CHAPTER 3
VISION DEVELOPMENT: SETTING CONTEXT
Setting Context

General

The economic, social and environmental context of the Neck area was an essential foundation for defining the vision for the Partnership for Prosperity Master Plan. This context not only included the physical conditions that define and influence the area, but the policy, historical, and socio-economic conditions in the study area and surrounding region as well. There were numerous plans and studies that also provided guidance for the vision and master plan, either prepared solely for sites or neighborhoods within the Neck area or with the Neck area as a component in a larger regional plan. That detailed knowledge base helped answer the questions “Where are we now?” and “Where are we going?”

Existing Plans, Policies, and Projects Review

A variety of planning documents were reviewed to help understand existing conditions and community issues within the project area. These documents provided area context, reference data, and systems level inventories. The goal of this review was two-fold; first, to become familiar with key initiatives, and second, to find themes and integrating elements among these documents.

Several common themes emerged from these documents that helped form key guiding principles important to the development of a vision and Master Plan for the Neck area:

Heritage – the area’s unique and treasured cultural resources need to be an integral part of land use decisions and should be preserved and protected from the potential negative impacts of growth and development, such as displacement of established lower income residents (gentrification) and further division of neighborhoods with transportation facilities. Residents should be able to take pride and ownership of a cohesive community.

Growth – Blighted conditions, a lack of locally-oriented services or other elements that detract from the area’s character and image need to be eliminated. Urban infill and redevelopment consisting of mixed use development with a variety of housing, jobs, recreation, neighborhood services, and civic amenities needs to be encouraged along existing and proposed transportation corridors.

Transportation – Major transportation corridors need expanded travel choices – from regional freight service to better organized freight rail and trucking operations. Access to jobs, retail and transit service depends on eliminating gaps and overcoming barriers in the bicycle and pedestrian network. Vehicular traffic should be dispersed and walking made easier by creating smaller scale streets running parallel to the north-south central transportation spine and creating more east-west street connections similar to older neighborhood patterns. Key intersections should become distinctive gateways that provide economic opportunities to attract new business, industry, and residential uses.

Natural Systems – to the greatest extent possible, protect, preserve, and enhance the environment and existing natural resources. Integrate and connect green spaces and parks at all scales, including regional, community, and neighborhood projects. All families should be able to enjoy and benefit from these spaces, using them for both recreation and health.

The summaries below briefly describe the documents reviewed and highlight some of the key material relevant to the vision:

The BCD Regional Scan (2008)

The BCDCOG created an initiative to outline a blueprint (Our Region, Our Plan) for future growth and conservation within the Tri-County region. The goal of the initiative is to develop a vision to serve as a strategic long-range planning guide for the economic, environmental and social health of the region.

As the first part of this initiative, the BCD Regional Scan presents an overview of key regional trends and drivers affecting the future of the region. These key elements include land use and development, environment, transportation, public services, economics, and other aspects that have regional importance or need to
be addressed on a regional basis.

The BCD Regional Scan serves to make the public aware of these elements and the regional patterns of change that currently influence or in the future will influence the quality of life in the region.

As the Neck area sits squarely in the middle of the Tri-County area, its location alone made the BCD Regional Scan information relevant to the project. Maps of “Development in the New Neck,” “Existing and Proposed Port Terminals,” and “Existing and Proposed Transit Corridors” were all useful information incorporated into systems analysis base maps.

The Neck Plan provides a framework for development in the southern portion of the Neck study area. It includes three primary sections – an Urban Plan, a Zoning Strategy, and an Implementation Strategy – as well as a preliminary infrastructure assessment that describes public investments that will be needed to support the plans.

The primary goals of the Neck Plan address the physical plan – provide quality development opportunities, create synergistic activities, eliminate blighting conditions, maximize private sector leverage of public infrastructure, create additional affordable housing opportunities, and mitigate or eliminate conflicts between residential and non-residential uses while enhancing community viability.

The design guidelines included in the Neck Plan generally mirror those of the larger Neck area encompassed in this Master Plan – preserve and protect existing assets, capture lost value of the transportation spine, disperse traffic and make walking and bicycling easier, create mixed-use service centers, and maintain a variety of opportunities.

There were several specific areas mentioned in the Neck Plan that were noted and subsequently considered in the project issues and opportunities analysis, including Laurel Island development, Magnolia development, and Rosemont expansion and redevelopment.

LAMC Area Revitalization Plan (2010)
The LAMC (Low Country Alliance for Model Communities) Area Revitalization Plan is a grass-roots comprehensive planning effort led by seven environmental justice neighborhoods (Accabee, Chicora/Cherokee, Five Mile, Howard Heights, Liberty Hill, Union Heights, and Windsor) in the City of North Charleston. Its goal is to develop a unified community vision and implementation strategy for long-term growth and equitable redevelopment within the study area.

The first part of the LAMC Area Revitalization Plan is a community profile, which lays out current conditions and challenges facing the LAMC neighborhoods. The following subjects are covered – overview, demographics and economics, transportation and infrastructure, environmental, housing, commercial real estate, urban design and land use, education, public safety, and policing. Each subject is summarized by a SWOT analysis covering the major strengths, weaknesses, opportunities, and threats.

The second part of the LAMC Area Revitalization Plan is the final plan, which presents major recommendations and conclusions developed from the community profile and subsequent public meetings. The following subjects are covered – overview, study area analysis, community vision and goals, redevelopment priorities, and implementation plan. The final plan presents different scenarios for community reinvestment, housing, mixed-use, and recreational development that would be accessible across the LAMC communities, including major corridor improvements to facilitate that accessibility. A work plan is included that identifies the priority, responsibility, schedule, and resources for the plan’s key elements.

The LAMC Area Revitalization Plan is relevant to the Neck Master Plan because it creates a community profile and introduces values and concerns for large residential areas. In doing so, it provides a strong planning foundation for developing framework and implementation strategies for the Master Plan project as a whole. The LAMC Revitalization Plan is considered a completed planning document, and thus, the Neck Partnership for Prosperity work will be coordinated to help advance key actions and strategies that serve to implement elements of the LAMC plan.

There were several specific areas mentioned in the LAMC Area Revitalization Plan that were noted and subsequently considered in the Neck project issues and opportunities analysis, including naval complex, ports, Noisette, Mixson, Magnolia/Ashley River Center, and neighborhood revitalization studies, port-related roadway improvements, public amenities, environmental and industrial sites, proposed redevelopment projects, existing and planned schools, model block programs, and network improvements.
The Charleston County Comprehensive Plan (2008)

The Charleston County Comprehensive Plan is the guide for public decision-making and the future vision for preservation and development in Charleston County through the year 2020. The various elements of the Plan are designed to accomplish this vision by articulating goals for the future regarding the pattern, quality, and intensity of land uses, the provision of public facilities and services, economic development, availability of housing, and preservation of natural and cultural resources.

The Charleston County Comprehensive Plan also establishes strategies, actions, and implementation tools to enable the County to achieve the vision set out in the Plan. The components of the Plan focus on real actions the County can achieve given the appropriate time and resources. The strategies of the Plan elements are tied together in a comprehensive manner and are executed through both land use and priority investment strategies.

While the maps and policies associated with the document address planning in a larger scale, there are several positive takeaways for the Neck area. The maps not only indicate community facilities and economic development sites in the project area, but show how those facilities fit into a larger network that services the County. The maps also indicate where more detailed planning may be needed. By showing these relationships and information, local jurisdictions can ensure coordination and consistency in prioritizing investment strategies. Many of the listed strategies such as “coordinate land use patterns with transportation, housing, employment and retail development to provide communities and neighborhoods where people can live and work” are relevant to the goals of the Neck Area Master Plan and were used as building blocks throughout the project.

City of Charleston Comprehensive Plan (2011)

The City of Charleston Comprehensive Plan contains the future vision for preservation and development in the City through the year 2020. It is a document created by the citizens that articulates the values and goals of the City and serves as a guide for decision makers and a tool for managing community change to achieve a desired quality of life.

The Plan is a statement of community values and goals, and the 2010 Plan update was prompted by several factors, including new trends and opportunities (growth and sprawl, redevelopment and infill, and planning trends), sustainability (in planning and in natural resources), changes in the community (from new U.S. census Bureau information), and accomplishments of the previous decade (providing improvements in the quality of life).

The maps and policy associated with the Plan are larger in scale and the information included on them has also been included on a smaller scale in studies specifically of the Neck area. However, maps of “Peninsula Land Use,” “Commuter Rail Study,” and “Bike/Pedestrian System” were all useful information incorporated on systems analysis base maps.

City of North Charleston Comprehensive Plan (2008)

The City of North Charleston Comprehensive Plan will help guide the City in its arrangement of land uses and transportation systems so that it can continue its role as a strong, regional economic leader, while also retaining its natural resources and cultural assets. In addition, the Plan will help the City meet housing, public service, and facility needs as it continues to grow and develop. Equally important, it sets guidelines and strategies for redeveloping older areas of the City that have declined in population and investment over the years.

The components of the Plan focus on actions the City can achieve given time and resources. It is a policy document for future development in the City and is based not only on planning principles but extensive public participation.

The maps and policies associated with the Plan are larger in scale and the information included on them has also been included on a smaller scale in studies specifically of the Neck area. However, the map of “AICUZ Impact Zones” (clear zones adjacent to the airfield) was useful information incorporated on systems analysis base maps.

Charleston Area Transportation Study Long Range Transportation Plan (CHATS LRTP) (2010)

BCDCOG in its role as the metropolitan planning organization (MPO) for the Tri-County Region urbanized area, initiated the update of the CHATS Long-Range Transportation Plan in 2010 for the horizon year 2035. The vision of the Plan was to retain the BCD Region as a special place while providing accessibility and mobility for people and goods by developing and maintaining an adequate, safe, and balanced transportation system.
The Plan identifies transit strategies that seek to enhance mobility options, ease traffic congestion, and mitigate transportation impacts for all residents of the region. Strategies related to transportation are as follows:

- **Existing Transit Service Enhancements**
  - Continue to enhance commuter service from outlying areas
  - Continue to expand service oriented special generators
  - Expand community-based services in low-density areas
  - Implement Intelligent Transportation Systems (ITS) enhancements at major transit stops and investigate the potential of designated rights-of-way for fixed guideway service

- **Existing Roadway Improvements in the Neck area**
  - I-26
  - I-526
  - I-26/I-526 Interchange
  - Dorchester Road
  - International Boulevard
  - Montague Avenue
  - Micheaux Parkway

- **Facilities, Equipment, and Amenities**
  - Complete the North Charleston Regional Intermodal Center
  - Examine the role of Transit Oriented Development (TOD) as a transit hub to support nodal land use plans
  - Provide transit amenities throughout the region
  - Further coordination of opportunities between CARTA and Tri-County Link
  - Stronger coordination of land use and transportation planning

- **New Modes and Technologies**
  - Develop dedicated park-and-ride facilities
  - Study the potential implementation of fixed guideway service
  - Continue discussions and preserve rail corridor capacity for potential commuter rail service
  - Examine critical corridors for Bus Rapid Transit (BRT)
  - Explore potential water shuttle connections

- **Institutional and Funding Strategies**
  - Maintain a comprehensive marketing program
  - Actively participate in promoting transit-supportive land use

Pursue local funding outside of Charleston County

Enhance security as needed

The vision for the Neck area is consistent with CHATS’ long-range plan (see Figure 3.1 CHATS 2035 LRTP Candidate Projects).
3.1. Some of the concepts presented in this Neck Area Master Plan directly support a number of the recommendations made by the CHATS LRTP, including progressing plans for BRT and commuter rail, along with completing the North Charleston Intermodal Center. The strategy to enhance existing transit services is taken and expanded upon in the Neck vision.

**BCDCOG Alternatives Analysis (2012)**

As a follow-on to earlier commuter rail planning efforts, BCDCOG initiated an Alternatives Analysis (AA) process in 2012 for the US 52 and I-26 corridors to comply with federal requirements for making major transit investments. The merits of various transit alternatives will be weighed against study goals, and various data will be used to compare the alternatives. A locally preferred alternative (LPA) will be established and the study will provide decision-makers with the information and next steps needed to pursue potential New Starts and Small Starts funding. The LPA may consist of a no-build or Transportation Systems Management alternative, or it could entail some form of fixed guideway transit. The AA will likely consist of a more detailed engineering study that includes some of the transit concepts presented in this Neck Area Master Plan.

**Charleston Metropolitan Area Commuter Rail Feasibility Study (2006)**

Two commuter rail corridors have been identified for further study – Summerville/Charleston (predominantly along the Norfolk Southern corridor) and Moncks Corner/Goose Creek/ Charleston (predominantly along the CSX Transportation corridor). The BCDCOG initiated the first phase of the Charleston Metropolitan Area Commuter Rail Feasibility Study in 2006 to investigate the potential for a future commuter rail service stretching from the peninsula to Summerville along existing Norfolk Southern rail lines. The study outlined the framework that continues to guide policy decisions.

Building upon the 2006 study, the Charleston Metropolitan Area Commuter Rail Feasibility Study - Phase 2 analyzed potential technologies, forecasted future ridership, developed a financial strategy, and determined the feasibility of a potential passenger rail service along the CSX Transportation main line along the US 52 Corridor through the Goose Creek and Moncks Corner areas. The study identified the following next steps: encourage transit supportive zoning and design standards in the rail corridor; perform an Alternatives Analysis to address the concerns over each type of mode and location of the service, and provide the ability to pursue federal funds; and support regional participation in CARTA Express bus service.

**Joint Base Charleston JLUs (2008)**

The Charleston Air Force Base (AFB) - Naval Weapons Station (NWS) Joint Land Use Study promotes communications with tri-county municipalities and provides land use recommendations to local governments in an effort to promote compatible civilian development near military installations and reduce operational impacts on adjacent civilian lands.

The primary study area extends one mile from the Air Installation Compatible Use Zone (AICUZ), with a one-half mile buffer around the boundaries of the NWS. The study area includes the horizontal surface flight area of the AFB, which extends 30,000 feet from the runways. The AICUZ area extending from Runway 33 (referred to as the SE quadrant) overlays a portion of the Neck study area in the Mall Drive catalyst area and the recommendations from the study should be considered for both accident and noise potential when developing conceptual designs.

The study recommends certain types of development within the flight area, including no development within the Clear Zone Surface; industrial and manufacturing uses, communications, wholesale, and recreation within the Accident Potential Zone I; and low density residential, personal and business services, and low intensity commercial/retail uses within the Accident Potential Zone II. The study recommends that the City of North Charleston adopt an AICUZ overlay zone to implement these development restrictions, and although the study is referenced in the Comprehensive Plan, no corresponding overlay district has been adopted in the zoning code.

While it is clear that other uses than those listed above have been developed within the Mall Drive AICUZ, recognition of these recommendations and restrictions will be important as concept plans for this portion of the Neck study area are developed.
Our Region Our Plan (2012)

Our Region Our Plan is the BCDCOG vision plan for the tri-county region for the next thirty years. It provides a broad context for infrastructure improvements, growth, and development that can be used by both public and private entities as they contemplate decisions that will shape the future of the region.

The vision is formed around a framework of centers and open spaces, with corridors providing connections between the two. It draws upon placemaking principles, such as unique character of place, the natural environment, historic preservation, landscaping, variety of place, public realm, transportation options, affordability, walkable streets, low-impact parking, human scale, and economic development to provide a sustainable future with choices and opportunities for all residents.

Although the vision maps cover the tri-county region, the peninsula is a main focus within the larger networks and it is easy to see how the Neck area plays an important role in the future of the region. The Plans Scenario map, which indicated a variety of transit routes and ferry service along the Ashley River, and the Green Infrastructure map, which indicates new centers adjacent to The Neck area, provided useful information during the project analysis.

The strategy concludes with a narrative of vital projects, programs, and activities that can address the needs of the tri-county area. Initiatives discussed include the Charleston Regional Development Alliance’s Opportunity Next and Regional Economic Scorecards, the Trident workforce Investment Board’s five Year Strategic Plan, and the BCDCOG Our Region Our Plan. These initiatives should be integrated into the framework and development analysis done for the Neck study area.

Existing Conditions Inventory

This section provides a generalized summary of existing conditions within the Neck study area. This information served as part of the foundation for the planning effort and helped ensure that all opportunities and challenges for future change were considered as part of the development and evaluation of alternatives.

The information below was generated through on-the-ground field reconnaissance and research, use of published documents and data, and discussion with local government and agency staff. Refinements were made using community input and recommendations. While every effort was made to be complete and accurate, some inventory categories may not reflect all field conditions.

Land Use and Zoning

Land use is designed to guide future development and it acts as a master plan for a municipality to clarify expectations to existing and future landowners and development. Land use maps are a graphic representation of physical uses of the land and usually indicate both current land use and plans for future land use. Land use maps identify land uses by general category and typically include such categories as residential, industrial, commercial, conservation, and civic uses.

The basic purpose and function of zoning is to divide a municipality into residential, commercial, and industrial districts that are for the most part separate from one another, with the use of the property within each district being reasonably uniform. Within each of these three main types of districts there generally will be additional sub-districts (or zones) with specific restrictions that can be quite detailed. Regulations may restrict areas to single-family homes or to multi-family dwellings or townhouses. In areas of historic or cultural significance, zoning regulations may require that certain features be preserved.

Zoning maps are a graphic representation of the boundaries for which a certain set of standards or regulations have been adopted. Zoning maps typically provide predictability for the residents and development community as to what
type of land uses may be expected and allowed within each zoning district. Generally speaking, no building, land, structure, or premises shall be erected or used except in the conformity with the regulations for the use districts in which they are located.

City of North Charleston Zoning

In the City of North Charleston, the zoning districts below are located within the Neck study area, with the R-1 and M-2 districts being the most prominent (see Figure 3.2):

- **R-1, Single-Family Residential District.** This district allows medium density single-family residential uses.
- **R-1A, Low to Medium Density Residential District.** This district provides low to medium density single-family residential uses, including mobile homes.
- **R-2, Multi-Family Residential District.** This district allows medium to high density residential uses, including R-1 uses and multi-family dwellings.
- **R-3, Mobile Home Residential District.** This district allows medium density residential uses, including R-1 uses, mobile home parks, and a single mobile home on a lot of record.
- **OD, Office District.** This district allows for infill office and institutional uses serving the neighborhood and citywide by allowing professional offices separate from the intensive development of commercial and industrial development.
- **ON, Neighborhood Office.** This district permits business and professional offices and all R-1 uses.
- **B-1, Limited Business District.** This district encourages the formation and continuation of a quiet and uncongested environment for compatible professional business offices together with certain residential and neighborhood commercial uses which will not adversely affect adjacent residential areas.
- **B-2, General Business District.** This district is reserved for general business purposes with particular consideration for general commercial development.
- **B-3, Commercial, Recreational, and Highway Oriented Usage.** This district allows suitable highway oriented uses and social and recreational facilities which may not be compatible within one thousand feet of a residential development.
- **CRD, Commercial Redevelopment District.** This district allows for medium density business development.
- **M-1, Light Industrial District.** This district provides areas for commercial, warehousing, transportation, and certain light manufacturing activities.
- **M-2, Heavy Industrial District.** This district provides areas for commercial, manufacturing, storage, and transportation-related activities.
- **PD, Planned Development District.** The intent of this district is to encourage flexibility in the development of land in order to promote its most appropriate use; to improve the design, character, and quality of new development to facilitate the adequate and economical provision of streets and utilities; and to preserve the natural and scenic features of open space.

City of Charleston Zoning

In the City of Charleston, the zoning districts below are located within the Neck project area, with the HI and SR-1 districts being the most prominent (see Figure 3.3):

- **C, Conservation District.** This district is designed primarily to protect and encourage the appropriate use of marshlands, forested areas, scenic areas, and agricultural areas that are not likely to be developed for urban purposes.
- **SR-1, Single-Family Residential District.** This district allows one-family detached dwellings with a maximum density of 4.8 units per acre.
- **SR-2, Single-Family Residential District.** This district allows one-family detached dwellings with a maximum density of 7.3 units per acre.
- **DR-1 and DR-1F, Diverse Residential Districts.** These districts allow multi-family residential (3 or more) dwellings, one-family attached dwellings, and single- and two-family dwellings, with a maximum density of 19.4 units per acre. The BZA may approve fraternity houses, sorority houses, dormitories, and homes for the elderly as special exceptions.
- **DR-2 and DR-2F, Diverse Residential Districts.** These districts allow multi-family residential (3 or more) dwellings, one-family attached dwellings, and single- and...
two-family dwellings, with a maximum density of 26.4 units per acre. The BZA may approve fraternity houses, sorority houses, dormitories, and homes for the elderly as special exceptions.

**DR-3, Diverse Residential District.** This district promotes acceptable living environments for occupants of mobile home parks as well as occupants of mobile homes and manufactured dwellings on single lots outside of mobile home parks. The minimum lot size for a mobile home or manufactured dwelling on its own lot is one acre.

**DR-4, Diverse Residential District.** This district allows multi-family dwellings of 20 or more units for the elderly.

**DR-9, Diverse Residential District.** This district allows multi-family residential (3 or more) dwellings, one-family attached dwellings, and single- and two-family dwellings, with a maximum density of 9.0 units per acre.

**LB, Limited Business District.** This district provides a limited variety of commercial uses and services associated with neighborhood retail, financial, and office activities which are compatible with residential uses. The hours of operation for most permitted uses are between 7 a.m. and 11 p.m.

**GB, General Business District.** This district provides a broad range of commercial uses and activities. It is the most intensive commercial zoning district.

**BP, Business Park.** This district accommodates service type commercial, wholesale, storage, and light manufacturing uses with relatively limited external effects in a high quality environment. Uses which fit into this category are characterized by being low traffic generators, having no external environmental effects across property lines, and having all outdoor storage areas screened from adjoining rights-of-ways and properties.

**LI, Light Industrial District.** This district permits most commercial uses and low impact industrial uses which are compatible with surrounding commercial districts.

**HI, Heavy Industrial District.** This district provides a broad range of industrial uses. It is the least restrictive industrial zoning district.

**GP, Gathering Place District.** This district promotes mixed-use town, village, and neighborhood centers at major intersections or along traditional commercial streets. Diverse housing, mixed-use, pedestrian-oriented developments are permitted in this district.

**MU-1, Mixed Use District.** This district is intended to permit high density residential uses along with a limited variety of neighborhood commercial uses and services in urban areas of the city.

**MU-2, Mixed Use District.** This district is intended to permit high density residential uses along with a broad range of commercial uses and activities in urban areas of the city.

**MU-1/WH, Mixed Use 1, Workforce Housing.** This district is incentive based and is intended to permit high density residential uses with a mixture of housing opportunities, along with limited neighborhood non-residential uses and services in urban areas of the city.

**MU-2/WH, Mixed Use 2, Workforce Housing.** This district is incentive based and is intended to permit high density non-residential uses with a mixture of housing opportunities, along with a broad range of non-residential uses in urban areas of the city.

**PUD, Planned Unit Development District.** This conditional use district provides flexibility in the design of developments; to encourage comprehensive planning of major developments; to permit innovation in neighborhood design that includes incorporation of open space or other amenities; and to insure compatibility of developments with surrounding areas.

**Charleston County Zoning**

There are small pockets of unincorporated Charleston County land scattered throughout the Neck area, primarily within the City of North Charleston.
zoning districts for these lands are identified as follows:

**M-12, Mixed Style Residential 12 District.** This district consists of small lot single family development, as well as forms of attached and multi-family development suitable for close-in, high access areas. Traditional neighborhood style developments including a mix of residential, commercial, institutional and office development characterize the mixed style development.

**R-4, Single-Family Residential 4 District.** This district consists of low-density residential uses and provides single-family development on typical suburban lots.

**CC, Community Commercial District.** This district provides for a range of commercial uses including professional and other office uses, institutional uses (civic or community uses), medical, hospital, hospitality, retail, wholesale, and flex space located along highways, at major intersections, and in other highly accessible locations.

**I, Industrial District.** This district includes major industrial uses and industrial parks and encourages high-tech industries. Appropriate uses include manufacturing, distribution facilities, flex space, industrial support activities, ports, and transportation related facilities.

**NRM, Natural Resource Management District.** This district is for conservation management and consists of natural resource areas - typically highland area surrounded by marsh or water, islands, or fragile natural land.

While there are many parcels or sites where revitalization within the Neck area can begin to occur through development and redevelopment under existing zoning districts, existing regulations do not lend themselves to the mix of land uses and densities/intensities proposed later in this Master Plan for transit-oriented design within catalyst areas. The opportunity may exist to revise planning policies to allow more horizontal and vertical mixing of uses to create core catalyst areas with densities supportive of these multimodal transportation options.

**Urban Fabric**

Urban fabric loosely describes the physical form of a place, emphasizing building types, roads, open space, frontages, and streetscapes. It is often described by two typologies – the large scale or course grain network and small scale or fine grain network.

The Neck area, encompassing more than 25 square miles, contains examples of both topologies. These topologies are greatly influenced by the road and rail networks, which serve not only as framework pieces for accessibility and movement, but also as barriers to connectivity.

Course grain urban fabric consists of larger areas that do not provide many opportunities for connectivity. Typical features include oversized blocks, big box stores, multi-block projects, and manufacturing operations and associated services - uses that often do not feel integrated with the surrounding community, but instead seem imposed on the area. Areas of course grain urban fabric often act as barriers for all except those who are there for a specific purpose.

Areas of course grain urban fabric in the Neck area include a variety of industrial uses along the Ashley and Cooper Rivers, Centre Point, the former Naval base, and the Port.

Fine grain urban fabric consists of smaller blocks with a higher degree of connectivity. Buildings front the street and offer opportunities for social interaction. With more intersections, traffic is slower and safer. Fine grain urban fabric is not imposed on a community, but has evolved over time in a piecemeal fashion, responding and adapting to a variety of internal and external conditions, thus becoming a dynamic place reflective of the area’s changing needs.

Areas of fine grain urban fabric in the Neck area include Olde North Charleston, Park Circle, historic LAMC neighborhoods, Oak Terrace, Horizon Village, and the Hampton Park area.

While there is no one ideal form of urban fabric, the preferable and most resilient choice is usually the fine grain system that adapts and evolves over time. The Neck area has many different networks and patterns that have the ability to be memorable places and pedestrian friendly areas that can help revitalize and connect the community.

**Rail Network**

There are three railroad track systems running north and south through the Neck area (see Figure 3.4). These track corridors and yards are owned and operated by CSX Transportation (CSXT), Norfolk Southern Railway (NS), and the South Carolina Public Railways (SCPR). CSX owns and operates the Bennett Rail Yard and Cooper Rail Yard. Norfolk Southern owns and operates the Seven Mile Rail Yard. The existing rail lines are the result of several consolidations over time that have removed redundant trackage.

As shown on Figure 3.4, three rail lines enter the study area in the northwest corner of the study area. The green line is the Columbia-Charleston main track of
The Norfolk Southern Railway. It continues through the study area and terminates in downtown Charleston. The westernmost red line is the CSXT “A Line,” a primary track running from Northeastern US to Florida. It passes through North Charleston turning west, crossing the Norfolk Southern main track and exiting the study area across the Ashley River. The location where the two main tracks cross is known as SY Junction. The easternmost red line is the CSXT “S Line” which runs from Hamlet, North Carolina through Dillon and Andrews and passes the former Naval Base area on the west in North Charleston before joining the CSXT port line and terminating just north of the Columbus Street Terminal in Charleston. It is a secondary freight line. The other rail lines on the figure serve local industries, marine terminals of the South Carolina Ports Authority, private operators, and governmental installations.

There are four lines running north and south through the Neck area. Three of the four lines spring from or cross the CSXT “A Line” at or in very close proximity to SY Junction. The westernmost is the CSXT Downtown Lead which originates at the eastern end of the railroad’s Bennett Yard and runs parallel and adjacent to I-26 initially, eventually ending up parallel and adjacent to King Street on the west. This line serves a number of industries, the largest of which is Rhodia, Inc. This line terminates in the vicinity of Ford Ready Mix at Monrovia Street.

Lying between I-26 and Meeting Street initially are two rail lines, one belonging to CSXT (closer to Meeting Street) and the other to NS. The CSXT line is a remnant of predecessor Atlantic Coast Line’s track to downtown Charleston and the docks of the South Carolina State Ports Authority. The line has been truncated in the vicinity of Hackermann Avenue before reappearing at Cherry Hill Avenue and continuing to a junction with the SCPR at the northern boundary of the Columbus Street Terminal. The northern end of the line is the location of the CSXT intermodal terminal. The NS line is the original route of the South Carolina Canal and Rail Road Company constructed in the early 1830s. The NS line ends up in between King and Meeting Streets in the Neck area and continues on between the two roadways until it terminates at Spring Street in downtown Charleston. Columbus Street Terminal and Union Pier Terminal bound NS trains cross over the CSXT line described above near Covington Street for interchange of traffic with SCPR at the Columbus Street Terminal. The NS main line from that point to its downtown terminus is out of service. The joint port line is used by the NS BMW unit train six days per week and other port-bound trains of both railroads less frequently. The CSXT line lying along the eastern side of the peninsula enters the study area running parallel and adjacent to Spruill Avenue and then Meeting Street until it diverges on a route closer to the Cooper River and finally joins the joint CSXT and NS line en route to the Columbus Street Terminal. This rail line was owned by CSXT’s predecessor Seaboard Air Line and thus is designated the “S Line.” It is out of service except for the segment from the end of the Cooper Rail Yard to Kinder Morgan.

The Charleston region is served by AMTRAK, which operates three interstate passenger trains per day each way through the area. Station stops for the Silver Meteor and Palmetto lines occur in North Charleston near the Rivers Avenue/
Gaynor Street intersection on CSX tracks. The Auto Train also runs on this same route but does not stop.

The principal public complaint in regard to rail service in the Neck area relates to interference with vehicular traffic on the area’s principal roadways, namely King and Meeting Streets, and a lack of east/west connecting roadways due to the presence of the north/south rail lines.

The dominant heavy industrial use in the past along both rivers is rapidly disappearing; however, freight movement by rail will be an important component of the Neck area for many years to come. Although land use is evolving, with the Magnolia and Ashley River projects on the Ashley River and the Laurel Island and Noisette projects on the Cooper River, as well as many examples of smaller projects, historic neighborhoods and established residential areas, the need to provide separation of residential and rail uses remains as important as ever, and every effort should be made to mitigate for a variety of rail-related impacts and conflicts.

**Roadways**

Navigating between point A and B in the Charleston Neck area is challenging, at best. While the roadway network is comprised of interstate highways, major US highways, primary and secondary state highways and a network of collector and local streets, all that provide several alternate routes parallel to the Interstates, its users also must face a slew of challenges. This includes an overall lack of connectivity across the Neck area, a lack of adequate rail crossings, and numerous safety and accessibility concerns for bicyclists and pedestrians.

There are numerous strengths to the overall roadway network located within the Neck Area. There is an excess capacity of non-interstate facilities with good access to the two interstates. Additionally, there are several alternate routes running parallel (north/south) to the interstates. The established roadway network is already being utilized by multiple modes of transportation, including auto, truck, transit, bicycle and pedestrian. In many areas, there is an excess of right of way, which would allow for either expansion or redesign of that roadway. Finally, there are already improvements planned in connection with the Port Access Road and Stromboli Corridor, which will help in providing better overall regional mobility and local connectivity.

With the strengths of the roadway system come challenges as well. There is a general lack of connectivity between the Cooper and Ashley Rivers (east/west) in the Neck Area as a whole. Pavement conditions of existing roadways are often poor. Other problems include potholes and poor drainage (primarily in the southern portion of the Neck area). The facilities provided for bicyclists and pedestrians are inadequate in many areas, with little or no buffer between sidewalk and travel lane, and create safety issues. Bike lanes and facilities are lacking in many areas and in many cases where sidewalks are present, they are not wide enough. Other challenges facing the roadway network are a lack of adequate access to existing and developable properties and a lack of safe access to transit stops.

With rail traffic continuing to be a major influence in the area, there is a definite need for safe, at-grade crossings. While the majority of major roadways have warning lights and gates at rail crossings, there are many crossings where neither is present.

The major north-south roadways throughout the Neck area are I-26, US 52 (Meeting Street/Carner Avenue/Rivers Avenue) and US 78 (King Street). Interstate 26 is the true “spine” of the Neck Area, connecting Charleston to North Charleston, as well as to I-95 and the rest of South Carolina. It is congested during peak hours of the day, although daily volumes have been decreasing through the Neck Area. There is some widening of I-26 in progress as a result of an Environmental Assessment, including the addition of one lane each way, the replacement of six bridges and the reconfiguration of two interchanges. Transportation on the US highways is in relatively low demand, with capacity generally exceeding measured traffic volumes. Conditions along many of the US highways, including US 52, vary as one travels along them. For instance, US 52 at I-526 is a divided, four lane roadway with good pavement condition, 12-foot travel lanes, occasional sidewalks, and suburban development; while US 52 at Stromboli Avenue is an undivided, four lane roadway with poor pavement condition, 10- to 11-foot travel lanes, sidewalks and industrial development.

Montague Avenue is one of the main east-west connections in the Neck area.

East-west connectivity is often lacking throughout the Neck area. Due to the presence of major north-south railroad corridors throughout the peninsula and their restricted number of crossings, there are not adequate east-west routes to provide sufficient options for local circulation. The main east-west connections are I-526; Cosgrove Avenue, connecting West Ashley to Spruill Avenue; and Montague Avenue, connecting Dorchester Avenue on the west to Virginia Avenue on the east.

The lack of connectivity places greater traffic pressure on the interstate system, adds congestion with a mixture of truck and auto traffic on other roadways like Montague Avenue, and encourages cut-through traffic in neighborhoods when trains or traffic accidents disrupt the flow of the main roadway network.

Montague Avenue is one of the main east-west connections in the Neck area.

The lack of connectivity places greater traffic pressure on the interstate system, adds congestion with a mixture of truck and auto traffic on other roadways like Montague Avenue, and encourages cut-through traffic in neighborhoods when trains or traffic accidents disrupt the flow of the main roadway network.
**Setting Context**

While the roadway network within the Neck area has its share of challenges, there are also several opportunities that will help it rise above those challenges. The first is the excess capacity of non-interstate facilities and an excess of right of way along many roadways. Through the use of road diets, the addition of bike lanes, the widening of sidewalks, and in some cases, the expansion or redesign of the roadway, many roads will feel more comfortable to motorists, while providing needed facilities for those who rely on means of transportation other than a car. Improvements to facilities, such as fixing drainage issues and potholes, will make the roads easier and safer for all to use. Finally, the majority of future planning projects in the Neck area are in their early stages, which allows for a comprehensive approach to the design of new or improved roadways.

**Transit**

The primary public transportation provider in the Neck study area is the Charleston Area Regional Transportation Authority (CARTA), which operates approximately 20 bus routes and over two hundred miles of route service in the Tri-County area. CARTA is an independent authority organized under the laws of South Carolina, and is a designated recipient of federal transportation funds. Tri-County Link is the rural public transportation provider in the region, offering demand response service for those who are transportation disadvantaged due to age, disabilities, income or other factors.

**Transit Challenges**

Finding a sustainable funding source for public transportation has been challenging in the past. In 2004, CARTA experienced major service cuts in response to local funding constraints. A half-cent sales transportation tax in Charleston County was passed in November 2004, and proceeds became available in 2005. Subsequently, CARTA increased its level of service.

In recent years, transit funding has decreased due to lower sales tax revenue associated with the economic recession. CARTA has continued to work within its budget while continuing to search for additional funding sources from federal, state, county, local and non-traditional sources. The system continues to improve efficiency by evaluating non-performing fixed routes and making adjustments in service when necessary. CARTA recently completed a 5-Year Strategic Plan that established priorities for future system investments, projected near-term revenues and expenses, and provided a guide for the development of future annual budgets.

Tri-County Link faces the same fiscal challenges as other rural transit providers elsewhere in the country. The system is funded through a mix of federal grants (Section 5309, 5311, 5316 and 5317), Medicaid funding for Berkeley and Dorchester Counties, and contractual agreements with local businesses.

**Existing and Planned Facilities**

The site of the future North Charleston Intermodal Transportation Center is planned on Montague Avenue in the vicinity of Dorchester Road. This 30-acre site was purchased through funding from the Federal Transit Administration Section 5309, New Capital Investments. In 2010, CARTA constructed a park-and-ride lot consisting of 225 parking spaces for its express bus service. Ultimately, this Intermodal facility is envisioned to accommodate CARTA and Tri-County Link transit services, regional Amtrak and Greyhound service, as well as rental cars and taxi service to and from the Charleston International Airport.

There has been some discussion about moving the Intermodal Center to the existing Amtrak Station facility. In addition to a CARTA funding shortfall for development of the site, there have also been questions about whether trains stopping at the new station would block rail traffic at the CSX Bennett Yard. CARTA originally thought that trains could sit on the main line as they currently do at the existing Amtrak Station, but CSX has indicated that a spur would be needed for the trains, creating new questions about cost and additional land. No decision has been made at this time as to the final location for the Intermodal Center.

CARTA’s SuperStop is located at Rivers Avenue near Cosgrove Avenue and serves as the major transfer hub for service in North Charleston. The SuperStop consists of a small building and a covered area where buses pull through and load and unload passengers. The site is conveniently located for ease of access, but is small and does not offer space for future expansion.

**Current Services and Transit Travel Patterns**

Intercity service is offered by Greyhound, with a station on Dorchester Road, and Amtrak, with a station on Gowen Street near Rivers Avenue. CARTA and Tri-County Link are the transit providers operating in the Neck area.

**CARTA**

CARTA provides a network of fixed routes, commuter express routes, and paratransit service (Tel-A-Ride) accommodating the needs of residents in Charleston and North Charleston (see Figure 3.5 and 3.6). Fixed route services are provided daily as early as 5:45AM and as late as 9:30PM on certain routes. The North Charleston to James Island Express service (Route 1) serves commuters during the peak morning and afternoon periods.
A park-and-ride lot at the Super Kmart near the intersection of Rivers Avenue and Otranto Road in North Charleston provides an opportunity for regional commuters to drive to this location and ride the express route through the Neck into Charleston.

Route 10 - Rivers Avenue traverses the entire length of the Neck area and is the fixed route with CARTA's highest ridership, carrying 90,000 passengers per month. Additionally, CARTA's Route 11 – Dorchester/Airport serves more than 22,000 monthly passengers, and many more passengers use the other routes described in Figure 3.5.

**Tri-County Link**

Tri-County Link, formerly known as the Berkeley-Charleston-Dorchester Rural Transportation Management Association (RTMA), offers deviated fixed routes, commuter routes and contracted demand response services in the rural portions of Berkeley, Charleston and Dorchester Counties. Tri-County Link serves customers who reside in rural areas traveling to employment opportunities and other services. Tri-County Link service passes through the Neck area but does not stop. Passengers can transfer from Tri-County Link to CARTA at coordinated transfer points, including the North Charleston’s Super Kmart park-and-ride lot.

**Transit Markets and Travel Patterns**

Due to its central location within the region, the Neck serves both local transportation needs (to and from activities within the Neck area), as well as regional needs (travel through the Neck area destined for downtown Charleston and other points elsewhere in the region). Travel patterns in the Neck area are influenced by the fact that Charleston’s peninsula is a major employment center, institutional hub, and tourism destination for the region and southeastern U.S.

**Transit Markets**

An important consideration is the relative importance between transit needs at a neighborhood level (circulating within communities in the Neck), local level
transit opportunity. To attract choice users on their way to work, transit service
must provide an option with desirable travel times, such as the existing CARTA
express routes. The frequency of stops is reduced so that trip times can compete
favorably with automobile travel times. Centralized transit stations can be served
by neighborhood bus feeder services.

Transit service with frequent access is the most important criterion for the Neck
area market. A large portion of this market is made up of residents who depend
on transit as their primary mode of transportation and often must adapt their
daily schedules according to the availability of transit service. Thus, travel time
and convenience can often be secondary considerations. For this type of transit-
dependent population, a potential major transit investment needs to be justifiable
first and foremost on the ability of the investment to meet a high level of transit
demand, rather than creating a premium transit service that focuses on just speed
and convenience.

The following graphic illustrates the general balance between access and mobility
at the neighborhood, local and regional levels.

### Neighborhood
Emphasis on access with stop spacing every two blocks

### Local
Balance between local access and mobility with stop spacing every ½ to 1 mile

### Regional
Emphasis on regional mobility with stop spacing every 2 to 5 miles

The local market strikes a balance between access and travel time. By limiting
access to key destinations only, travel time can be reduced. This type of service can
be attractive to both transit-dependent customers and those who have a choice of
using either a private automobile or public transit. This market serves destinations
for work and non-work trips throughout the day. For the choice riders to value this
mobility option, transit travel times must be competitive with automobile travel
times. Providing more premium amenities also attracts passengers who have
a choice. Providing visible shelters would be beneficial since fewer stops are
needed to serve this market. The local market can coexist with the neighborhood
market. For example, services can be overlaid within transit emphasis corridors
and stop locations can be shared to allow for easy transfer.

Downtown Charleston offers a high concentration of traditional (8:00 am to
5:00 pm) jobs. The relatively high number of jobs in downtown Charleston and
regional travel patterns warrant additional consideration of transit services
oriented primarily around the commute-oriented regional market. As parking
becomes more constrained in the peninsula and fuel costs continue to rise, more
commuters will be encouraged to consider transit options. Focusing on a regional
market limited to the typical peak-hour commute trip may provide a viable

### INFRASTRUCTURE
The social, economic, and environmental well-being of the Neck area relies on
a strong infrastructure that effectively delivers core services to the community. When residents, businesses, and visitors enjoy a safe, supportive, stimulating
environment, they can feel secure and thrive, which in turn benefits the community
as a whole.

Primary utility drivers have the strongest influence on development activities and
include services such as drinking water, sanitary sewer, and stormwater drainage
that are usually operated by public entities. Infrastructure upgrades can be very
expensive and have long payback periods.

All drinking water (domestic, fire, and industrial) is provided by the Charleston
Water System (CWS). CWS currently meets the water demands of existing
land uses; however, future land uses will need to be modeled to the system's
capacity and distribution capabilities.

Sewer service is divided into two providers - either the Charleston
Water System or the North Charleston Sewer District. Both are large public
entities with significant infrastructure within the Neck area, including wastewater
treatment plants with current capacity. Infrastructure shortfalls are only expected
to involve improvements to the local collection systems to get sewage to the trunk
lines and treatment plants.
Stormwater is regulated by either the City of Charleston or the City of North Charleston, although development projects also require approval from OCRM-SCDHEC (Ocean and Coastal Resource Management, South Carolina Department of Health and Environmental Control). Stormwater issues are less about infrastructure and more about regulation. Land development is heavily influenced by the local governing regulations, which can control density, retention requirements, and water quality. While the regulations are complex and stringent, they should not be considered oppressive.

Secondary utility drivers include services such as electrical power, natural gas, telephone, and broadband that are usually operated by private, for-profit companies. If services are not available to a development site, these utilities can generally be constructed or upgraded to meet the future capacity needs.

Electric power and gas are provided by SCE&G. Telephone is provided by BellSouth. There are multiple providers of broadband service. Because the Neck area is generally developed, it is expected that these utilities are available and will not significantly affect future growth plans.

Utility infrastructure is not anticipated to be a significant obstacle to potential catalyst development in the Neck area at this time, as the area is generally fully developed and has an extensive existing utility network to support previous development associated with the Naval Base, industry and the current land uses. However, research into network capacities will still be needed as future alternative scenarios are proposed to assess the capacity and condition of services.

Open Space

Open space contributes to the health and quality of life for residents, promotes community sociability, provides a variety of recreational and educational activities for all ages, and helps preserve and enhance the natural environment.

Passive-based open space emphasizes enjoyment of a natural resource or activity and not competition or
participation. Facilities may include picnic tables, benches, observation areas, gardens, historic or cultural sites.

Active-based recreation uses promote participation and rely on the presence of facilities that enable certain activities to function. User-oriented activities may include baseball, football, soccer, basketball, and tennis. Resource-based activities include hiking trails and water-related pursuits.

A variety of open spaces exist within the Neck area (see Figure 3.7). These areas fall into several broad categories that have been described below. In order to fully understand how these open spaces function within the Neck area for planning purposes, facilities must not only be looked at individually, but how they connect and contribute to the system as a whole. A complete inventory of Open Space Facilities can be found in Appendix C.

PARKS
Parks are the basic unit of the open space system and serve as the recreational and social focus of the community. Parks should accommodate a wide variety of age and user groups, with a focus on both informal active and passive uses.

ATHLETIC FIELDS
Fields are areas prepared for the play of organized sports and games and include both grassed ground (such as baseball, softball, and football fields) and hard court areas (such as basketball, tennis courts, tracks, and hockey rinks).

PLAYGROUNDS
Playgrounds are designed to provide both active and passive uses, usually with distinct play areas and equipment for preschool (ages 2-5) and/or school age children (ages 5-12) and informal recreation for all ages. They are often located adjacent to an elementary school.

SHARED USE PATHS / TRAILS
For purposes of this inventory, trails (more accurately known as shared use paths) for recreational use include only off-road multi-use trails. On-street facilities are included in the bicycle/pedestrian network.

COMMUNITY CENTERS
Community Centers are indoor meeting places used by members of the community for cultural, educational, social, or recreational (such as swimming pools, gyms, and weight training facilities) purposes.

SPECIAL USE FACILITIES
The Special Use classification covers a broad range of recreation facilities oriented towards a single-purpose use.

NATURAL SPACES
Natural open space areas consist of landscape set aside for the purpose of preservation or conservation of natural resources, natural features, buffering, or scenic/aesthetic value.

SCHOOLS
Schools also provide a variety of open spaces for recreational purposes and are usually available for community use during non-school hours.

Although there are a variety of routes to get from one open space area to another along the street network, as discussed below in the bicycle/pedestrian system section, there are gaps in the network that prevent clear and safe mobility options for many users.

BICYCLE AND PEDESTRIAN NETWORK
There are many important nodes and destinations within the Neck area such as schools, neighborhood services, libraries and other civic uses, churches, parks, recreational facilities, and employment centers that provide focal points for non-motorized travel. An on- and off-road network provides connections for people who walk or bicycle for transportation. Convenient and attractive routes for pedestrians and bicyclists form a major component of the transportation system, but are often viewed as an afterthought rather than as a priority. This is especially true in the Charleston Neck area, where a large share of the population often must rely on transit or non-motorized means of travel to reach their destinations. Mobility choice is not complete until a full range of safe and convenient routes and facilities are available to all parts of the community. Connectivity is the foundation of a pedestrian-friendly environment and a commitment to support alternative modes of transportation.

Overall, the sidewalk system within the Neck area lacks connectivity, even making the assumption that it is not necessary to have sidewalks on every street – there are some areas that pedestrians simply are unlikely to walk (see Figure 3.8). There are many gaps in the sidewalk network. Missing sidewalks force pedestrians to either cross the road back and forth or travel in the right-of-way or shoulder of the road. This situation further impedes people with disabilities, the elderly and children, who are the most vulnerable road users. The majority of residential streets do not have sidewalks and shoulder areas are limited due to narrow streets and open drainage systems.

Where sidewalks do exist, they are often in disrepair or lack regular maintenance.
Potholes, recessed manhole covers, poor repair work, curb damage, overgrown vegetation, and other hazards affect the safety of bicyclists and walkers. Factors that contribute to the comfort of users include the width of sidewalks, quantity of curb cuts, lateral separation from the travel lane and presence of buffers (street trees, parked cars, planting strip), adjacent roadway volume and speed, pedestrian crossings (markings and widths), road signalization, shade, and security lighting.

Facilities for bicyclists are not consistent throughout the area (see Figure 3.8). There are few bicycle paths or trails and only short segments of roadways with bicycle lanes, notably on Rivers Avenue near McMillan Drive. Safety and accessibility for bicyclists represents a significant challenge, given the volumes and high speed of traffic passing through the street network, the lack of east-west street connectivity, and the number of railroad crossings.

The bicycle and pedestrian network is most complete in the southern areas of the Neck where the established neighborhoods provide a more continuous local street network. Newer development in the northern areas has been designed to accommodate bicyclists and pedestrians with roundabouts, shorter crossing distances, and high-visibility crosswalks. However, in the older neighborhoods, the streetscape has generally been designed without sidewalks, bike lanes, pavement markings or other accommodations for bicycling or walking.

**Goods Movement**

**Significant Roadways**

The current highway system for freight, goods, and services (see Figure 3.9) consists of the same network open to the general traffic. The absence of a planned “commercial vehicle friendly” network has contributed to commercial vehicle usage of numerous roadways and conflicts between the motor carrier, community and residents.

These conflicts represent concerns over truck-automobile road sharing, safety concerns related to truck-pedestrian interaction, environmental aspects of truck traffic on communities, and the presence of trucks on multi-use corridors without appropriate design. This latter point
draws into conflict pedestrian and bicycle traffic, with trucks operating on roads with narrow lanes, no sidewalks, or other designated surfaces to either segregate or manage truck and other traffic. In contrast, a “commercial vehicle friendly” roadway design may include some or all of the following:

- Thirteen (13) foot lanes;
- Absence of roundabouts or adequately designed roundabouts;
- Intersections with adequate turning radii;
- Reduction or absence of signaling, or where present, appropriately managed for truck traffic;
- Wide shoulders or pullouts for commercial vehicle usage, and
- Reduced grades and elimination of super-elevated curves.

These designs may be reflected in specific functional class designs and constructed roadways. The Federal Highway Administration (FHWA) describes the general functional classes of lesser design than interstate and freeways, as:

<table>
<thead>
<tr>
<th>Functional System</th>
<th>Services Provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arterial</td>
<td>Provides the highest level of service at the greatest speed for the longest uninterrupted distance, with some degree of access control.</td>
</tr>
<tr>
<td>Collector</td>
<td>Provides a less highly developed level of service at a lower speed for shorter distances by collecting traffic from local roads and connecting them with arterials.</td>
</tr>
<tr>
<td>Local</td>
<td>Consists of all roads not defined as arterials or collectors; primarily provides access to land with little or no through movement.</td>
</tr>
</tbody>
</table>

Source: [http://www.fhwa.dot.gov/environment/flexibility/ch03.cfm](http://www.fhwa.dot.gov/environment/flexibility/ch03.cfm), January 01, 2011

The resulting mobility and access evolves as traffic is disbursed on the three functional types, with arterials providing the greatest mobility with the least amount of access, through local roadways with greater access though significantly reduced mobility.

Historical purpose and diverse land use patterns adjacent to roadways in the Neck area have led to a variety of multiple functional class attributes along the length of many roadways. An illustrative corridor commonly referred to as a route used heavily by trucks, Azalea Drive, contains:

- Segments of two and four lanes;
- Presence and absence of shoulders;
- Lengths marked by greater and lesser distances between signaled and non-signaled intersections, and
- Flanked by adjacently assigned residential and industrial land use parcels.

With this combination of characteristics along the same roadway, its functional classification is not adequately described by a singular class designation. In recognition of this common occurrence, roadways are classified using a modified classification designation of interstate, a combination of freeway and arterial, and a combination of arterial and collector attributes, and local significant roadways.

The final class, local, is not illustrated. These segments are present in significant number in residential and densely built up areas, and their use in the Neck freight mobility plan would be expected to serve as the final “yard” access route.

**Significant Railroads**

Primarily servicing port traffic, both Class I railroads currently operate intermodal facilities, as shown on Figure 3.10. These provide the multi-modal movements between truck and rail. In all but Wando Welch, rail service is potentially available via the SC Public Railway. Many of the container movements to the existing intermodal terminals are performed by truck. The new Naval Base
A Master Plan for the Neck Area of Charleston and North Charleston

Terminal plan seeks a future location for an intermodal yard. Three potential sites are under consideration, though none have been selected (see Figure 3.10). These are Noisette, Clemson, and Macalloy. The Noisette and Clemson locations present some significant challenges with respect to land use compatibility and dispersion of truck traffic into more of the Neck area.

**Significant Port Facilities**

The South Carolina State Ports Authority (SCSPA) operates six facilities, five of which are located in the Port of Charleston, most in or near the study area. The sixth is located at the Port of Georgetown in Georgetown, SC, approximately 60 miles north of the Neck area. A new facility, the Navy Base Terminal, also in the study area, has been permitted and is under construction.

Commodity movement, by volume, through these combined ports is displayed in Figure 3.11 and represents a variety of industrial and commercial supply chains. These supply chains are not solely driven needs within the state, but needs identified with ventures several states distant. The attractiveness of these ports is a combination of geographical proximity and the efforts by the port itself to capture individual freight flows. The number two import commodity, auto parts, is an example of both cases. A significant portion of the category supports the in-state automotive manufacturer, BMW, in the Greenville-upstate area. Another major segment supports Mercedes Benz assembly operations in Tuscaloosa, AL. Though other ports, e.g., New Orleans or Mobile may provide closer proximity, a partner effort by the SCSPA, local carriers, and supply chain professionals have produced a transportation service product that satisfies the operation's need for reliable service at a cost point that, in combination, exceed those services from other ports.

Container traffic at the Port of Charleston has steadily increased as the world's reliance on this carriage type has grown (Figure 3.12 and Figure 3.13).
The Port of Charleston is preparing for the growth of trade in the coming decades through four strategic priorities – infrastructure development, cargo growth, productivity and efficiency and financial sustainability – that provide the framework for the port’s success. The location of the port facilities discussed below is shown in Figure 3.14.

Wando Welch Terminal

The Wando Welch Terminal is a common use terminal, primarily serving container traffic needs. The largest of the SCSPA ports, the terminal has 12 post-panamax cranes; four with 145 to 146 foot outreach and eight with 190 to 197 feet.

On-site rail service is unavailable. Not physically located on the peninsula, associated truck traffic with this terminal must funnel into the Neck area via I-526. Though traffic may subsequently exit the area by I-26, never accessing North Charleston’s local roadways, the containers seeking rail movement must do so to gain access to CSX or NS intermodal yards. One way truck trips to the CSX and NS intermodal yards are 14 and 13 miles, respectively. Other pertinent data is included in Figure 3.15.
North Charleston Terminal
The North Charleston Terminal is a 200 acre modern container handling facility with an on-terminal container freight station and rail yard. It has over 19,650 grounded and 2,300 wheeled container slots, as well as 380 refrigerated container slots and 14 interchange lanes/gates. The terminal’s six post-Panamax designed cranes can each perform 40 moves per hour, creating a truck turnaround time of just over 20 minutes. Four of the cranes have a 145 foot outreach and the remaining two cranes have a 196 foot outreach. Additional terminal layout information is presented in Figure 3.16.

Veterans Terminal
The Veterans Terminal is a 110 acre fully secured dedicated bulk, breakbulk, ro-ro and project cargo facility. It can provide long term outside storage in dedicated yard space, both paved and rock base. It also has covered sprinkler protected warehouse space, with over 42,800 square feet of cold storage space and 54,200 square feet of dry storage space. The mobile cranes can provide truck lift directly to ship, rail to storage yard or truck to storage yard. Additional terminal layout information is presented in Figure 3.17.
Setting Context

Union Pier Terminal

Though associated primarily with passenger service provided by the cruise ship industry, this terminal provides significant Ro-Ro and breakbulk capabilities. Serviced by SC Public Railways, much of the breakbulk and automobile traffic is served by a combination of truck and rail. It is set up to handle traditional non-container freight such as forest products, metals and equipment. Covered storage is available within the 500,000 square foot facility. This terminal is the closest to open sea sailing (less than one hour), though not significantly closer than Columbus Street. Additional terminal layout information is presented in Figure 3.19.

The City of Charleston and SC State Ports authority have created a conceptual plan for the redevelopment of Union Pier Terminal. The cruise terminal will move to

Columbus Street Terminal

The Columbus Street terminal provides Ro-Ro, breakbulk, and services to handle project cargo. Operating on 135 developed acres, of the total 155, this terminal has approximately 44 acres for Ro-Ro staging, 25 for breakbulk, and 11 for rail yard activities. There are three total cranes, with 2 of post-panamax design. These two have a 145 foot outreach with the third at approximately 114 feet. There are two warehouses providing a total of 259,149 square feet, with each having covered rail access. Additional terminal layout information is presented in Figure 3.18.

The City of Charleston and SC State Ports authority have created a conceptual plan for the redevelopment of Union Pier Terminal. The cruise terminal will move to
the north end of the site, which will improve traffic circulation and where parking, ground transportation and service areas can be accommodated adjacent to the terminal. The area will be reconnected with the historic downtown by extending existing city streets to the water, introducing mixed use and civic development, restoring the wharf and public landing, and creating a green natural shoreline. Current cargo operations will be relocated to other Ports Authority facilities. The proposed Concept Plan is presented in Figure 3.20.

Navy Base Terminal
The SCSPA is building a new port facility on the southern end of the former Charleston Naval Complex. It is the only new container terminal currently permitted and under construction on the U.S. East and Gulf coasts. It is designed exclusively for container cargo and will have cargo support marshalling areas, processing areas, and handling facilities. At build out, the 280 acre facility will increase the total container capacity in the Port of Charleston by 50%. The first phase, approximately 171 acres, is scheduled for completion in 2018, although that date could be moved up if container capacity is needed earlier. The terminal will have a dedicated port access road connecting to I-26.

Significant Air Cargo Facilities
In 2009, the aviation industry across all components contributed $731.5 billion to the national GDP\(^2\). The national aspects of aviation employment impacts are as significant, as shown on Figure 3.21.

The impact of just one component, aircraft manufacturing, is a key to the future economic growth of the Neck area.

Where airport operations service the needs of passenger traffic, an extension of that service provides transport for air cargo. Air cargo is used to accelerate transport times for high value or perishable items. High technology, e.g. computer components and cell phones can minimize capital investment by rapidly moving components and finished assemblies from the manufacturer or assembler to the consumer. In not simply presenting items for sale, these same entities employ air cargo to bring the latest technologies to the market quickly, meeting consumer demands more timely than water or other surface transport is capable. Perishable foodstuffs and flowers transported from one continent to another require timely service to minimize spoilage. Additionally, supply chain professionals utilize air transport to fulfill both planned transport of materials, assemblies, or finished goods to satisfy the overall supply chain plan, and to offset shortages until larger piece shipments may arrive by other modes.

This employment of air as a modal staple takes three distinct forms:

- **True air transport:** Goods are transported by aircraft from one airport to another, with a surface component providing first and final mile service. This may take one of two forms:
  - “Belly” transported in the cargo or luggage area onboard passenger aircraft
  - Dedicated, where aircraft is solely transporting goods
- **Truck-air hybrid:** Goods are transported for a segment of the total trip by truck, and then utilize aircraft for the remaining segment. Found in many of the common air carriers; FedEx, UPS, etc where transit time may still be met while engaging a lower cost alternative for a part of the total trip.
- **Deferred air product:** Not truly an air cargo type, by actual mode. This utilizes a schedule of truck movements to mimic high speed air transit, offering longer actual travel times, at lower than air rates, but overall, a transit time that is highly reliable and faster than traditional truck movement.

**Lower Hold or “Belly” Cargo**

Commercial airline service attracts and collects additional revenue through the taking onboard of goods transported in the luggage compartments. The reduction in overall passenger aircraft fleets, move to a more standard passenger airframe, and scheduled airfreight flights in the U.S. domestic market have a limiting effect on this overall market with about 10 percent of air cargo traveling in this manner.

The airlines serving the Charleston International Airport (CHS) as of June 30, 2011, include American Eagle, Continental, Delta, Southwest, Jet Blue, United Airlines and US Airways. Atlantic Southeast Airlines, Chautauqua, Comair, Compass, Pinnacle Air, and Shuttle America operate as regional carriers for Delta. Air Wisconsin, Chautauqua, Mesa Jet, PSA, and Republic Airlines are regional carriers operating as affiliates of US Airways. Atlantic Southeast Airlines, Express Jet, Mesa Jet, SkyWest, and Trans States are regional carriers operating as United Airlines. Continental Express Jet and Chautauqua are regional carriers operating as Continental. All of these carriers transport passengers and cargo to an air hub, prior to flying to the destination airport. This lack of direct flights is also a limiting factor to using air cargo at CHS.

**Dedicated**

This segment is serviced by aircraft transporting goods solely on the given trip. This form of locally available air cargo has increased in volume with the transfer from passenger to air mail service. These may be divisions of larger passenger, components of truck-air hybrid, or charter air carriers.

---

Truck-Air Hybrid

Although FedEx Express and UPS may be considered in the category of dedicated air carriers, these are also proponents of the hybrid model. Sold as air serviced cargo, within origin-destination pairings where the local station lacks shipment density, cargo is placed on trucks to be transported to the closest designated air hub. This network allows for near air transit times to be provided to all markets while maintaining a cost and invoice level that provides value to the provider and consumer.

Deferred Air

As noted, this is not a true air cargo product. Air forwarders, e.g. Forward Air, establish a more cost burdened schedule of truck movements to provide a highly reliable and timely product. Marketed as air, this is at the extreme margins of service oriented truck service. In the simplest form, this cargo is never placed aboard an aircraft.

Local Air Cargo Service

The North Charleston area is served by two airports; Charleston International Airport and the Charleston Executive Airport, as shown on Figure 3.22.

The latter is not located in the area, but provides air services for business aircraft and recreational flyers. No air cargo, charter or otherwise are operated from this field.

The Charleston International Airport maintains two areas in support of air cargo; a 21,000 warehouse for transload or storage and a concentrated area where air cargo and freight forwarders maintain individual operations. The airport is a joint base of US Air Force Airlift operations and civilian based aircraft. The USAF owns and operates all runways and associated taxiways, except where those taxiways are associated with the civilian terminal. The Charleston County Aviation Authority owns and operates these and the civilian terminal. As a result, this airport has extensive runway capabilities (see Figure 3.23).

With these capacities, the airport can handle up to the AN-124 (see Figure 3.24), a Russian-designed cargo aircraft, which is the largest production aircraft in the world. Though not associated with the current Charleston Boeing plant, Boeing does contract a Russian-based air cargo company operating AN-124’s to transport oversize aircraft components. This aircraft is also used to transport GE90 engines, turbofan engines manufactured by General Electric for Boeing’s 777 Airliner.

US domestic air cargo activity has experienced a decrease over the past two years. Reported in Boeing’s World Air Cargo Forecast 2010-2011, with maturity, air cargo markets find volumes relatively flat or slightly decreasing. The U.S. domestic market, as such a market, has observed a 9.7 percent decrease in 2008 and 12.4 percent decrease in 2009. These decreases have occurred in the face of a general decline in air cargo with the world economic downturn.

CHS, in addition to a significant decrease in mail cargo, as explained earlier, has experienced similar trends, as shown on Figure 3.25. Inbound, or deplaned, air cargo volumes have reflected an alternating history of annual tonnage gains, with 2011 projected to be somewhat less that the 2009 high of over 18 million pounds. Outbound, or enplaned, has continued to grow steadily with 2011 to be
for the first ten months. A project total is applied and will mark the first year of a potential reversal of this trend since 2003.

**Significant Freight, Goods, Services Facilities**

A working freight mobility plan provides not only local access to individual locations of freight intensive activity, but includes the travel needs of units moving into, out, and through the area. Commercial vehicles require access to the retail, wholesale, commercial and industrial facilities in the area to support the maintenance and growth of those jobs and revenues represented by these locations. As that activity may be concentrated in specific areas and along a finite set of roadways, a review of those roadways for greater significance is desirable. Where these roadways support freight activities, are characterized by reduced conflict with non-freight activities, e.g. residential, and are currently or easily converted to attract commercial vehicle transit, their use as cross region access routes may be desirable. This desirability follows that where truck activity is required for the pick-up and delivery activity, utilizing another roadway for access places the truck on two, where one roadway is sufficient. This minimizes the expenditure necessary to construct and maintain truck friendly routes, assists in siting of future economic pursuits, and creates a more efficient operational environment for the transportation provider. This efficiency reduces vehicle miles of travel (VMT) and the associated environmental impacts, and supports moderated transportation rates and coverage schedules.

**Motor Carrier, Commercial Vehicle Terminals, Service Centers**

Terminals or facilities operated by individual commercial carriers are typically located where travel distance to the majority of the expected shipping base, across the service area, is minimized. Over time, businesses relocate and new
businesses are located on older, and newly designated land use parcels. As terminal buildings are the largest single investment for most providers, these are typically not relocated to match this shipper migration. As distances increase between the carrier and the shippers, cost increases for the carrier and is passed onto the shipper through higher transportation rates. This increase may deter introduction of businesses, both industrial-manufacturing and retail-wholesale.

Of those companies listed as General Freight and Other Specialized Trucking in the NAICS description, for the Neck area, four distinctive locations exist, as shown on Figure 3.27:

- North Rhett, north of Remount Road
- West Montague, Michaux Parkway to Dorchester Road
- Area bordered by Dorchester Road (North), Leeds Dr (West), and Azalea Dr (South)
- Greater Stromboli Avenue Area

Within the general business environment all businesses, as well as residential land uses, require varying degrees of freight, goods, and services movement. Much of the routine truck traffic for residential and other low freight intensive activity is accomplished by Class 6 or smaller vehicles, as shown on Figure 3.28. These classes do not typically require special roadway design consideration, as their performance is similar to general traffic.

Moderate to heavy freight intensive activity may utilize these same classes. The majority of activity at this level would expect to include Class 7 and Class 8 vehicles, as shown on Figure 3.30.

All truck traffic must be considered in the plan. Special consideration must be provided to accommodate the larger classes. To account for this need, the locations of those facilities of moderate to high levels are illustrated. Beginning with a potential list of over 6,000 businesses present, this list is significantly reduced,
as service industry and other sectors are removed. Business sectors included warehousing and distribution locations, manufacturing and industrial based, retail and wholesale, and similar addresses.

Current locations of those identified businesses are illustrated in Figures 3.30 - 3.32. The four carrier oriented areas noted previously are highlighted.
Environmental Conditions

Most of the Charleston area is at or near sea level. Because of its low elevation, coastal location, and abundance of rivers and streams, it is subject to flooding or storm surges associated with hurricanes, tropical storms, and intense thunderstorm activity.

The Neck area is part of the peninsula bounded by the Ashley River on the west and the Cooper River on the east, each part of a watershed sub-basin for the greater Santee basin. Both rivers, as well as their tributary creeks, are tidally influenced, meaning they rise and fall with the tide and contain brackish water.

There are large areas on the peninsula that are designated as either floodplains or wetlands. These areas are generally adjacent to the larger water bodies and provide many important benefits, including flood control, water quality improvement, groundwater recharge, recreation, and ecological habitat (see Figure 3.33).
Floodplains are land areas susceptible to inundation by floodwaters from any source. The base flood elevation, the national standard for which management and insurance are calculated, is the 100-year flood. A 100-year flood is calculated to be the level of flood water expected to be equaled or exceeded once every 100 years on average. It is more accurately referred to as a flood having a one percent chance of being equaled or exceeded in magnitude in any given year. It is important to keep development out of the floodplain or above the 100-year flood elevation for the protection of life and property.

Wetlands are areas that are flooded or saturated by surface or groundwater often and long enough to grow vegetation adapted for life in water-saturated soil. They often occur within the floodplain; however, wetlands often become disconnected from the floodplain drainage system as a result of development activities. Because of the wide array of ecological benefits provided by wetlands, development should not encroach into these areas if at all possible.

The Charleston County Government has identified hurricane zones for the Tri-County area to help ensure timely evacuation and citizen safety during major storm events. The zones are listed “A” through “H” with evacuation, of all zones or some zones, occurring in alphabetical order based on storm specifics. The Neck area falls entirely within Zone “B”.

Over the years, much of the watershed storage areas on the peninsula have been cleared, developed, or paved. Stormwater runoff is now conveyed by pipes and ditches, which have increased the total volume of water running off the land, altered the natural stormwater runoff patterns and increased flooding to downstream areas. Pipes are often undersized or poorly maintained, increasing water ponding during storm events. Runoff from developed areas and industrial activities has degraded aquatic habitat and harmed surface water quality.

**Socioeconomic Factors**

The socioeconomic conditions in the Neck area will shape the needs of its residents and influence the redevelopment opportunities that can be achieved through the Master Plan. This section presents an overview of key population, housing, and employment characteristics of Neck area residents and workers. Where available, the data were analyzed by census tract in order to identify geographic patterns within the area.

**Population Characteristics**

As the Berkeley-Charleston-Dorchester (BCD) region has grown over the past two decades, the Neck area’s population has actually declined. Because the city populations of Charleston and North Charleston increased during this time period, there is a clear trend of depopulation in Neck area neighborhoods. Figure 3.34 shows the population figures from the past three decennial censuses, with the Neck area and the two cities displayed on a chart.

The population decline from 1990-2000 was primarily driven by the decommissioning of the Charleston Naval Base, which was the long-standing employment anchor of the Neck area. With the navy base gone, local neighborhoods lost a major source of employment and economic activity.

The current demographic profile of the Neck area is of a population that has predominantly low incomes and limited educational attainment. The average median household income across the area’s census tracts is only $26,553, but individual tracts range from a low of $17,549 to a high of $50,268. This compares to $47,799 for Charleston, $34,955 for North Charleston, and $49,312 for the BCD region as a whole. Almost half of the census tracts show a college degree attainment rate of less than 10 percent, which means that finding a good-paying job is more difficult for Neck area residents in a regional economy that is becoming increasingly services-oriented. On average, 29 percent of the families in each census tract are living below the poverty line. This compares to 11 percent for Charleston, 20 percent for North Charleston, and 10 percent for the BCD region as a whole. Figure 3.35 presents a map of the Neck area’s income...
Historical settlement patterns have left the Neck area with a racial composition that differs substantially from each of the two cities that encompass it. According to the 2010 Census count, two-thirds of Neck residents identified themselves as Black or African American, making it the predominant racial category in the area. Figure 3.36 shows the racial composition of the Neck area compared to Charleston, North Charleston, and the BCD region as a whole. While African Americans are the predominant racial category in the Neck area, the percentage varies significantly across individual census tracts. There are two tracts that are more than 90 percent African-American, while the Navy Yard tract is at five percent and the northern half of the Park Circle neighborhood is at 35 percent. The area of greatest African-American concentration is in the southern half of the Neck area, primarily in the North Charleston neighborhoods belonging to the Low Country Alliance for Model Communities (LAMC). LAMC and these neighborhoods are working to improve economic conditions that are a legacy of years of environmental contamination, lack of investment, deteriorating housing stock, and limited job opportunities.

The age characteristics of the Neck area population are fairly similar to the areas that surround it, with one exception (see Figure 3.37). When compared to the Neck area, North Charleston, and the BCD Region as a whole, the city of Charleston has a lower percentage of children under 18 and young adults age 18 to 24. The higher proportion of young adults is likely due to the several colleges located in the city, while the lower proportion of children could be due to higher housing costs that make it more difficult for young families to live there.
Overall, 65 percent of the Neck area’s population is between 18 and 65 years of age, meaning that around two-thirds of the population are in the typical working years and could potentially benefit from education and job training programs. Furthermore, 40 percent are between 18 and 44 years of age, with a number of prime working years still ahead of them.

**Housing Characteristics**

New housing development in the Neck area has been very limited, with only 12 percent of units having been built since 1990. In comparison, the share of homes built since 1990 is 34 percent in Charleston, 27 percent in North Charleston, and 37 percent in the BCD region as a whole. While there have been a number of new residential projects completed in recent years, primarily in the northern half of the Neck area in and around the Navy Yard project, just over half of Neck residents live in homes more than 50 years old. Thirty percent of the homes in Charleston and 22 percent of those in North Charleston were built before 1960, but in the Neck area the figure is significantly higher at 51 percent.

Home prices and rents in the Neck area generally parallel income levels, with higher values found on the edges of the area in Park Circle, Wando Woods, and Wagener Terrace. The central LAMC neighborhoods present the largest proportion of households that are paying more than 30 percent of their incomes for housing costs – the standard measure of affordability. Even though home prices are the lowest in these neighborhoods, their low incomes mean that many households are burdened by housing costs. Overall, 40 percent of home owners in the Neck area are paying more than 30 percent of their incomes for housing, and 15 percent are paying more than 50 percent, with burdened homeowners primarily concentrated in the two census tracts at the southern edge of the Neck area and in the Chicora/Cherokee neighborhoods. However, the Neck area’s central location and excellent regional accessibility mean that for some households the higher housing costs may be balanced out by lower transportation costs. According to the H+T Index produced by the Center for Neighborhood Technology, the Neck area has some of the lowest combined housing and transportation costs in the region (see Figure 3.39). But for many Neck residents, affording even basic housing is a challenge. A significant share of the population lives in subsidized rental housing, particularly in the LAMC neighborhoods. Data from HUD indicate that there are five census tracts where at least one-fourth of the population lives in subsidized housing. Affording a car also may be a challenge, as nearly one in four Neck area households (23 percent) do not have a vehicle available to them for use. This compares to 11 percent of households in Charleston, 12 percent in North Charleston, and 7 percent in the BCD region as a whole.

**Employment Characteristics**

While the effects of the Great Recession have been felt throughout the Charleston region, the impact on residents of the Neck area has been considerably larger. Unemployment data are only available for small areas as a historical snapshot through the American Community Survey, but it illustrates the divergence in economic fortunes. The average unemployment rate in the Neck area from 2005-2009 was 13.3 percent, more than double the rate of the BCD region, which was 6.0 percent. African-American workers in the Neck area were much more likely to face difficult job prospects, as their unemployment rate was 16 percent – double that of white workers in the Neck. The white unemployment rate paralleled that for the City of North Charleston as a whole, which itself was 1.5 points higher than the City of Charleston. Figure 3.40 presents the comparison.
Neck area residents tend to work in lower-paying industries. The predominant industry sectors are Accommodation & Food Services, Health Care & Social Assistance, Retail Trade, and Administration & Support Services. Just over 30 percent earn less than $15,000 per year, and half earn between $15,000 and $39,999 per year. More than 70 percent commute less than 10 miles to get to work, primarily to either Charleston or North Charleston. Based on the industry and wage profile data, many Neck area residents are working at retail stores, medical facilities, hotels, and restaurants in downtown Charleston and the airport gateway/retail corridor of North Charleston.

Neck area employees tend to live farther away from their jobs than do Neck area residents. Only 43 percent live less than 10 miles away, and 17 percent live greater than 50 miles away. Only around one-fourth of the employees live in Charleston or North Charleston, and only 40 percent live in Charleston County (inclusive of the two cities). The trend has been for an increasing share of employees to live farther away from their jobs. In 2003 the share of employees living in Charleston and North Charleston was 33 percent, and the share living in Charleston County was 50 percent. Because most of these employees are likely to be driving to work, the increasing commute distances contribute to worsening air quality, greater energy demands, and higher household spending on transportation as a share of income. All of these factors put the regional economy at greater risk from potential shocks such as rising gasoline prices or negative health impacts from increased air pollution.
SUMMARY OF SOCIOECONOMIC CONDITIONS

Examining the population, housing, and employment characteristics of the Neck area reveals a number of significant issues, including:

• The Neck area population is in a declining trend.
• Unemployment is significantly higher than elsewhere in the region, especially for African-American residents.
• The industry mix between the resident workforce and local employment base does not match well. Residents are under-represented in the manufacturing and construction sectors, which tend to pay better than retail and tourism sector jobs.
• Most residents’ commutes are relatively short.
• There is a high proportion of rental housing, including a major presence of subsidized housing. Not much new housing is being built. Even though there is a high proportion of rental housing, not much of it is in a multifamily format.
• The neighborhoods with the highest incomes and home values are on the edges of the Neck area, making potential linkages that could reinforce disadvantaged neighborhoods more difficult to achieve.

COMMUNITY FOCAL POINTS

Community focal points are important places that are well known in the Neck area and accessible and treasured by residents. They can represent a variety of socio-economic destinations, including civic, religious, retail, wellness, service, education, culture, and/or recreation facilities. Focal points form an important part of the community fabric and usually act as gathering places or places where information and services can be obtained.

The map (Figure 3.41) shows that although there are a variety of community focal points scattered throughout the Neck area, primarily in the Park Circle and Shipwatch Square areas, there are areas without community facilities readily accessible to residents. Filling these gaps in community focal points helps connect the community and increase the quality of life for citizens in the Neck area.
**Economic Equity**

Despite living in the heart of the region’s job corridor, a place that has a strong economic position and is continuing to attract investment, residents of the Neck area historically have not shared in the economic growth that is taking place around them. As this growth benefits the entire region, but the business activities impose costs on local neighborhoods, there is a question of economic equity that should be addressed when planning for the Neck area’s future. ESRI, a national demographic data provider, estimates that in 2011 the median household income of the BCD region was $44,910. Meanwhile, the median income in the Neck area was $25,463 or 43 percent lower. Shrinking this gap will require a process of helping Neck area residents share more in the region’s economic development — growth that is anchored by employment and investment occurring near their neighborhoods.

Many local residents have not been able to tap into this nearby economic engine. Of the 42,000 jobs in the Neck area in 2010, only eight percent were filled by Neck area residents and the average over the past nine years has been 11 percent. This represents 22 percent of the Neck area’s employed residents. Of the Neck area residents with jobs, only 54 percent worked full time in the past year according to the American Community Survey and those full-time workers earned only 80 percent of the average wage of a job located in the Neck area. If part-time workers are included, the average employed Neck resident earns only 57 percent of the average wage of a Neck area job. That means most of the wealth produced in the Neck is outsourced to people living in other parts of the region, a situation that contributes to a donut-hole effect of declining prosperity and quality of Neck area neighborhoods.

Even the residents who work in the Neck area have not been able to capture a share of the area’s economic activity to the same extent that workers who live elsewhere do. Figure 3.42 shows how nonresidents are much more likely to hold the better-paying jobs in the Neck area (those paying $40,000 or more per year) than are residents.

While there is a wide range of possible factors that influence where people live and are able to find work, a key challenge that has been identified in the Neck area is a lack of sufficient educational attainment and/or job skills. While 40 percent of the Charleston region’s adult population (excluding the Neck area) holds at least an associate’s degree, in the Neck area the share is only 20 percent. National research has demonstrated the direct correlation between education level and income, and industry sectors that are central to the region’s economic development are demanding workers with significant technical skills and the ability to handle complex tasks. While living in the Neck area gives residents proximity to the potential ingredients for prosperity, they must also have the tools needed to participate in the future growth. Redevelopment strategies will need to build connections between the places which attract investment and the people who already live in and near them.

**Context Summary**

The Neck is a key Tri-County and regional area that provides jobs and destinations for both local residents and visitors. While the peninsula is a tight strip of land with many competing demands and issues, opportunities exist for positive change that will help revitalize the area. Several plans have been completed or are underway that set in motion a series of expectations for improvements in the Neck area. This Master Plan strives to build and complement those efforts. Examining the area context set a foundation that guided the planning efforts that followed in this project, mainly balancing economic development with community sustainability and regional mobility with community livability. Context also helped develop an area place identity that will be used to attract economic investment, promote community involvement and ownership, and improve the overall quality of life for Neck residents.