternative</td>
<td>Acres within Corridor to be Converted</td>
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<tr>
<td>Controlled Access Facilities</td>
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<tr>
<td>Alternative A</td>
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<tr>
<td>Alternative B</td>
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<td>Alternative C</td>
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<tr>
<td>Alternative E</td>
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<td>Parkway Facilities</td>
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<td>Alternative F</td>
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</tr>
<tr>
<td>Alternative G</td>
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</tr>
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*Source: Charleston County Tax Parcel Data (GIS)*