SR 7 Transit Supportive Land Use and Urban Design Study

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prepared by

Treasure Coast Regional Planning Council
Acknowledgements

Palm Beach Board of County Commissioners
Commission Chair Burt Aaronson, Vice Chair Karen Marcus, Commissioner Shelley Vana,
Commissioner Steven Abrams, Commissioner Jess Santamaria, Commissioner Priscilla Taylor

Steering Committee Members
Allan Ennis, Patricia Masterman, Claudia Mossini, Jorge Perez,
Dr. Steve Perman, Sheri Scarborough, Steve Sherman, Roxanna Trinka

Palm Beach Metropolitan Planning Organization
Florida Department of Transportation
Palm Tran
Broward County Transit
South Florida Regional Planning Council
Broward Metropolitan Planning Organization
West Boca Community Council
South East Florida Transportation Council

This document represents the design ideas and vision for the future of SR 7 in southwestern Palm Beach County. The designs, illustrations, and graphics included within this report are meant to convey that vision and are conceptual by nature.
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EXECUTIVE SUMMARY
In March 2010, the Treasure Coast Regional Planning Council, in partnership with the Palm Beach and Broward Metropolitan Planning Organizations (MPOs), Florida Department of Transportation (FDOT) District IV, and Palm Beach County, conducted a week-long public design charrette to explore strategies to enhance transit viability on SR 7-US 441 in southern Palm Beach County. The SR 7 charrette and this report of findings and recommendations are part of the larger mobility analysis concurrently underway for northern Broward County and Southern Palm Beach County.

The removal of the University Drive and Riverside Drive extensions into Palm Beach County from the Comprehensive Plan and the subsequent determination by the Florida Department of Community Affairs (DCA) that the removal was “not in compliance” with state law in 2007, heightened the necessity of a long-term strategy to improve mobility on the corridor. The resulting Stipulated Settlement Agreement requires SR 7, between Glades Road and the county line, be designated as a “Transit Oriented Corridor”. To satisfy the intentions of that designation, this study proposes to achieve a transit-supportive environment using several strategies, including balancing land uses, improving both the aesthetic and functional components of the SR 7 right-of-way, and increasing access to and mobility around the corridor.

The Study Area

The primary study area for the SR 7 Transit Supportive Land Use and Urban Design Study charrette includes all parcels directly abutting the SR 7 corridor within a ½-mile from the centerline of SR 7/ U.S. 441 from a ¼-mile north of Glades Road to a ¼-mile south of the Hillsboro Canal (approximately three miles). Additional analyses and observations were made outside of the primary study area to include other destinations.

SR 7 in southern Palm Beach County is a classic example of the evolution of suburban development patterns. The older neighborhoods within the study area, primarily south of Palmetto Park Road and Judge Winikoff Road, are relatively well connected and provide optional routes for moving through the community. Newer neighborhoods are typically inwardly focused, not well connected to one another, and are often gated. Their development pattern forces traffic onto the limited number of through streets. The resulting circulation pattern causes those few connectors to increase in size to handle the disproportionate number of household trips. The fundamental challenge for this study is to achieve a balanced mix of land uses and enhance connectivity while respecting the existing neighborhoods. The major shopping centers in the area provide great opportunities to achieve these goals, if redeveloped properly over time.

Key Recommendations

The removal of the proposed University Drive extension has shifted the burden of accommodating future traffic from new connectors back onto the existing roadway network. The Florida Department of Transportation’s analyses show that just adding lanes to SR 7 from Glades Road to the county line as a singular solution cannot solve the congestion problem over time. Additional study is underway to determine the potential mobility improvement by adding managed lanes. These managed lanes would be available to transit and/or other limited drivers (HOV, SunPass drivers, etc). This proposal suggests a “6+2” configu-
The current environment in the corridor is stressful and unappealing, especially for pedestrians. Since every transit rider engages the pedestrian environment, improving this condition is key. The basic pedestrian infrastructure must be updated along the corridors and linked into the adjacent development. In addition, landscaping improvement is necessary, not only for beautification, but to provide shade for riders walking to the bus stops.

Other connections must be created along the corridor to disperse the traffic through alternate routes and to shorten pedestrian routes to transit stops. Approximately 20-30% of all trips on SR 7 are local (meaning trips whose origin and destination are within the general area). Providing alternate routes for local trips will not only reduce some of the pressure on SR 7, but also improve the quality of life and access to the corridor for those frequently traveling on SR 7.

This study identifies appropriate areas to diversify land uses and demonstrates the form necessary for redevelopment to improve the corridor’s viability as a transit corridor. Transit operates efficiently when both residential and employment generators are serviced. However, the design and arrangement of uses must establish a pedestrian-friendly environment and multiple vehicular routes. Finally, SR 7 widening should be carried out in conjunction with all other strategies to create the desired multi-modal environment.

**EXECUTIVE SUMMARY**

**KEY RECOMMENDATIONS**

1. Civilize the corridor:
   a. Install regularly-spaced shade trees along the roadway;
   b. Complete the sidewalk network;
2. Work with the Lake Worth Drainage District:
   a. Provide a multi-purpose path along E-1 canal;
   b. Install pedestrian bridges across the E-1 between SW 3rd Street and SW 19th Street;
   c. Develop long-term strategies to increase drainage capacity and urbanize the canal between SW 3rd Street and SW 19th Street;
3. Provide additional connections in these locations:
   a. To and between existing commercial developments (as shown in the master plan);
   b. 95th Avenue South (work with the Jewish Federation to accommodate security concerns);
   c. Within all major shopping centers, primarily through redevelopment efforts;
4. Encourage a county-initiated rezoning of all commercial parcels within the study area to Palm Beach County’s new Infill Redevelopment Overlay (IRO) code to incorporate a mix of uses within a transit-supportive form.
5. Incorporate every possible option to improve multi-modal mobility on the corridor in conjunction with widening SR 7 to eight lanes.
BACKGROUND
History of Development in South-Western Palm Beach County

Like the far-western reaches of Broward and Dade counties to the south, the roots of western Palm Beach County were in agriculture. In 1952, the area of western Palm Beach County between Southern Boulevard and the Hillsboro Canal along SR 7 boasted nearly 200 vegetable farms, 30 dairy farms, and 35 ranches with nearly 30,000 head of cattle. Western Palm Beach County was an agricultural frontier in the 1950s and SR 7 was a small, but important, two-lane farming road.

In May of 1958 Pratt & Whitney opened a jet engine development plant on an 11-square mile tract of northwestern Palm Beach County. The Pratt & Whitney complex was the single largest industrial complex for its time and was the first significant shift towards non-agricultural employment in the western parts of the county.

By the mid 1960s, central and western Palm Beach County had become a golfing mecca, as well as home to an emerging equestrian industry. Horse shows, rodeos, and thoroughbred training facilities were becoming part of the county’s culture. The New York Times reported in 1965 that the Professional Golfers’ Association was moving its national headquarters back to Palm Beach Gardens, and by 1967 Palm Beach County was home to 44 golf courses and 38 golf clubs. Land that had previously been agricultural was proving desirable for recreational uses that would attract both residents and tourists. The mid to late 1960s provided a glimpse into the coming decade that would change western Palm Beach County forever.

The opening paragraph to a January 1977 article in the Palm Beach Post read, “Palm Beach
County can expect more than a quarter of a million new residents, half of them in south county, as a result of zoning approved since the county’s land-use plan went into effect less than four years ago”. Between 1973 and 1977, more than 100,000 new homes were approved in Palm Beach County. Between Hypoluxo Road and the county line, 49,017 dwelling units were approved, representing 49 percent of the total units approved during that period. 100, 200, and 1,000-acre chunks of farmland were being rezoned at an alarming pace in the western parts of the county. Typically, these projects were approved with low densities to imply to a sense of low impact. Palm Beach County was maturing very quickly, just as home development planners were perfecting a pattern of growth that was sparse in its density, internally focused, often gated, and did not contribute to establishing an interconnected roadway network. The new homes, schools, stores, and workplaces that followed put an enormous amount of pressure on the limited network of small roads, which began to fail under the strain.

SR 7 in southwestern Palm Beach County had become one the most congested roadways by the middle 1980s. The two-lane “farm to market” road had become a primary means of access for tens of thousands of residents and shoppers. SR 7 had already established a reputation for dangerous automobile and truck accidents; however, by 1987, intense congestion further jeopardized safety. Traffic counts on the corridor had exceeded 20,000 trips per day (8,000 above capacity). In an effort to expedite relief to the congestion on SR7, county planners were able to link future developments on the corridor to improvements and widening. Mission Bay, the Boca West Medical Center, and Lakes at Boca Raton together committed to widening SR7 from two to four lanes by the end of 1988, with further widening to six lanes committed by the state in the following year.

Today, SR 7 is a six-lane regional roadway with multiple turn lanes at each major intersection and is, once again, near capacity volume with approximately 51,000 trips per day. SR7 is one of only five north-south connections between Broward and Palm Beach Counties west of I-95 (including the Florida Turnpike). Since its completed widening in 1989, and many subsequent intersection improvements through the years, the daily traffic volumes on SR 7 have nearly tripled and the peak-hour congestion is severe.
State Road 7 Collaborative in Broward

In an effort to reverse the growing trend of disinvestment and declining economic and aesthetic value of SR 7 in Broward County, a number of local elected officials created the SR7/US 441 Economic and Redevelopment Committee. This group, whose communities were either adjacent to or bifurcated by SR7, engendered the interest of all 14 municipalities located along the corridor. This ad hoc committee formally organized as the “SR7 Collaborative” and set out to achieve a common goal, “to coordinate local resources and planning in order to promote the economic vitality of the corridor through aesthetic improvements, redevelopment, enhanced mobility and safety of the corridor.” With the leadership and support of the South Florida Regional Planning Council (SFRPC), the SR 7 Collaborative was successful in receiving funding for planning and implementation including $1,000,000 from FDOT in 2003 and 2004 for corridor landscaping. This award was successful in large part due to the support and cooperation of 14 jurisdictions located along the corridor. The Collaborative was awarded $1,900,000 for the development of a Strategic Master Plan for the corridor. In 2003 the Treasure Coast Regional Planning Council (TCRPC) joined forces with the Collaborative and SFRPC to assist with the development of the Master Plan. Between 2003 and 2006, the Urban Design Studio of TCRPC conducted nine, week-long design charrettes encompassing all 14 municipalities along the 25.6 mile corridor to establish solutions and strategies to improve the corridor in each community.

Since the completion of the last design charrette in 2005, the Collaborative has remained active in affecting local land use and redevelopment energies along SR 7 in Broward County. While each of the 14 jurisdictions along SR7 had unique characteristics and concerns, they were unified in their determination to enhance the aesthetics, improve the viability of transit, and generally improve the quality of life along SR 7. One issue that repeatedly surfaced during the charrettes was whether or not the need or desire to widen SR 7 further existed, even if to accommodate addi-
tional lanes for transit. Unequivocally, the vast majority of communities along SR 7 did not want the roadway widened whether the lanes would be dedicated to transit or not.

The last SR 7 Collaborative charrette in Broward County was conducted in 2005 along the northernmost segment of the corridor and included the cities of Coconut Creek, Parkland, and Coral Springs. While the primary focus of that charrette, like all others along the corridor, was to make design, redevelopment, land use, and zoning recommendations, the discussion of whether or not to extend University Drive north into Palm Beach County was in full swing. At issue was the need to relieve pressure from SR 7 as one of the few north-south connectors between Broward and Palm Beach Counties.

**University Drive and Riverside Drive**

University Drive is a major north-south arterial in Broward County that extends from the Florida Turnpike Extension (Miami-Dade/Broward county line), to ½ mile south of the Hillsborough Canal (Palm Beach/Broward county line). South of the Miami-Dade/Broward county line University Drive extends as 27th Avenue all the way to Coconut Grove. University Drive is one of the few major, at-grade corridors west of SR 7 that connect Miami-Dade and Broward counties however, none of these roadways extend into Palm Beach County. In an effort to mitigate growing congestion and connectivity concerns in southern Palm Beach County, the extension of University Drive northward had been planned for decades.

The University Drive extension is an alternative to a failed plan to extend the Sawgrass Expressway north into Palm Beach County along the eastern edge of the Loxahatchee Wildlife Refuge. That plan had been debated for decades and was finally extinguished in 1994; however, the county continued to review other options for a regional, cross-county connector. University Drive was a leading candidate. In fact, a short stretch of University Drive exists in Palm Beach County ¾ mile north of the county line from Palmetto Park Road to Judge Winikoff Road. At that point, University Drive becomes Glades Road and continues east to Boca Raton.

Detailed studies by FDOT to extend University Drive into Palm Beach County, as depicted on the county’s Thoroughfare ROW Identification Map, drew outrage from the communities in West Boca. Additionally, efforts by Palm Beach County to de-annex the “Wedge” property (nearly...
2,000 of undeveloped land south of the Hillsboro Canal, west of SR 7 that resides in Palm Beach County) to Broward County became entangled in the University Drive/Riverside Drive extension debate. Efforts to tie the county boundary changes to a clause prohibiting the extension of the two roadways were ultimately successful. Palm Beach County transmitted Ord. #2007-08, removing University Drive and Riverside Drive extensions into Palm Beach County from the 2020 Thoroughfare ROW Map to the Florida Department of Community Affairs (DCA). In October 2007, the DCA found the removal of University Drive and Riverside Drive from the ROW map “Not in Compliance” due to lack of alternative provisions and mitigation strategies. In April 2009, Palm Beach County and the DCA executed a Stipulated Settlement Agreement which outlined the necessary actions needed to mitigate the removal of the roadway extensions. Main elements of the Stipulated Settlement Agreement include:

1. SR 7 shall be designated a Transit Oriented Corridor from the Broward County line to Glades Road and it shall facilitate the use of mass transit by providing for improved local access to transit stops and shall be considered for premium transit service;

2. The Corridor shall be further defined and implemented considering the recommendations from the SR 7 Transit Supportive Land Use and Urban Design Study;

3. The County’s vehicular LOS shall remain LOS D on the SR 7 Transit Oriented Corridor;

4. Appropriate phasing leading to the widening of SR 7 to an eight lane section (with two dedicated transit lanes) shall be supported by the County;

5. When projections indicate accepted LOS will be exceeded within five years, no concurrency approvals for significant project traffic will be granted until the construction phase of the eight lane section is included in FDOT’s 5 Year Work Program;

6. Once construction of the eight-lane section has commenced, the vehicular LOS will be at the CRALLS (Constrained Roadway at Lower Level of Service) level specified in Policy 1.2-f (43) of the Transportation Element of the county’s Comprehensive Plan.

The 6+2 roadway section for SR 7 has also been identified as a Cost Feasible Federal and State project (year 2020) in the Palm Beach MPO 2035 Long Range Transportation Plan.
BACKGROUND

Language in the Agreement emphasizes the importance for Palm Beach County, Broward County, and the FDOT to implement a common vision for the corridor. As such, many studies are underway to analyze and improve mobility, connectivity, and quality of life in north Broward and southern Palm Beach Counties. These efforts are being coordinated by the South East Florida Transportation Council and include FDOT District IV, Broward MPO, Palm Beach MPO, Broward County, Palm Beach County, SFRPC, and TCRPC.

This report, the SR 7 Transit Supportive Land Use and Urban Design Study, is an important part of complying with the Stipulated Settlement Agreement. This study provides detail analyses of all of the elements of the corridor and a series of recommendations to be implemented over a phased period of time. This study provides strategies that will improve mobility and the quality of life in southern Palm Beach County and northern Broward County.
CREATION OF THE MASTER PLAN
CREATION OF THE MASTER PLAN

Purpose

The charrette process was used to create the SR 7 Transit Supportive Land Use and Urban Design Study. The purpose of the charrette process is to have the community help resolve issues and define a common vision for the future. A team of professionals, also referred to as the charrette team, tests to make sure the citizens’ requests are feasible, and then creates a document to articulate the vision.

Steering Committee

The first step of the charrette process is the creation of a steering committee to plan the logistics of the charrette. Steering committee members recommend times, locations, and strategies to effectively notify the community about the charrette. Members also provide input on which key stakeholders and agencies need to be interviewed prior to the public workshop.

Pre-Charrette Interviews

The purpose of the pre-charrette interviews is for the charrette team to gain a full understanding of the specific issues affecting the area, including the terrain, any shortcomings, and strengths. Interviewees range from community activists to utility providers. Steering committee members and elected officials are also interviewed. For the SR 7 study, 32 people were interviewed during April 8 - 13, 2010.

Public Workshop

The public workshop was held April 17, 2010, at the Olympic Heights Community High School in West Boca Raton. Approximately 30 people attended the workshop, although roughly half were consultants and agency representatives. The citizens who participated provided a valuable service to this effort.

Participants listened to an initial presentation that outlined the issues in the area. After the presentation, citizens dispersed to tables with charrette team members and agencies representatives where they debated issues and drew their ideas on an aerial photo of the study area. Participants were asked to identify ways to make the area more supportive to transit. At the end of the workshop, a citizen from each table presented their group’s ideas to the rest of the charrette participants. Following is a summary the citizens’ requests from the public workshop.

Charrette

Charrette means “cart” in French. An architectural school legend holds that at the Ecole des Beaux Arts, in 19th Century Paris, work was so intense that students continued to sketch even as carts carried their boards away to be juried.

Today charrette refers to a high speed, intense, and focused creative session in which a team works with citizens on design problems and presents solutions.
The citizens sat at tables and discussed solutions. Above are the citizens’ drawings from the public workshop.
Citizens’ Requests

- Do not widen SR 7 because it will impact the landscaping in front of Boca Woods, the construction will be disruptive, and the corridor will be harder to cross.
- Encourage through traffic on SR 7 to be diverted to the Florida Turnpike. Eliminate tolls in this area so the through commuters use the Turnpike at no charge.
- Provide multiple safety islands at intersections for pedestrians and cyclists to cross with pedestrian lights.
- Improve safety of Marina Boulevard and 18th Street.
- Improve pedestrian/cyclist crossing at the SR 7 and Marina Boulevard intersection.
- Improve vehicular accesses to Meadow Lakes, which currently has only one entrance and exit utilizing a short service road.
- Improve pedestrian/cyclist crossing at the SR 7 and Boca Entrada Boulevard intersection.
- Improve pedestrian/cycling crossing at the SR 7 and Sandalfoot Boulevard intersection.
- Provide multi-use path on the east side of SR 7, which currently does not have a sidewalk.
- Expand sidewalk on west side of SR 7 to a multi-use path.
- Provide bus terminal at the intersection of SR 7 and Palmetto Park Road.
- Improve access into West Boca Medical Center and the Jewish Federation at the south entrance onto Central Park Boulevard, possibly with a light.
- Time the lights along SR 7 to improve the flow of traffic and turning movements.
- Improve safety at the intersection of SR 7 and Glades Road.
- Connect 228th Lane to Neptune Boulevard for emergency access into the trailer park
- Connect Hammock Street to the Publix on SR 7.
- Connect Meadow Lakes development across the Hillsboro Canal to Lox Road.
- Improve safety of the curve on Marina Boulevard/18th Street
- Provide a connection from SR 7 to Glades Road
CREATION OF THE MASTER PLAN

from the West Boca Medical Center that protects the security of the Jewish Federation.
• Improve the intersection of Central Park Boulevard with a separate right-turn lane onto SR 7.
• Provide a connection from the Target plaza to Palmetto Park Road so a U-turn is not needed to go north.
• Reduce the amount of people using SR 7 on the west side by providing connections between shopping centers and back to the neighborhoods.
• Minimize the need to make U-turns on SR 7.
• Connect Mission Bay Plaza and Mission Bay Office Park.
• Improve intersection of SR 7 and Glades Road.
• Improve street connectivity on the east side of SR 7 to reduce need to travel on SR 7.
• Connect University Drive into Broward County.
• Improve traffic turning by making the left turns at the same time.
• Get bikes off the roadway and make the roadway more pedestrian and cycle-friendly.

Studio
The charrette team listened and recorded the ideas presented from each table. A studio was set up the Sandalfoot Plaza from April 18 through April 22, 2010. Opening a studio within the study area allows the team to easily evaluate the citizens’ ideas and provides an opportunity for the public to observe and offer additional input. Approximately 20 additional people provided community input to the team at the studio over the course of the week.

Work-in-Progress Presentation
The Work-in-Progress presentation was given to the public on April 23, 2010, at the Olympic Heights Media Center. Work completed to date by the charrette team was presented to the public, and additional comments and input were gathered. The information gathered throughout the entire charrette process was used to create this report.

Charrette Team
The members of the charrette team:

Natasha Alfonso
Urban Designer

Marlene Brunot
TCRPC

Marcela Camblor, Marcela Camblor & Associates

Dan Cary
Dan Cary & Associates

The studio was at the Sandalfoot Plaza where the charrette team worked together on the citizens’ requests.
A special thanks to the steering committee members:

Allan Ennis, Patricia Masterman, Claudia Mossini, Jorge Perez, Dr. Steve Perman, Sheri Scarborough, Steve Sherman, Roxanna Trinka

and

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Palm Tran
Palm Beach Metropolitan Planning Organization
West Boca Community Council
Participants discussed how to make SR 7 more transit supportive.
PRINCIPLES OF URBAN DESIGN
Florida is facing new challenges

The agricultural economy of Florida has been steadily declining over the last decade. The recent housing boom has led to a glut of unattainable units and a crashed construction economy. Growing concerns exist over the availability of drinking water and the potential future effects of sea-level rise. These predicaments have been, in large part, due to an economy built on suburban sprawl. Fortunately, signs suggest Florida may have learned some lessons from its aggressive development history and is correcting its path for the future.

Many coastal cities have emerged from near abandonment during the 1970s and re-cast themselves as viable, sustainable downtowns. Local governments are increasingly employing planning strategies and methods that provide predictability, balance land uses, and promote beauty in future growth. For the first time in 40 years, ongoing discussions are engaged about restoring passenger rail service to the FEC corridor. Florida residents are playing a much more active role in planning and urban design decisions. And perhaps most importantly, Floridians in general are recognizing how fragile the state is ecologically and that future growth and redevelopment must be more compact, require less fuel consumption, and promote a legacy of responsibility for both the natural and built environments.

This chapter discusses and describes the principles of urban design that shape communities into sustainable, multi-modal, healthy places.

John Nolen’s 1925 plan for Venice, Florida. This is one of 54 master plans the landscape architect designed in Florida in the 1920’s. Nolen’s plans are exemplary representations of many the principles of urban design outlined in this report.
Two Patterns of Growth

Historically, towns, cities, and individual projects have been developed following one of two general patterns of development: a suburban pattern or a traditional pattern.

The Suburban Pattern

The Suburban Pattern of development segregates uses by creating single use, disconnected areas. As a result, shopping, housing, schools, and recreation are not organized in an intrinsically connected, compact manner. In order to access each of these disconnected areas, the use of an automobile is mandated. As a result, parking becomes a dominant feature of a sprawling landscape. This sprawling and disconnected development relies upon a limited roadway network that gradually degrades the mobility of a community.

This erosion of mobility is inevitable as most vehicular trips must occur on collector or arterial roads. Local roads that are comfortable and safe for pedestrians and cyclists as well as motorists are either disconnected from most destinations or no longer sufficient type to handle the vehicular demands of the suburban pattern of settlement. With most of the traffic volume accommodated on fewer and fewer local roads, the connecting thoroughfares become increasingly wide and auto-dominant, and unable to provide a safe or desirable environment for cyclists and pedestrians.

As roadways become less desirable, new development naturally “turns its back” to the road. This common development model further exacerbates the degraded physical environment, making suburban development self-perpetuating and very difficult to reverse. The necessity of an automobile is further reinforced, and the situation worsens. Under the suburban pattern of development, the more an area develops, traffic congestion worsens.

The degree to which a community is auto-dependent is a result of its development patterns (suburban or traditional) and the network and size of its streets. The effect of the suburban pattern is particularly difficult for children and the elderly who either cannot drive or are losing their ability to drive. Many elderly residents of isolated communities find they must move from their homes and neighbors when they can no longer drive. This is due, in part, to another hallmark of the suburban pattern: low density. Low-density development has made the critical mass needed for a viable transit system almost impossible to achieve.
The Traditional Pattern

The traditional pattern of development is how cities, towns, and neighborhoods were built prior to World War II. In contrast to the suburban pattern, the traditional pattern mixes and interconnects different uses through a dense network of streets, blocks, and public spaces. This network of streets allows for the dispersion of vehicle trips throughout the community, rather than forcing all cars onto a few through streets. Dispersing vehicular trips into multiple routes allows roadways to be smaller with fewer lanes. Smaller roadways, unlike collector or arterial roads, easily accommodate bicyclists and pedestrians in a safe and often beautiful environment. One could easily travel from home to work or shopping on local streets without having to engage larger, auto-dominant thoroughfares. Additionally, a system of interconnected neighborhood streets reduces the number of local trips that rely on arterial and collector roads. As a result, the interconnected neighborhood streets also allow the larger, faster moving thoroughfares to remain a civilized size, serve primarily “through” traffic, and maintain efficiency as well.

Many of South Florida’s older coastal downtowns - Stuart, West Palm Beach, Lake Worth, and Delray Beach - are great examples of the traditional pattern of development. Each of these areas has places to live, work, and shop all within very close proximity. Their higher densities are more transit-supportive and the balance of uses lessens the need for vast parking areas and creates livelier places throughout the day.

A Shifting Paradigm

Unfortunately, the majority of the metropolitan areas in south Florida have been built following the suburban model of single-use, disconnected pods that rely almost entirely on limited collector and arterial roadway networks. An interesting experiment is to visit any of the older downtowns listed above, find a major east-west roadway (Kanner Highway, Southern Boulevard, Lake Worth Road, Atlantic Avenue, etc.), and drive west. What one typically discovers is a road that progressively widens while the number of cross-streets diminishes, and a public realm that becomes unattractive and auto-dominant. Having experienced the impacts of the suburban pattern of development for decades, many in South Florida desire a change. In the early 1980s, this dissatisfaction led to a resurgence of interest in areas developed in the traditional pattern. In fact, during the past twenty years, a nation-wide trend to develop and restore urban environments has been evident.
Principles of Urban Design

Every place is different. Each city, town, and neighborhood has unique characteristics and conditions. There are, however, fundamental principles that apply to all conditions. The fundamental, time-tested principles of good urban planning are characterized in the traditional pattern. These strategies have successfully shaped great cities, towns, and neighborhoods for centuries, and can be applied to all conditions. These planning principles guided the designs and recommendations of the SR 7 Transit Supportive Land Use and Urban Design Study.

History and research have demonstrated that the most successful and livable communities share the same basic, time-tested planning principles. These principles are: Neighborhood Size, Neighborhood Center and Edge, Interconnected Network of Streets, Mix of Uses, Mix of Building Types, Proper Building Placement, Proper Parking Placement, Civic Buildings, and Public Open Space. This chapter describes each principle and their interdependence.

A) Neighborhood Size

The Neighborhood is the basic increment of development of traditional towns and cities. When clustered with other neighborhoods it becomes a town or city; when standing free in the landscape, it becomes a village.

The Neighborhood is limited in size. Each neighborhood typically ranges in size from 40 to 125 acres. This results in a majority of the population living within a 5-minute walking distance of the neighborhoods’ center (1/4 mile). This distance represents the average most people will walk to satisfy their daily needs (whether this means reach an actual destination, or access transit that provides transportation to the ultimate destination). When two or more neighborhoods are combined they form towns and cities.

The density of a residential neighborhood typically averages between 6 and 10 units per acre. Such density allows for a wide spectrum of housing options, including houses on a range of lot sizes, townhouses, and multifamily buildings. Downtown cores and the more urban neighborhoods typically have much higher average densities given the larger occurrence of multifamily buildings, and the need to support a diversity of uses (i.e. retail) and transit. With higher densities, a greater variety of services is possible within close proximity to homes. Neighborhoods mostly dedicated to a specialized use or activity are Special Districts (i.e. industrial, entertainment, etc).
B) Center, Edge and Neighborhood Transition

Traditional neighborhoods have a clearly defined Center and Edges. Its elements are generally structured and arranged so that building types, density, intensity and uses are grouped in close proximity and range from rural-to-urban.

Higher densities and more intense uses such as retail, office and multi-family residential are concentrated in the center or core. Lower densities and less intense uses are placed towards the edge of the neighborhood.

Neighborhood edges can be natural (i.e. rivers, natural preserves, farmland), or man-made (i.e. wide, high traffic streets).

Transitions between Uses and Scales: Compatibility and Incompatibility

Buildings have fronts and backs. In order to ensure compatibility, buildings of like scale and massing and compatible uses should face each other on a street. Likewise, incompatible uses and buildings significantly different in height and/or massing should not be adjacent to each other (i.e. a heavy industrial use should not be next to a residence). Transition incompatibilities create stress on real estate values and the physical predictability of an area.

The front a building is more exposed and relevant to the public realm than its rear. Transitions between differing intensities, uses, and scales should occur at the side or rear of buildings (parking areas) and along alleys.

Transect

The "Transect" is a planning term that refers to an "ordering system". This system describes how the physical elements of a Neighborhood are arranged and grouped to compatibly transition from the Neighborhood Center to Edge. Building scale, mass, and the intensity of the uses gradually decrease moving from the Center toward the Edge.
The Transect compatibly arranges diverse building types and uses within an area, in contrast to conventional planning strategies, which isolate and disconnect differing uses and densities. The diagram below illustrates how an area comprised of tall, attached buildings containing a wide range of uses can quickly transition to one or two-story single family homes within the space of half of a block. Note that similar building types face each other across each street; particular care must be given to residential uses to ensure peaceful coexistence with other uses.

“A” and “B” Streets

The diagram also demonstrates the concept of establishing street standards. These standards designate streets as either “A” or “B” streets. While care should be evident in the design of all streets, “A” streets are intended to be the main pedestrian routes and as such are lined by the most active uses and held to a higher standard of development. “B” streets, while still important, are less restricted and can accommodate parking and service functions (i.e. drive-thrus, gas stations).
“A” and “B” Streets

“A” streets are where the primary pedestrian activity and vehicle traffic occur. They have active ground floor uses, the primary building façade, the main entrance, and limited or restricted curb cuts.

“B” Streets are the secondary streets and may have the service and shipping entrances, driveways, curb cuts, and parking.

C) An Interconnected Network of Streets

Streets are the Center for Human Activity

Streets are centers of human activity. As such, they should be inviting and comfortable places for people, whether driving, walking, or cycling.

Thirty to forty percent of all developed areas in a neighborhood are dedicated to streets which is why the way streets are treated has significant impacts on the safety, comfort, and quality of life. Street development should be undertaken with the same care that is given to creation of any other important public or civic space.

The Power of the Grid

The grid is the most efficient system of street planning. A dense network of interconnected streets provides more options for drivers. When streets intersect with other streets they form a fine network of alternative transportation routes. Utilizing a denser network of streets allows intersections to remain smaller and safer. Users of the system have more routes to choose from improving convenience for all modes.

The following analysis by Dover Kohl and Partners illustrates the importance of an interconnected street network (see page 22). Given one origin and one destination points (A & B) with two roads connecting them, only one possible route is available. If two additional roads, parallel to each of the existing roads are added, then there are two possible routes between points A & B. As the grid or network of streets increases to a six-road grid, the number of routes begins to grow exponentially, now resulting in six possible routes from point A to point B. A grid of nine roads results in 35 routes, and the complete grid represented in these diagrams (a 12 x 16 road grid) results in 12,870 routes. This 12 x 16 road grid shown in the example is in fact the grid of the Town of Beaufort, South Carolina, which very comfortably handles millions of visitors every year without this resulting in major traffic problems.
Indian River - St. Lucie - Martin - Palm Beach

PRINCIPLES OF URBAN DESIGN
A city block, urban block or simply a block is an essential central element of urban planning. Blocks are areas surrounded by streets where buildings are placed. They are the basic unit of neighborhood planning.

Traditional Neighborhoods are composed of a variety of sizes and shapes of blocks. These blocks are generally limited in size to allow for a dense grid of interconnected streets, and ultimately a walkable environment. To achieve walkability, blocks should have an average perimeter no greater than 1,320 feet (see “General Block Guidelines” in inset).

Suburban blocks are usually irregularly shaped and very large. These large blocks are generally referred to as “superblocks.” Superblocks limit the potential to establish an interconnected network of streets and limit flexibility for modifying the built form over time.

When there is a grid in place, the community should protect it and its effectiveness by not closing streets to public use.

Diversity of Street Types

Great towns have a hierarchy of streets that are different in size, function and configuration. Streets in business districts are usually wider, have formally designated on-street parking lanes and wide sidewalks to accommodate street furniture, formal landscaping, and a large number of pedestrians. Local streets in residential areas are narrower, accommodate for slower vehicular speeds with informal parking, narrower sidewalks and planting strips between the sidewalk and the actual street. Street types include highways, corridors (boulevards, avenues etc), commercial streets (main street), residential streets and alleys.
Street to Building Height Ratio

As stated in Architectural Graphic Standards, published by the American Institute of Architects, a ratio of one-to-three is the minimum to create a sense of spatial enclosure. The smaller ratio is typically more desirable as frequently indicated by higher real estate values. Consequently, recommended building heights will vary in accordance with the width of the street and sidewalks and the building setbacks. Wider streets accommodate taller buildings while narrower streets accommodate smaller buildings. In order to achieve the desired sense of enclosure on very wide streets, like boulevards, tall buildings frame the space, frequently reinforced with formally aligned street trees planted in medians. In lower density neighborhoods where single-family homes set back from the street, the proper enclosure can be provided with a continuous alignment of street trees. A proper building height relative to the width of the street is important to provide a sense of enclosure and definition to the street space.
Speed is Key to Safety

In order to have streets conducive to human interaction, they must be and feel safe. Vehicular speed is directly linked to street safety. The concerns with pedestrian safety in Florida have been spotlighted in the recently published Transportation for America report “Dangerous by Design”. This report lists four of Florida’s metropolitan areas as the top five most dangerous cities in the country for pedestrians and cyclists. This is especially disturbing when one recognizes the low percentage of pedestrian activity in most of Florida’s cities due to the difficult pedestrian and cyclist environments.

The chart below shows the increase in pedestrian fatalities as vehicles travel faster. Fatality rates increase significantly between 20 and 30 miles per hour and rise significantly until the fatality rate is about 80% at 40 miles per hour.

Pedestrian Safety Graph: Pedestrian safety decreases as vehicle speed increases
Roadway Design Speed

The most effective way to keep traffic slow is to design the road for the speed vehicles are intended to travel. The most efficient (capacity-wise) street design is a two-lane road with a dedicated left turn lane at intersections.

Two-lane roads, with one lane of travel in each direction, encourage slower speeds. Since vehicles move more slowly on two-lane roads, less separation is needed between vehicles so vehicles can occupy the travel lane in a more compact manner. A network of two-lane parallel routes is the most efficient way to move traffic, and since the streets are narrower, pedestrians and cyclists feel safer encouraging other modes of transportation.

As lanes are added, the incremental gain in capacity per lane mile is reduced. Since speeds generally increase on wider roads, the following distances between vehicles are greater. Longer following distances between vehicles creates less compactness, less capacity, consequently resulting in efficient streets.

As lanes are added, the roadway become less efficient.
Corner Radius

The curb return or corner radius impacts the length and location for pedestrian crossings. The curb return radius also heavily influences the speed of turning vehicles. The smaller the radius, the slower the vehicle must drive to negotiate the turn. The smaller radius also creates a more compact intersection, which allows a shorter pedestrian and bike crossing, and it is easier for the visually impaired to navigate.

On lower speed streets, curb extensions or bulb outs can be used to reduce turning radii and crossing distances for pedestrians.

Traffic Calming Design Elements

The best way to calm traffic is to design streets for the actual speed desired, as opposed to designing for higher speeds and posting slower speeds.

There is array of elements that can be used in the design of the street to calm traffic, and they may be thought of as a palette. Care must be given to the design, function, and the effectiveness of the street for all users when using these traffic calming design features. If designed properly, they will effectively slow traffic and become small civic embellishments to the city.

- building placement
- width of the street and number of lanes
- on-street parking
- street trees and furnishings
- modern roundabouts
- mini roundabouts
- mini circles
- medians
- curb extensions, chokers, and bulb-outs
- raised/textured crosswalks
- raised pedestrian tables
- tight (small) turning radius at intersections

Notethat speed bumps are not recommended.
Sidewalks and Pathways

In order to safely accommodate cyclists in the streets, motorists’ attitudes and behaviors need to change. The message moves from the importance of speed and vehicle domination to safety with the pedestrian and cyclist being the most important. Pedestrian and non-motorized modes should have priority over vehicles. Drivers should understand that they must share the street with other users.

Multi-Use paths are routes designed for pedestrians, cyclists, skaters, and other non-motorized travel. On multi-use paths, oftentimes the cycle lane is separated from the pedestrian lane in order to protect the pedestrian from cyclists. Multi-use paths provide both transportation and recreational opportunities. Deciding the type of pathway depends upon the character of the street. On busier roads with numerous cyclists and pedestrians, a multi-use path with a separate cycle lane should be provided. On less busy roads, cyclists may not need to be separated from pedestrians but still may need to be separated from vehicles. If vehicle speeds and drivers’ behaviors are safe enough, cyclists may share the multi-use path with pedestrians, and if vehicle speeds are slow enough and drivers’ behaviors are safe enough, cyclists may share the road with vehicles.

Sidewalks should follow the roadway and should be parallel to it. Sidewalks along the street create a predictable intuitive pedestrian route. Sidewalks on both sides of the street encourage walking. A dense network of streets with sidewalks and/or multi-use paths offers choices and disperses foot and cycle traffic, and avoids unnecessary and dangerous road crossings by pedestrians.

The widths of sidewalks and multi-uses paths vary according to the location and level of use. Wide sidewalks are important on commercial streets to accommodate a high level of pedestrian activity and activities such as outdoor dining and merchandise displays. The minimum sidewalk width for a commercial street should be 10 feet. Sidewalks...
Active commercial streets with wide sidewalks, with space for pedestrians, bicycles, strollers and outdoor cafes.

Street Trees
The most beautiful streets typically show strong alignments of formal, regularly placed street trees. Properly planted, street trees serve three purposes: beautification, safety, and shelter.

Trees between the sidewalk and the roadway help protect those on the sidewalk from passing cars. In this way, pedestrians will not feel as vulnerable to speeding vehicles and large trucks. Street trees are also an effective traffic-calming device. The trees create a feeling of enclosure, and drivers become more alert to pedestrians and what occurs on the sides of the street. Trees provide shelter from the sun and encourage walking.
In retail areas, palm trees and arcades should be used instead of shade trees. Nothing should obstruct the view of the storefront windows from the street. If using shade trees, trunks should be trimmed of their lower branches a minimum of eight feet from the ground to ensure storefront visibility.

On residential streets, tall shade trees should be planted so that the tree’s canopy covers the sidewalk. Care needs to be taken in the planting of shade trees so it does not diminish the visibility of the sidewalk from natural surveillance.

**Street Furnishings and Lighting**

Benches, shelters, fountains, and signage should be detailed and designed as furniture to be placed within the outdoor room of the city that constitutes the street. The community should use locally distinctive, durable, and easy to maintain materials for street furniture.

**Seating**

Seating on key pedestrian routes should be considered every 300 to 600 feet to provide rest and natural surveillance. This encourages street activity and offers respite to those who may be physically disadvantaged.

**Signs**

The excessive or insensitive use of traffic signs and other street furniture can also have a negative impact on the street. Too many signs compete for a driver’s attention. Messages on the street should be necessary and not distract the driver. Important messages should not be competing with unnecessary messages.

**Lighting**

Pedestrian-scaled lighting in appropriate places will encourage use by cyclists and pedestrians. Lighting should be pedestrian in scale and full spectrum. Mixed-use and commercial districts are generally active longer than residential neighborhoods and require brighter lighting solutions to ensure safety.
Developments that follow a sustainable pattern of development tend to have a balanced mix of land uses where people can live, work, shop, recreate and satisfy daily needs within their community without traveling long distances. Providing easy access to all of these uses does not mean people will stop traveling outside the community, but that the need to drive long distances to satisfy each need is greatly reduced or even eliminated.

Additionally, sustainable communities decrease the financial burden of large, spread-out infrastructure for municipalities, lessen the reliance on fossil fuels, allow children and older people to be self-sufficient, and reduce the number of vehicles a household needs to function.

A general desire for cities and neighborhoods to be more sustainable has led to a renewed interest in mixed-use districts. Mixed-use districts combine uses to accommodate diverse functions within an area. The mix can be a combination of residential, commercial, industrial, office, institutional, or other land uses. Allowing a mix of uses contributes to the sustainability of a city by legalizing the close proximity of various destinations. This in turn allows for easy connections and continuity of all spectrums of community life: employment, health-care, school, shopping, entertainment, and recreation.

The most successful mixed-use communities are compact, allowing ease of access between uses, and efficiently allocating resources such as water, electricity, roads, lighting, and street furnishings.
Land is utilized more resourcefully, typically occupied by higher density and intensity buildings. Parking requirements are reduced since a single trip provides access to many uses. Compactness also supports alternative modes of transportation including walking, cycling, and mass transit.

Mixed-use can occur vertically within a building or horizontally across a parcel. For example, in a vertical arrangement, the ground floor houses retail uses, the second floor office space, and upper stories are dedicated to residential uses. Consideration should be given to the compatibility of uses. Residences are easily accommodated over retail shops or offices; however, compatibility with a bar or loud restaurant can present conflicts.

Retail
People need and desire various shops and services such as clothing, food, hardware, furniture, restaurants, pharmacies, and pet supplies. The closer these items are to work and home, the more sustainable a community is. In order to establish a successful retail environment that accommodates pedestrians, cyclists, and transit riders in addition to motorists, several elements are needed.

Retail is generally successful along streets and corners that have higher vehicular trips than neighborhood streets. Cars must be accommodated. However, unlike a sprawling pattern, the pedestrian needs for safety and comfort must prevail over the needs of vehicles and vehicle parking. Wide, shaded sidewalks must be provided. Retail buildings should line the sidewalk in a fairly continuous fashion. Window-shopping is encouraged with a canopy or colonnade that invites people towards the store to escape the sun and rain. Colonnades should cover the sidewalk so that the pedestrian naturally passes by the storefronts and cannot circumvent the storefront using a parallel sidewalk. The primary entrance to the store should face and be accessible directly from the sidewalk.

Retail Visibility
Retail must attract both pedestrians and drivers' attention. Drivers are more likely to notice mer-
chandise in slow-moving traffic. Ironically, open-air streets used as pedestrian malls, the rage in the 1970s, failed in almost every instance. Visibility from the car is critical, but it should not preclude a great walking experience. Large, untinted, bright, clean widows call attention to the merchandise for sale. When buildings are pulled up to the sidewalk, large monument signs are no longer necessary. Signage should be clear and easily read from both the street and sidewalk.

A large number of people shop at regional and national chains. When these national stores are combined with local retail districts they function as anchors. These anchors usually spend thousands of dollars per month or more on advertising through flyers, newspapers, radio, and television. They draw in people, which in turn, supports adjacent, smaller local retailers. The local retailers can capture foot traffic that might not otherwise pass by their stores. Furthermore, the anchors offer a wide variety of many different types of goods allowing the local retailer to spin-off and specialize in a thorough selection of a particular type of good.

Some communities chose not to allow or limit the number or type of regional or national chains. While some of these places have maintained thriving, non-chain retail areas, it is mainly due to an organized and effective retail strategy and the fact that they are well-established, beautiful areas in their own right. Nevertheless, for most municipalities, a better and more beneficial strategy is to take advantage of the anchor store’s draw while controlling the way the anchor impacts the street. These stores should be pulled up to the street and lined along the exterior with smaller storefronts. The majority of parking should be consolidated behind the building. Prohibiting anchors does not change people’s buying habits. Instead, residents travel longer distances to access certain goods, lessening sustainability and spending (and sending valuable tax revenues) in neighboring communities.
E) Appropriate Mix of Housing Types

A sustainable community should offer a palette of building types: single-family homes, townhouses, multifamily buildings, mixed-use buildings, outbuildings, and estate homes. How they are arranged is paramount to sustainability. When housing types are separated into large, single-type developments, the result is a segregated community. A balanced community requires all types of individuals earning a spectrum of incomes to create a healthy neighborhood.

A mix of housing types and densities allows people to stay in one community all of their lives if they choose. For example, a college graduate returns home and gets his first job. He lives in a neighbor's garage apartment. He marries and moves into the townhouse. As his family grows, he moves into the single-family house. When his children leave home, he and his wife move to the multi-family condominium. His children, in turn, are able to repeat the cycle.

Housing segregation further contributes to road congestion and widening as discussed in the “Patterns of Growth” section of this Chapter.

F) Proper Building Placement and Alignment

Controlling the building placement and alignment ensures that a predictable public realm is established. Using a “build-to-zone” rather than a minimum setback is a tool that controls the ultimate form a street has. On commercial streets or higher density areas, buildings are generally set close to the sidewalk aligned in a continuous facade to encouraging walkability and transit. Pedestrians and bicyclists feel safe and have a more interesting environment where buildings line the route instead of parking lots and landscape buffers. In lower density, single-family areas, a generous setback for the front yard is appropriate.
G) Proper Parking Placement and Quantities

Parking is an essential component of development. Sufficient parking should be provided in reasonable proximity to the destination it serves. In a traditional development form, parking opportunities occur in many different instances, such as on-site, on-street parking, shared, or consolidated into structures.

On-Street Parking
On-street parking should be provided whenever possible. On-street parking can take two forms: a dedicated lane or an informal arrangement. In commercial, mixed-use, or higher density areas, on-street parking should be accommodated within a dedicated lane.

Studies show that on-street parking is directly related to increased sales in commercial streets. On-street parking additionally shields pedestrians from moving cars, allows quick, convenient access to buildings and acts as an effective traffic calming device.

In lower density areas, on-street parking occurs informally, frequently resulting in a yield traffic pattern whereby an on-coming driver must slow and take turns moving past parked vehicles. This contributes to slow traffic, resulting in safer neighborhood streets.

Off-Street Parking
Off-street surface parking should always be shielded from the street to create an attractive pedestrian realm. Buildings provide the best shield. Other strategies for shielding include landscaped buffers or walls, but these should be used as a last resource.

District-Wide Parking Strategy
Parking requirements should be determined using a district-wide

The test-case shown above is an example of how on-site parking can undermine walkability. A commercial building (134’ x 67’ (8,978 square feet)) typically must provide one parking space per 200 square feet of habitable space. This building requires 45 spaces. This means roughly 7,290 square feet of the site must be dedicated to parking not including necessary drive aisles or access ways. By requiring each site to have its own parking lot, most parking requirements erode the walkability of an area and reduce the viability of other transportation modes (walking, cycling, and riding transit). In most zoning codes, parking is calculated on a parcel-by-parcel basis.
strategy rather than expecting parking to be provided on a parcel-by-parcel basis. For areas intending to become or maintain “park once” environments, reduced individual requirements and district-wide solutions are possible. “Park once” areas are places that allow a person to park and visit multiple destinations instead of driving and parking multiple times at each specific destination.

An example of a district-wide strategy is seen within a mixed-use area with office, commercial, and residential. Residents generally vacate parking spaces during working hours freeing them for businesses to use.

Retail Parking
Consider that drivers access stores by foot, and this reinforces the concept that the pedestrian experience must be superior. Yet, parking is a necessity and is critical in shaping the pedestrian environment. It can be accommodated appropriately in a number of places.

Parking should be accommodated on street. These on-street spaces have dual roles. First, the on-street spaces provide a protective physical barrier between pedestrians and moving traffic. Secondly, the spaces allow impulse stops for drivers who may see a store that catches their eye. The on-street spaces in front of the store should be turning over many times per day to provide customers with quick and convenient access. Metered or time-limited on-street parking spaces help stimulate retail sales by ensuring the user of the parking space turns over periodically. Other parking should be located in the rear of the lots or within consolidated parking areas serving the district as a whole. Since the resulting environment is a pleasant walking experience, this strategy is similar to the one used by conventional malls where the car is left behind for long periods of time, while shoppers stop at multiple stores.

Shoppers should have easy access in the form of mid-block pass-throughs from rear parking to the front of the stores. Employees within the district should also use off-street parking spaces. If an employee parks directly in front of the store, it will reduce visibility and shopper access and potentially diminish sales.
H) Civic Buildings

Public buildings such as schools, churches, and temples are important components of neighborhoods. These buildings help give identity to a place and help establish a sense of pride and community. Significant public buildings such as city halls, libraries, courthouses, and universities should serve as centerpieces for downtown areas. Civic buildings should be located prominently, either fronting or within public plazas and squares, or terminating vistas, as shown in the diagrams to the right, to communicate their public nature.

I) Public Open Space

Parks and open space are critical for the success and livability of any community. To ensure the success of public open spaces, they must be properly designed and placed. Parks need to be naturally monitored without the constant patrol of police and security personnel. By surrounding public open spaces with the fronts of buildings and interconnecting streets, natural surveillance of the space is provided throughout the day. In neighborhoods, parks should be surrounded by the fronts of homes. People living and visiting naturally observe and hear what occurs. In mixed-use districts, a similar configuration is important. When mixed-use buildings face civic open spaces, the park is frequented by shoppers and workers during the day and residents in the evening. This 24-hour activity ensures safety.

There are different types of open space, and each serves a unique purpose:

**Regional Parks**
Regional parks are usually composed of acres of preserved land with room for active recreation. The land for this type of open space should ideally coincide with a natural feature in the area.

**Multi-Use Play Fields**
These are active parks that house play fields for sports such as baseball and soccer. These fields may be incorporated and shared with schools.
Greens
A green is an urban open space generally surrounded by homes or other building types. Greens are informally landscaped. They are generally for passive use or limited sport activities (i.e. throwing a frisbee). Greens may contain benches, pavilions, memorials, and paths.

Squares
Squares are formally landscaped urban open spaces. Squares provide a setting for civic buildings and monuments. Squares can either be attached or detached meaning the square can either be part of a block or surrounded by streets on all four sides.

Neighborhoods, towns and cities should aspire to have many and diverse public open spaces.
Location

The charrette focused on an area in southwestern Palm Beach County, west of the City of Boca Raton. Though located within unincorporated Palm Beach County, the area is generally referred to as “West Boca.” The specific charrette study area is a three-mile section of SR 7, extending from ¼ mile north of Glades Road to ¼ mile south of the Broward County line/Hillsboro Canal, and includes the area ½ mile on the east and west sides of SR 7.

Demographics

The Economic Study Area, which is illustrated in the Market Overview chapter on page 53, has approximately 4.9% of the Palm Beach County population. 63,500 residents live in approximately 26,700 households (2009). The annual average household income for the study area is $82,000 per year, which is less than the City of Boca Raton average of $120,700 per year, and close to the Palm Beach County average of $84,300 per year.

Origins and Destinations

The area is predominately residential, with commercial
uses located along the main arterial roadways. Of the residents living in the study area, 81% own their homes, which is a high percentage, reflecting the stability of the surrounding residential communities. Housing located along the SR 7 corridor within the study area has a wide range of price points, including high-end golf course communities and mobile homes. Single-family housing comprises 54% of the housing stock, and 43% is multi-family.

The following pages depict an analysis of the location of residential and employment uses in the study area, using Traffic Analysis Zone (TAZ) data. The Population diagram reveals that the southern portion of the study area (south of Palmetto Park Rd.) has 65% of the total population, or approximately 9891 people. Logically, a review of the Dwelling Units analysis shows a higher concentration of multi-family uses in the same area. Using ½ mile radii, the generally accepted pedestrian shed for transit, the study area divides into three main nodes, with the northern portion having the fewest number of residents. Conversely, a review of the Employment diagram shows more employment activity located in the northern portion of the study area.

The study area has a range of housing affordabilities from multi-million dollar homes to mobile homes.

West Boca Medical Center is a significant employer and provides important services to the community.

The Evert Tennis Academy is located in West Boca.
Population
by Traffic Analysis Zone (TAZ)
The study area contains diverse uses that serve the surrounding predominately residential areas. The map below illustrates commercial, institutional, and other uses non-residential uses within the study area. Many destinations exist, including retail stores, several churches and schools, the Evert Tennis Academy, the West Boca Medical Center, and the Jewish Federation of South Palm Beach County.

In recent years, Target and Waterway/ Riverstone Shoppes opened in the area. Commercial strip centers are located at every major SR 7 intersection, serving local shopping needs. West Boca Medical Center is the largest employment center in the study area and serves as a regional destination. Other jobs are largely retail or service oriented and are located in the commercial shopping centers.

This map shows the commercial, institutional, and other uses residents use to provide their needs. The Jewish Federation, schools, recreational, and commercial areas are shown. The boundaries of the study area are show with the yellow rectangle.
Development Pattern and Land Uses

The location and separation between differing land uses reflect a typical suburban development pattern. Land uses are segregated and frequently buffered from each other. Interconnections between residential and non-residential uses are limited or non-existent. Bicycle and pedestrian pathways have missing links, deterring bicycle and pedestrian travel. The combined result of development pattern yields an auto-dominated environment.

Outside of the major intersections, the study area is comprised of mostly residential uses. The majority of the housing developments has limited access or is located within gated pods with little connectivity to surrounding uses. Commercial and retail uses are generally located at major intersections. A large track of agricultural land (currently in use) remains undeveloped near the intersection of SR 7 and Glades Road, on the southeast side.

Several major vacancies exist in the study area, including an old Wal-Mart location on the southeast corner of SR 7 and Palmetto Park Road, a former Albertson’s grocery in the Mission Bay Plaza on the northwest corner of SR 7 and Glades Road, and a former Linen’N Things on SR 7.

Transportation Network

SR 7 is the western most north/south connection from Palm Beach County into Broward County. Other connections located to the east are Lyons Road, the Florida Turnpike, and Powerline Road, which are spaced at approximately 1-mile intervals. Glades Road, Palmetto Park Road, and Marina Boulevard/18th Street are the primary east/west corridors, and are spaced approxi-
EXISTING CONDITIONS

The streets that are colored are part of private developments, while the white streets are public thoroughfares.

The Palm Beach County Future Land Use Map provides a general indication of the arterial network and local through streets. The various colors indicate differing land use, with the yellow and orange tones representing different residential density levels.
Character of SR 7

Currently, SR 7 is a six-lane state road with a five-foot bike lane. The roadway averages approximately 50,000 cars per day, most of which is through traffic. SR 7 provides an important north-south route, yet the size, travel speed, and cross section design creates a divide between the eastern and western sides of the corridor. In some areas, pedestrian infrastructure is missing, and crossing the corridor by foot or cycle can be an intimidating experience. For local drivers, using the corridor can be cumbersome and time consuming, with the need for “U” turns to access destinations.

Lake Worth Drainage District Canal

The Lake Worth Drainage District E-1 Canal runs along the east side of SR 7 for almost the entire length of the roadway through the study area. Along the canal, sidewalks are frequently missing, with disconnected access offered to the bus shelters. There are bridges for pedestrians and cars to cross over the canal; however, large areas along the roadway have no infrastructure for vehicular or pedestrian crossings.
EXISTING CONDITIONS

Transit

Palm Beach County’s Palm Tran and the Broward County Transit (BCT) connect at the Sandalfoot Plaza just north of the Broward County line. Palm Tran Routes 91 and 92 travel along SR 7 and then follow Glades Road and Palmetto Park Rd, respectively. BCT Route 18 crosses the Hillboro Canal and connects to Palm Tran. Shelters are provided at most of the bus stops in the study area along SR 7; however, most lack landscaping. Most bus stops located off of the SR 7 corridor do not provide shelters.

Pedestrian and Bicycle Facilities

Pedestrian and bicycle connections to the shelters vary. On the west side of SR 7, a sidewalk is provided, and is separated from the fast-moving traffic by a wide swale. Bicyclists are frequently

Bus shelters are located along SR 7. On the east side, sidewalk connections link the route to the nearest intersection or driveway access that bridges the canal.

Palm Tran stops in the study area located off of the main corridor do not have benches or a shelter.

On the west side of SR 7, a low wall camouflaged by a hedge, and then another hedge encircling a restaurant, limit pedestrian and bicycle access to the retail center.

This photo illustrates that despite the inhospitable environment for bicyclists, some employees bike to work.
seen opting to use this path rather than the on-street bike lane. In some places, a physical barrier prevents people from accessing the sidewalk except along driveways and roadways. On the east side, no sidewalk exist, except adjacent to bus shelters. Pedestrians are forced to walk on grass, and bicyclists only option is to use SR 7. Further detracting from the environment, little shade or shelter is available for pedestrians along all of SR 7 and throughout much of the study area.

Local Government Structure

The West Boca area is in unincorporated Palm Beach County Commission District 5, which is the southwestern portion of the County. West Boca has many Home Owner Associations, which have coordinated to form the West Boca Community Council (WBCC). The WBCC is an active citizen-based group concerned about quality of life, traffic, social, and other community issues. It successfully lobbied for the removal of a planned extension of University Drive from Broward County into Palm Beach County.
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Market Analysis

A market analysis was undertaken for the SR 7 study to understand the current market conditions and to identify drivers of demand for economic growth. The analysis ensures a realistic and feasible vision is established for the area. Determining anticipated market conditions helps guide planning and public decisions related to zoning and land use regulations. The time frame of this market analysis is for 20 years, through 2030. The analysis takes into account the current economic situation and weak real estate market.

Economic Study Area

The Economic Study Area extends beyond the charrette study area to consider the various factors that influence the SR 7 corridor. The Economic Study Area is bounded by Yamato Road on the north, the County line on the south, Powerline Road on the east, and South County Regional Park on the west. The area is approximately 17 square miles and is largely located within unincorporated Palm Beach County.

Population and Households

The Economic Study Area currently has 63,600 residents in 26,700 households, which comprises 4.9% of Palm Beach County’s total population. The population in the Economic Study Area has generally grown faster than the population of the City of Boca Raton. Since 2000, the study area population increased by approximately 1,500 residents in 400 households, compared to the City of Boca Raton, which added only 700 residents in the same timeframe.

Future growth in the Economic Study Area is anticipated to continue this trend. The Economic Study Area is expected to add 2,700 new residents in 850 new household units by 2030. The rate of population growth in the Economic Study Area is projected to be higher than the City of Boca Raton but lower than Palm Beach County as a whole.

Housing

The Economic Study Area has a strong amount of owner-occupied homes at 81%. This reflects the overall stability of the surrounding residential neighborhoods. The remaining 19% of the
 MARKET OVERVIEW

households are rentals. Over the next five years, the distribution of owner-occupied and rental homes is expected to remain the same.

In 2009, the average housing value in the County was $197,000 compared to $405,700 in Boca Raton. Single-family housing is 54% of the housing stock and 43% is multifamily. The remaining 3% is mobile homes and other types of housing. Of the total housing units in the Economic Study Area, an estimated 2,900 are seasonally occupied. 1,752 units (6.6% of the total housing units) are currently vacant.

Foreclosures

Based on data provided by Realtytrac.com, over 1,300 foreclosures are located among the four Zip Codes that straddle the State Route 7 corridor. This represents a nominal 4.1% of the 34,900 foreclosures in seven nearby municipalities. Market potentials for new housing in the study area during the next three to five years (2012 to 2014) will most likely be limited. Key factors necessary to enhance market potential are as follows:

- economic recovery
- renewed access to mortgage capital
- decline in foreclosures and vacant units
- new net growth in population, households, and jobs

Targeted housing should be moderate-density housing such as townhouses, multi-family rental, and condominiums on infill sites. The projected number of units should be 850 to 1,000 by 2030.

Age Characteristics

Demographic forecasts suggest that in Palm Beach County the number of people aged 55 – 64 years will increase in 2014 by 2,700. The people in this age group are typically residents in their peak earning years, empty nesters, and pre-retirees. With the increased growth in this age group in Palm Beach County, it is anticipated that a market for multi-family, for-sale housing oriented to empty nesters and pre-retirees is supported in this timeframe. Conversely, the number of residents aged 35 – 44 is forecast to decline. It is likely that these people are first-time or move-up home buyers or renters in search of affordably-priced housing elsewhere in the market.

Income

The average household income in the Boca West Economic Study Area is $82,000. However, the average household incomes vary widely ranging from $40,000 to $139,000 and illustrate the
diversity of the area. For comparison, the City of Boca Raton has an average household income of $120,700, and Palm Beach County has an average household income of $84,300. The projected average income for the Economic Study Area is $87,000 in 2014.

**Economic Trends and Forecasts**

16,700 jobs exist in the Economic Study Area, which represents a 3% share of the estimated 571,500 jobs in Palm Beach County. By 2030, approximately 418,000 new jobs are anticipated in Palm Beach County. If the Economic Study Area maintains its current share, approximately 12,000 new jobs are projected. The current MPO forecasts accommodate approximately 1,300 jobs within the TAZ zones flanking SR 7. Considered together, this information translates into potential for new workplace locations.

2,400 businesses are currently located in the Economic Study Area. Of these businesses, 1,000 of them are in the services and retail sectors. 14,000 (over 80%) of the jobs in the Economic Study Area are in the services and retail trade sectors, which is much higher than the County average of 45%. Within the study area, key employment anchors are the Boca Medical Center, the retail clusters, and “big box” stores.

**Commercial Office**

The Boca West office submarket has an office space inventory of 6.6 million square feet, which represents 12.5% of the County’s overall 52.7 million square feet. This indicates a slight decline in market share from 14% in 2000 and is largely due to other suburban submarkets experiencing new office development, such as Palm Beach Gardens.

In the Boca West submarket, almost 1.7 million square feet of new office space has been delivered since 2000, including several new Class A office buildings on Glades Road. The combination of new office construction and the associated impacts of the economic downturn have produced a significant increase in the amount of vacant office space Boca West. Since 2000, the amount of vacant office space in Boca West has jumped by 775,000 square feet to 1.2 million square feet, representing an 18% vacancy rate.

Leasing activity, a barometer of the overall health of an office market, has fluctuated over the past 10 years, paralleling fluctuations in the economic and real estate development cycles. Several years exhibited tenants vacating more space than they leased. Since 2000, the average absorption for commercial space is 31,000 square feet per year. These trends suggest that, at least in the short-term (1 to 3 years), market potential for new office development in Boca West will be limited. Key factors necessary to enhance market potential for new office development in Boca West over the next five years include the following:

- recovery from the current economic downturn in South Florida
- net new job growth in office-using sectors
- expansion of demand generators such as West Boca Medical Center
MARKET OVERVIEW

- renovation and upgrades to aging/obsolete Class C office properties
- back-filling/leasing some portion of existing vacant space (to stabilized occupancies)
- ready availability of capital to finance new construction
- stronger leasing activity

In the long term, it is projected that by 2030, there will be the need for an additional 500,000 square feet of office space. Office development requires growth in office-using sectors of the workforce and available sites providing proximity to the labor force and regional accessibility. Adjacency or proximity to key demand generators, such as a hospital for medical office space, will also enhance the competitive position and overall marketability of a specific location for office development. In areas with existing office concentrations, quality buildings and interior finishes, competitive rents, and net positive leasing activity are required. Other locational characteristics necessary to attract office development include the following:

- parcels with sufficient frontage and visibility on a primary arterial or clustered into a District
- appropriate parking
- proximity to public transit in urban locations
- presence of other corporate tenants and supporting services such as retail and restaurants

Retail Market

The Boca West retail submarket currently has 6.8 million square feet of retail space, which accounts for approximately 9% of the county’s total inventory. Since 1991, retail projects have built 725,000 square feet, including the new Wal-mart, Target, and Waterway Shoppes, located along SR7. During the past ten years, the vacancy rate has jumped from 5% to 10.4% resulting in approximately 705,000 square feet of vacant neighborhood and community retail space within the submarket area.

While the larger view of the retail market suggests little demand for growth, retail use in particular must also consider the influences based on the primary trade area. The primary retail trade area is a 5-mile radius extending from charrette study area. The primary retail trade area and the current shopping destinations in the charrette study area are indicated on the maps on this page.

Retail Spending

Consumer spending is a key barometer of demand for retail space. Within the larger Economic

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Class A, B, and C

Class A - most prestigious buildings competing for premier office users collecting rents above average for the area and having high quality standard finishes, state of the art systems, exceptional accessibility and a definite market presence

Class B - buildings with a wide range of users collecting average rents for the area and having adequate systems and finishes that are fair to good for the area

Class C - buildings aimed towards tenants requiring functional space collecting rents below the average for the area
Study Area, households spend approximately $515 million per year on retail, which is more than $19,000 per household. Households located within the primary retail trade area spent almost $2.8 billion in key retail categories. By comparison, sales among retailers located in the trade area in 2009 totaled more than $4.0 billion across these same retail categories. This suggests that retailers along SR 7 are attracting spending from outside of the five-mile primary retail trade area. In other words, the area is attracting shoppers that do not live in the study area. This can occur for many reasons, such as transportation patterns or the location of employment centers, and is why retail demand is evaluated considering a trade area versus the just the larger submarket analysis.

Retail Surplus and Gap
MARKET OVERVIEW

To understand relative strengths and weaknesses among retailers located along SR 7 (and in nearby competitive locations such as Glades Road), a Retail Opportunities and Gap analysis was prepared. This analysis compares demand (i.e., household spending) with supply (i.e., store sales). The resulting difference is either a gap or surplus in retail sales. A gap indicates untapped spending potential whereby households within a five-mile trade area are spending more than retailers in the trade area are capturing in sales.

The analysis identifies potential gaps in sales that could translate into retail development opportunities. Analysis shows that approximately $417 million in annual spending is available. Presuming key redevelopment sites are available to accommodate new uses, approximately 250,000 square feet of retail opportunities exist if 15% of the untapped spending potential can be captured in the corridor. The analysis suggests approximately 250,000 square feet of retail opportunity exists in the charrette study area.

Currently, 241,700 square feet of new retail and restaurant development is likely to be supportable in the charrette study area in the following general categories:

- 60,900 sf Food & Beverage Stores (Grocery, Beer/Wine/Liquor off premise)
- 38,400 sf Hardware & Lawn Care Retail
- 35,700 sf Restaurants (Full Service, Limited Service & Drinking Places)
- 29,200 sf Home Furnishings and Furniture Retail
- 28,600 sf Electronics, Appliances, and Computer Retail
- 25,600 sf Sporting Goods, Hobby, Books & Music Stores
- 19,400 sf Miscellaneous Retail (Pet Supply, Florist, Tobacco, and Video Stores)
- 3,900 sf General Merchandise Retail (General Store, Dollar Store, Resale Store)

In 2014, 258,600 square feet of new retail and restaurant development is likely to be supportable in the following general categories:

- 67,200 sf Food & Beverage Stores (Grocery, Beer/Wine/Liquor off premise)
- 40,200 sf Hardware & Lawn Care Retail
- 38,500 sf Restaurants (Full Service, Limited Service & Drinking Places)
- 30,700 sf Home Furnishings and Furniture Retail
- 30,600 sf Electronics, Appliances, and Computer Retail
- 26,800 sf Sporting Goods, Hobby, Books & Music Stores
- 20,400 sf Miscellaneous Retail (Pet Supply, Florist, Tobacco, and Video Stores)
- 4,200 sf General Merchandise Retail (General Store, Dollar Store, Resale Store)
Key factors necessary to enhance retail potential are as follows:

- economic recovery
- access and availability to capital for construction and retail tenant expansion
- ready access to financing
- stronger leasing activity
- retail tenant expansion
- increased consumer confidence

*Surplus and Leakage of retail in the charrette study area.*
MASTER PLAN
The master plan strives to achieve three main objectives to improve transportation within the study area: use public infrastructure improvements to enhance the multi-modal options in the area, establish new links to alleviate traffic congestion on the corridor, and demonstrate how to organize new development to transform the area into a transit-supportive environment. An evaluation and specific recommendations to improve the public portion of the corridor is included addressing both the SR 7 cross section and the adjacent canals.

Private redevelopment is most likely to occur on commercial parcels, as major changes are unlikely to occur in established residential communities, with multiple property owners and/or stakeholders. Though the market study does not indicate enough future demand to currently support redeveloping every shopping center in the study area, the master plan provides designs for all commercial or undeveloped sites. Since private property rights limit the ability to determine which parcels will redevelop first, the master plan equips the County with proposals that balance uses and respond to the surrounding area for each potential site. Each plan demonstrates how to create a place that disperses traffic through alternate routes, accommodates a mix of uses to internally capture vehicular trips, and establishes a beautiful environment conducive to walking and biking. The goal is to prepare the community and potential investors with plausible plans to accommodate growth and achieve the desired transit-supportive environment.

**SR 7 Roadway Design**

SR 7 is a vehicular-dominated environment under its current design. The infrastructure requirements for rural road cross-sections, which do not anticipate dense pedestrian traffic, are quite different from the components for urban roadway cross-sections, which anticipate heavier use by non-motorists. The extremely high-paced growth in the area transformed what was once a rural road into a main thoroughfare traversing an urban area before the roadway itself could be appropriately improved. The current charge is to ameliorate the effect of the recent removal of the University Drive extension from the transportation network by improving the transit environment on SR 7. In order to accomplish this, the cross-section design must change.
Shaping the Future of SR 7

The current plan, based upon the data and analysis developed for the settlement agreement, is to improve transit use by expanding the SR 7 right-of-way to add two dedicated transit lanes, once certain thresholds have been exceeded. The strategy is clearly intended to replace the north-south lanes lost by the removal of University Drive. The purpose of this study and the charrette is to consider all aspects related to the SR 7 corridor including livability, safety, cost, and the elements that are proven to create transit-supportive environments. Four key points suggest exploring alternatives to widening the road:

- **Community Concerns**

  While there were a limited number of charrette participants, strong opposition to further widening was raised for different reasons. Roadway construction would disrupt the daily lives of residents, albeit for limited amounts of time, given the few alternatives in the street network. Businesses
would be negatively impacted in an already suffering economy, as roadway construction generally deters patrons and customers. Additional concerns were raised regarding the bleak environment of the corridor and that additional pavement could make it appear even worse; however, many improvements to the corridor, including shade trees and widened sidewalks, could be realized through the future construction.

**Is it a Long-Term Solution?**

The purpose of adding two lanes is to ensure the roadway functions appropriately. However, the analysis conducted by FDOT, demonstrates that if two additional lanes are added, whether dedicated for transit exclusively or used to establish an 8-lane roadway, SR 7 will still fail. This suggests other steps are essential to relieve congestion and make transit truly viable on the corridor.

<table>
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<tr>
<th>Scenario 3D - No University Drive Connection</th>
<th>Scenario 1G - University Drive Connection</th>
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<tr>
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<td>3G Modified 1</td>
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<tr>
<td>[SL+2L State Road 7]</td>
<td>[SL+2T State Road 7 and auxiliary lane on Turnpike]</td>
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<tr>
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</table>

*Summarized Results of FDOT Network Needs Analysis.*

**What Will It Cost?**

According to estimates in the Palm Beach County 2035 Long Range Transportation Plan (LRTP), the cost for widening SR 7 from Glades Road to the County line is approximately $22.7 million. These projected costs have been estimated without the benefit of detailed engineering study, and may change in response to current conditions on ground (e.g. limited right-of-way, impacts to canal bridges, and drainage considerations). The economic downturn and current funding structure for roadway projects impact the expenditure and prioritization for new lanes and increased connectivity.

**Will It Create a Transit-Oriented Corridor?**

The current transit ridership is low and far below the demand thresholds to necessitate dedicated bus lanes. However, increasing transit as a mobility choice is an important strategy to relieve congestion on the SR 7 corridor. In order to make transit viable, the physical environment must create an attractive pedestrian realm. Just adding more vehicular lanes has the potential to worsen pedestrian travel (a significant aspect of riding transit) by increasing the time and expanse of roadway to cross the street. Street-crossings are necessary to access the route in both directions. The provision of regularly spaced shade trees and widened sidewalks along SR 7 are fundamental to improving the corridor and will be vital to increasing transit viability.
**Key Recommendations to Improve the Roadway**

By making a few adjustments in the right-of-way design, SR 7 could become much more attractive and less hostile to non-motorists. Missing pedestrian links exist along the SR 7 corridor, and throughout the study area. In some areas, sidewalks are nonexistent, in others, located within open drainage systems and likely to be underwater at certain times. The lack of bridge connections across the canals extends the length of time and distance for those trying to access transit routes. The first step is to provide missing sidewalk links along the corridor. Where room permits, installing a 12-ft. wide multi-use path along SR 7 is recommended to give both pedestrians and cyclists the opportunity to use a route separated from traffic.

The second recommendation is to improve the landscaping within the right-of-way. Few trees are planted long the entire length of the corridor. Those that exist are mostly planted by adjacent development and do not extend shade over the sidewalks. Planting uniformly spaced, large canopy trees within the right-of-way will provide continuous shade for pedestrians and a sense of enclosure. Using clusters of varying species does not achieve the same effect. The sense of enclosure establishes a more comfortable human experience, and has the added effect of calming traffic flows. Ample room exists to plant the trees an appropriate distance from moving traffic. These small infrastructure efforts will greatly improve the experience of using transit on the corridor.
The final two recommendations to improve SR 7 require implementation efforts outside of the right-of-way cross-section: increase connectivity and change the development pattern. Increasing connectivity to the surrounding area creates alternative routes for both non-motorists and motorists, and acts as a safety valve to relieve pressure from the road. The master plan identifies small links between adjacent properties and potential new streets through larger, redeveloped parcels. Changing the development pattern also is necessary to transform SR 7. New development must create places comfortable for pedestrians, establish a finer grain street network, and use a mix of uses to create a more sustainable, transit-supportive area. Various opportunities to implement these recommendations are demonstrated throughout the Master Plan.

**Key Recommendations**

1. Connect Missing Pedestrian Links;
2. Improve Landscaping;
3. Better Interconnectivity
4. New Development Patterns
The Southwest Quadrant

The Southwest Quadrant is the portion of the study area on the west side of SR 7, from Broward County, extending up to Palmetto Park Road.

Hillsboro Canal South

At the southern end of the study area, across the Hillsboro Canal into Broward County, a large vacant parcel is located on the west side of SR 7, within the City of Parkland. The site is triangular in shape, bounded by SR 7 on the east, Lox Road on the south, and the canal on the north. Lox Road is expected to be widened to four lanes in the future, given the development anticipated west of the study area. The site has the potential to provide a significant, positive impact to the area provided future development uses the pattern shown in the master plan.

The proposed design for this site establishes a street and block system, creating multiple circulation routes within the development and into the surrounding area. Those living or working in the site have many ways in and out of the development. One potential feature in the proposed network is a new two-lane bridge connecting Palm Beach and Broward counties across the Hillsboro Canal, between two commercial parcels. The bridge provides several important benefits:

- Removes some local trips from the corridor by establishing an alternative, parallel route to SR 7;
- Strengthens cross-shopping opportunities for local residents between the commercial parcels through the ease of mobility and increased convenience of access;
- Establishes an alternative route to the grocery store, a major destination for surrounding residences;
- Provides a safer, more aesthetically pleasing option for pedestrians and cyclists than the SR 7 corridor;

The new bridge, as illustrated on the next page, is not intended as a new regional connector. Rather, it is a local option to increase local connectivity between commercial parcels north and south of the Hillsboro Canal. The bridge would be a narrow, pedestrian and bicycle-friendly local route.

The development pattern also demonstrates how to compatibly mix uses on the Broward County site, without physically disconnecting them from each other. The plan places the higher intensity retail uses along SR 7, transitions to a hotel use in the middle of the site, and then to residential townhouses in the western portion. The transition from commercial to residential use is accomplished by facing the backs or sides of buildings to each other across an alley. The proposed townhouses face streets lined with other residences or park areas. The uses demonstrated in the plan are
An undeveloped parcel along the Hillsboro Canal provides an opportunity to seamlessly interconnect Broward County’s efforts to establish SR 7 as a multi-modal environment with the transit-supportive land use study for Palm Beach County.

The proposed plan compatibly accommodates a mix of uses and creates multiple routes for drivers and pedestrians to various destinations using an interconnected block structure.
demographics along the corridor, but are not specifically required for a successful development pattern. The important point is that a wide range of uses are possible, provided they are arranged to respond to the scale and uses in the surrounding development. The physical design ensures compatibility, maintains interconnectivity, and creates an attractive, desirable place.

**Twin Meadow Lakes Drive to Judge Winikoff Road**

This area is located on the west side of SR7, between Twin Meadow Lakes Drive and Judge Winikoff Road. The parcels in this location are generally developed as strip commercial centers. North-south access is possible between some parcels via an informal route. These commercial buildings contain a wide range of uses, including several very successful businesses including a Publix grocery store and a popular local Brazilian bakery.

The master plan recommends formalizing interconnected access between the various developments located along SR 7. Some of the existing buildings are older and likely to redevelop over time. When redevelopment occurs, the missing or weak links in this secondary north-south route should be added or improved. Formalizing this route is important in order to create easy access to the signalized intersections at SR 7.
In order to improve the pedestrian experience along the corridor, future buildings should line SR 7, with a small setback and wide, shaded sidewalks. This arrangement creates an interesting pedestrian route, rather than one dominated by surface parking lots. The result is a “park once” environment whereby patrons park, and then comfortably travel between several shops on foot. In the design proposed, parking, loading, and vehicular circulation is located to the rear of the buildings, minimizing potential vehicular conflicts with pedestrians. The grocery store is maintained as an anchor within the center. Multi-family and/or office uses are located in upper stories over the retail uses to diversify the parking demands over the day, and to create affordable housing options for the workers in the businesses.

**Key Master Plan Features**

1. Establish easy, alternative north-south routes to access streets with signalized intersections with SR 7;
2. Position new buildings along SR 7 to create a wide, shaded, continuous shopping route for pedestrians;
3. Incorporate residential and office to mix the land uses.
Southeast Quadrant

The Southeast Quadrant is the portion of the study area on the east side of SR 7, from Broward County, extending up to Palmetto Park Road. The area has a much better street network than found in other parts of the study area. Edgewood Parkway provides an alternate north-south route from Marina Boulevard to SW 3rd Street. The E-1 Canal traverses the east side of SR 7 and is a significant feature both visually and physically. In this quadrant, Marina Boulevard, Boca Entrada, Sandalfoot Drive, SW 14th Street, and SW 3rd Street cross the canal. Sandalfoot Square, a large quantity of multi-family development, and a vacant former Walmart are located along SR 7.

Sandalfoot Square

Sandalfoot Square is an existing development located on the east side of SR 7 in the southeast quadrant. The site, located between Marina Boulevard and SW 14th Street, is one of the largest parcels in the study area. The shopping center contains Western Beef as the anchor and a wide range of other uses, including retail, personal services, restaurants, medical offices, and a school. The inclusion of off-retail uses suggests the center may be likely to redevelopment in the next ten to fifteen years.

The design demonstrates a transformation of the site into a beautiful, mixed-use village. Vehicular traffic is accommodated, while a desirable place for pedestrians is created. Main pedestrian streets are lined with building fronts, with parking located in the rear. Secondary routes accommodate surface parking and service functions. The plan has
capacity to accommodate a range of retail tenants and maintains the existing larger format stores. The new development creates a desirable address for other uses, including office and residential.

A new system of streets and blocks provide multiple, seamless, pedestrian-friendly routes through the new mixed-use center, connecting to the surrounding areas. The Boca Entrada entryway is extended through the parcel as a street. This new connection to Edgewood Parkway increases the exposure of the retail stores and diversifies the travel route options for the area as a whole. Along the canal, a parallel route to SR 7 is established with the character of a traditional main street. The street is lined with building fronts and has slower-moving traffic, on-street parking, and wide, shaded sidewalks. This new street will become the primary north-south pedestrian route in the area.

An aerial view of Sandalfoot Square as it exists today.

New travel routes in the redevelopment design for Sandalfoot Square.

Key Master Plan Features

1. Extend Boca Entrada through the parcel;
2. Establish a street parallel to SR 7 along the canal;
3. Line main pedestrian streets with building fronts;
4. Accommodate parking and service functions on secondary routes;
5. Create a desirable address for residential and office uses.
Multi-Family and the Canal

The area between SW 14th Street and Palmetto Park Boulevard is characterized by low rise, well-maintained multi-family buildings ranging in construction age. Approximately 6,000 people live in this area. Most of the complexes have limited access points and few, if any, interconnections between each other. The neighborhood itself has a better street network than other parts of the study area. Edgewood Parkway provides a north-south link from Marina Boulevard to SW 3rd Street. The E-1 Canal traverses the east side of SR 7 and is a significant feature both visually and physically. SW 14th Street and SW 3rd Street cross the canal, but no other bridges or pedestrian walkways afford access between SR 7 and the adjacent residential developments.

Some residential complexes have gated access.

Most residential complexes are separated by fences.

This aerial view shows most of the southeast quadrant of the study area. Multi-family development is located north of Sandalfoot Square. To access transit stops, residents must travel west to Edgewood Parkway, then north or south to one of the two roads that bridge the canal.
Opportunities exist to transform the pedestrian realm into a fully functional, attractive area and to open alternative transportation options to a large concentration of residents. The lack of access to the corridor and the design of the SR 7 right-of-way deter pedestrian and bicycle travel. The absence of both sidewalks and shade in this area combines into a hostile pedestrian environment. Pedestrian needs have been difficult to address in some areas since drainage remains in an open swale system. The adjoining canal right-of-way is solely focused on water conveyance. However, the needs and the concerns of the surrounding community necessitate the expansion of its role, without reducing its primary function. With adjustments to the design of both rights-of-way, a dramatic improvement in the function and aesthetics of the corridor is possible.

The first priority is to redesign the SR 7 right-of-way to properly accommodate pedestrians. Currently, the SR 7 right-of-way has a bike path alongside the outside vehicular travel lane, and then approximately 30 feet of grass swale, which extends to the guardrail that demarcates the boundary of the Lake Worth Drainage District property. No sidewalks exist in this area. In other areas with sidewalks, cyclists generally tend to abandon the bike lane in favor of the sidewalk to increase the distance from motorists.

The recommendation for the SR 7 right-of-way is to install a 12-ft. wide multi-use path along the border of the Lake Worth Drainage District boundary. The remaining 15 feet of right-of-way easily accommodates a planting area for uniformly spaced shade trees. Planting the trees between the multi-use path and the travel lanes creates both a physical and visual barrier between moving traffic and people, and provides shade for non-motorists. The width of the planting area provides sufficient room to ensure the trees can be planted an appropriate distance from motorists.

Due to safety and liability concerns, the Lake Worth Drainage District has installed fences periodically to deter people from walking along the canal edge.
Opportunities exist within the Lake Worth Drainage District right-of-way, to accommodate both the drainage and maintenance responsibilities, while simultaneously enhancing the environment for the adjacent 6,000 residents. In order to properly maintain the canal, periodically heavy equipment is used to clear debris and vegetation. It is imperative that access is provided for these infrequent, but necessary maintenance efforts, as proper function of the E-1 canal is important from a regional perspective. In order to facilitate maintenance from both sides of the canal, the proposed multi-use path within the SR 7 right-of-way should be constructed with sufficient compaction, etc. to accommodate the maintenance vehicle, if needed. The canal right-of-way currently has approximately 45 feet between the canal bank and the property line. Even considering potential expansion of the canal width, room is available to install a few simple improvements to accommodate cyclists and pedestrians without impeding water conveyance or maintenance.

By using certain design details, people can be afforded reasonable access within a safe, attractive environment. Currently, due to safety and liability concerns, the Lake Worth Drainage District has installed fences in certain locations in an effort to keep people from traversing along the east side of the canal. The breaks in the adjoining developments’ hedges and the trail worn in the grass sug-
gest the route is being used despite the deterents.
The recommendation for the Lake Worth Drainage District right-of-way is to allow pedestrians and cyclists access along the east side of the right-of-way. The design proposes installing a row of shade trees along the eastern edge of the boundary with a 10-ft. wide multi-use path. A hedge delineates the west edge of the path to visually and physically corral people away from the canal bank. Over 20 feet remains along the canal bank unchanged or available for expanded waterway. The multi-use path should be constructed to accommodate access by the maintenance vehicle.

In the long term, should the watercourse expand, the opportunity exists to create an urban amenity. If the canal section uses a hard edge for increased flow and reduced maintenance, the edges of the canal could be detailed more formally as well. A parallel shaded roadway could be included, increasing the alternate travel to include vehicles within the right-of-way. Expanding the public infrastructure along water utility areas to create character and a signature urban feature has been successful in other places.

*The canal section with the multi-use path transformed to a parallel roadway.*

*Using the hard edge of the canal section to create an urban amenity.*
One of the most consistent themes voiced by the community was to transform the canal into an amenity for the area. In order to achieve this, the Lake Worth Drainage District and Palm Beach County should enter into a legal arrangement to alleviate the potential liability incurred by allowing access to the area. These recommendations do not require the participation of private property owners and could greatly improve the physical environment both functionally and aesthetically.

**Pedestrian Bridges over the E-1**

During the charrette, the Lake Worth Drainage District suggested potential support of the idea of enhancing pedestrian connectivity crossing over the canal. This pedestrian connectivity is proposed in the form of simple yet beautiful, easy to install and maintenance-free prefabricated pedestrian bridges to span the canal at key locations. These bridges, spaced every few hundred feet allow residents easier access to both the businesses and transit along SR 7.

The bridge shown below is an example of the type of prefabricated bridges that could be installed. This particular brand is made of aluminum alloys that do not require painting or ongoing maintenance. They are delivered ready to drop in place, and since they are typically 65% lighter than steel pedestrian bridges, minimal labor and equipment is needed, making it ideal for this canal.
The flexibility of the material with which these bridges are constructed allows great spans and complex designs.

Pedestrian bridges could greatly expand access to the corridor and transit. The bridges should be installed in conjunction with new transit stops, and linked to the surrounding residential developments by the proposed multi-use path along the canal (dotted yellow line). The residential areas north of Sandalfoot Square have densities that, in some instances, exceed 20 du/ac. In an area with densities as high as this one, this simple combination (bus stop + pedestrian route + pedestrian bridge) could dramatically increase access to transit, as well as:

1) Create new routes for people to access goods and services along the corridor;
2) Decrease pedestrian travel time to access transit; and,
3) Decrease local vehicular trips.

In order to further increase connectivity and consequently transit ridership, new pedestrian routes should be established linking Edgewood Parkway to the canal, between existing developments, wherever possible (shown in purple).

The image above depicts the current condition, where a person living in point A must walk 3/4 miles to access transit (point B) due to the lack of connectivity in the area.

If pedestrian bridges and new stops are installed, this same person could access transit (point C) by walking a mere 350 feet (path shown in orange).

By connecting these pedestrian bridges with a multi-use path along the canal, pedestrians will have more convenient access to goods, services and transit.
**East side of the Intersection with Palmetto Park Road**

This site is located at the intersection of Palmetto Park Road and SR 7. The southeast parcel contains a vacant building, formerly a small Wal-mart. The north side houses a Lowe’s and a Walgreens. The retail uses within the study area are generally over-parked, which detracts visually and creates expansive, hot asphalt areas. Water retention areas create additional separations.

The proposal for this site is to strategically replace some of the surface lots with liner buildings. The buildings are positioned closer to the main thoroughfares for visibility. The buildings face parking areas that are reconfigured into streets with on-street parking to accommodate vehicles, parking, and a pleasant pedestrian route. The anchor site remains, with adjustments to accommodate loading and service from the back. Ideally, the type of uses would be neighborhood services,
such as a small market, pharmacy, drycleaners, etc., to provide easy access to these uses from the surrounding neighborhoods. A link is suggested between the adjacent development to the east, ideally as a roadway, but at least as a pedestrian and bicycle accessway.

An image of the new pedestrian-friendly commercial center. The retention area is formalized with surrounding sidewalks and formal tree planting to shape it into a park, rather than a buffer.
West Boca Medical Center

West Boca Medical Center is a significant employment center in the area. The hospital employs approximately 1000 people in addition to 500 physicians circulating in and out each day. Currently, access is solely from SR 7, and the administrators report difficulty accessing the center, particularly from the left turn area in the southbound direction. Three office buildings are located in the western portion of the parcel, with the hospital facility located in the eastern area. Though one building has a high vacancy amount, parking is in high demand. Recent expansion activity has been focused off-site, which creates a certain amount of inefficiency for physicians’ time, as well as traffic impacts. The campus has a cafeteria, but no other options for dining or shopping.

The proposed plan accommodates future expansion needs on the property. A frontage road with parking is proposed along the canal on the medical complex property to provide another north-south route. Additional medical facilities are proposed over surface lots. For expansion to occur on site, a structured garage must be incorporated. The plan demonstrates how well-positioned buildings can begin to shape the streets and open areas to create a tranquil, beautiful setting, especially around the waterways. Attracting new restaurants as part of the improved physical environment would also be beneficial to the campus.
Infill buildings are used to create a unified campus. A new parallel route to SR 7 is incorporated. A signalized intersection is recommended at the intersection with SR 7 and Central Park Blvd.
Jewish Federation

In response to security concerns, links in the already limited street network have been closed around the Jewish Federation. While the security concerns of the facility are legitimate and important, the negative impact of closing the streets is also significant, particularly as it relates to hospital access. Hospital access was possible from Glades Road, via Ruth and Baron Coleman Road prior to the closing. Now every trip, including emergency trips, to the hospital must engage SR 7 and the Glades Road intersection. Removing access routes to emergency facilities is not desirable. The recommendation is to support the Federation in hardening the boundary around their property to improve security and control access to their property. Securing the boundary will allow 95th Avenue and Ruth and Baron Coleman Road to reopen to community access. Restoring this missing link will greatly improve hospital access and the overall transportation network.

Occasionally people become concerned with speeding traffic and non-locals driving through neighborhood streets. Hoping to address these concerns, streets get closed. This seemingly simple solution triggers many unintended consequences, which are detailed in the Principles of Urban Design chapter of this report. In the specific case shown to the right where the suburban development pattern has poor connectivity by design, closing just one road severely limits access to the hospital, and forces everyone to engage SR 7 for every single trip.
Restoring access to Glades Road, and introducing multiple routes to disperse traffic in the proposed Westwinds development pattern.
Westwinds of Boca

Westwinds of Boca is located at the southeast corner of Glades Road and SR 7. The center is currently very successful with Home Depot and Publix as anchors, and no space available to let. The center has two retention ponds, one located at the intersection, which is surprising as the corner location is very valuable given the surrounding car trips. The canal adjoins the west side of the parcel, but two bridges afford access from SR 7. The access to and from Glades Road is difficult; the easternmost point is signalized, but congested. The adjacent parcel is still functioning as agriculture, and likely to redevelop once the economy recovers.

The proposal for this area demonstrates a redevelopment strategy that integrates the vacant parcel into Westwinds of Boca. The design demonstrates how to maintain the successful elements of the shopping center, and refine the weaker aspects. On the Westwinds parcel, the proposal is to relocate the drainage located in the northwest corner and augment the area in the southeast corner, releasing the valuable corner for development as a restaurant cluster. The main center remains intact including the anchors and their respective parking fields. The western portion, which currently contains scattered individual tenants and surface parking, could be transformed into urbanism. The result is a pattern that maintains the strengths of the existing center, clearly demarcates entrances to the center, and establishes pedestrian links.
The adjacent, vacant parcel, which currently has a residential future land use, is developed as an interconnected neighborhood. The design creates a residential area, with a mix of housing types and a variety of open spaces. The street network extends into the shopping center to provide easy access by foot, bike, or car without necessitating a trip onto the arterial roadways.

A view of the southeast corner of Glades Road and SR 7 as it exists today.

The proposal maintains the components of the successful center, uses infill shops to create a pedestrian-friendly environment, and establishes connections with the new neighborhood to the east.
A view of a street in the new residential neighborhood, shaped by townhouses.
Shadowood Shopping Center

The Shadowood Shopping Center is located on the northeast corner of Glades Road and SR 7. The center has a wide range of tenants, and a plan that appears slightly haphazard reflecting additions and changes over time. Similar to the strategy used for the other centers in the study area, the proposed plan demonstrates how to incrementally infill the site to create interesting places conducive to pedestrians, without scraping the major anchors or better performing tenant spaces. In the proposal, the large footprint spaces with their respective parking fields remain in tact. New development is organized around the primary entries and treated as main streets. The portion of the site located at corner of Glades Road and SR 7 is very valuable and is designed as a restaurant cluster, with outdoor seating opportunities. The opportunity is to create a signature destination for the community in the shopping center.
The proposed design accommodates new development opportunities, while maintaining the anchors.
Mission Bay

Mission Bay is located at the northwest corner of the intersection of Glades Road and SR 7. The site is unique abutting a beautiful watercourse on three sides. Across the waterway, a desirable residential development lines the opposite shore. The site is developed as a standard strip center, with several freestanding buildings located along SR 7. Water retention is given over to the valuable corner intersection location. A green buffer is provided along the waterway to shield commercial service and loading functions from the view of adjacent residents. Since the site is so prominent, and boasts several unique advantages from the surrounding area, this is the only site in the master plan where a complete redevelopment design is proposed.

The proposal alters the configuration and design treatment of the waterway. The corner retention pond is filled to take advantage of the prominent visibility afforded by the SR 7 and Glades Road intersection. Additional waterway is sculpted along the southwest part of the site, resulting in slightly more water than in the current development. Careful attention was given to organize the plan so that the most intense development faced south and east, while a new residential component was introduced to transition to the water, and achieve a mix of uses. At the corner, the plan suggests a 100,000 square foot, five-story office building. Adjoining the office building is approximately 100,000 square feet of in-line retail uses. A structured parking garage is located in the center of the block, providing optimal shared parking opportunities. The garage will be filled by the office use during the day, and by the retail and restaurant patrons in the evenings and during weekends. A new grocery store is also accommodated in the new plan.
The drawing above is the charrette Master Plan for Mission Bay Plaza. In this scenario the site is completely redeveloped as a mixed-use center. The SE corner facing Glades and SR 7 is primarily office uses with a large (15,000 s.f. floor plate) building flanked by in-line office space to the north and west. There is a multi-level parking garage attached to the rear of the building. To the west the existing lake is enlarged and sculpted to create a hard-scape harbor flanked by restaurants and shopping. The energy and activity of this area is focused towards Glades Road and away from the existing residential to the west. There is a small (30,000 s.f.) grocery store facing the central square and the balance of the site is residential.
The rendering to the left illustrates one of the internal courtyards proposed as part of the “harborside” restaurant cluster in the Master Plan for Mission Bay Plaza. While this is an ambitious plan, the intent is to create a local destination that the community can feel proud of. Creating a true sense of place would strengthen the sense of community and identity of the area. The intense mix of uses would also support the Transit Oriented designation of the corridor.

This view is looking from Glades Road north, across the newly sculpted “harborside” restaurant cluster. Note that the water’s edge is urbanized with a bulkhead and is surrounded by promenades and plazas. All of the restaurants and shops face the water and provide a transition to the new residential to the north. The existing single family community to the west would remain buffered from the site so that visual and noise impacts are not an issue. Mission Bay Plaza was specifically selected as a site to design a completely new project because of its unique features, its excellent presence on SR7 and Glades Road, and because of the existing communities immediately to the west which could access the project as pedestrians or bicyclists.
Regulating Form and Land Uses

A diverse mix of uses is located along the corridor. A cursory review of the amount and types of uses suggests the corridor must surely be a transit-supportive environment. Yet the arrangement of these uses yields a corridor that is bleak and auto-dominant. SR 7 is not a place most people would choose to navigate by foot, bike, or bus. Regulating the form of redevelopment and balancing the land uses is necessary to create a true transit-oriented corridor.

Each of the interventions proposed in the master plan follows the same methodology in the suggested form: the principles of urban design. Each parcel is shaped into walkable-sized blocks and establishes a fine-grain street network with new interconnections whenever possible to lessen the strain on any one roadway. Buildings line the main pedestrian route; parking is no longer the dominant characteristic along the street. Pedestrian and bicycle infrastructure and improvements are demonstrated consistent with the recommendations in the Transit, Mobility, and Enhanced Connections chapter. The uses proposed respond the existing uses on the corridor and the Market Analysis information contained in this report. The challenge moving forward is how to ensure this pattern occurs over time?

Palm Beach County regulates uses and form using the Comprehensive Plan and the Unified Land Development Code (ULDC). In most of the study area, parcels have a land use designation with an underlying residential density, which suggests that a mixing of uses can occur. For transit to be truly viable, densities of at least 4-6 dwelling units per acre are typically needed to ensure that enough population lives within the pedestrian shed to support a regular bus schedule. The county has a bonus program to transfer density in exchange for workforce housing accommodations. One recommendation is the SR 7 corridor should be a prime target for this program. Job centers are also important to establish active, regular destinations to support transit. The land uses of each prime redevelopment site were evaluated to determine if the current allowable uses were consistent with the goals of this effort.

The ULDC regulates the physical outcome of development. Recently, the County adopted the Infill Redevelopment Overlay (IRO), which offers a streamlined approval process for development following form-based code requirements. The IRO regulates block size, street interconnections, building placement and height, and parking location in a manner consistent with the principles of urban design in this report. As an overlay, the IRO is optional; however, for this corridor to redevelop properly, the IRO is the preferred zoning.

Each redevelopment plan was analyzed for compliance with the Future Land Use designations and the IRO code. The diagrams on the following pages illustrate the existing conditions of each potential redevelopment area, analyze the current regulatory framework, and compare the proposed build out of each site. This analysis helps identify the changes needed to balance land uses and realize the form necessary to create a transit oriented corridor.
Existing Shopping Centers

The existing commercial centers are the most likely candidates for redevelopment. Each commercial center is keyed to the map to the right:

1. **Mission Bay Plaza**
   
   Built in 1989, the 272,866 sq. ft. center has tenants including Office, LA Fitness, and TGI Fridays.

2. **Shadowood Square**
   
   Built between 1982 (majority of construction) and 2005, the 304,000 sq. ft. center has a Regal 16 Theater, Borders Books, Bed Bath and Beyond, and Best Buy.

3. **Sports Authority**

4. **Westwinds Plaza**
   
   This center has 172,000 square feet of gross leaseable area with the major tenants of Publix, Home Depot, and DSW Shoes.

5. **West Boca Square**
   
   The 315,000 sq. ft. center has major including Target, Beall’s, Babies R Us, and a Chili’s restaurant.

6. **Lowe’s Center**
   
   Has a 150,000 sq. ft. home improvement store and a 17,000 sq. ft. drugstore.

7. **Palmetto Professional Park**

8. **Wal Mart Center**
   
   Vacant 112,500 sq. ft. structure constructed in 1993 on 13.82 acres.

9. **Publix Center**

10. **Sandalfoot Plaza**
    
    The 140,729 sq. ft. center was built in 1984. Contains Western Beef, Dollar General and various local restaurants, offices, and educational tenants.
Redevelopment Areas: Once the various commercial parcels were evaluated, considering age, tenant mix, and the market analysis of the economic study area, the likely candidates for redevelopment emerged.
Existing Conditions: The diagram below shows the quantity and arrangement of the current uses on each redevelopment area.
**Proposed Redevelopment**: The diagram below shows the quantity and arrangement of the proposed uses on each redevelopment area.
**Future Land Use Analysis:** The amount of commercial and residential uses is controlled by the future land use designation on each site. The table below depicts the current designation and the maximum amount of development allowed per use.

<table>
<thead>
<tr>
<th>Location</th>
<th>FLU</th>
<th>Zoning</th>
<th>Acres</th>
<th>Allowable Development*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mission Bay</td>
<td>LR-3</td>
<td>RT</td>
<td>6</td>
<td>18 units</td>
</tr>
<tr>
<td></td>
<td>CL/3</td>
<td>RT</td>
<td>4</td>
<td>182,000 sq ft/12 units</td>
</tr>
<tr>
<td></td>
<td>CH/3</td>
<td>CG</td>
<td>30</td>
<td>1.3 million sq ft/90 units</td>
</tr>
<tr>
<td>Shadowood</td>
<td>CH/3</td>
<td>CG</td>
<td>35</td>
<td>1.5 million sq ft/105 units</td>
</tr>
<tr>
<td>Westwinds</td>
<td>LR-3</td>
<td>AR</td>
<td>40</td>
<td>120 units</td>
</tr>
<tr>
<td></td>
<td>CH/3</td>
<td>CG</td>
<td>37</td>
<td>1.6 million sq ft</td>
</tr>
<tr>
<td>West Boca Medical Center</td>
<td>INST</td>
<td>CSH/SE</td>
<td>32</td>
<td>489,000 sq ft</td>
</tr>
<tr>
<td>Walmart-Lowe's Centers</td>
<td>CH/8</td>
<td>CG</td>
<td>14</td>
<td>611,000 sq ft/112 units</td>
</tr>
<tr>
<td></td>
<td>CH/5</td>
<td>MUPD</td>
<td>25</td>
<td>1.1 million sq ft/125 units</td>
</tr>
<tr>
<td>Publix</td>
<td>MR-5</td>
<td>RS</td>
<td>1.3</td>
<td>7 units</td>
</tr>
<tr>
<td></td>
<td>CH/8</td>
<td>CG</td>
<td>14</td>
<td>625,000 sq ft/112 units</td>
</tr>
<tr>
<td>Sandalfoot</td>
<td>CH/8</td>
<td>CG</td>
<td>36</td>
<td>1.5 million sq ft/288 units</td>
</tr>
</tbody>
</table>

* When residential uses are underlying, either residential OR commercial use is assigned to land for the purposes of calculating the maximum development potential; mixing uses is generally permitted.
**Individual Site Analysis:** The proposed redevelopment schemes were compared to the existing allowable development, as controlled by the future land uses designations. In most cases, the future land use designation allowed far more commercial use than could reasonably fit onto the sites; the exception being the West Boca Medical Center. Residential densities require some adjustment as well, particularly to implement the Westwinds plan, which requires more units to create a true neighborhood. In response to the existing uses in the study area, more residential uses were introduced onto sites in the northern portion than in the southern portion, which is already fairly dense. The development proposed in each plan is detailed in the following diagrams:

**Mission Bay Plaza**

*Acres: 40.52*

<table>
<thead>
<tr>
<th>Existing Conditions</th>
<th>Proposed Redevelopment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential: 0 units</td>
<td>Residential: 193 Units</td>
</tr>
<tr>
<td>Allowable Density: 3 du/ac 120 units</td>
<td>Proposed Density: 5 du/ac</td>
</tr>
<tr>
<td>Commercial: 272,866 sq ft</td>
<td>Retail: 159,600 sq ft</td>
</tr>
<tr>
<td>Allowable FAR: 1.00 1,482,000 sq ft</td>
<td>Office: 182,515 sq ft</td>
</tr>
<tr>
<td>Restaurant: 61,088 sq ft</td>
<td>Total Commercial: 403,203 sq ft</td>
</tr>
<tr>
<td>Proposed FAR: .26</td>
<td></td>
</tr>
</tbody>
</table>

*Treasure Coast Regional Planning Council*  
*Indian River - St. Lucie - Martin - Palm Beach*  
98
### Shadowood Plaza

**Acres:** 34.93

<table>
<thead>
<tr>
<th>Existing Conditions</th>
<th>Proposed Redevelopment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Residential:</strong></td>
<td><strong>Residential:</strong></td>
</tr>
<tr>
<td>0 units</td>
<td>120 Units</td>
</tr>
<tr>
<td><strong>Allowable Density:</strong></td>
<td>3 du/ac  105 units</td>
</tr>
<tr>
<td><strong>Commercial:</strong></td>
<td><strong>Density:</strong></td>
</tr>
<tr>
<td>304,000 sq ft</td>
<td>3.5 Du/Acre</td>
</tr>
<tr>
<td><strong>Allowable FAR:</strong></td>
<td><strong>Retail:</strong></td>
</tr>
<tr>
<td>1.00 1.5 million sq ft</td>
<td>135,900 sq ft</td>
</tr>
<tr>
<td></td>
<td><strong>Office:</strong></td>
</tr>
<tr>
<td></td>
<td>84,800 sq ft</td>
</tr>
<tr>
<td></td>
<td><strong>Restaurant:</strong></td>
</tr>
<tr>
<td></td>
<td>32,250 sq ft</td>
</tr>
<tr>
<td></td>
<td><strong>Total Commercial:</strong></td>
</tr>
<tr>
<td></td>
<td>252,950 sq ft</td>
</tr>
<tr>
<td></td>
<td><strong>Proposed FAR:</strong></td>
</tr>
<tr>
<td></td>
<td>.18</td>
</tr>
</tbody>
</table>
Westwinds Plaza

**Acres:** 76.98

### Existing Conditions

- **Residential:** 0 units
- **Commercial:** 172,000 sq ft
- **Allowable Density:** 3 du/ac 231 units
- **Allowable FAR:** 1.00 1.6 million sq ft

### Proposed Redevelopment

- **Residential:** 632 units
- **Density:** 8 du/ac
- **Retail:** 362,500 sq ft
- **Office:** 0 sq ft
- **Restaurant:** 55,200 sq ft
- **Total Commercial:** 417,700 sq ft
- **Proposed FAR:** .26
The West Boca Medical Center is a major employment center along the corridor. The campus currently has vast amounts of surface parking lots, while satellite medical offices for some hospital doctors are emerging along Glades Rd, some distance away. In order to maximize this destination, the campus should be permitted to infill beyond the current .35 FAR limitation.
## Walmart-Lowe’s Centers

**Acres:** 39.32

### Existing Conditions

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Residential</td>
<td>0</td>
</tr>
<tr>
<td>Allowable Density</td>
<td>5 and 8 du/ac</td>
</tr>
<tr>
<td>Commercial</td>
<td>280,000 sq ft</td>
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<tr>
<td>Allowable FAR</td>
<td>1.00</td>
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### Proposed Redevelopment

<table>
<thead>
<tr>
<th>Category</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential</td>
<td>75 units</td>
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<tr>
<td>Actual Density</td>
<td>2 du/ac</td>
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<tr>
<td>Retail</td>
<td>372,050 sq ft</td>
</tr>
<tr>
<td>Office</td>
<td>0 sq ft</td>
</tr>
<tr>
<td>Restaurant</td>
<td>0 sq ft</td>
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<tr>
<td>Total Commercial</td>
<td>372,050 sq ft</td>
</tr>
<tr>
<td>Proposed FAR</td>
<td>.22</td>
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</table>
Publix Center
Acres: 15.73

Existing Conditions

Proposed Redevelopment

<table>
<thead>
<tr>
<th></th>
<th>Existing Conditions</th>
<th>Proposed Redevelopment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residential:</td>
<td>0</td>
<td>36 units</td>
</tr>
<tr>
<td>Commercial:</td>
<td>167,593 sq ft</td>
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<tr>
<td>Allowable Density:</td>
<td>8 du/ac 126 units</td>
<td></td>
</tr>
<tr>
<td>Allowable FAR:</td>
<td>1.00 625,000 sq ft</td>
<td></td>
</tr>
<tr>
<td>Actual Density:</td>
<td></td>
<td>2 du/ac</td>
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<tr>
<td>Retail:</td>
<td></td>
<td>90,450 sq ft</td>
</tr>
<tr>
<td>Office:</td>
<td></td>
<td>136,300 sq ft</td>
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<tr>
<td>Restaurant:</td>
<td></td>
<td>0 sq ft</td>
</tr>
<tr>
<td>Total Commercial:</td>
<td></td>
<td>225,750 Sq ft</td>
</tr>
<tr>
<td>Proposed FAR:</td>
<td></td>
<td>0.36</td>
</tr>
</tbody>
</table>
### Sandalfoot Plaza

**Acres:** 35.68

<table>
<thead>
<tr>
<th>Existing Conditions</th>
<th>Proposed Redevelopment</th>
</tr>
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<tbody>
<tr>
<td><strong>Residential:</strong></td>
<td><strong>104</strong> units</td>
</tr>
<tr>
<td><strong>Allowable Density:</strong> 8 du/ac</td>
<td><strong>Actual Density:</strong> 3 du/ac</td>
</tr>
<tr>
<td><strong>Commercial:</strong> 140,729 sq ft</td>
<td><strong>Retail:</strong> 233,638 sq ft</td>
</tr>
<tr>
<td><strong>Allowable FAR:</strong> 1.00</td>
<td><strong>Office:</strong> 225,825 sq ft</td>
</tr>
<tr>
<td></td>
<td><strong>Restaurant:</strong> 0 sq ft</td>
</tr>
<tr>
<td></td>
<td><strong>Total Commercial:</strong> 459,463 sq ft</td>
</tr>
<tr>
<td></td>
<td><strong>Proposed FAR .30</strong></td>
</tr>
</tbody>
</table>
Maximizing Transit in Transit Oriented Development

The map on the following page illustrates how to integrate transit into the proposed redevelopment proposals. Four main transit hubs are proposed: Sandalfoot Plaza, West Boca Medical Center, Westwinds Plaza, and Mission Bay Plaza. These locations are anticipated to have the most active, main stations. Each hub is located within a $\frac{1}{2}$ mile pedestrian shed identified along the corridor to maximize access.

Each hub is integrated into the redevelopment plan in the civic center of each area. The center is the natural spot to access transit. Riders can wait within a beautiful public open space surrounded by other uses to maximize comfort and efficiency. The walking from the stop to the destination uses is seamless. It is important to note that the proposed bus route travels on new connections through the redevelopment areas, which not only locates the stops more conveniently for the rider, but also avoids the Glades Road intersection, relieving pressure from the intersection. Finally, new northbound and southbound stops are also suggested to augment service along the corridor; however, it should be noted that the new stops proposed on the east side largely depend upon additional pedestrian infrastructure.
TRANSIT, MOBILITY, AND ENHANCED CONNECTIONS
Enhancing Transit

Many factors affect transit ridership levels, including population density, levels of private vehicle ownership, freeway network, parking availability and cost, transit network and service frequency, fares, system safety, and the walkability of the built environment. In regard to the focus of this report, established correlations between land use mix, land use density, walkability and parking with ridership levels are important to consider. Residential density is a generally acceptable measure informing transit service levels, given that logically, ridership levels increase as more people have access to the transit. The figure below illustrates the generally accepted correlations between residential densities and the type and frequency of transit they support.

<table>
<thead>
<tr>
<th>Type of Transit Service</th>
<th>Residential Density Threshold (Dwelling Units/Acre)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Bus (1 bus per hour)</td>
<td>4-5</td>
</tr>
<tr>
<td>Intermediate Bus (1 bus every 30 minutes)</td>
<td>7</td>
</tr>
<tr>
<td>Frequent Bus (1 bus every 10 minutes)</td>
<td>15</td>
</tr>
<tr>
<td>Light Rail (5-min headways or better during peak hour)</td>
<td>9</td>
</tr>
<tr>
<td>Rapid Transit (5-min headways or better during peak hour)</td>
<td>12</td>
</tr>
<tr>
<td>Commuter Rail (20 trains per day)</td>
<td>1 - 2</td>
</tr>
</tbody>
</table>

Institute of Transportation Engineers 1989

Similarly, ridership levels have been proven to be largely affected by employment opportunities. Studies indicate that changes in the percentage of jobs within a central business district correlate directly to transit ridership levels (Gomez-Ibanez 1996; Hendrickson 1986). Consider the factor of the central business district itself, which, by its very description, indicates a destination hub for multiple employers and users versus typical suburban employment centers, which tend to be single employer, isolated developments.

When land use mix and urban design are taken into consideration, studies find (Crane 2000, Cervero 1993, Pushkarev and Zupan 1977, TCRP 1996, Spillar and Rutherford 1998, Hendrickson 1986) that decentralized residential and occupational locations are difficult to serve with traditional fixed-route public transit because transit works best when a large number of people are traveling to and from concentrated nodes of activities. Not surprisingly, dense, compact development is found to be more conducive to efficient transit operations than dispersed and sprawling patterns of development (Taylor and Fink 2003). Low-density land uses, where greater separation exists between any two land uses, encourages automobile travel choice to the extent that traveling long distances deters human-powered travel such as walking and biking (Ewing and Cervero, 2001), which is important given that bus transit systems are most frequently accessed via walking or biking (Ryan and Frank 2009).
The walkability of the built environment is proven to be significant with regard to bus transit ridership (Ryan and Frank 2009). Walkability has been evaluated considering the impact of three main characteristics of the built environment within ½ mile of transit stations: land use density, land use mix, and the street network. Land density considered net residential density and average retail floor area ratio. Land use mix considered the number of different land uses within a given area. Finally, street network pattern assessments rated dense street networks comprised of small streets compared to sparse networks comprised of large streets using the number of intersections within the station area. The outcome indicates a measurable, statistically significant increase in transit ridership in walkable environments.

The SR 7 Transit Supportive Land Use and Urban Design Study is only part of a larger mobility study, the Multimodal Quality of Service Assessment for Northern Broward and Southwestern Palm Beach Counties. That study is being conducted by the Broward MPO, FAU, FDOT, and Renaissance Planning Group. A key element of that broader study is a multimodal quality of service analysis. The multimodal quality of service analysis is an in depth analysis of the existing pedestrian, bicycle and transit infrastructure throughout the area. Bicycle, pedestrian, and transit elements are assessed and ranked to determine which locations have the greatest need for improvements. The maps on the following page are drafts of the Pedestrian Quality of Service and Adjusted Pedestrian Quality of Service maps from that study. The information gathered from the Multimodal Quality of Service Assessment for Northern Broward and Southwestern Palm Beach Counties will assist with implementing appropriate improvements supportive of general mobility efforts and consistent with the focus of this effort.

Finally, parking is a major proven factor affecting transit ridership. The free and plentiful availability of parking spaces at desired destinations encourages continued automobile use. As parking availability decreases and, subsequently, parking has an associated fee, transit ridership is proven to increase (Moral and Bolger 1996). Interestingly, the increased cost of parking has been found to have a greater impact on transit ridership than the level of service or frequency (TCRP 1980).

Considering the multitude of factors affecting transit ridership and the current predominantly suburban development pattern along SR 7 and throughout the county, increasing transit use along the corridor will be challenging. The current disconnected land uses, low densities, abundant and free parking supply, and hostile pedestrian environment conspire to discourage shifting from the automobile, for those given a choice. In order to re-position mobility along the corridor as much as possible towards transit, every potential factor linked toward increasing ridership must be maximized. As the focus of this effort is transit-supportive land uses, the key recommendations in this report will address mix of land uses, density, walkability, and parking.
Adjusted Pedestrian Quality of Service Map.

Pedestrian Quality of Service Map.
SR 7 Transit Service

The Palm Tran operates Palm Beach County’s public bus service, which connects to the Broward County Transit (BCT) service at the southern end of the SR 7 corridor. This inter-connection is significant because Broward County intends to focus more attention on transit services countywide, which will expand access to destinations and increase the frequency of service. A study is planned by the FDOT to consider enhanced transit service such as Bus Rapid Transit (BRT) or Light Rail for the section of Glades Road from SR 7 to US 1, with the intent to connect into a potential new Tri-Rail station. These two potential opportunities for added and enhanced service sets the stage to significantly enhance service and ridership in the study area.

Palm Tran and BCT overlap and connect in the study area. BCT Route 18 stops at destinations throughout Broward County, providing service every 30 minutes on weekdays and every 40 minutes on weekends. Palm Tran Routes 91 and 92 run every hour. Based on the current schedules, BCT Route 48 stops at the corridor every 30 minutes and then travels to the east. Route 91 primarily uses Glades Road, and Route 91 is routed along Palmetto Park Road to reach the destinations to the east.
The purpose of this study is to provide recommendations on how to make the SR 7 corridor more transit-supportive in order to maximize mobility along the corridor by increasing transit ridership. In order for transit to be successful, both physical characteristics and land use mix must be improved to promote transit as a mobility choice. Some of these changes affect private development, while others could be addressed by public agencies. For example, improving the existing street network and requiring proposed development to promote pedestrian access to the corridor are both important.

Some areas of SR 7 are better positioned to support transit than others. For example, the densities in the multi-family area located on the east side of SR 7 south of Palmetto Park Road are currently transit-supportive, yet access to the corridor needs improvement. In order to organize the discussion, this section of the report is broken down into SR 7 and four quadrants comprised of the adjacent parcels. The quadrants are divided east and west by SR 7 and north and south by Palmetto Park Road. Each area is analyzed in terms of the roadway network and pedestrian/bicycle infrastructure to increase and encourage access to the corridor. Land use mix and policy issues are discussed more detail within the Master Plan chapter.

**Roadway Level of Service**

The adopted level of service (LOS) for Palm Beach County is LOS D. Based on the FDOT 2009 QLOS/Level of Service Handbook and the traffic counts in the corridor the roadway, LOS is D. Based on discussions with Palm Beach County Traffic Engineering, their detailed analysis shows that the LOS is not at D, but between C and D. The 2009 traffic volumes for SR 7 were in the range of 45,000-52,000 depending on the section of SR 7 where counts were taken.

Since 2006, traffic volumes have reduced approximately 10%, which is consistent with the national trend of a reduction in vehicle miles travelled. At this point in time, considering the fairly short period this trend has existed,
no consensus has been reached nationally for future expectations of the number of vehicle miles travelled. Additionally, while this trend currently coincides with national figures, the unique condition of each corridor may result in a different outcome in the short term.

One such condition on SR 7 is the potential development of “the wedge”, which was recently de-annexed from Palm Beach County into Broward County. Plans to develop this property could have a significant impact on the number of trips in the corridor. The potential for development of this property and its associated impacts should not be dismissed lightly.

**Mobility on SR 7**

SR 7 has been constrained to 8 lanes for future conditions. The expectation is for the existing 6 lanes to remain as general purpose lanes, and the addition of 2 managed lanes, which are available for transit and/or other limited drivers (HOV, Sunpass, etc.). As a state road, the current design of SR 7 is intended to allow vehicles to move quickly with little delay at an established higher safe speed. Several factors combine to accomplish this objective:

- Signal spacing ranges from 1,200-3,800 feet, which tends to increase speeds since most of the crossing streets have relatively low volumes and the dominant movement is north-south through the study area.
- The wide roadway cross-section causes drivers to feel comfortable driving at speeds above the speed limit.
- Several dedicated right turn lanes (at both signals and driveways) have relatively long deceleration lanes, allowing turning vehicles to turn without reducing speed.
- The 6-lane cross-section combined with dedicated turn lanes creates very large intersections.
- Access management is an important treatment to reduce the potential for conflicting movements, and can enhance vehicle safety. Along this corridor the access management is highly controlled such that there are few connections to State Road 7. The highly controlled access also allows drivers to feel more com-
comfortable driving faster due to the reduced points of vehicle access to the corridor.

- On-street parking is not allowed, reducing friction to through moving traffic.
- Buildings are set back significantly from the roadway so there is no sense of enclosure, which increases the drivers’ comfort with faster speeds.

The net effect of these elements is that the vehicular traffic along SR 7 travels at faster speeds than are comfortable for adjacent pedestrians and cyclists. In its current condition, cyclists are frequently observed choosing to ride on the sidewalk due to the vehicular speeds. The large intersections intended to reduce vehicular stacking can be intimidating for pedestrians to cross. In order to create the intended transit corridor, the pedestrian experience along the road must be elevated in importance to that of the vehicular accommodations.

Study Area Street Network/Block Structure

The mobility challenge affecting all users, but especially pedestrians and bicyclists, is a result of the suburban development pattern of the study area. Most developments are deliberately disconnected from one another using gated entries, landscaping, and berms. Sidewalk links are frequently lacking as well. The result is a large block structure and a sparse network of through streets, which requires SR 7 and other through corridors to carry a disproportionate amount of traffic.

In order to compensate for the poor street network in the study area, the limited number of interconnected roadways are routinely sized at four and six lanes, with large intersections providing multiple dedicated turn lanes in every direction. In some cases, streets in the study area are four-laned, even where traffic volumes do not warrant more than a two-lane road or a
two-lane road with left turn lanes at the intersections. The limited network of through streets pro-
vides few options for motorists to access alternate routes if a major intersection, such as SR 7 and 
Glades Boulevard, is blocked due to an incident. The connectivity challenge is further exacerbat-
ed by the extensive use of “access management” treatments along State Road 7, which limit turn-
ing movements and opportunities to cross the street.

Restrictive medians and other treatments require vehicles to drive longer distances by allowing 
only right turns. Consequently, in order to access a property on the opposite side of SR 7, a driv-
er has to turn right, drive down SR 7 some distance, make a u-turn, and drive back to the destina-
tion, which is across the street from the origin. This treatment, which is intended to create less 
delay for through movement, creates additional delay for local trips, results in higher vehicle miles 
travelled, and can cause drivers to take additional risks due to added frustration. Free movement 
is further restricted by the E-1 Canal, which is located on the east side of SR 7, restricting east-
west movement for motor vehicles, pedestrians, and bicyclists.

Many of the gated developments create a “block structure” comprised of the entire site, due to the 
lack of through access, yielding a “superblock”. An example is the Boca Woods development, 
which is a “superblock” with a perimeter of approximately 23,000 feet or roughly 4.4 miles. 
Where retail and commercial businesses are 
located, the development pattern consistently 
have large surface parking lots along the road-
ways with the buildings located behind the sea 
of parking. The result is an environment that 
discourages walking, except from the parking space to the destination building.

This environment sharply contrasts with places 
that are walkable, safe, and convenient for 
pedestrians and cyclists, and naturally transit- 
supportive. A transit-supportive environment 
has a fine grained network of streets, easily 
navigable by motorists, cyclists, and pedestrian-
s. Blocks generally have a perimeter of approximately 1,500 feet. The network of streets is 
much more extensive, allowing more options for users and alternate routes when a blockage 
occurs. A dense network of streets disperses traffic more effectively thereby allowing individual 
streets to carry less volume and be smaller and more pedestrian-bike friendly.
SR 7 Existing Pedestrian and Bicycle Infrastructure

The design team analyzed the pedestrian and cycling infrastructure in the study area. Pedestrian and cycling infrastructure refers to the system of sidewalks, multi-use trails, street crossings, landscaping along the sidewalks, and street furnishings for both modes of transportation. The community has some sidewalks along some streets, but it is clear that providing a complete, interconnected network of sidewalks has not been a top priority in the study area. In addition to the incomplete sidewalk network, those areas with sidewalks frequently have routes that are incomplete, in poor repair, not compliant with the Americans with Disabilities Act (ADA), lacking shade, or located such that flooding is likely a frequent occurrence. Time did not permit a comprehensive survey of the study area during the charrette, but the conditions documented and illustrated herein indicate problems for pedestrian access to the corridor. A full evaluation of the pedestrian and bicycle infrastructure is recommended for the entire study area.

A sidewalk is needed on the east side of the corridor to provide a safe and comfortable walking surface for the pedestrians who do not need to cross SR 7. Another significant issue along SR 7 is the physical location of the sidewalk on the west side. Setting the sidewalk as far as possible away from the high speed road is admirable and increases the comfort for pedestrians and pro-

The sidewalk network has missing links.

Some of the pedestrian infrastructure is unsafe and not compliant with the Americans with Disabilities Act.

Pedestrian infrastructure is incomplete along SR 7.

The drainage structure is at the same height as the sidewalk, which likely floods in storm events.
vides room for tree planting between the roadway and sidewalk. However, in some locations, such as in front of the Publix just south of Sandalfoot Blvd., the sidewalk is located at the bottom of the drainage swale. Consequently, during some storm events, the sidewalk is fully under water. This condition likely forces some pedestrians to walk along the edge of the shoulder, exposing them to splashing from passing vehicles and higher potential for injury from being hit.

Along SR 7, the sidewalk has little shade, which compromises the comfort of pedestrians and potential transit riders. The abundant number of light and utility poles located between the edge of roadway and the sidewalk suggests additional vertical infrastructure in the form of shade trees could be installed.

**Cyclists on the Sidewalks**

Cyclists were observed consistently choosing to ride on the sidewalk on the west side of SR 7. The narrow width of the sidewalks along the corridor do not support mixing cycling with pedestrians, yet most cyclists are not comfortable riding in the bike lanes on SR 7. Adding to the concern, cyclists were observed riding against traffic on the sidewalks. Riding bicycles against the flow of traffic is statistically the highest cause of crashes with automobiles, accounting for 40%.

**Crash Information**

One surprising discovery was the information on crash data made available through the Palm Beach County Sheriff’s Department. The 2009 crash data included in the table on the right for SR 7. Within the study area, 398 crashes were reported in 2009 with 55 crashes reported with injuries and 2 fatalities.

<table>
<thead>
<tr>
<th>Location</th>
<th>Crashes</th>
</tr>
</thead>
<tbody>
<tr>
<td>18th Street</td>
<td>55</td>
</tr>
<tr>
<td>Sandalfoot</td>
<td>49</td>
</tr>
<tr>
<td>Judge Winikoff</td>
<td>18</td>
</tr>
<tr>
<td>SW 3rd</td>
<td>27</td>
</tr>
<tr>
<td>Palmetto Park</td>
<td>60</td>
</tr>
<tr>
<td>Boca Woods</td>
<td>23</td>
</tr>
<tr>
<td>Central Park North</td>
<td>15</td>
</tr>
<tr>
<td>Central Park South</td>
<td>33</td>
</tr>
<tr>
<td>Glades</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>292</strong></td>
</tr>
</tbody>
</table>
The number of crashes for this approximately three-mile corridor seems significant, especially considering the amount of access management provided. The data was not broken down to reflect pedestrian or bicycle involvement. Further study of the crash data over time is recommended to identify potential opportunities for crash reduction, and review pedestrian/bike safety concerns.

The SR 7 Cross Section Recommendations

The current cross section of SR 7 is anticipated to widen in the future to accommodate the ultimate build out of a “6+2” cross-section. The timeframe for when this will occur is uncertain, and based on reaching certain thresholds in LOS or transit ridership. However, important pedestrian and bicycle infrastructure is in need of improvement immediately. The following pages depict detailed drawings illustrating the current condition, and the recommended improvements for SR 7, based on both the current and ultimate number of travel lanes.

Phase I Improvements to SR 7: Multi-Use Paths

The first recommendation for SR 7 is to install multi-use paths lined with uniformly spaced shade trees along both sides of SR 7. A 12’ wide multi-use path should be installed along the eastern edge of SR 7 and the existing 5’ wide sidewalk on the west side should be widened to a 12’ multi-use path. These paths will allow bicyclists and pedestrians to safely share the space and maximize comfort and safety. The path will reduce the current exposure to traffic of pedestrians who have to choose between walking in the grass next to the canal or crossing SR 7 to use a sidewalk. Adequate room appears to be available on the both the east and west side of the corridor to include/widen the existing sidewalk in most locations. An assessment would need to be performed to assess the feasibility for the entire length of the corridor. In addition, raising the path to eliminate the flooding condition of the sidewalk that currently exists would improve comfort and safety of the users. The installation of shade trees will improve both the aesthetics of the roadway and the comfort of pedestrians and cyclists.

A charrette participant suggested that a pedestrian overpass should be provided to remove pedestrians from crossing at grade on SR 7. Pedestrian overpasses should be avoided. Pedestrians rarely use them, due to the added distance (approximately 800-900’) of approach ramps to the width of the roadway crossing distance and the cost for a single overpass is approximately $2-2.5 million (assuming no right-of-way would be required). However, when a sidewalk or path is included on the east side of SR 7, installing additional pedestrian crossings of the E-1 Canal are far less costly, and will effectively increase access to the corridor. In addition, the possibility should be explored of installing another multi-use path on the east side of the E-1 Canal to further accommodate pedestrians, roller bladers, and bicycles along the corridor.
The current conditions on SR 7 are depicted in the plan and elevation/section above. Note how the sidewalk is not continuous on the east side of SR 7, the sidewalk on the west side of SR 7 is relatively narrow, and the general absence of shade trees.
Phase I improvements include installing a 12’ multi-use path on the east side of SR 7, expanding the existing sidewalk to a 12’ multi-use path, and the provision of regularly spaced shade trees adjacent to the paths.
Phase 2 - Add 2 Managed Lanes

When widening becomes necessary, a managed lane in either direction will be added. An important consideration to study is whether the widening occurs about the centerline of SR 7, or asymmetrically. If the future additional lanes are added symmetrically about the existing centerline of SR 7, potential right-of-way constraints to the east along the E-1 canal are a factor. Additionally, conflicts with existing bridges may arise. If the future additional lanes are added asymmetrically to the west of the SR 7 centerline, other implications must be considered. Adding two lanes to the west, effectively shifting the road centerline westward, will alter the crown of road location and slope, which could result in a more expensive and expansive effort. In addition, impacts to some driveways and neighborhood access points may occur. In either case the existing drainage systems will be affected need to be upgraded.

The following diagrams depict some of the potential implications of both scenarios. It is important to note that these are only diagrams illustrating the potential impacts in each scenario. The full extent of road widening impacts, large or small, will not be known until detailed engineering drawings are developed. The diagrams provided here are intended to encourage discussion about the best future course of action.

State Road 7: Bicycling

With SR 7 operating at fairly high speeds it is likely that only experienced cyclists will use the existing bike lanes adjacent to the travel lanes. Since many of the cyclists in this corridor are younger riders or less experienced cyclists, provisions considering these riders should be provided. As mentioned above, this can be accomplished using 12’ wide multi-use paths.
The image above shows the potential impacts if the future roadway widening occurs on the western side of SR 7. The areas in orange highlight the changes: the relocated curb and gutter and additional lanes to the west; the relocated median; and the shortening of the entrance median into Boca Woods. Note the new trees and widened multi-use paths.
This diagram shows a widening symmetrical about the existing centerline of SR 7. Note that orange areas of change occur on both sides of the roadway; potential conflicts with the bridges over the E-1 on the east side of SR 7; and impacts to the Boca Woods entry median occur, though to a lesser degree than in the asymmetrical scenario.
Southeast Quadrant

The Southeast Quadrant starts quarter mile south of the Broward County line and is bordered by SR7 on the west and Palmetto Park Road to the north.

Southeast Quadrant: Roadway Network

In contrast to the other quadrants of the study area, this quadrant has a relatively well-connected network of streets with multiple connections north and south, east and west. By having better connection through its street network, this quadrant provides some alternate routes for pedestrians, bicyclists, and motorists. Access to the corridor is still affected by the E-1 Canal.

Southeast Quadrant: Pedestrian and Bicycle Infrastructure

The sidewalk network needs improvement in the Southeast Quadrant. Gaps in the sidewalk network exist along the west side of Edgewood Parkway, on both sides of SW 3rd Street, and within Sandalfoot Square. In addition to these significant missing sections of sidewalk, small sections are missing at intersections and on the connecting streets across the E-1 Canal. The multi-family developments are not afforded access across the E-1, except by streets, which results in longer than necessary routes out the developments.

Bike lanes are installed on some of the local streets in this quadrant of the corridor; however, the bike lane width is inadequate under any condition for cyclists. What makes the existing lanes particularly problematic, for example along Edgewood Parkway, is that the narrow bike lanes are adjacent to on-street parking. The minimum bike lane

![](image1)

Sidewalk damaged, incomplete and drainage inlet interference.

Missing sidewalks along Edgewood.

Lack of sidewalks in Sandalfoot Square.

Missing Sidewalk on 3rd Street.

The Southeast Quadrant
based on American Association of State Highway and Transportation Officials (AASH-TO) criteria is 4 feet wide. The bike lanes were measured at 3 feet adjacent to on-street parking. As a result, a bicyclist is completely within the “door zone” of parked cars, which creates a dangerous condition for the cyclist.

Southeast Quadrant Recommendations

Pedestrian Crossing Improvements

In this quadrant, the neighborhood retail and commercial uses located in the Sandalfoot Square shopping center attract customers from the dense residential uses located on west side of SR 7, as well as throughout the quadrant itself. The current signal spacing throughout the corridor varies from 1200 feet to 3800 feet; the trend for the corridor is that spacing is generally in the quarter-mile or larger range. Based on the number of pedestrians/ bicyclists crossing SR 7 in this area, improving pedestrian crossing conditions is necessary.

Two changes are recommended to improve pedestrian crossing safety. The first recommendation is to provide a signalized pedestrian crossing at the Boca Entrada Blvd./Sandalfoot Plaza Drive intersection with SR 7.
The second recommendation is to change the alignment at the intersection of 14th Street/Sandalfoot Blvd. and SR 7. By realigning the eastern approach of 14th Street to better align with Sandalfoot Blvd., the pedestrian crossing could be improved significantly. This change would allow pedestrian crossing on the northern leg of the intersection and reduce the crossing distance. Reducing the size of the intersection will also allow more efficient signal timing since the time needed to cross the intersection would be reduced for pedestrians and vehicles.

Sidewalk Network Improvements

There is a good opportunity to increase the sidewalk network in this quadrant. The graphic to the right shows the main locations complete sidewalk routes should be implemented through repair, links, and new installations. As illustrated previously, Edgewood Parkway has significant pedestrian activity walking in the street along the western edge. The graphic shows a sidewalk on the west side of Edgewood Parkway, which requires completing missing sections. New sidewalks are recommended on both sides of Southwest 3rd Street. Finally, a new sidewalk connection is recommended along the access driveway which connects SR 7 to Edgewood Parkway between SW 65th Street and SW 65th Way along the south edge of a multi-family complex. Ideally, this new pedestrian connection would continue across the E-1 Canal via a pedestrian bridge. Together, this new route could significantly reduce the distance pedestrians would have to traverse to access SR 7 from within the eastern neighborhood and surrounding multi-family uses.

Along both sides of the bridges crossing the E-1 Canal, a number of locations were observed where repairs are needed. In these areas,
improving the pedestrian condition consists of replacing damaged sidewalks and reaching ADA compliance. Those improvements should also address the current gaps between the bridge railing and guardrail approaches, which leave an opening someone could fall through.

**Bicycle Route Improvements**

There are a number of bike lanes in this segment, including along Edgewood Parkway and SW 3rd that have bike lanes which are 3 feet wide, which is inadequate. In both locations, the parking space or lane width, or part of each, could be reduced by re-striping to widen the bike lane to the recommended minimum of 4 feet. Short of reconstructing the roadway, this is the best improvement that can be done. Most of the remaining streets are low speed where bikes and cars can share the roadway lanes.

**Roadway/Intersections Improvements**

The primary concern in this area is with speeding along some of the streets and potential for crash in certain locations based on information from the Sherriff’s Department. Installing mini-roundabout or roundabouts at the intersections of Edgewood Parkway with Marina Boulevard and Edgewood Parkway with SW 14th Street/Sandalfoot Plaza Drive will reduce crashes and speeding along Marina Boulevard and SW 3rd Street. Another potential location for a mini-roundabout is at the intersection with Sandalfoot Plaza Drive and SR 7. Using a roundabout at this intersection would help to reduce crashes and provide a way to improve traffic control as well.
Northeast Quadrant

This quadrant is bordered on the southern edge by Palmetto Park Road, runs a quarter mile north of Glades Road, and is bordered on the west by SR 7. It contains the West Boca Medical Center, Shadowood Square, and the Jewish Federation.

Northeast Quadrant: Roadway network

This quadrant does not have a well-connected network of streets. The combination of gated communities, the West Boca Medical Center campus, Westwinds of Boca, Shadowood Square, the vacant Walmart site, and the closing of Ruth and Baron Coleman Boulevard (a public street) by the Jewish Federation effectively remove most alternative routes. Given the location of the major medical center, the provision of alternate access is very important. Charrette participants reported difficulty accessing the medical center southbound on SR 7 and requested review of the left turn queuing.

Northeast Quadrant: Pedestrian and Bicycle Infrastructure

This quadrant has big challenges for the pedestrian and bicyclist. The combination of gated communities, the West Boca Medical Center, and the closing of Ruth and Baron Coleman Boulevard effectively creates a difficult environment for pedestrians. Additionally, few if any of these sites are connected to one another, and the average size of each site is in the range of 1 mile square, creating a mass of “superblocks” that neither pedestrians, bicyclists, nor motor vehicles can navigate between without accessing SR 7. In addition, significant gaps in the sidewalk network occur. At the intersection of Palmetto Park Road and SR 7, the sidewalk ends at the canal, forcing pedestrians into an overgrown passage into the parking lot of Walgreens.
**Northeast Quadrant Recommendations**

The intersection at SR 7 and South Central Park Boulevard is identified as a potential candidate for signalization. A signal at this location would serve the West Boca Medical Center and the entrance to Target across the street. If implemented, the access to the medical center would be better managed. The resulting signal spacing would be approximately 1,800 feet to the next intersection to the south, at Palmetto Park Road. The distance to the next intersection to the north, at North Central Park Boulevard/Boca Woods Lane would be approximately 1,000 feet.

The primary opportunity in the quadrant is to reopen the Ruth and Baron Coleman Boulevard and design a method to provide security to the Jewish Foundation along the edge of their property. This will improve access to the Boca Medical Center to and from the east and provide an alternate route around the intersection of SR 7 and Glades Road. These types of alternate routes increase mobility in the event that an incident blocks the intersection, which is particularly important given the hospital use.

An important recommendation for the Northeast Quadrant, which should be fairly simple to realize, is to complete the sidewalk at the intersection of Palmetto Park Road and SR 7. The sidewalk should be extended across the E-1 Canal to connect SR 7 and Palmetto Park Road. This improvement is necessary so that pedestrians will be visible and safe. This link will reduce the pedestrian travel distance to the intersection by 850 feet, (unless the pedestrian walks in Palmetto Park Road, which is dangerous).

This quadrant clearly demonstrates the need to coordinate with the Lake Worth Drainage
District to install a multi-use path along the eastern side of the E-1 Canal. Currently, the residents north of Walgreens have no logical route to the store. If a multi-use path was installed, alternative access to both transit and adjacent uses would be provided.

Northwest Quadrant

This quadrant extends from the norther boundary of the study area by Mission Bay Shopping Center to the southern edge defined by Palmetto Park Road, and on the east by SR 7.

Northwest Quadrant: Roadway Network

This quadrant contains Mission Bay Shopping Center, Mission Bay residential neighborhoods, Boca Woods, other gated subdivisions, and two additional shopping centers. This quadrant does not have a well-connected network of streets due to the large, isolated residential and retail developments. Similar to the other quadrants, few, if any of these sites, are connected to one another creating barriers. Pedestrians, bicyclists, and motorists have no choice but to use SR 7 to circulate between uses.

During the charrette, concerns were expressed regarding the current difficulty in crossing from the Mission Bay Shopping Center to Shadowood Square, from South Central Park Boulevard to West Boca Square, and the lack of access on the southern end of West Boca Square to Palmetto Park Road, near the Chili’s.
Northwest Quadrant: Pedestrian and Bicycle Infrastructure

This quadrant has significant challenges for pedestrians and bicyclists. The combination of gated communities and retail developments that are not connected to one another is not supportive to pedestrian travel. Despite those conditions, the charrette team observed a significant number of pedestrians and bicyclists using the path on the north side of Glades Road, indicating a demand for moving around on foot and bike. No sidewalk or bike trail exists along the southern edge of Glades Road, west of SR 7. Crossing Glades Road is challenging at Diego Drive East and Calle Comercio due to the lack of signal crossings. The net result of these issues is travelling along Glades Road by bike is difficult, since crossing Glades Road is required to access a path.

During the charrette, the desire to access both the Mission Bay Shopping Center and Shadowood Square by bike was expressed. Charrette participants raised concern that crossing at Glades Road and SR 7 is currently very challenging and they do not feel safe crossing with their children on foot or on bike.

Northwest Quadrant Recommendations

The first recommendation is to improve access and circulation between the east and west side of SR 7, between Mission Bay Shopping Center and Shadowood Square. By realigning the entries at is at the northernmost driveway of Shadowood Square. In order for this recommendation to maximize the benefit to the corridor, the center driveway of the Mission Bay Shopping Center would need to be relocated to connect with the northern driveway of Shadowood Square, and then be signalized.
The remaining driveways at both centers would remain right in/right out, except the northern driveway of Mission Bay, which would need to be closed due to its proximity to the new signal. This new signal would be just under 1,200’ feet from the Glades Road intersection. This installation would remove some of the crossing and turning movements from the Glades Road intersection. It would also provide a more desirable crossing for bicyclists and pedestrians since the intersection would be more compact and experience less turning movements.

There were a number of suggestions to provide a connection to Palmetto Park Road from the shopping center near Chili’s again reducing the number of vehicles that would have to go through the intersection of Palmetto Park Road with SR 7. The County could pursue a connection behind Chili’s to the currently privately owned El Bosque Way, by either buying that section of the street or gaining an easement and then provide a gated entrance to the neighborhood if desired by the homeowners.

**Sidewalks/Bicycling**

The best opportunity in this quadrant is the construction of a 12’ multi-use path along the

The current condition on SR 7 between Mission Bay and Shadowood Plaza.

A small connection from West Boca Square to Palmetto Park Road would help divert local trips off of SR 7.

The proposed condition, realigning drive aisles to facilitate access between both sides of SR 7.

Recommendation for a traffic signal at Mission Bay/Shadowood plazas.
south edge of Glades Road west of SR 7. This path would reduce the number of unnecessary crossings of Glades Road for pedestrians and cyclists and potentially increase the numbers of users along this corridor since access would be improved significantly. The trail along the northern edge should be increased to 12’ to improve the function and reduce the potential for conflicts between users.

Northwest Quadrant:
Roadways/Intersections

To improve access across Glades Road, reduce speeds and the potential for crashes, modern roundabouts at Glades and Calle Comercio, Diego Drive East, and Cain Road should be considered. In addition to improving safety for pedestrians and cyclists to cross Glades more safely, the installation of a roundabout at Calle Comercio would allow a crossing movement of Glades that is not currently allowed, but occurs illegally. This would improve safety and reduce detours down Glades to get from one side of the road to the other.

Southwest Quadrant

This quadrant is bordered on the northern edge by Palmetto Park Road and on the east by SR 7 and extends a quarter-mile south of the Broward County line.
Southwest Quadrant: Roadway Network

This quadrant contains a mixture of gated subdivisions and other cul-de-sac neighborhoods. Within this quadrant, a connected network of streets occurs in some areas, yet the neighborhoods in general are not inter-linked to one another. The quadrant has potential to create some additional connections. An existing alley that runs from Sandalfoot Blvd. up to Judge Winikoff Rd, behind a strip center facing SR 7, provides a parallel route to the corridor. A number of cars were observed using the alley as a way to avoid using SR 7. One barrier to establishing additional north-south connections in this area is the open drainage system that bisects the quadrant between Sandalfoot and Boca Entrada. Finally, the Twin Meadow Lakes Drive entrance and connection across to Marina Drive is very awkward.

Southwest Quadrant: Pedestrian and Bicycle Infrastructure

A significant amount of pedestrian and bicycle activity exists within this quadrant, especially in the central portion of the area. Pedestrians are fairly well served by sidewalks throughout the neighborhoods, with the exception of Sandalfoot on the north side between Watergate Court and Marina Place and on both sides of Sandalfoot west of Watergate Court. The charrette team observed and heard concerns about pedestrian crossings taking place between Boca Entrada Blvd. and Sandalfoot Square. This location does not have a signal, yet a fairly significant number of bike and pedestrian crossings occur there. This location is the entrance to the neighborhood on the west side and the main entrance to Sandalfoot Square on the east side. In order to access the neighborhood commercial uses, residents cross the corridor. Without a clear signalized crosswalk, those who are crossing area at significant risk. Unfortunately, utilizing the crossing at the signal at Marina Blvd. requires a pedestrian to take a half-mile detour to get to the entrance to Sandalfoot Square, which most people will not undertake. The lack of crossings encourages jay-walking.

Southwest Quadrant Recommendations

The recommendations for this quadrant involve increasing the street network to improve circulation of all users. Opportunities exist to establish new links parallel to SR 7 to facilitate mobility and provide alternate local routes. For example, using a few lots in the mobile home
park area, where many parcels are currently available for sale, could create a new link connecting Sandalfoot Blvd. and Boca Entrada Blvd. An added benefit is increased oversight of the neighborhood. Another possibility is to extend the drive for the parking/storage lot on Boca Entrada Blvd. across the drainage easement to connect, ultimately, to Sleepy Brook Lane. These connections would involve right-of-way purchase, but result in parallel circulation west of SR 7.

Another recommendation is to formalize the alley behind the strip center between Sandalfoot Boulevard and Judge Winikoff. This route is already used as a “street.” As the center redevelops, it could be moved closer to SR 7 to create a street connection removing trips from SR 7 and the adjacent intersections.

The final potential new local connections are located at the southern neighborhood on the edge of the Hillsboro Canal. A connection between Aqua Vista Way and the back of the strip shopping center could provide additional access to the neighborhood. Another consideration raised by local residents was the possibility of establishing a narrow, pedestrian and bicycle-friendly connection across the Hillsboro Canal to provide another local route that avoids engaging the large arterial.

Charrette participants requested a pedestrian crossing at Boca Entrada Boulevard and Sandalfoot Square, at Marina Drive, and across the Hillsboro Canal.

The County should consider connecting Hammock St and Sleepy Brook Ln to Sandalfoot Blvd and Boca Entrada Blvd Boulevard.
General Recommendations

Transit

The potential station at Glades Road provides the opportunity for the community to gain access to true multimodal transportation options. The following discussions are intended to increase pedestrian access to these transit options.

Walking

The best way to encourage transit is to make walking safe and pleasant. Every transit rider starts and ends his or her trip as a pedestrian. To enhance walking conditions, the community should focus on the strategies in the Principles of Urban Design section of this report such as wide sidewalks buffered from the street by on-street parking (where possible) and lined with street trees for shade and further protection.

Pedestrians want a safe and interesting walk, and this can be accomplished with well-maintained buildings pulled to the street where parking is not the most dominant feature. Auto traffic must be slowed so pedestrians feel safe; the provision of on-street parking is an excellent technique to slow cars down. The County should make the pedestrian experience a critical factor when contemplating redevelopment proposals in the area.

Bicycles

Charrette participants stated that SR 7 is not supportive to bicycling and want to see access and circulation improved for bicyclists. The market for passengers on transit can be increased by providing convenient routes and access for cyclists, therefore the County should seek to increase the use of bicycling to access transit in lieu of driving automobiles to the station, which will reduce parking requirements for cars.

There are many types of bicyclists with different levels of comfort biking on roads. Some bicyclists share streets with traffic, and on these streets, it is important that auto speeds are low. Bike lanes should be provided on the busier and faster streets (those with posted speeds higher than 25
Bike routes and trails should be provided for those who find the busier roads uncomfortable. These bike routes should be made easily available to the public. The County may consider forming a local bicycle advisory committee to gather input on routes and trails, ways to encourage bicycling, and explore strategies to make bicycling safer. The MPO’s Bicycle and Pedestrian Advisory Committee may be a good resource in this area.

**Sidewalk/Path Network**

As mentioned previously, the entire area has large block sizes with a low-density network of streets in much of the study area. In order for pedestrians to reach destinations effectively, a more complete sidewalk network is needed.

A pedestrian and cyclist-friendly development has streets every 300 to 600 feet, which is the recommended block size for development. The proposed sidewalk network attempts to introduce a network every 300 to 600 feet and considers how people use transit stops. Any proposed redevelopment along the corridor should follow these guidelines to improve the network for pedestrians, which also benefits other modes as well. The suburban pattern of development should evolve into a more traditional pattern of development with smaller blocks and more frequent and narrower streets at lower vehicular speeds.

The neighborhoods along the corridor that desire improved pedestrian and bicycle access should look at ways to connect and integrate neighboring developments with at the minimum, sidewalks, and bike routes.

**Design of Sidewalks/Paths**

Sidewalks should be on both sides of the street to encourage walking and discourage dangerous jaywalking or walking along the asphalt of a motoring road. Crossings should be every 300 to 600 feet to allow pedestrians the ability to cross the street to reach their destinations safely and efficiently.

Sidewalk widths should be varied depending on the context of the built environment and the land uses located along the corridor, but at a minimum, sidewalks should be wide enough for two people to walk side-by-side comfortably. Design should consider the pedestrian volumes and composition of the pedestrians. Streets where people walk in groups such as near schools or other high pedestrian generators or destinations need wider sidewalks. Sidewalks should be wide enough to support the necessary levels of pedestrian activity so pedestrians do not enter the roadway as an alternative to conflicts with other pedestrians.

Sidewalks should be part of the public realm and accessible to all members of the public. Sidewalks or paths should never be blocked or impeded since they are the primary conduit of people on foot or bikes. If a sidewalk or path is blocked for repair or construction, a safe and convenient detour should be provided for pedestrians and bikes.
While meandering sidewalks are necessary to avoid natural features or existing trees, the tendency to create artificially meandering sidewalks is not good design. The meandering creates unnecessary costs, and people prefer more direct paths when walking. That is evidenced by the fact that pedestrians routinely take "short cuts" when the sidewalk doesn’t follow a logical path.

Obstructions such as streetlights and utility equipment squeeze the pedestrian space. Streetlights, utility poles, and street furnishings should be arranged in such a way that the pedestrian path is unobstructed and the width and slope requirements of the ADA must be included.

Sidewalk and pedestrian areas around transit stops should be wide enough to accommodate passing through cyclists and pedestrians and those waiting for the transit. Sidewalks should not be blocked or partially blocked by vehicle parking or service vehicles. Pedestrian through traffic should be paramount.

Pedestrian areas and sidewalks should be well drained and not subject to standing water. Additionally, puddles should not accumulate on the car’s portion of the street to prohibit the sidewalk users from being splashed by passing cars.

**Sidewalk and Path Maintenance**

Trees close to sidewalks should be maintained and trimmed such that the spread does not interfere with using the sidewalk. Areas near the sidewalks/paths should also be kept trim so pedestrians and cyclists can travel unimpeded.
Crossings

Crossings have the greatest potential for hazards, for it is the point where pedestrians, cyclists, and vehicles have ownership of the same space. Following are principles to make the crossing safer for all.

All crossings should be provided with ADA accessible slopes, ramp widths and tactile surface treatments so visually impaired pedestrians are directed properly. In addition, there should be two ramps per corner in order to direct pedestrians towards the opposite corner. Tactile pavement and contrasting pavement for the pedestrian crossing also signals to the driver that they should slow and be aware of pedestrian activity.

Corner Radius

The curb return or corner radius impacts the length and location for pedestrian crossings. The curb return radius also heavily influences the speed of the turning vehicle. The smaller the radius, the slower the vehicle must drive to negotiate the turn. The smaller radius also creates a more compact intersection, which allows a shorter pedestrian and bike crossing, and it is easier for the visually impaired to navigate. Unfortunately, many of the radii in the study area are designed to encourage speeding quickly through the turn, which does not afford sufficient time to watch for pedestrians.

As the area redevelops or where a greater emphasis on pedestrian comfort and safety is desired, intersections should be redesigned with tighter radii to give pedestrians and cyclists safer and more efficient crossings. Additional improvement can be gained by use of pedestrian refuge in medians or islands between right turn lanes and through lanes. On lower speed streets, curb extensions or bulb outs can be used to reduce crossing distances for pedestrians.
Signalization

Crossings of major intersections in the study area are facilitated by signals. While signals are important to allow the sharing of the limited time each intersection has to move vehicles and pedestrians through the intersection while avoiding conflict between movements, signal timing must be managed to avoid unnecessary delay. While the County has a very effective traffic management system, which ensures the incidents are managed by adjusting timing and redirecting traffic, the routine timing of signals during the course of the day does not seem to accommodate the reduced volumes that occur during the day. Cycles are typically in the 110 to 150-second range. This creates significant delay outside of the peak hours and even where pedestrian crossings exist, pedestrians were observed to cross outside of the pedestrian phase due to the length of time they had to wait.

Streets

As described in the section concerning the width of sidewalks and the relationship to the context of the location, streets should be treated the same way. This suggestion is a departure from the approach used for most street design for the last 40-50 years. As the goal to increase pedestrian and bicycle mobility, and subsequently access to transit, increases, the mobility of the automobile may be reduced somewhat. Alternatively, as the focus on moving the automobile increases, the potential reduction in pedestrian mobility may decrease, but at the same time may not be eliminated or neglected. The various types of streets and the appropriate context for their use is described below:

- **main street** – a low to moderate-speeds primary thoroughfare in a town or downtown usually lined with retail, providing wider sidewalks for people to shop, dine, and gather with frequent crossings.

- **alleys** – passages between or behind a row of buildings or lots to provide rear access in lieu of driveway access in the front; also provides a good location for utility access.

- **retail street** – a low-speed street that is predominately retail with wider sidewalks for people to shop, dine, and gather with frequent crossings.

- **mixed-use street** – a low-speed street with a mixture of uses usually retail, commercial, residential and/or offices with wider sidewalks for people to shop, dine, and gather with frequent crossings.

- **boulevard** – a moderate speed broader street with landscaping in the center median (center refuge for pedestrians may be provided)
residential – should be designed for very low speeds (sidewalks should be provided on both sides with informal or formal street trees)

Vehicle Speeds

In creating a transit-friendly area, the streets should be designed to keep vehicle speeds down. Slowing traffic increases safety and promotes other modes of non-vehicular travel. As the community infills and redevelops, those street sections should be designed for slower vehicle speeds. For those existing streets where speeds are too high and reconstruction is not financially feasible, traffic calming devices should be evaluated for use to control vehicle speeds. There are a number of streets where cars are driving too fast for the conditions. These streets were verified by the Palm Beach Sheriff’s Office.

Landscaping

If properly planned and provided, street trees can serve three purposes: beautification, protection, and shelter. The community has done an excellent job using trees to beautify its streets as its rich and lush landscaping demonstrate.

Trees between the sidewalk and the roadway help protect those on the sidewalk from passing cars. These can typically be accommodated within engineering requirements for tree-street separation. Most existing sidewalks within the study area have sufficient space between the sidewalk and roadway to accommodate a row of shade trees. In this way, pedestrians will not feel as vulnerable to speeding vehicles and large trucks. On narrower roads, the trees will naturally slow drivers. The trees create a feeling of enclosure, and drivers become more alert to pedestrians and what occurs on the sides of the street.

Shade trees, such as the live oak, are found within the area and offer ample shading where used properly. In some areas, shade trees are provided but are planted too far from the sidewalk to offer any shading. Shade trees should be placed so that a tree’s canopy covers the sidewalk. Trees may be used on both sides of the sidewalk in appropriate areas such as resi-
dential areas and at non-retail frontages. Care needs to be taken in the planting of shade trees so it does not diminish the visibility of the sidewalk from natural surveillance.

Street Furniture

Seating on key pedestrian routes should be considered every 300 to 600 feet to provide rest and to encourage street activity. Seating should be located where there is good natural surveillance. This encourages street activity and offers respite to those who may be physically disadvantaged or visually impaired. The excessive or insensitive use of traffic signs and other street furniture can also have a negative impact on the success of the street as a place. Too many signs compete for a driver’s attention. Messages on the street should be necessary and not distract the driver. Important messages should not be competing with unnecessary messages. The community should use locally distinctive, durable, and maintainable materials for street furniture. Pedestrian-scaled lighting in appropriate places will encourage use by cyclists and pedestrians.

Vehicular Parking

SR 7 is not an appropriate location for on-street parking based on the through speeds and suburban development patterns with large surface parking lots out front and buildings set back far from the sidewalk. However, there are local streets that are wider than necessary due to low volumes such that four lanes are not warranted where on-street parking would be a good feature. Also as redevelopment of shopping centers or other large parcels takes place, where new streets are created and buildings are moved to the back of sidewalk, on-street parking should be included in lieu of overly large surface parking lots. On-street parking enhances the retail environment and protects pedestrians from passing vehicular traffic.

Parallel parking lane widths should be kept as narrow as 7’ with 8’ for use where available pavement width exists. Drivers tend to park in the same fashion as they color with crayons; they tend to “stay within the lines.” The net
effect is that as parking space width increases, drivers tend to get sloppier about their parking practices. This is especially important when bike lanes are placed next to parking spaces. It is a better practice to put additional width into the bike lane rather than the parking space in order to reduce the potential for “dooring” the bicyclist.

Bike Parking

Many people will prefer to bike quickly through the area rather than walk. Cycling is a more sustainable mode of transportation, and its infrastructure requires less land than car parking. Bike parking should be made as convenient as car parking and considered as part of the necessary infrastructure as car parking. Bike storage should be considered in the design of new buildings and when renovating older buildings. Retail and office bike parking requirements will be different from residential bike parking. Retail and office parking should be conveniently near the entrances of the building but should not interfere with pedestrian spaces. Ideally, the bike parking area should be located in a covered area with natural surveillance.

Residents prefer to park their bikes in a sheltered and secure place. In single-family residences, bikes are usually stored in the garage. In multi-family residences, consideration should be given to bike parking in the design of the building. Units can be given individual storage space within the unit. If units are located on different floors, the size of the elevator should be designed to accommodate the bike’s transport up to the appropriate floor. Another option is to provide a secured storage area for the bikes. This storage can be in the form of bike lockers or can be designed as part of the building or an out-building. This area should be located in a well-lit and often used common area with natural surveillance.

Bike Racks/Lockers

Just as a community plans for parking, the community should plan for bike parking as well. Employers should be encouraged to provide ample and suitable bike racks/lockers wherever possible. The community may consider mandatory bike racks at all commercial and multi-family buildings. The community could also consider requiring a minimum number of bike racks when approving a building or development similar to parking requirements.

Neighborhood Electric Vehicles (NEVs)

A variety of cities, businesses, and private developments use neighborhood electric vehicles. Many people have begun to find them charming and welcoming when seeing them in the community. They are often operated as an entrepreneurial endeavor, so cities need only
license their operation, but not fund it. It is possible that there may be enough demand in some of the developments to support the use of NEVs to provide shuttle service out to SR 7 to access transit as it becomes more desirable as a mode of choice.

**Transit Service Considerations**

In order for a community to be sustainable, people need to move about efficiently to get their daily needs met. People of all ages and abilities should be able to move about their community: people with cars, people without cars, people who do not want to drive, people who cannot drive. A community should offer a full range of transportation choices: walking, driving, biking, and riding mass transit wherever feasible. Every transit trip begins and ends by walking and/or biking, so every effort should be made to ensure that pedestrians and bicyclists feel safe and welcome during all parts of the trip. The focus of the SR 7 Transit Supportive Land Use and Urban Design Study is to establish a successful transit corridor.

A primary goal for successful transit is to begin with the intent to make transit competitive as a transportation choice, instead of the mode of last resort. To achieve that goal, there are five keys to transit success: safety, convenience, efficiency, comfort, and welcome.

**Safety**

In order for people to feel comfortable choosing to travel around their community outside of an automobile, creating a safe environment is critical. Most municipalities do not have the resources to provide officers to oversee every street. People generally feel safer in the presence of others. By appropriately mixing uses, properly placing buildings, and designing streets and pathways to promote oversight from

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**Five Keys to Transit Success**

1. Safety
2. Convenience
3. Efficiency
4. Comfort
5. Welcome

Transit should be reliable and run frequently so that people will trust it as a dependable option.
surrounding buildings and uses, the environment is safer. This type of visibility is considered “natural surveillance”. Natural surveillance increases safety, discourages crime, and increases the appeal of transit.

Convenience

With regard to transit, convenience requires easily understood system information and payment options. Transit systems should provide easy-to-read schedules and route maps. New technologies allow people to pay and enter transit without searching for coins using season passes or prepaid cards obtained from conveniently located kiosks or service areas. In all cases, the fee, payment options, and schedule and route information must be clear and simple to understand. If people do not easily understand how the system works or feel intimidated by it, they will not choose transit.

Efficiency

Time is essential in modern life. Accordingly, transit users need to know the reliability of the service. Schedule information can be communicated by placards, kiosks, Internet, and cell phones. Real-time information updates riders on the scheduled transit arrival time; this information can be communicated at the stop, over the Internet, and/or on the vehicle.

Frequency of service is also essential to a successful transit system, and different types of transit technologies provide different frequencies of service. Some systems, such as regional rail, can be successful with service on an hourly basis, but hourly service might not be sufficient for light rail and even less so for bus service. More frequent service (10 or 15 minutes between pickups) improves flexibility and convenience for users and provides for less delay when transfers are part of a commute trip. Frequency is directly related to the surrounding uses. Transit routes and stops must be in locations with trip generators or destinations, or in areas with high residential density in order to increase frequency.

Ideally, transit stop locations should consider pedestrian accessibility. Most people will walk for a quarter-mile (or five minutes) to reach a destination. When accessing transit service, that distance generally increases to a half-mile (or ten minutes). The pedestrian experience along the routes to the transit stop is as important as the actual travel distance. Pedestrians must feel safe and com-
Comfort is essential for people to choose transit. Riders should have shelter from the sun and rain, sufficient seating, and lighting. Basic amenities such as transit schedules and trash receptacles are necessary. Convenience retail (vending machines, newsstands, coffee shops) are desirable to increase comfort. Ideally, the surrounding development should afford access to such uses. For intermodal or transfer facilities, where riders wait for connections, restrooms should be provided, wherever possible.

Welcome

All facilities need to be clean, well-maintained, and fit within the context of the community. Cities can use shelters as a way to promote civic pride and reinforce the community’s iden-
tity. In some locations, such as within a downtown area, municipalities have designed unique shelters or included the shelters as subjects of art and design competitions. Having comfortable, attractive facilities helps communicate that transit riders are valued customers. Finally, transit employees should be helpful, informed, and courteous.

In order to create a more attractive service, many transit providers offer free newspapers, television, and/or wireless services at transit stops, stations, and on transit vehicles. Providing these types of services helps make transit more competitive to those who could choose the automobile as the normal travel mode.

The City of Plantation has designed unique transit shelters that provide the necessary functional elements within a signature piece of city architecture.

Providing shelter from the elements and comfortable places to wait treats riders as valued customers.

The fleet and facilities should be clean, well-maintained, and attractive.
IMPLEMENTATION
The SR 7 Transit Supportive Land Use and Urban Design Study provides many recommendations for increasing roadway connectivity, enhancing transit viability, mitigating impacts to SR 7, and balancing land uses to reduce vehicle miles traveled. The Implementation chapter of this report provides a step-by-step framework for policy decisions and county/agency actions. This chapter organizes specific implementation steps into Immediate Actions items (years 2011-2012), Intermediate Action Items (years 2013-2015), and Long-Range Action items (beyond 2015). The primary purpose of this organizational structure is to highlight the transit-oriented priorities on the SR 7 corridor and ensure certain fundamental actions occur in the proper order.

For the study recommendations and following initiatives to be realized, the coordination and cooperation of Palm Beach County and many local agencies will be necessary. It is imperative that Palm Beach County, and/or the Palm Beach MPO, confirm that the recommendations of this public design process represent the desired direction for the future on SR 7. In order to achieve these recommendations, the following actions should occur:

**IMMEDIATE ACTION ITEMS**

(2011-2012)

1. Palm Beach County Board of County Commissioners and/or the Palm Beach MPO should adopt the SR 7 Transit-Supportive Land Use and Urban Design Study as an appropriate vision for the corridor. Key recommendations include:
   a. Recognize that the widening of SR 7 to a 6+2 or 8-lane section alone will not result in the creation of a successful transit-oriented environment; the provision for pedestrian, bicyclist, and urban design improvements as identified in this study are essential to have a successful transit corridor;
   b. Focus on increasing local vehicular and non-vehicular connectivity as a high priority for the corridor; increased vehicular, pedestrian, and bicycle connectivity should be a core component of future SR 7 studies (including the forthcoming PD&E study on southern SR 7 scheduled to begin in the Spring of 2011);
   c. Balance the land uses along SR 7 and provide for concentrations of mixed-use, workplace, and housing that are well-connected and integrated into the existing urban fabric to enhance potential transit ridership on the corridor (especially in the redevelopment areas outlined in this report).
   d. Commence the ultimate widening of SR 7 consistent with the criteria established in the Stipulated Settlement Agreement and continue the transit-oriented improvements outlined in this report.

2. Palm Beach County and the Palm Beach MPO should develop a SR 7 Task Force to focus on the implementation of the plan.
   a. The Task Force should be comprised of County Planning, Zoning, Engineering, and MPO staff, at a minimum;
   b. The Task Force should meet regularly to define specific priority projects in the study area (using this Implementation Chapter as a guide) and craft strategies to implement the projects;
   c. The Task Force should also serve as a conduit for information to and from the West Boca community and businesses.

3. Palm Beach County, the Palm Beach MPO, and the SR 7 Task Force should begin discussions with the Lake Worth Drainage District (LWDD) regarding bike, pedestrian, and transit improvements along the E-1 canal.
IMPLEMENTATION

a. It is critical that LWDD become a partner with the county and the MPO if the full opportunities for transit and mobility on the SR 7 corridor are to be realized;

b. Palm Beach County, the Palm Beach MPO, and the LWDD should develop a Memorandum of Understanding (MOU) identifying the mutually beneficial goals of enhancing the E-1 canal within the SR 7 study area and listing priority projects including:
   i. Prioritizing the length of the E-1 between SW 3rd Street and SW 15th Street for pedestrian improvements;
   ii. Considering options to install a 12’ wide multi-use path along the eastern edge of the E-1 canal;
   iii. Considering areas to install pedestrian bridge connections to the adjacent community, north of Sandalfoot Square, to provide easier access to transit;
   iv. Establishing public access easements to the pathways and other methods to alleviate LWDD liability concerns;
   v. Considering long-range waterway expansion or enhancement projects designed and developed as economic development amenities (e.g. San Antonio Riverwalk, West Palm Beach Golf Avenue canal project).

4. The SR 7 Task Force, Palm Beach County, and the Palm Beach MPO should begin discussions with the Jewish Federation and associated schools to restore vehicular and pedestrian connections between North Central Park Boulevard and 95th Avenue South.

5. The SR 7 Task Force, Palm Beach County, and the Palm Beach MPO should initiate discussions with the West Boca Medical Center to explore an additional traffic signal at SR 7 and South Central Park Boulevard.

<table>
<thead>
<tr>
<th>INTERMEDIATE ACTION ITEMS</th>
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<td>(2013-2015)</td>
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The SR 7 Task Force should coordinate with Palm Beach County and Palm Beach MPO in implementing the following recommended projects:

1. Enhance pedestrian connections within SR 7 ROW.
   a. Install continuous multi-use paths on east side of SR 7;
   b. Replace the existing sidewalk and install continuous multi-use paths on west side of SR 7;
   c. Plant shade trees, at a regular spacing of 30’ – 50’ on center, along the east and west sides of SR 7, between the multi-use paths and vehicular travel lanes;
   d. Improve and repair pedestrian infrastructure at the existing bridges over the E-1 canal, and install missing links.

2. Initiate discussions with the owners of West Boca Square (shopping center with Chili’s restaurant) and homeowners in adjacent community (along El Bosque Way) to improve access to Palmetto Park Road.
   a. Emphasize the importance of every new connection, no matter how small;
b. Consider options that minimize impacts to neighborhood (see charrette Master Plan);

3. Install new connections at key locations:
   a. A signalized pedestrian crossing at Boca Entrada Boulevard to Boca Plaza Way;
   b. A vehicular connection at Aqua Vista Way towards SR 7 (east).

4. Initiate coordination among FDOT, the county engineering department, and the owners of Mission Bay Plaza to improve circulation onto SR 7:
   a. Realign the northern entrance of Mission Bay to SR 7 to align with the northern, bridged entry to Shadowood on the east side;
   b. Provide a traffic signal at the newly aligned entry point to allow left (northbound) turns out of Mission Bay Plaza and to improve circulation across the corridor (between the two shopping centers).

5. Establish policies that require future redevelopment to connect to adjacent non-residential parcels.

6. Finalize designs and strategies with the Jewish Federation and associated schools to restore the vehicular and pedestrian connection between North Central Park Boulevard and 95th Avenue South.
   a. Strategies must ensure campus security;
   b. Coordinate with the West Boca Medical Center to maximize benefits and reduce conflicts.

7. Coordinate closely with FDOT District IV and their consultants throughout the course of the SR 7 PD&E Study to ensure consistency and compatibility with the SR 7 Transit-Supportive Land Use and Urban Design study recommendations.

8. Incorporate incomplete Bicycle, Pedestrian, and Transit projects (including sidewalk and multi-use paths, bridges, etc) into the Palm Beach MPO 2040 Cost Feasible Project Plan.

LONG-RANGE ACTION ITEMS
(2015-2020)

The SR 7 Task Force should coordinate with Palm Beach County and Palm Beach MPO in implementing the following recommended projects:

1. Implement the Infill Redevelopment Overlay (IRO) code
   a. Utilize the newly adopted county code provisions facilitating urban infill to ensure new development supports the Transit Oriented Corridor designation;
   b. Consider a county-initiated rezoning for all commercial parcels within the Transit Oriented Corridor district to require using the IRO regulations;

2. Future Land Use Provisions
   a. Prioritize the increased density available under the Palm Beach County density bonus programs
IMPLEMENTATION

to apply, by right, to the following properties when rezoned to IRO to achieve, at least, the minimum density tested in the Master Plan:
  i. Mission Bay Plaza
  ii. Shadowood Plaza
  iii. Agriculture lot adjacent to Westwinds Plaza;
  b. Increase the FAR allowance for West Boca Medical Center;

3. Require Connectivity
  a. County should mandate parcel-to-parcel connectivity for all new projects to reduce trips on the Corridor;
  b. County should establish a prioritization list and goal for connecting existing, developed parcels on the corridor to adjacent, non-residential parcels.

4. Work with Palm Tran on strategies to enhance ridership in area.
  a. Increase marketing within the corridor;
  b. Increase frequency of service, particularly at peak times;
  c. Develop unique shelter designs for the Transit Oriented Corridor;
  d. Establish policies, with the county Zoning Department, to require future redevelopment projects on the corridor to install clear links to transit and to coordinate with Palm Tran to provide on-site bus access, if needed.

The SR 7 Study recommends working with the Lake Worth Drainage District for pedestrian bridge connections to the adjacent community to accommodate easier access to transit.
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
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<tbody>
<tr>
<td>AASHTO</td>
<td>American Association of State Highway and Transportation Officials</td>
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<td>BCT</td>
<td>Broward County Transit</td>
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<td>BRT</td>
<td>Bus Rapid Transit</td>
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<tr>
<td>CRALLS</td>
<td>Constrained Roadway at Lower Level of Service</td>
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<td>DCA</td>
<td>Department of Community Affairs</td>
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<td>FDOT</td>
<td>Florida Department of Transportation</td>
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<td>FEC</td>
<td>Florida East Coast (Railroad)</td>
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<td>GDC</td>
<td>General Development Corporation</td>
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<td>IRO</td>
<td>Infill Redevelopment Overlay</td>
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<td>LRTP</td>
<td>Long Range Transportation Plan</td>
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<td>MPO</td>
<td>Metropolitan Planning Organization</td>
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<td>NEV</td>
<td>Neighborhood Electric Vehicle</td>
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<td>SFRPC</td>
<td>South Florida Regional Planning Council</td>
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<td>TAZ</td>
<td>Traffic Analysis Zones</td>
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<td>TCRPC</td>
<td>Treasure Coast Regional Planning Council</td>
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<td>ULDC</td>
<td>Unified Land Development Code</td>
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<td>WBCC</td>
<td>West Boca Community Council</td>
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arcade  a covered, unglazed portion of a building extending over the sidewalk, open to the street forming an archway or passageway. Arcades are typically used in front of shops.

attainable housing  dwelling units whose total housing costs are deemed "affordable" to a group of people within a specified income range.

bond  A certificate of debt that is issued by a government or corporation in order to raise money with a promise to pay a specified sum of money at a fixed time in the future and carrying interest at a fixed rate. Generally, a bond is a promise to repay the principal along with interest on a specified date of maturity.

build-out  within a defined plan and/or area, the point that all allowable and potential development has been completed.

bulb-outs  a traffic-calming device on streets whereby a portion of the sidewalk extends to the outside edge of a travel lane, typically capturing the end of an on-street parking lane. Bulb-outs narrow the width of roadways, decreasing crossing distances for pedestrians and expanding sidewalk areas to accommodate landscaping, benches, and/or transit shelters.

Burt Harris Act  a Florida Statute that provides in part that when a specific action of a governmental entity has inordinately burdened an existing use of real property or a vested right to a specific use of real property, the property owner of that real property is entitled to relief that may include compensation for the actual loss to the fair market value of the property caused by the action of government.

civic anchor  a place that serves to attract people to a particular neighborhood or area i.e. church, theatre, shopping district.

civic realm  public place in a community where people can freely gather usually associated with a civic or public use building such as a post office or courthouse.

colonnade  series of columns set at regular intervals, usually supporting a roof or series of arches.

community retail  shops and services providing for the daily needs of the surrounding area.

connectivity  the ability to travel from one destination to another with many choices of routes and/or modes of travel i.e. bicycle, foot, bus, and train, automobile.

Community Redevelopment Agency (CRA)  Florida statutes permit local governments to create a CRA for eliminating and preventing the development of slum and blighted areas or for the provision of affordable housing in areas in need of redevelopment.
<table>
<thead>
<tr>
<th><strong>GLOSSARY</strong></th>
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<tbody>
<tr>
<td>curb cut</td>
<td>any opening of the stone or concrete curb that surrounds a street; most often refers to driveways and access points to parking lots</td>
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<tr>
<td>density</td>
<td>number of units per given parcel size, most often given in number of dwellings per acre</td>
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<tr>
<td>Enterprise Zone</td>
<td>an area in which businesses are exempt from certain taxes and are given other incentives as an inducement to locate there and employ residents</td>
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<tr>
<td>façade</td>
<td>the wall of a building that faces the street</td>
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<tr>
<td>Floor Area Ratio</td>
<td>a planning method regulating development in an area or parcel based upon the ratio between the floor area of a building and the lot size. Is contrasted in this document with planning based upon traditional community-building concepts.</td>
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<tr>
<td>General Obligation Bond</td>
<td>A municipal bond secured by the taxing and borrowing power of the municipality issuing it, used to raise capital for local government day-to-day activities and for specific projects (usually pertaining to development of local infrastructure such as roads, sewerage, hospitals etc.)</td>
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<tr>
<td>green</td>
<td>a public open space, such as a park, usually designed for passive uses consisting of lawn with either formally or informally arranged landscaping</td>
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<td>Industrial Revenue Bond</td>
<td>Bond used to finance the construction of manufacturing or commercial facilities for a private user</td>
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<td>infill</td>
<td>building upon or utilizing a vacant or under-used parcel or parcels, usually in redevelopment areas</td>
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<tr>
<td>lending consortium</td>
<td>a group of lenders working collaboratively with a municipality offering specialized terms to facilitate priority community projects.</td>
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<td>market absorption</td>
<td>rate at which a market can absorb additional units of supply without causing market saturation and severe price distortions</td>
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<tr>
<td>median</td>
<td>1. term used in statistics to describe the middle number in a series of numbers. 2. strip of land that divides opposing lanes of traffic</td>
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<tr>
<td>mixed-use</td>
<td>more than one use in an area or building, the uses which compliment each other i.e. grocery store next to residential uses</td>
</tr>
<tr>
<td>neighborhood electric vehicles</td>
<td>speed-limited battery electric vehicle used as an alternative to fossil fueled vehicles</td>
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</tbody>
</table>
neighborhood retail  shops and services providing for the daily needs of the surrounding neighborhood.

neighborhood station  a small transit station located within a residential neighborhood or at the conjunction of several neighborhoods, easily accessible by pedestrians and occasionally offering limited parking.

Palm Tran  public bus transportation provider for Palm Beach County

parcel  a piece of land

park and ride  a facility collocating public parking spaces with transit access

park-once  an urban pattern whereby a driver can park in a district and walk to several destinations without needing to drive the car

passive cooling  in pedestrian and public areas, ways to protect pedestrians from the sun and heat without air conditioning i.e. trees, colonnades, transit shelters

plaza  an open public area usually paved and arranged in a formal way

pocket parks  a lot or small parcel of land used as a public park either for passive or playground uses.

primary arterial roads  highways designed for through traffic, usually on a continuous route

promenade  public walking space, usually arranged in formal way

public realm  outdoor areas accessible to the public

public spaces  places the general public has a right to occupy without paying a fee

redevelopment area  an area designated by a local government, usually an older developed area, in which the local government wants to eliminate blight to achieve desired development, reconstruction, and rehabilitation including residential, commercial, industrial and retail

Redevelopment  Private bonds issued to finance certain acquisition, clearance, rehabilitation, and relocation activities for redevelopment purposes by a governmental entity in designated blighted areas

retail anchor  A store (usually a major chain store or department store) in a shopping area or mall whose presence attracts business to smaller shops within the center.
retail leakage: a situation whereby residents of an area are unable to obtain goods and services so they shop at another area to obtain goods and services.

Request for Proposals: formal procedure whereby an organization asks for proposals for a specific task or project.

roundabout: traffic safety control device that forces drivers to slow and navigate through the roundabout. Optimum speeds for roundabouts are between fifteen and twenty-three miles per hour. Roundabouts can be circular or oval.

Right-of-Way (ROW): land reserved for public use or benefit such as a road or electrical transmission.

Special Assessment: source of funding for certain capital improvement projects that will benefit a specific designated area.

suburban pattern: land use pattern characterized by predominantly low-density residential uses, which are physically separated from limited commercial and civic uses.

synergy: combined effort of two or more entities that produce a benefit.

Tax Increment: Method of financing used by local governments to encourage redevelopment and stimulate the local economy. Taxes derived from increases in assessed values of property within a specified district, typically a Community Redevelopment Area, are used to fund and leverage projects.

traffic calming: the use of certain devices or techniques, such as narrow lanes, trees lining the street, and bulb-outs to slow or restrict traffic, especially in residential areas.

Transit-Adjacent: land use pattern that is next to a transit station. The function of the transit station does not integrate or enhance transit, hence the term "adjacent."

transition area: areas are used between areas of two different and distinct characteristics to allow a smooth transition from one characteristic to another. Oftentimes the transition area is a mix of all characteristics.

Transit-Oriented: land use pattern and built form of development that supports and enhances transit located ¼ to ½ mile around a transit stop.

urban pattern: a land use pattern integrating medium or high density residential uses with commercial and civic uses within a concentrated area, i.e. a neighborhood, village or city.
REFERENCES

*Transportation*, 17, 117-139

Berkely: National Transit Access Center, University of California, Berkely,  
Chapter 2.

CRANE, Randall. “The Impacts of Urban Form on Travel: An Interpretive Review”  


*Transportation Research Part A: General* 20A(1) 33-37.


*Journal of Public Transportation, Volume 12, No.1*


*TCRP Research Results Digest*, Number 4,  
February.

------------------1998. “Continuing Examination of Successful Transit Ridership Initiatives.”  
*TCRP Research Results Digest*, Number 29, August.