# COMMUNITY MOBILITY

**Chapter 3** 

Advance transportation planning and thoroughfare development will help prepare Florence for future traffic demands and create a safe and efficient system of travel to, from, and within the community. A well-balanced and comprehensive transportation system should offer a choice of travel modes (pedestrian, motor vehicle, or bicycle) and be appropriately designed for safety and visual appeal. This chapter of the Florence Comprehensive Plan establishes the framework for such a system to accommodate travel demand for the planning area through the Year 2030 and beyond.

This chapter identifies and addresses key transportation issues in the community and makes recommendations to help improve mobility and accommodate anticipated growth. Additionally, included in this chapter is a Thoroughfare Plan to be used by City staff, Planning Commission, and City Council to address necessary thoroughfare connections and extensions as future development occurs. It has been prepared in coordination with the Florence County Comprehensive Plan Update and, more significantly, with the ongoing Florence Area Transportation Study (FLATS) metropolitan area transportation planning process. Specific recommendations presented in the County's Transportation Element update and FLATS 2035 Long Range Transportation Plan (LRTP) are presented as insets throughout this chapter.

This Community Mobility chapter is divided into three sections:

- Discussion of trends affecting mobility in Florence.
- Recommended goals, objectives, and actions for maintaining and improving Florence's transportation network.
- Existing and future thoroughfare discussion.

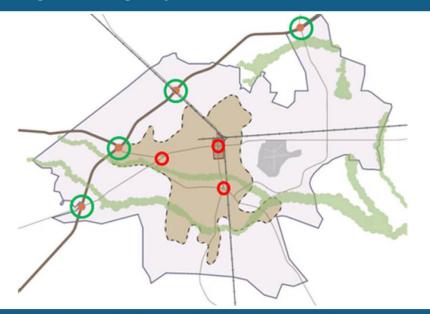
# INTRODUCTION

Transportation concerns are one element common to nearly all residents' everyday lives. Traffic congestion, street maintenance, and safety, along roadways, are important elements when considering current and future community needs. When residents cannot move with relative ease throughout their community, this leads to frustration and detracts from local quality of life. Likewise, retaining and attracting businesses requires having adequate roadway, rail, air, and other transportation facilities to move people and goods to and from this area in an effective and efficient manner.

Nevertheless, during the series of Community Workshops, meetings of the Citizens' Delegation, and focus group discussions, transportation issues were rarely raised as major concerns of Florence residents. Issues such as business rush hour traffic, congested intersections, or mistimed traffic signals were, for the most part, considered to be annoyances rather than as strategic issues affecting the future of the community. Indeed, with a few exceptions, Florence has excellent transportation infrastructure for a community of its size.

Much of the emphasis of this chapter is placed on addressing roadway system issues in concert with recent and forthcoming peripheral land development patterns and, particularly, servicing new growth areas as efficiently as possible. Additional focus is given to making better use of the existing system — reducing inefficiencies and localized congestion — as well as improving the appearance of roadways in nonresidential areas.

Figure 3.1: Highway Access



Florence is benefitted by four I-95/I-20 interchanges and a complementing system of arterial streets. Areas subject to frequent traffic congestion are denoted by the red circles.

However, while traveling by car is the most common mode of travel, this plan recognizes that building and widening roadways will not adequately address future transportation needs in the community. With continued growth, high costs of developing infrastructure, escalating fuel costs, and impacts to air quality and the environment, planning for all future travel needs in the City will involve looking at transportation as an interconnected system of roadways, paths, trails, and sidewalks, with multiple options for getting around, including by transit and bicycle.

An integrated and connected system with multiple alternatives for traveling within the community will help keep traffic flowing and alleviate congestion on roadways. Options should apply not only in terms of offering different modes of transportation, but also in offering multiple travel routes and choices on the roadway system. Providing such options and enhancing mobility will also require promotion of development patterns that encourage alternative land uses and shorter trips (i.e., mixed use developments and compatible commercial uses within close proximity to neighborhoods). The transportation system has a strong influence on the type and quality of growth and should, therefore, be closely coordinated with the community's overall land use goals and policies. (See *Figure 3.1*, *Highway Access.*)

# PLAN FOCUS AREAS AND STRATEGIC RECOMMENDATIONS

#### Focus Area 3.1

Ensure a well connected and safe mobility network.

A well-managed and maintained transportation system is important for ensuring a safe system that is enjoyable by all users. With the City's limited financial resources, roadway and other transportation improvements should be carefully balanced with basic maintenance of the existing systems of travel.

The functional classification of Florence's street system is illustrated in **Map** 3.1, Functional Classification. It shows the logical hierarchy of streets, ranging from interstate highways to freeways, principal and minor arterial and collector streets, and finally to local streets. The functional classification system

is important not only for designating the traffic carrying significance of a street or highway, but also as a determination of the funding responsibilities and maintenance priorities of streets. In general, SCDOT has responsibility for the interstates, arterials, and collectors, leaving the City and County responsible for local streets in their respective jurisdictions.

Key planning considerations for ensuring a cohesive and safe mobility system include:

- Improving existing roadway conditions through reconstructing failing streets and corridors.
- Pursuing safety improvements for all travel modes in existing and planned corridors.
- Ensuring continuity of arterial roads through more effective thoroughfare planning and targeted right-of-way acquisition and improvements.

**Strategy 3.1.1:** Improve existing roadway conditions through local infrastructure maintenance and retrofitting.

#### Rationale

While building new roadways or widening existing ones is often important in addressing existing and future traffic needs, maintenance of what is already there is equally important and should require the continued attention of all units of government.

#### **Actions and Initiatives**

- ♦ In conjunction with other neighborhood enhancement and capital improvement projects, identify and improve deteriorating streets and roadways and establish a program for long-term rehabilitation.
- In conjunction with road rehabilitation or other public improvement projects, construct or reconstruct sidewalks where they do not exist or are in poor condition (particularly adjacent to schools, parks, and public buildings).

# Florence County Comprehensive Plan Recommendations

In November 2006, Florence voters pledged an additional onecent sales tax (Capital Road Funding) for Florence County roadway improvements. The tax expires after seven years. Commitment from the State Infrastructure Bank was secured to fund six road-building projects. If Florence County could come up with \$148 million in matching funds, the State would bankroll the remaining \$250 million. The six projects proposed are listed below in the order of priority.

- Pine Needles Road widening from Southborough Road to South Ebenezer Road
- US 378 widening from US 52 near Lake City to SC 41 in Kingsburg
- US 76 widening from I-95 to Main Street in Timmonsville
- TV Road widening to four lanes from Wilson Road to I-95
- Pamplico Highway widening SC 51 from Claussen Road to US 378 in Kingsburg
- US 301 Bypass completion from US 76 near Timmonsville to the intersection of US 52/US 301 and Howe Springs Road

The Capital Road funds collected from the November 2006 vote will complete the first four projects and a portion of the fifth. Funds will not be available for the sixth designated project.

Source: Transportation Element (2010 Draft), Florence County Comprehensive Plan

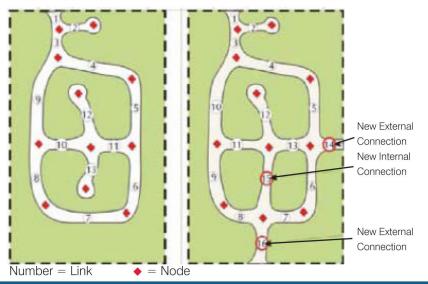
- Provide regular maintenance on pedestrian amenities including crosswalks and signals, replacing obsolete traffic signs, and synchronizing traffic signals.
- Seek future funding sources for local transportation improvements.

**Strategy 3.1.2:** Pursue multi-modal safety improvements in existing and planned corridors.

#### Rationale

Safely accommodating traffic is the primary consideration in the design of any transportation system, particularly when vehicle travel interfaces with pedestrians and bicycles.

## **Figure 3.2: Determining Street Connectivity**



A connectivity index numerically evaluates the ratio of street links and nodes; needing a certain connectivity threshold to conform. The above example indicates a street loop (left) that does not meet the ratio (13 links/11nodes=1.18) and a street layout (right) that is modified (16 links/11 nodes - 1.45) to comply with the required threshold.

#### **Actions and Initiatives**

- During the subdivision review process, ensure connectivity of the road network for effective police and emergency response, possibly considering use of a connectivity index. (See Figure 3.2, Determining Street Connectivity.)
- Focus particularly on the safety of school children on bike and on foot through planned pedestrian improvements and connections to schools and parks.
- Take appropriate steps to enhance safety in school vicinities given traffic and vehicle queuing related to parent pick-up and drop-off and higher sensitivity to vehicle volumes and speeds. Rework downtown traffic circulation, in conjunction with the Downtown Plan Update, to enhance

- safety. This may include traffic calming installations, as well as appropriate signage, traffic control, and patrol.
- Continue to facilitate development of a citywide cyclist and pedestrian system through easement and right-of-way acquisition and land dedication concurrent with new development and redevelopment.
- Pursue access management policies and strengthened regulations to reduce conflict points and enhance traffic flow and safety on major roads by restricting the number, location, and spacing of driveways; street intersections; medians and median openings; marginal access roads; turn lanes; and acceleration/deceleration lanes at major intersections.
- In coordination with new access management restrictions, require both common and cross access for adjacent sites, thereby limiting street access to move between adjacent properties.
- Make physical improvements, where feasible and appropriate, to enhance safety (e.g., intersection redesign, new or upgraded signalization, new/ improved street lighting).
- Monitor the visibility and effectiveness of traffic control and directional signage.
- Target traffic enforcement efforts to areas of particular concern for safety, notably including those near major traffic generators and destinations such as schools, the medical centers, and other large commercial developments and public buildings.
- ◆ Take appropriate steps, in coordination with railroad companies, to improve safety at busy railroad crossings. Consider applying to the SCDOT and Federal Railroad Administration for "Quiet Zone" status under the provisions of 49 C.F.R. § 222.7. These provisions will alleviate train whistle noise in Florence, particularly in neighborhoods along the main line railroad tracks.

# Focus Area 3.2 Improve local traffic congestion.

While, overall, Florence's hierarchy of arterial and collector streets serves the community in a relatively effective manner, there are some localized areas where the over-concentration of major streets and nonresidential uses has produced congestion problems. In the western part of Florence, the successive, parallel east-west streets (for example, Darlington, Evans, King, and Palmetto) connect into North Cashua Drive, which then leads into the notorious "Five Points" intersection. The Florence community, working through FLATS, has addressed this and other areas of similar concern. These studies determined that alleviation of the problems through any major changes in street

**Figure 3.3: Major Congested Areas** 



Areas shown in red indicate areas where several arterial or collector streets merge to create "choke points," where higher levels of congestion are often experienced.

configuration require the acquisition of expensive commercial property, are time consuming, and can intrude into nearby neighborhoods. Given these limitations, a long-term solution is more likely to involve localized reductions or relocations in curb cuts and improved access management as the adjacent commercial areas redevelop over the long term. (See *Figure 3.3: Major Congested Areas.*)

This can be implemented through the adoption and enforcement of stronger access management standards in the City's development ordinances and possibly affording density bonuses or other incentives for redevelopment projects where added investment is made to improve the flow of traffic.

**Strategy 3.2.1:** Work with FLATS and SCDOT to reduce traffic congestion issues at selected locations.

#### Rationale

FLATS and the South Carolina Department of Transportation (SCDOT) are the funding and sponsoring agencies for improvements to the major portions of the street/highway network. It is important that the recommendations in this Comprehensive Plan be carried over to the ongoing FLATS planning process, as well as any statewide initiatives.

#### **Actions and Initiatives**

- Continue to participate in the FLATS planning program.
- Include FLATS as a review agency for major City rezoning, subdivision, or other development projects.

**Strategy 3.2.2:** Ensure that future expansions to the transportation network avoid the creation of bottlenecks and areas of significant traffic congestion.

#### Rationale

Adequate planning measures, traffic studies, development standards, and the coordination of major transportation improvements with the Land Use Plan will help Florence avoid the mistakes that were made in the past.

#### **Actions and Initiatives**

 Coordinate the Thoroughfare Plan with the Land Use Plan so that proposed major street extensions adequately serve their intended uses. Any

# FLATS Roadway Capacity Improvement Recommendations

As part of the 2035 FLATS LRTP, a set of roadway capacity improvements was recommended within the MPO area. These recommendations consist of the following:

- Widen Cashua Drive between Second Loop Road (SC 51) and S Parker Drive to five lanes with a two-way left-turn lane
- Widen Claussen Road between SC 327 and just past SC 51/ Pamplico Highway to a three lane facility with a two-way left-turn lane
- Widen W. Darlington Street between N Cashua Drive and Irby Street (US 52) to five lanes
- Widen Ebenezer Road between Pine Needles Road and W Palmetto Street (US 76) to four lanes with a median
- Widen Ebenezer Road/Pisgah Road between Industry Boulevard and Pine Needles Road to five lanes with a two-way left-turn lane
- Widen Ebenezer Road/Radio Drive between David H McLeod Boulevard (I-20 Business) and near Industry Boulevard to 4 lanes with a median
- Widen Freedom Boulevard between Freedom Florence Recreational Facility and National Cemetery Road to 4 lanes with a median (including an access management overlay)
- Widen Hoffmeyer Road between Anderson Farm Road and Tivoli Drive to 4 lanes with a median
- Widen I-95 between David H McLeod Boulevard (I-20 Business) to W Palmetto Street (US 76) to six lanes
- Widen National Cemetery Road between S Church Street and Stockade Drive to four lanes with a median
- Widen Oakland Avenue between E Lucas Street and Wilson Road to three lanes with a two-way left-turn lane
- Widen Southborough Road between N Sally Hill Road and Pine Needles Road to 4 lanes with a median
- Widen Third Loop Road between S Marsh Avenue to S Irby Street to 3 lanes with a two-way left-turn lane
- Widen US 301 Bypass Extension/Alligator Road between Palmetto Street (US 76) and Irby Street to 4 lanes with a median

Source: Transportation Element (2010 Draft), Florence County Comprehensive Plan

amendments to the Land Use Plan warrant analysis as to the individual and cumulative effects on the Thoroughfare Plan, with recommendations as to necessary modifications.

- Enforce zoning regulations to ensure that any increased density or intensity of use does not create additional traffic congestion.
- Consider adding redevelopment density/intensity bonus provisions for projects that include improved access management or developer-funded roadway realignments.
- Work with SCDOT to improve its access management provisions for primary and secondary highways, particularly in the unincorporated outlying portions of the planning area. The condition and appearance of local streets is a fundamental factor in defining the livability and economic stability of a neighborhood. It is important that all neighborhoods be provided with safe, attractive, and well-maintained local streets.

#### Focus Area 3.3

Provide safe and adequate neighborhood streets.

The streets in most of Florence's neighborhoods are attractive and well maintained. However, there are some older neighborhoods in Florence where the streets were poorly constructed, have deteriorated over time, and are in need of repair and removal of overgrown weeds and vegetation. Some of this deterioration is inherent to aging and is simply indicative of the need for continued maintenance. In other situations, critical infrastructure components (sidewalks, intersection controls, crosswalks, etc.) were never installed along some City streets, and there is a need for installation for the first time.

**Strategy 3.3.1:** Maintain and improve the condition of neighborhood streets.

#### Rationale

Well-maintained, appropriately sized, and attractive streets are a primary asset of a neighborhood. (See **Figure 3.4: Areas Where Street Enhancements Are Needed**).

#### **Actions and Initiatives**

- Promote neighborhood integrity through appropriate street, sidewalk, and crosswalk design, including protection of mature trees in all road construction and rehabilitation projects.
- Ensure consideration of community aesthetics in all transportation infrastructure projects including the design of bridges, retaining walls, and medians, as well as the standards for street lighting and traffic control devices.
- ♦ Enhance the streetscapes and appearance of North/South Irby Street and East/West Palmetto Street as they approach downtown, including consideration of medians, landscaped parkways, enhanced lighting, wayfinding and unique street signage, and pedestrian amenities.

# Figure 3.4: Areas Where Street Enhancements Are Needed



Some of the older neighborhoods in Florence have aging and inadequate residential streets that are in need of enhancement and repair.

Review the street cross section requirements and design standards in the City's subdivision ordinance. The design standards should reflect the character of development by way of modified right-of-way widths, use of landscaped medians, the width of parkways and amount of green space within the right-of-way, the placement and spacing of streetside vegetation, and the handling of pedestrians and bicyclists.



The design quality and good maintenance of local streets significantly contribute to their attractiveness and the character of the neighborhood.

- Complete a community-wide sidewalk inventory to highlight gaps in the existing sidewalk system, areas with no sidewalks, areas where sidewalks are in need of repair or replacement, and areas with the highest propensity of pedestrian activity where sidewalks and/or trails are most needed.
- Perform tree and vegetation trimming and replacement plans that improve the streetscape appearance, remove dead or unhealthy trees, and address site visibility at street intersections.

# **Focus Area 3.4**Accommodate greater walking and biking opportunities.

Bicycle and pedestrian facilities add to the quality of life of Florence and help create a cohesive environment that is interconnected not only through roadways, but also through a system of bike lanes (within or adjacent to streets), off-street trails, and sidewalks. In addition to their practical function of getting people around, pedestrian and bicycle opportunities help meet some of the recreational needs in the community. Currently, largely by reason of the available – or unavailable – infrastructure, automobiles are the primary form of transportation as less than three percent of residents walked or used a bicycle as their means to work<sub>1</sub>. However, with an aging population and the presence of Francis Marion University, opportunities exist for providing alternative modes of transportation including bike and pedestrian facilities, along with improved public transit services.

<sup>1</sup> P30. Means of Transportation to Workers for Workers 16 Years and Over, Census Summary File 5 (SF3)

Key planning considerations for making Florence more bicycle and pedestrian "friendly" include:

- Continuing to invest in necessary infrastructure and facilities to support alternative transportation modes.
- Making downtown Florence, the medical centers, and large autooriented commercial developments more accessible, safe, and hospitable for pedestrians and cyclists.
- Promoting development and redevelopment patterns that result in parks, schools, and convenience shopping and services within reasonable walking and bicycling distance of residential areas.
- Expanding and enhancing Florence's extensive and interconnected trail network.

**Strategy 3.4.1:** Provide facilities and improvements that promote and support alternative transportation modes.

#### Rationale

Increased use of alternate modes of transport will reduce demands on the street and highway network, reduce reliance on non-renewable energy sources, and promote personal health.

#### **Actions and Initiatives**

- Determine appropriate requirements for pedestrian pathways within new developments and concurrent with street construction/rehabilitation projects, ensuring such improvements reflect the character of development.
- Install bicycle racks at key public locations and buildings throughout the community, also considering required bicycle parking for larger-scale development projects, e.g. shopping centers, big-box retail outlets, and major employers.
- ◆ Take steps to acquire easements or rights-of-way for future trail development, including the railroad right-of-way that parallels West Lucas Street.

As part of an overall bicycle network, identify and stripe roadways appropriate for bicycle lanes. The City has identified an extensive on- and off-street bicycle trail system. While many trails are located along quiet neighborhood streets that do not require lane dedication, routes on busier collector streets should have dedicated, striped, and signed bicycle lanes.

**Strategy 3.4.2:** Increase multi-modal options by making commercial developments more accessible to bicyclists and pedestrians.

#### Rationale

The use of alternative modes of transport is often thought of as only a recreational pastime. Efforts should be taken to make bicycling and walking as true, viable alternatives to motor vehicles by providing adequate facilities in public venues, shopping areas, and places of employment.

#### **Actions and Initiatives**

- Prioritize intersections in the community that are heavily used by pedestrians and implement safety improvements at these intersections. Intersections should be prioritized based on propensity of use and pedestrian risk.
- ♦ Improvements may include walkovers or tunnels; installing accessible ramps for persons with disabilities; marked, signed, and/or signaled pedestrian crossings; and pedestrian-actuated signal detectors.
- Target pedestrian and bicycle improvements at key locations within the community including around downtown areas as well as schools, parks, and other public places.
- Make the southern downtown "cultural district" more pedestrian-friendly by providing direct routes between buildings with enhanced landscaping and signage. Provide direct linkage to the new FMU Performing Arts Center and the downtown core.

## **Intersection Improvements Recommendations**

Two major intersection and interchange improvements are also recommended as a part of the 2035 FLATS LRTP:

- Construct half cloverleaf interchange at I-95 and McIver Road
- Construct 2-lane roundabout at the Five Points intersection

- Coordinate with the McLeod Medical Center to provide direct pedestrian/ bicycle linkage between their campus and downtown Florence.
- Add specific pedestrian and bicycle criteria to the site plan review process when large commercial and multi-use sites are proposed. These criteria may include designation of pedestrian connections to surrounding developments, internal pedestrian and bicycle circulation, bicycle parking and transit stop locations, and parking lot safety.
- Highlight the availability of offstreet parking in downtown Florence to overcome a perception that parking is scarce in the downtown, particularly at peak periods. Information about parking options should be made available through way-finding and good signage. Lighting and landscaping improvements should be made to parking areas to enhance their appearance and foster a greater sense of personal security.
- ♦ Efforts should be made to arrange for off-peak use of the new FMU Performing Arts Center and future Museum parking areas for use by downtown shoppers and lunchtime restaurant patrons.



Well designed parking lots should accommodate the safe and convenient movement of pedestrians throughout a development site.

**Strategy 3.4.3:** Promote land use patterns that result in a more walkable community.

#### Rationale

Transportation elements are closely interwoven with the land use pattern they serve. Neighborhood residents should be afforded choices in the mode of transport, as walking or cycling to an activity can often be more convenient and enjoyable.

#### Actions and Initiatives

• Eliminate the PDD, Planned Development District in favor of allowing multiple development types, including the development of mixed use

- neighborhoods and those with multiple housing types. Availability of nearby services and frequent destinations (school, church, restaurants, grocery store, convenience store, dry cleaners, parks, etc.). Allow residents to make shorter trips on foot or by bike rather than getting in their cars and driving for every trip purpose.
- Amend the zoning ordinance to include bufferyard provisions for both within and between districts to ensure compatibility among different use types and intensities. The bufferyard standards should be commensurate with the intensity of development
- Allow a mix of uses in specific zoning districts, subject to applicable districts to ensure compatibility among different use types and intensities standards should be commensurate with the intensity of develop community Example.)

Figure 3.5: Walkable Community Example



Mixed use development integrates different use and housing types in a manner that promotes pedestrian connectivity and improved walkability.

#### Focus Area 3.5

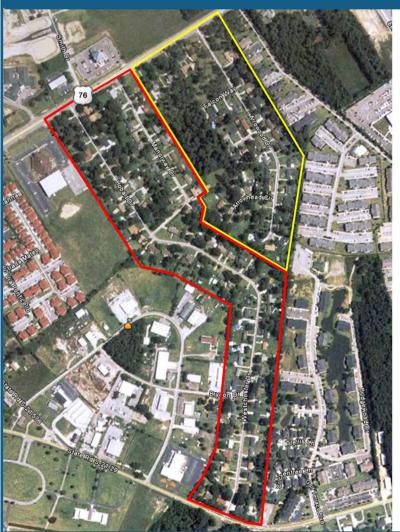
Expand the road network while maintaining the "small town" character.

In order to maintain a high quality of life for residents and remain competitive, local and regional transportation improvements will be necessary during the horizon of this plan. Mobility system expansion is inherent to population growth. This growth, however, does not need to come at the expense of the City budget and loss of neighborhood character. Efforts can be made to ensure that new roads are properly planned and executed in conjunction with future development. Future linkages can largely fail or succeed before the initial construction begins since so much of the corridor potential is derived from long-term right-of-way planning and acquisition.

A significant issue in street expansion is the physical design of the corridor and the infrastructure elements present in the right-of-way. Most of the City's older residential areas are on a grid system providing good connectivity within and through neighborhoods. However, many newer neighborhoods in near outlying and semi-rural areas have been designed with a curvilinear street pattern, cul-de-sacs, and, often, one point of entry/exit. (See Figure **3.6: Subdivision Connectivity Example.)** While this pattern is desirable by residents for reasons of safety and aesthetics, concerns are typically raised regarding connectivity. As new subdivisions are developed, plans should be made for adequate connectivity within and between neighborhoods. Likewise, new subdivisions and commercial centers should be developed in a manner that allows multiple transportation options that are also interconnected. It is not sufficient to simply designate where new corridors will expand, but there is much gained or lost in the manner of their development. A well-designed, multi-modal corridor can be a boon to a neighborhood, while a poorly designed street may only signal a lost opportunity.

It is also important that the designation of new or extended corridors be executed with careful attention to land uses and the pattern of development along these corridors. For instance, the effectiveness of David McLeod Boulevard, which is a critical link between the City and I-95, is enhanced because direct access to the fronting commercial areas is restricted to the intersecting streets. This greatly improves the flow of traffic and the safety of

Figure 3.6: Subdivision Connectivity Example



Connectivity is an essential aspect of good transportation planning. The above image is a relevant example of two abutting, enclave subdivisions, in this case, one within and one outside the City limits that have no means of connection other than by an arterial road (West Palmetto Street).

this roadway. Conversely, the effectiveness of two other well-conceived corridors, Second Loop Road and Third Loop Road was – and continues to be – compromised by the development along these roads. These two strategically significant circumferential routes are fronted mainly by single-family residential development, with accompanying driveway curb cuts and speed limits that restrict traffic flows. The presence of this development also severely limits the ability to acquire additional right-of-way for future widening. Fortunately, such shortsightedness has not yet occurred in the design and construction of Freedom Boulevard, which extends Third Loop Road to the east and north to I-95.

Key planning considerations for ensuring that transportation infrastructure is in line with Florence's community character include:

- Developing street design standards that are context sensitive and vary according to the development character (e.g. urban, suburban, rural, etc.).
- Anticipating potential traffic congestion and safety issues with ongoing growth and infill.
- Lining up the support and financing for significant regional roadway projects (e.g., Freedom Boulevard).

**Strategy 3.5.1:** Implement transportation system improvements that are consistent with the development forms that they serve.

#### Rationale

Well-designed, appropriately sized streets and intersections can avoid congestion while saving costs.

#### **Actions and Initiatives**

Coordinate with SCDOT to adopt context sensitive solutions in the design
of State roadways within the Florence planning area. Such approach would
accommodate varying roadway design parameters to better integrate with
the environment, including the character of adjacent development.

- Amend the City's subdivision ordinance and street standards to coincide the design of local streets with the character of development. This would result in rural, suburban, and urban street standards – consistent with the recommended district structure of the new zoning ordinance.2
- Provide for a continuous system of collector and minor arterial streets to distribute and convey traffic and relieve the traffic burden on the principal arterial streets.
- As part of the Downtown Master Plan Update, re-evaluate and amend the street design classifications and their widths and off-street parking requirements in the downtown to support the planned character of development and the area's accessibility and its role as the commercial and cultural center of the Pee Dee Region.

#### Focus Area 3.6

Improve the appearance of major entrances to Florence and portals to special areas and districts.

Issues, goal statements, and recommendations to improve the appearance of roadside development, particularly in commercial areas, are addressed

in Chapter 2, Community Character and Growth. An issue and opportunity that is closely related to this is the improvement of the street cross – section itself. In many locations, the design of streets at the edge of the City limits and in the immediate fringe areas are four – or five – lane undivided sections. In these locations, use of a median would functionally aid in better managing property access while also creating an opportunity for aesthetic enhancement.

The addition of landscaping and other amenity enhancements to the unpaved highway median shown in *FLATS* 



View of East Palmetto Street, looking eastward as it approaches the airport. The street cross section includes a landscaped median with turning lanes. Enhanced landscaping and minor repairs would greatly improve the appearance of this roadway.

(Source: Kendig Keast Collaborative.)

# FLATS Intersection Improvements Recommendations

Two major intersection and interchange improvements are also recommended as a part of the 2035 FLATS LRTP:

- Construct half cloverleaf interchange at I-95 and McIver Road
- Construct 2-lane roundabout at the Five Points intersection

Intersection Improvements
Recommendations, would
enhance the image of
this important corridor
approach to downtown
Florence and the Florence
Regional Airport. In a similar
fashion, opportunities exist
to transform the paved
turning lanes of other
highway approaches into
landscaped medians,
particularly in advance of

ensuing development. Creation of an esplanade within the continuous center turn lane on South Irby could transform the aesthetic integrity of this important portal to the downtown district.

**Strategy 3.6.1:** Upgrade the Appearance of the City's Major Approaches.

#### Rationale

Residents, visitors, and business prospects alike usually gain a lasting opinion of the City by their first impressions. It is important that Florence projects itself in the most positive fashion possible. Improvements in the public right-of-way are some of the most cost effective and easy-to-implement measures. The pleasant, green appearance along David McLeod Boulevard, for instance, presents a strong impression as to the City's values and livability.

#### **Actions and Initiatives**

- Design, fund, and install community gateways in the following priority locations:
  - » I-95 and U.S. 76/West Palmetto;
  - » U.S. 76 at eastern City limits;
  - » I-95 and Alligator Road;3
  - » I-95 and U.S. 52/West Lucas Street;
  - » SR 26 and TV Road;
- 3 A gateway at this location assumes there is I-95 access at some point in the future.

- » I-95 and SR 327; and
- » SR 51 at southeastern City limits.
- Prepare corridor master plans jointly with Florence County for the roadways on the fringe of the City limits with a goal of adopting regulatory provisions addressing signage, landscaping, general use types (and prohibited uses), outdoor storage and display, and other functional and aesthetic elements.
- Prepare corridor revitalization studies and plans including a detailed inventory and assessment of existing conditions such as land use and zoning, building footprints, numbers and locations of driveways and parking lots, numbers and locations of signs, trees and vegetation, natural features and open space, street cross section and right-of-way, sidewalks and bike/pedestrian improvements, pervious/impervious surfaces, and general visual elements. The revitalization plan should include specific regulatory recommendations and identified improvements and their

## **Historical Designation of Scenic or Historical Byways**

Designation as a Scenic or Historical Byway includes the protection and enhancement of scenic or historic highway programs and sites, including SC Scenic Byways, and National Scenic Byways, as well as other State and Federal-designated and/or eligible historic highways, regardless of the functional classification of the road. Historic highways must also be listed on/eligible for listing on the National Register of Historic Places. Applicants must include documentation of National Register listing/eligibility with their application to be eligible under the historic highway provision.

- Installation of interpretive plaques, signs, aesthetic guardrail, and visually sensitive bridge rails.
- Restoration of historic highway-related features such as retaining walls or historic markers.
- Construction of new or restoration of existing tourist and welcome centers related to scenic or historical sites.
- Development of scenic overlooks on State-designated Scenic Byways or National Scenic Byways.

Source: South Carolina Department of Transportation

- estimated costs. An implementation plan should identify priorities, funding options and sources, and a timeline.
- Partner with SCDOT in the establishment of scenic or historic byways particularly along U.S. 76 – and possibly other State routes through Florence – which would tap into Transportation Enhancement funds for activities that will protect and enhance the scenic and historic integrity and visitor appreciation of an existing highway or adjacent area.
- Coordinate with SCDOT to amend the design standards for the right-ofway width of new or extended arterial streets to acquire sufficient additional right-of-way to include environmental resources and add green space and buffer zones from adjacent land uses. This may include the acquisition of easements for the placement of entry gateway treatments, which may be funded by the City.
- Repurpose the landscaped median in the East Palmetto Street corridor near the Florence Regional Airport, including landscape enhancement, upgraded street lighting, and possibly public art installations.
- Select a "test case" area for replacing portions of the paved center turning lane with raised – or depressed – landscaped medians, which would be for the purpose of improving traffic control and better managing access while enhancing the visual environment. If the initial installation is successful, identify specific areas where additional median landscaping would be most effective and develop a long-term program for its implementation.
- ◆ Implement additional streetscape improvements in the southern "cultural district" part of downtown. Replace streetlights and provide additional amenities such as banners, benches, and street furniture, and other pedestrian-focused amenities. (See Figure 3.7: Streetscape Transformation).

#### Focus Area 3.7

Expand and enhance public transportation services.

The Pee Dee Regional Transportation Authority (PDRTA), which serves six counties in the Pee Dee Region, operates six fixed bus routes in the Florence area via the Florence Transit System. The agency also offers regular

commuter service into Florence from Dillon, Marion, Hartsville, and Darlington. The systems serve over 100 destinations within the City and environs and operate seven days per week. Additionally, the PDRTA provides services in Chesterfield and Marlboro Counties, with service between Chesterfield, Cheraw, and Bennettsville. It also provides two daily commuter service trips between Florence and Myrtle Beach.



Pee Dee Regional Transit Agency vehicle

(Source: PDRTA website)

Para-transit, or on-demand service for persons with disabilities and the elderly, has been the most

significant portion of PDRTA's regular business. PDRTA is the transportation provider for many human services agencies in the Pee Dee Region, particularly providing access to the City's medical centers.

Key planning considerations for upgrading public transportation offerings include:

- Continuing to invest in the expansion of the PDRTA vehicle fleet and service.
- Providing expanded service in connecting Francis Marion University's outlying campus with the future student activities associated with the downtown Performing Arts Center and other university-related activities.

**Strategy 3.7.1:** Enhance and expand public transportation options.

#### Rationale

A strong public transit system with fixed routes, intercity commuter service, and Para-transit services has been a part of Florence's community fabric for over 30 years. The community should continue to support and expand the role of transit as the area continues to grow and change.

#### **Actions and Initiatives**

 Cooperate with PDRTA to study ridership potential, as Florence grows, to determine ridership patterns and opportunities for modifying or adding routes.







This segment of South Irby Street (looking North toward downtown) could benefit from the installation of a landscaped median, which would begin to transform the aesthetic environs of the "heart of the City." (Source: Kendig Keast Collaborative)

 Coordinate the fixed transit routes that are committed for the long term with the capital streets improvement program. Invest in street-wide transit improvements such as bus pull-out bays. Other transit improvements include sidewalks of an increased width with curb cuts and handicap accessible ramps; non-slip surfaces; marked, signed, and signaled pedestrian crossings; prevention of obstructions for wheelchair access; and installation of pedestrian actuated traffic signals. Low cost transitoriented street improvements include:

- » Special left-turn lane signal phases at select intersections;
- » Preferred signal timing to aid bus travel time;
- » Initiation of parking regulations to clear the curb lane for bus operations;
- » Improved identification of bus stop locations and installation of no parking signs; and
- » Pavement markings in support of signing at transit stops.
- Amend the zoning ordinance to incorporate transit-supportive site development standards and design criteria. Considerations include pedestrian access within parking lots and to adjacent sites and transit stops; sheltered areas for transit patrons; access and site circulation for transit vehicles; site geometrics for vehicle maneuvering; and siting of transit stops and user amenities.

## CITY OF FLORENCE 2030 THOROUGHFARE PLAN

The City's Thoroughfare Plan is designed to provide for future travel needs by ensuring orderly development of the street system, including the extension and improvement of existing streets, as well as planned future roadways. The purpose and importance of the Thoroughfare Plan is to ensure that adequate rights-of-way are preserved with a general alignment and sufficient width to allow for efficient expansion and improvement of the street system. In addition, it is designed to provide opportunities for other transportation modes so as not to place a fiscal burden on the community to fund extensive road improvements, which, in turn, require long-term maintenance.

Similar to the Future Land Use Plan, which is intended to guide growth through the Year 2030, the Thoroughfare Plan represents a long-term vision for the mobility of the community. Some of the proposed arterial and collector streets identified on the plan, particularly in the outlying portions of the study area, will likely not be needed or constructed during the 20–year horizon of this plan.

Nonetheless, the purpose of this plan is to preserve needed transportation corridors (even if they will not be needed for 50 years) so that, as development occurs in the future, the City will have the ability to develop appropriately sized transportation facilities.

## **Thoroughfare Plan Policies**

Key features and policies of the Thoroughfare Plan are as follows:

- Review of general development plans and preliminary and final plats must be in compliance with the Thoroughfare Plan.
- ◆ The general location and alignment of thoroughfares must be in conformance with the Thoroughfare Plan. Any thoroughfare alignment that is inconsistent with the plan requires the approval of the Planning and Zoning Commission through a public hearing process. A change includes any proposal that adds or deletes a thoroughfare designation or changes the alignment that would affect adjacent lands.
- Variances from the Thoroughfare Plan should not be approved unless there is substantial evidence through a qualified traffic circulation and impacts study establishing a warrant for such amendment and showing how an alternative alignment or area street plan will provide improved circulation and an equal or improved level of service on all affected roadways.
- The necessary rights-of-way, in accordance with the roadway classification and corresponding cross sections, must be dedicated at the time of final platting. Properties proposed for subdivisions that include or are adjacent to an existing thoroughfare with insufficient right-of-way should be required to dedicate land to compensate for any deficiency.
- ♦ Existing streets adjacent to land proposed for subdivision should be continued so as to meet the continuity objectives of the Thoroughfare Plan. The arrangement of streets in a new subdivision including private subdivisions must make provision for continuation of the existing arterial and collector streets in the adjacent areas.
- Landowners are responsible for the dedication of rights-of-way and may be responsible for constructing sections of roadways located within or adjacent to their property. The total width of street rights-of-way must be dedicated at the time of development. The dedication of one-half of the

- required right-of-way should not be accepted unless the other half already exists or there is a plat on file for the adjacent land.
- To maximize mobility, collector streets must provide access and circulation both within and between neighborhoods. Collectors should connect arterial streets rather than allowing development to have a street system with no points of ingress and egress other than the major entrance.
- Collectors must be situated to connect arterial streets with other collectors and local streets. Their continuity in the roadway system is essential to its function of distributing traffic within the hierarchical system.
- The fact that a thoroughfare is shown on the plan does not represent a commitment to a specific time frame for construction or that the City or other governing body will build the roadway improvement.
- Individual thoroughfare improvements may be constructed by a variety of implementing agencies including the City, Florence County, South Carolina Department of Transportation, private developers, and/or intergovernmental agencies.
- ♦ The future alignments of local streets are dependent upon land development plans and, thus, are not set forth by the Thoroughfare Plan.

## **Thoroughfare Plan Alignments and Extensions**

Displayed in *Map 3.2, Thoroughfare Plan*, is one the proposed general corridors for the extension of existing collector streets and minor and principal arterial roadways, together with planned new roadways. A majority of these corridors are wholly consistent with the functional classification of roadways development by the South Carolina Department of Transportation (SCDOT), with some additions and exceptions, as follows:

## **Principal Arterial Roads**

- Alligator Road is proposed for re-designation from a Minor Arterial to a Principal Arterial Road because of its:
  - » likely future functional role in the southern portion of the urbanized area;
  - » length stretching westward beyond U.S. 76/West Palmetto Road, east of U.S. 52 (becoming E. Howe Springs Road), east of SR 51/Pamplico

- Highway (becoming Claussen Road), and continuing eastward out of the Florence study area;
- » two- to four-mile spacing from U.S. 76; and
- » relationship to the developing southern portion of the Florence study area.

#### **Minor Arterial Roads**

- ♦ N. Ebenezer Road from St. Rd. S-21-13/Hoffmeyer Rd north to U.S. 52;
- Pisgah Road from Ebenezer Road northeast across U.S. 52 to SR 179/ McIver Road; and
- St. Rd. S-21-63/Mechanicsville Road from U.S. 52 north past SR 179/E.
   McIver Road.

#### **Collector Streets**

- Blitsgel Drive from Southborough Road southwest;
- Wedgefield Road from Blitsgel Drive to Pine Needles Road;
- Stokes Road extending from Sumter Street parallel with I-95 to U.S. 52/ West Lucas Street;
- Range Way between Pisgah Road and Mechanicsville Road;
- East Sam Harrell Road between SR 26/Irby Street and McIver Road;
- John C. Calhoun Road between Old Marion Way and N. Williamson Road;
- ♦ Estate Road between Old Marion Road and U.S. 76/E. Palmetto Road;
- ♦ Stadium Road curving along the fringe of the Florence Regional Airport from U.S. 76/E. Palmetto Road to McCurdy Road;
- Extension of McCurdy Road south of National Cemetery Road following the alignment of Gilbert Drive to Freedom Boulevard;
- Steel Road between McCurdy Road and Freedom Boulevard;
- ♦ Beulah Road between McCurdy Road and Freedom Boulevard;
- Wallace Road from U.S. 76/E. Palmetto Road south across Freedom Boulevard to Old Wallace Gregg Road;
- Realignment of Turner Road to extend McCall Boulevard from National Cemetery Road south to Freedom Boulevard;

- Cato Road between Claussen Road across SR 51/Pamplico Highway southward through the Florence Study Area;
- Whippoorwill Road south of Alligator Road aligning with Myers Cemetery Road to John Paul Jones Road;
- McLaurin Lane connecting to Lakeshore Drive to S. Knollwood Road;
- Extension of Meadors Road (West of I-95) south of U.S. 76/W. Palmetto Road to Alligator Road, serving as a frontage road to gain access from/to I-95 to Alligator Road; and
- Extension of Bancroft Road (East of I-95) south of U.S. 76/W. Palmetto Road to Alligator Road, serving as a frontage road to gain access from/to I-95 from Alligator Road.

Concurrently with the City of Florence Comprehensive Plan is an update to the Florence Area Transportation Study (FLATS) 2035 Long Range Transportation Plan (LRTP) as part of the metropolitan area transportation planning process. Preliminary outcomes of this study effort produced a series of recommended roadway improvements. The roadway alignments and extensions reflected in *Map 3.2, Thoroughfare Plan*, include those represented on the draft LRTP, plus several supplemental improvements, as follows:

#### **Collector Streets**

- Extension of McLaurin Road south of Alligator Road following the alignment of Parrott Drive South and East to Oliver Road (which is shown on the draft LRTP), and continuing eastward across Savannah Grove Road to Whippoorwill Road; and
- Extension of Green Acres Road east of the north-south extension of Secretariat Drive (between Claussen Road and Flowers Road) to Willow Creek Road.

Future thoroughfare development must achieve continuity and connectivity to be functionally efficient. To do so, the City's plan, development ordinances, and approval procedures must stipulate applicable standards so as to avoid discontinuous and irregular street patterns. This is particularly significant in the fringe and outlying areas, where the City is likely to annex to accommodate

<sup>4</sup> Preliminary recommendations of the FLATS 2035 Long Range Transportation Plan, November 2009, provided by Kimley Horn Associates.

its future growth. In these areas development has and continues to occur in a noncontiguous manner, resulting in discontinuous streets and lost opportunities for good thoroughfare planning. It is, therefore, vital for the City of Florence and Florence County to coordinate their transportation planning functions through FLATS. Aside from the planning process, though, there must be a commitment and diligence in the coordinated review and approval of subdivision development to ensure it occurs in an orderly manner in the context of the transportation infrastructure.

The following planning principles and design guidelines are to aid in the transportation planning decisions during the horizon on this plan:

#### **Principal and Minor Arterials**

Arterial streets form an interconnecting network for broad movement of traffic. Although they usually represent only five to 10 percent of the total roadway network, arterials typically accommodate between 30 and 40 percent of an area's travel volume. Since traffic movement, not land access, is the primary function of arterials, access management is essential to avoid traffic congestion and delays caused by turning movements for vehicles entering and exiting driveways. Likewise, intersections of arterials with other public streets and private access drives should be designed to limit speed differentials between turning vehicles and other traffic to no more than 10 to 15 miles per hour. Signalized intersection spacing should be long enough to allow a variety of signal cycle lengths and timing plans that can be adjusted to meet changes in traffic volumes and maintain traffic progression (preferably one-third to one-half mile spacing).

- Access to high-intensity land uses should be limited by way of cross and joint access agreements and use of marginal access roads.
- Access points should be a minimum distance of 120 feet from street intersections.
- A raised median should be included in the design cross-section of all new principal arterial streets where the abutting property is not yet developed. A raised median may be included in the design of minor arterial streets, where warranted. For largely developed areas, an access study should be prepared to determine the feasibility of raised medians.

- Access points should be aligned with median breaks and access points across the street.
- Local streets should not access principal arterial roadways. Rather, they
  should access a collector roadway to minimize the impedance of traffic
  and maximize the traffic carrying capacity of the principal arterial street.
- ♦ Residential driveway access shall not be allowed onto a principal arterial street.
- Collector roadways should maintain a spacing of approximately one quarter to one-half mile, which may be signalized with a principal arterial street.
- Acceleration and deceleration lanes should be provided at all intersections to facilitate safe turning movements, as warranted by a traffic impact study.
- Parking should not be permitted on principal or minor arterial streets.
- ♦ A signal warrant study should be conducted to determine the location of signalized intersections.
- Pedestrian crossing improvements should be limited to signalized intersection locations. Such improvements should include crosswalk delineation via reflective paint or pavement texturing, American's with Disabilities Act (ADA) improvements, pedestrian and bicycle actuated signals, pavement markings, and signage. An underwalk or overwalk may be warranted at mid-point crossings.
- An eight-foot wide trail section should be incorporated on one side of all principal and minor arterial streets.
- ◆ Traffic control devices should be installed in accordance with the Uniform Traffic Control Manual.

### **Major and Minor Collectors**

Subdivision street layout plans and commercial and industrial districts must include collector streets in order to provide efficient traffic ingress/egress and circulation. Since collectors generally carry higher traffic volumes than local streets, they require a wider roadway cross section and added lanes at intersections with arterial streets to provide adequate capacity for both through traffic and turning movements. However, since speeds are slower and more turn movements are expected on collectors versus arterials, a higher speed differential and much closer intersection/access spacing can be used than

on arterials. Collectors typically make up about five to 10 percent of the total street system.

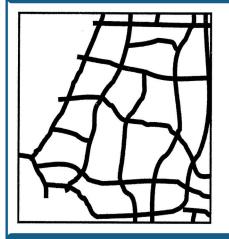
- ♦ Collector streets should be roughly spaced at one-half mile intervals.
- Minor collector streets, as applicable, should be determined by a development plan or a local circulation plan prepared by the City. Minor collector streets are for spacing between arterial and major collector streets where there are no more than 10,000 VPD.
- Collector roadways should not be designated as truck routes, unless special precautions are taken with respect to design (curb return radii, minimum tangent lengths between reverse curves, construction specifications, etc.) and the abutting land use.
- Driveways should be allowed for properties abutting no more than 20 percent of the lot frontage to collector streets.
- Collectors should extend continuously between arterial streets, crossing creeks, drainage channels, and other barriers to provide adequate street continuity. (See Figure 3.8: Street Pattern Continuity.)
- Traffic calming techniques should be used to slow traffic along continuous sections of collector roadways.
- Sidewalks should be located on both sides of all collector streets.
- Traffic control devices should be installed in accordance with the Uniform Traffic Control Manual.

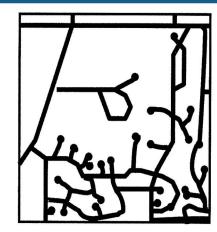
#### **Local Streets**

Local streets allow direct property access within residential and commercial areas. Through-traffic and excessive speeds should be discouraged by using appropriate geometric designs, traffic control devices, and traffic calming techniques. Local streets typically comprise about 65 to 80 percent of the total street system.

Performance standards should apply to local streets, where the type of access, number of dwelling units served, and the units' average frontages determine the right-of-way, pavement width, parking lanes, curb width, parkways, and sidewalks. In this way, the right-of-way and street design are directly tied to development density and traffic volumes.

**Figure 3.8: Street Pattern Continuity** 





Continuity of the street pattern is essential for its efficient and systematic function in the overall thoroughfare system.

(Source: Kendig Keast Collaborative)

- ◆ Traffic calming techniques should be used to slow traffic, particularly adjacent to schools, parks, and public buildings.
- Traffic control devices should be installed in accordance with the Uniform Traffic Control Manual.

## **Access Management**

Access management is an important component of the thoroughfare management process. Access management is the coordination between land access and traffic flow. The basic premise of access management is to preserve and enhance the performance and safety of the major street system. It manages congestion on existing transportation facilities and protects the capacity of future transportation systems by controlling access from adjacent development. Properly utilized, it can eliminate the need for street widening or right-of-way acquisition.

Techniques to accomplish access management include limiting and separating vehicle (and pedestrian) conflict points, reducing locations that require vehicle

deceleration, removing vehicle turning movements, creating intersection spacing that facilitates signal progression, and providing on-site ingress and egress capacity. In addition, regulation focuses on the spacing and design of driveways, street connections, medians and median openings, auxiliary lanes and transit facilities, on-street parking and parking facilities, on-site storage aisles, traffic signals, turn lanes, freeway interchanges, pedestrian and bicycle facilities, bus stops, and loading zones.

The following access management strategies may be used to coordinate the access needs of adjacent land uses with the function of the transportation system:

- ◆ Intergovernmental coordination Access management is most effective as a regional strategy that would involve Florence County and SCDOT in the design and construction of area roadways. Through coordinated efforts, access management can even further add to the efficiency of local thoroughfares.
- Separate conflict points Two common conflict points are driveways and adjacent intersections. Spacing driveways so they are not located within the area of influence of intersections or other driveways is a method to achieve access management objectives.
- Restrict turning movements at non-signalized driveways and intersections Full movement intersections can serve multiple developments through the use of joint driveways or cross access

# Florence County and Florence Area Transportation Study (FLATS) Program Recommendations

The FLATS Long–Range (2035) Transportation Plan is recommending access management and improvement strategies for three corridors within the City of Florence:

- Palmetto Street (US 76/US 301)—Ballard Street to Williston Road/ McCurdy Road
- Pamplico Highway (SC 51) Irby Street to How Springs Road/ Claussen Road
- Lucas Street (US 52) I-95 to Irby Street

- easements. Turning movements can be restricted by designing accesses to limit movements or by the construction of raised medians that can be used to provide turn lanes.
- Establish design standards Design standards within the subdivision ordinance addressing the spacing of access points, driveway dimensions and radii, sight distance, and the length of turn lanes and tapers are effective mechanisms for managing the balance between the movement of traffic and site access.
- Locate and design traffic signals to enhance traffic movement Interconnecting and spacing traffic signals to enhance the progressive movement of traffic is another strategy for managing mobility needs. Keeping the number of signal phases to a minimum can improve the capacity of a corridor by increasing green bandwidth by 20 seconds.
- Remove turning vehicles from through travel lanes Left- and right-turn speed change lanes provide for the deceleration of vehicles turning into driveways or other major streets and for the acceleration of vehicles exiting driveways and entering major highways.
- ♦ Encourage shared driveways, unified site plans and cross access easements Joint use of driveways reduces the proliferation of driveways and preserves the capacity of major transportation corridors. Such driveway arrangements also encourage sharing of parking and internal circulation among businesses that are in close proximity.