FLU DATA AND ANALYSIS APPENDIX G
US 17 Area Plan

US 17 AREA PLAN

2009–2010

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Water Management	Banks Engineering, Inc.
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History

The US 17 corridor in Charlotte County has a vibrant history that illuminates its redevelopment process; a process which can build on the historic characteristics of the past to create a plan that all of the citizens and property owners can support as a means for revitalization and future growth.

The area first blossomed to life with the construction of the Florida Southern Railway which extended from Tampa to Punta Gorda. Built by Henry B. Plant in 1883, the railway was intended as a transportation corridor for industrial and agricultural production as well as transit. The Town of Cleveland was platted along the rail line in 1885 and subsequently incorporated in 1926. In 1902 the Florida Southern Railroad was purchased by the Atlantic Coast Line, and rail service was extended to Fort Myers, which continues to run today.

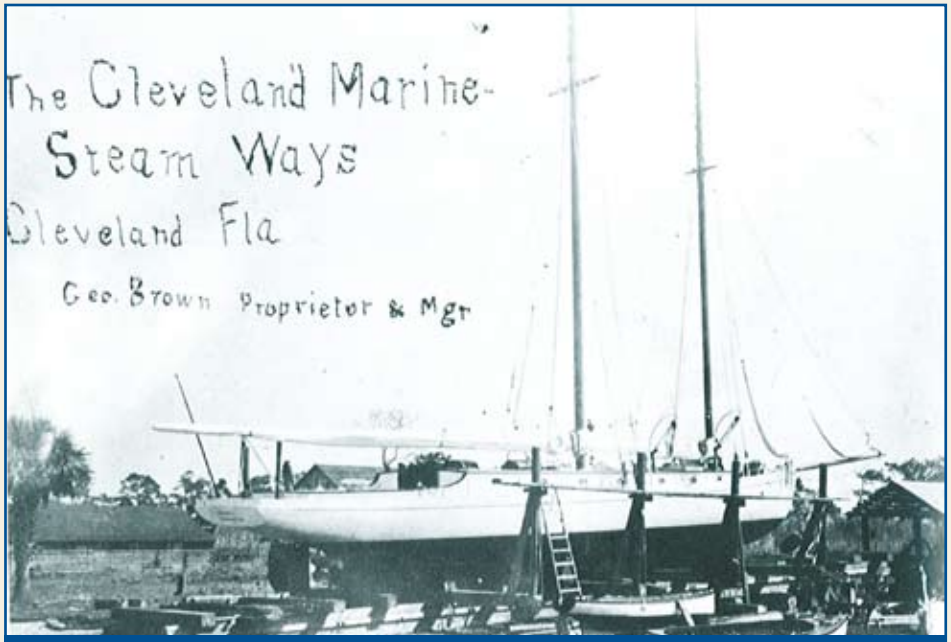


Photo 1: Cleveland Marine Steam Ways Company. Source: Punta Gorda and The Charlotte Harbor Area: A Pictorial History

Cleveland was named for the newly elected President of the United States, Grover Cleveland (first elected in November 1884). The neighborhood is probably best known for George Brown, a local African-American business owner who located to Cleveland in 1890 to open the Cleveland Marine Steam Ways Company, a shipyard and shipping company along the Peace River. Brown came to the area with Captain A.F. Dewey, shipping phosphate down the Peace River. He quickly became a noted member of the community and was the original owner of the property where the Old County Courthouse now sits on Taylor Street. The Brown house, which is located on Cleveland Avenue, is still standing and is cherished as a historic asset of the community.

Photo 2: Picture of The Peace River Lodge at Cleveland, 1925. Source: Punta Gorda and The Charlotte Harbor Area: A Pictorial History

In 1873 Fred Howard homesteaded the property that would later become the Solana neighborhood. Solana was subsequently platted in 1889. The name "Solana" was created as a combination of the word "sol", meaning "sun" and the first name of Fred Howard's wife, "Anna." Lots were originally sold by Fred Howard to associates from his home state of New York. For years Solana was known as a premier residential area with private water frontage for boat owners. Fishing served as the area's major industry. With the establishment of the rail line station at Cleveland, and the expansion of commercial refrigeration, fish became a profitable export product for the area. A loading platform, known as "Pineapple Central" was briefly opened at Solana for the purpose of loading and shipping pineapples, a fruit widely grown in the Solana area at the time.

Photo 3: The historic Cleveland Post Office. Source: Our Fascinating Past

Solana experienced significant growth in the land boom of the 1920s. Several historic structures from that time period still exist, including the historic Fredrick Babcock house, recently listed on the State's historic registry.

The life of Shell Creek as a community was short-lived. Located north of Cleveland, it was named after the nearby waterway, and included a railroad station on the Florida Southern Railway. Few details are known about the original community, except that it had about 50 residents in 1888 and less than a decade later they were gone. While none of the structures remain and the community has faded into history, what is left behind is the natural beauty of the creek and a home to abundant wildlife. Shell Creek saw a gradual influx of residents through the 1960s to present time, who now reside on large lot home sites off of Washington Loop Road.

The real estate boom of the 1920's propelled further development and platting of communities along the Peace River. In 1926, the Bay Shores subdivision was platted between Solana and Cleveland with the first man-made canals in Charlotte County. Riverside Park, along Riverside Drive, was also platted in the 1920s.

With the onset of the Great Depression and the real estate crash of 1929, development and business activity halted along what is now the US 17 corridor. The fishing trade ceased and the municipality of Cleveland faltered. Although Cleveland never unincorporated, its administrative functions were suspended. Development in Bay Shores, Solana & Shell Creek also declined, not recovering for decades.

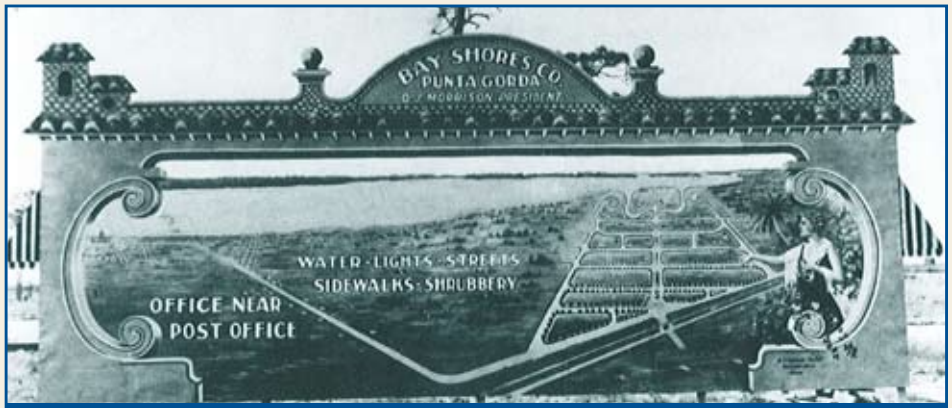


Photo 4: 1920's billboard of the Bay Shores Community.
Source: Punta Gorda and Charlotte Harbor Area: A Pictorial History

Photo 5: The historic George Brown House.
Source: Survey of Historic Resources, Charlotte County.

Over the next several decades, scattered residential communities and mobile home parks gradually cropped up along US 17. As elsewhere in Charlotte County, moderately-priced, low density residential single-family subdivisions and mobile home parks, such as Pine Acres Mobile Home Park, Pelican Harbor, Ridge Harbor and Peace River Shores near the DeSoto County line, appealed to the retiree market. Commercial and industrial development gradually lined the US 17 corridor which led to the mixed character that is present today. With the rapid development of the early and mid-2000s, as well as the hurricanes of 2004 and 2005, US 17 was widened to a four lane arterial to serve as an important hurricane evacuation route and a corridor to move goods through the center of the state. Pressure for additional industrial uses in DeSoto County led to development immediately across the county line of a Wal-Mart distribution center, due to the location's proximity to I-75 and its position along US 17.

The current real estate economic downturn provides an opportunity to plan for the next wave of future development.

Vision

Creating a vision and a realistic plan based on that vision for the US 17 Corridor is a complex and involved task. An extensive amount of technical data was gathered in order to understand the impact of changes occurring in the surrounding areas. Transportation information was gathered to understand the travel patterns of an increasing population, not just along the US 17 Corridor, but in the surrounding areas as well. Information about area constraints and opportunities with regard to environmental features was gathered to understand how the fragile ecosystem can be better preserved and where restoration opportunities exist. Most importantly, community input is critical to understand the overall community's vision for the future and what needs to happen in the planning process to implement a plan in this changing environment.

The goal… to gather the deep knowledge among the community's diverse resources to create a plan that represents a vision for the future, a plan that can be implemented.

Having a comprehensive and well-executed process is essential to creating a successful area plan. Anecdotal data by key stakeholders is important when planning an area with existing development to establish planning options and priorities. For this reason, the planning process was coordinated using two parallel tracks to gather data and produce the recommendations in this report.

From the start of the process it was understood by the planning team that the vision for the US 17 Area should be based on as much input from as diverse of a stakeholder group as possible. To create a successful plan the voices of many stakeholders were listened to. The goal was not to simply address all concerns, but to gather the deep knowledge among the community's diverse resources to create a plan that represents a vision for the future, a plan that can be implemented. A loose geographic boundary was defined for the visioning and interview process as being any area that directly impacts or accesses US 17 from the DeSoto County line on the north to the City of Punta Gorda line on the south.

Photo 6: The Peace River.

The project team used a stakeholder outreach approach, the "stakeholder assessment" that is based on recognized dispute resolution techniques. The visioning process began with a series of stakeholder interviews followed by two successive public workshops. The second workshop divided participants up into small groups and used graphics and drawings to better facilitate discussion. The visioning process was designed to make sure that all interests were represented and an open process was conducted.

The stakeholder assessment was conducted with two primary goals:

The first goal was to provide the consultant team with a general understanding of the issues of concern along the US 17 corridor and a knowledge of the vision of individuals for the future of the area. The second goal of the assessment process was to introduce the process and expected product of the study to the different stakeholder groups and begin to build comfortable working relations and lines of communication between the project team and general community.

All interviews were conducted in person. Most interviews were one on one, with a few small group meetings. Sessions were limited in size in order to provide for a comfortable atmosphere for in-depth discussions of the US 17 Corridor. The project team used an aerial of the area to facilitate discussion. Interviews lasted for approximately 1 hour and were held at various locations including the Charlotte County government complex. The interviews focused on the four general topics that follow.

1. Appropriate Land Uses for the Corridor
2. General Short and Long Term Visions for the Area
3. Specific Areas of Concern
4. Visions for Specific Properties

It is important to understand the difference between a stakeholder assessment and a scientific survey. The goal of a stakeholder assessment is to gather the input and seek out the involvement of all of the various interest groups, regardless of the actual number of people or voters these interest groups represent. The theory is that all interest groups have a legitimate right to be part of the process and have valuable input that should be accepted and weighed based on its merit. A scientific survey would randomly question individuals to assess the percentage of the local population that believe in one idea or another. These different tools are used for different purposes. The stakeholder assessment should be understood to be a summary of the issues important to different stakeholder groups, but not to be used to state that the "majority of people" believe one thing or another.

Findings and General Issues/Positions

The US 17 corridor has many distinct areas, unique and largely disconnected from each other. There are two historic neighborhoods of note along the south end of the corridor, the Cleveland and Solana neighborhoods and there are scattered residential neighborhoods on both the west and east side of US 17 extending all the way to the DeSoto County line. The comments received were very much in line with the specific issues faced by each stakeholder group reflecting how they are affected by the current state of US 17 land use.

BUSINESS DEVELOPMENT:

There was a very strong focus on the goal of developing the US 17 corridor as an environment where businesses could thrive. This was probably the most agreed upon goal amongst the most number of stakeholder groups. The desire to see new and more businesses and services also was presented in many forms.

First, **many from the residential neighborhoods expressed a desire to have more services along the corridor.** Long travel distances to meet daily needs is a present condition that many felt could and should be improved upon. This included the goal of seeing more restaurants, daily needs shops, gas stations and other similar uses in closer proximity to the residential areas.

Second, the **business community expressed concern about the limitations commercial on uses and size limitations that are in place where central water and sewer are not available.** For instance, it was noted that septic systems create difficult limitations for restaurant uses. Many properties remain vacant and new businesses are having difficulty starting because of regulations that require central sewer facilities.

Third, many existing business and land owners were particularly vocal **about the fear that this study would simply lead to increased regulations** on their properties, thus causing a barrier, rather than a stimulus for business growth. The goal of environmentally sustainable development was clearly a desire, as long as environmental regulations were understood as a win-win for both the business owner/developer and the environment. There was a vocal group that strongly urged an approach that relies more on providing "carrots" for development that exceeds current environmental regulations, rather than using a "stick" to enforce new stricter regulations. The incentive approach for new environmental regulations was strongly encouraged.

REDEVELOPMENT AND BEAUTIFICATION OF EXISTING NEIGHBORHOODS:

Many of the existing neighborhoods are in need of repair, reinvestment and enhanced landscape features. The general appearance and maintenance of several areas was mentioned as an issue that needs to be addressed. The desire was to see a "cleaned up" neighborhood, especially around Cleveland, so that surrounding and nearby properties would not be devalued based on the appearance of visual blight. Better code enforcement or County investment in landscaping, signage and other identity creating features to enhance the neighborhoods were requested.

CREATION/PRESERVATION OF WILDLIFE CORRIDORS:

The areas east and west of US 17 provide habitat for several species. The Ryals Ranch property was recently purchased to provide Scrub Jay habitat in Charlotte County. In many of the discussions, the idea of wildlife corridors became a central issue. The goal is to preserve/enhance areas of existing wildlife habitat to allow for and facilitate the continued or future movement of wildlife through the area. There is a desire to connect possible corridors with preserve areas from the Babcock Ranch purchase and other properties to the east of US 17. Shell Creek was a major focus of discussion for an east-west wildlife corridor.

PUBLIC ACCESS TO THE WATERFRONT:

The natural beauty of Shell Creek and Peace River was seen as a major benefit and opportunity for the community. Increased public access to these natural areas was requested, along with the desire to enhance and expand the wildlife habitat around and leading into Shell Creek and the Peace River. Public access to the water can enhance both the quality of life for area residents and also serve certain water dependent commercial uses. Now, public access to the water is limited to a few areas along the Peace River and a public park along Shell Creek. Finding and creating new opportunities for public access to the waterfront was seen as something that can add significant value to the area and was desired. Incentives to preserve existing water dependant uses was also encouraged.

IMPROVE ROADS AND TRANSPORTATION:

There was discussion about the need for a larger road network that is not entirely dependant on US 17. Some interviewees specifically mentioned a desire to implement additional recommendations of the US 17 Bypass Study that was completed by the Charlotte County MPO in the mid 1990s. A direct connection from US 17 to Bermont Road that bypasses the segment from Washington Loop Road to Bermont Road was discussed, as was improving the Washington Loop/US 17 intersection. Interviewees discussed the benefits of a road parallel to US 17, but several residents cautioned that they did not want to see additional trucks from the Wal-Mart distribution Center idling at early morning hours along frontage roads, as is currently occurring.

FIRST PUBLIC WORKSHOP

The first public workshop generated much discussion, focused primarily around the desires of the business community to encourage economic development along the US 17 Corridor. Concerns were expressed on how new regulations would impact the ability of new businesses to set up and existing businesses continue to operate. It was clear that most of the focus was less on macro planning issues, and more on immediate needs of the local business community.

SECOND PUBLIC WORKSHOP

At the second public workshop, participants were divided into three separate groups with the goal of soliciting comments and brainstorming visions for the future of the US 17 corridor. The purpose was to identify future development opportunities/areas, locations for targeted preserve/public acquisition areas and ways to improve infrastructure (roads, parks, etc.) to enhance the quality of life in the area.

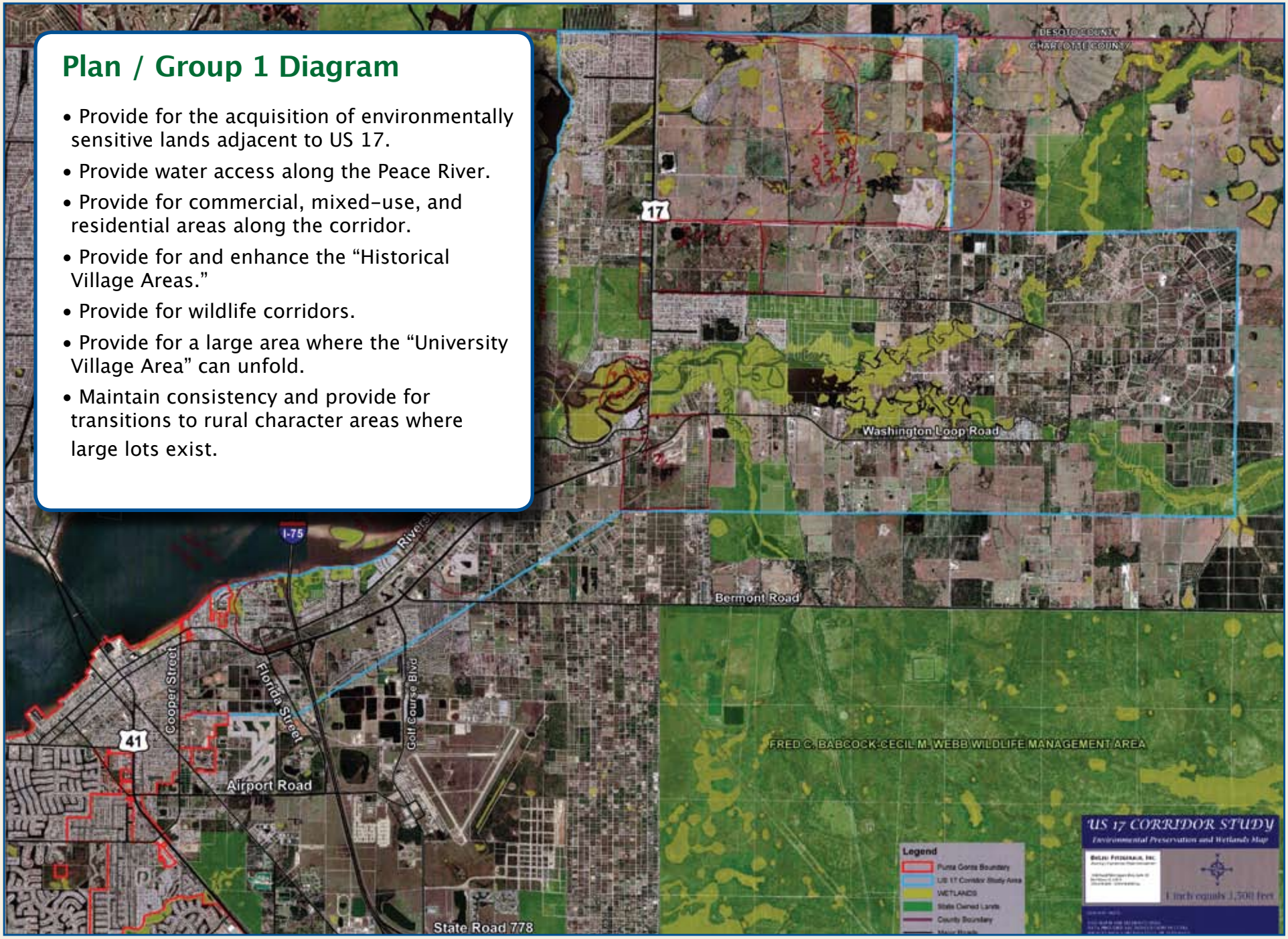
The ideas from the individual groups are presented in the sidebar. All three groups had several common themes – preservation of environmental corridors, locations for concentrated development and alternate roadways, with specifics that varied. The following graphic depictions of the visioning sketches are intended for the sole purpose of articulating the input that was heard. They are not intended to put forth an actual land use proposal for specific properties.

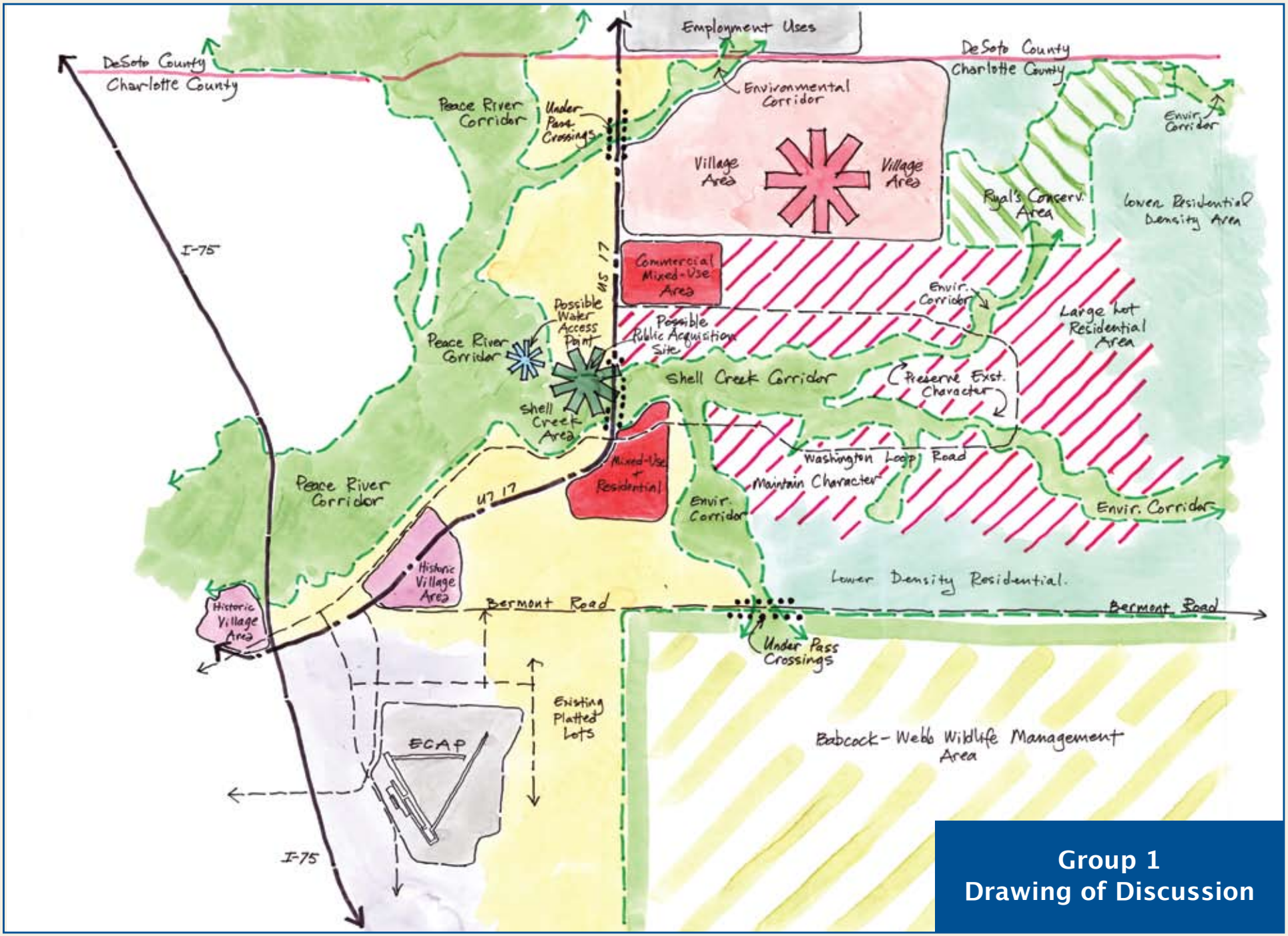
The following are ideas that were common to each group:

- Respecting the natural environment
- Providing for habitat transit corridors
- Creating eco-tourism nodes
- Creating greater water access
- Providing for a connection to the Webb Wildlife Area
- Enhancing and providing transportation networks off of US 17
- Providing for a "University Village"
- Providing for a mixed-use node like Coconut Pointe in Estero, for example.
- Make the Ryals Ranch area an asset for the region and corridor
- Expand on acreage lot areas to Bermont Road.
- Provide for a hospital / medical site
- Existing platted areas need to be addressed; no utilities or zoning.
- Move urban service line to allow for development east of 17 to include the Schwartz and Hudson properties.

Plan / Group 1 Diagram

- Provide for the acquisition of environmentally sensitive lands adjacent to US 17.
- Provide water access along the Peace River.
- Provide for commercial, mixed-use, and residential areas along the corridor.
- Provide for and enhance the “Historical Village Areas.”
- Provide for wildlife corridors.
- Provide for a large area where the “University Village Area” can unfold.
- Maintain consistency and provide for transitions to rural character areas where large lots exist.

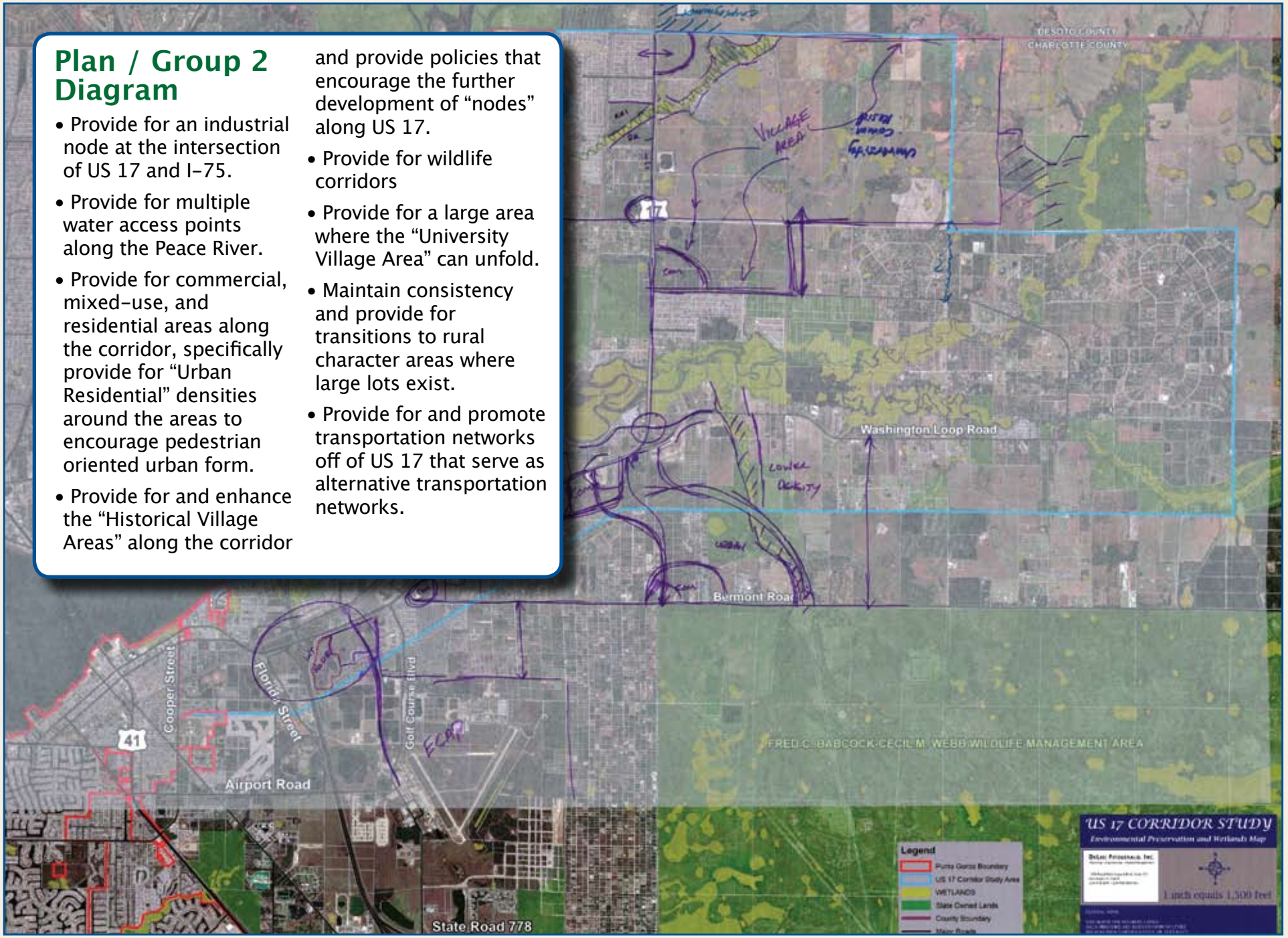


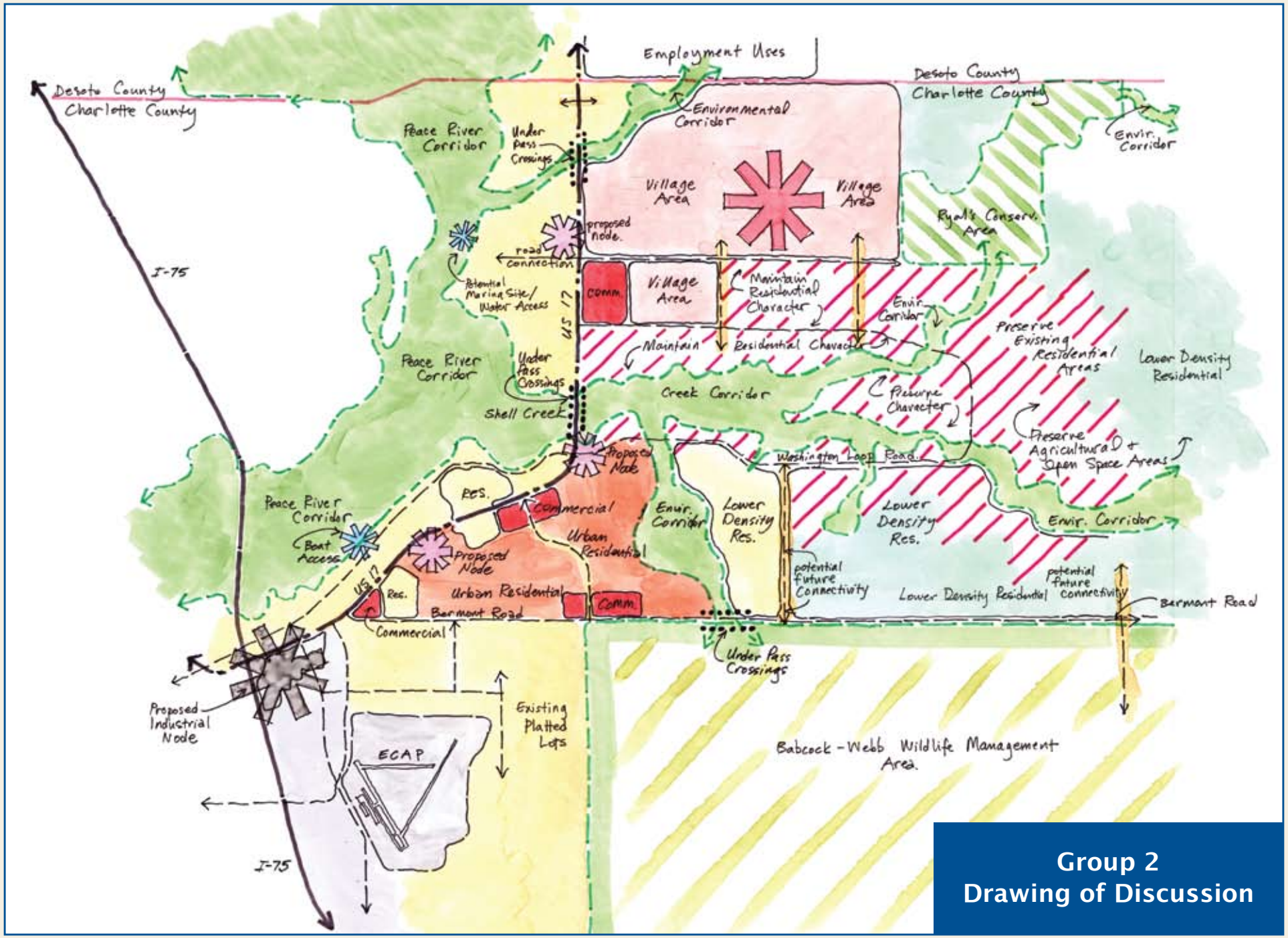


Group 1
Drawing of Discussion

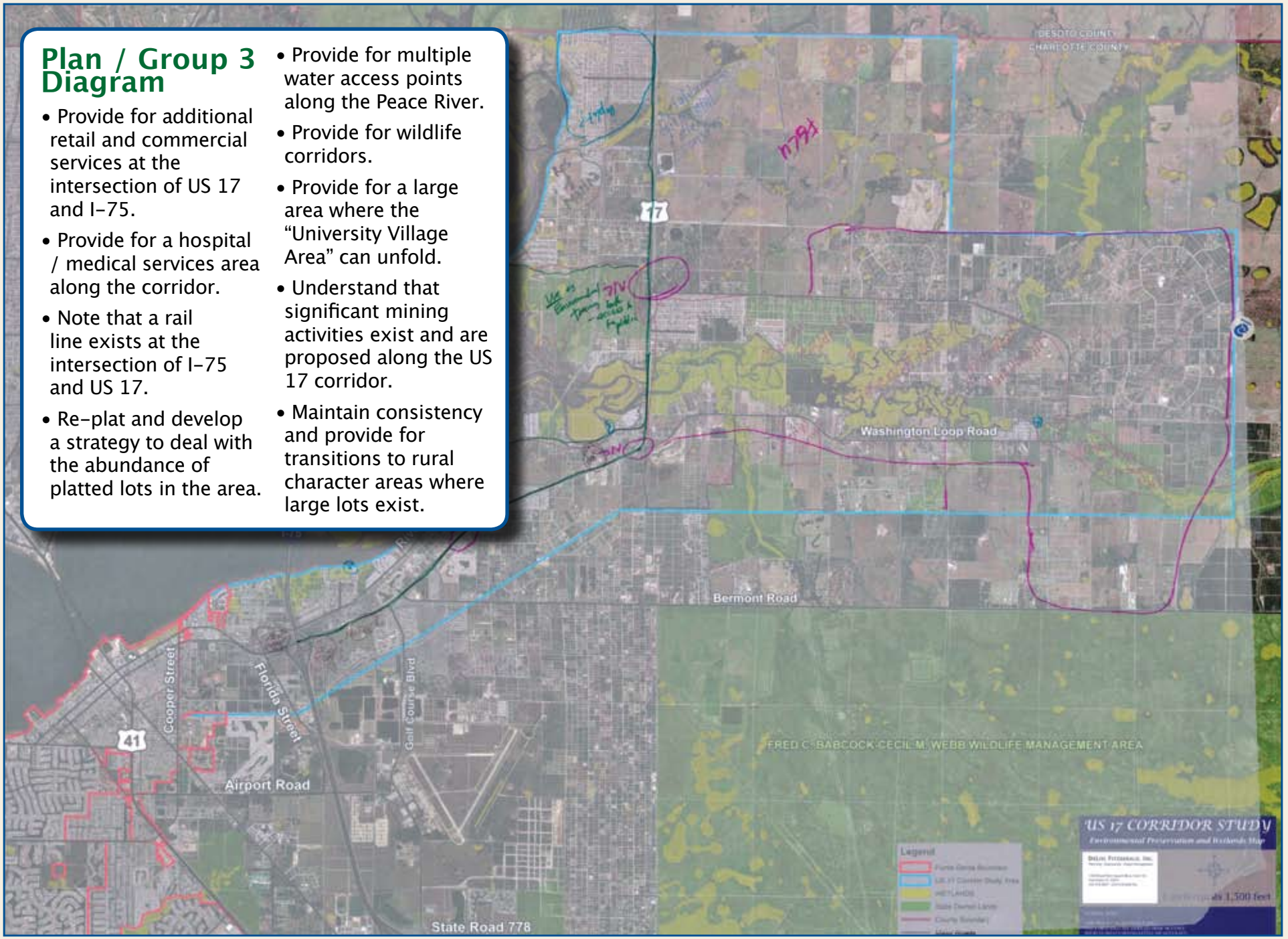
Plan / Group 2 Diagram

- Provide for an industrial node at the intersection of US 17 and I-75.
- Provide for multiple water access points along the Peace River.
- Provide for commercial, mixed-use, and residential areas along the corridor, specifically provide for "Urban Residential" densities around the areas to encourage pedestrian oriented urban form.
- Provide for and enhance the "Historical Village Areas" along the corridor and provide policies that encourage the further development of "nodes" along US 17.
- Provide for wildlife corridors
- Provide for a large area where the "University Village Area" can unfold.
- Maintain consistency and provide for transitions to rural character areas where large lots exist.
- Provide for and promote transportation networks off of US 17 that serve as alternative transportation networks.



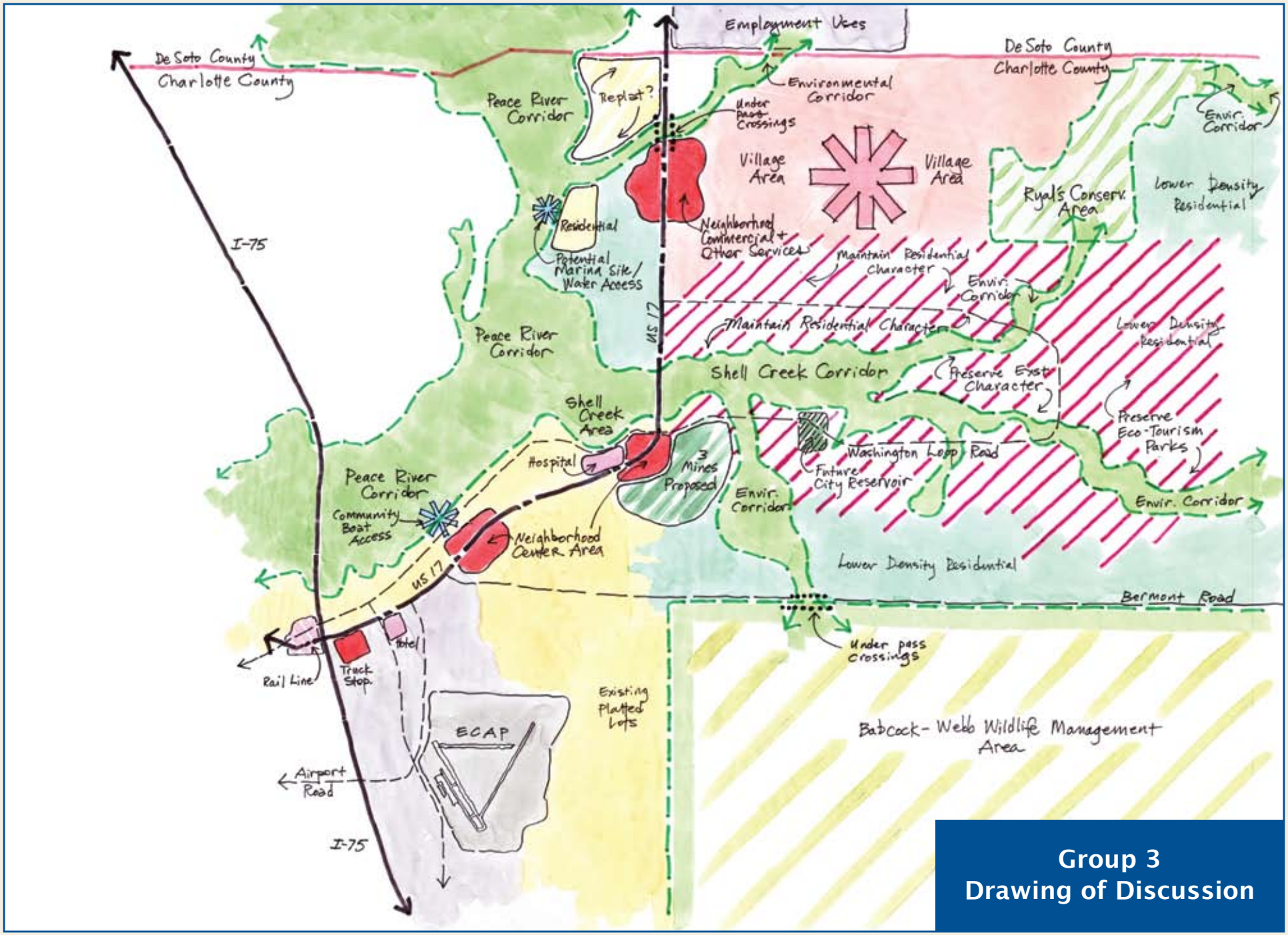


Group 2
Drawing of Discussion



Plan / Group 3 Diagram

- Provide for additional retail and commercial services at the intersection of US 17 and I-75.
- Provide for a hospital / medical services area along the corridor.
- Note that a rail line exists at the intersection of I-75 and US 17.
- Re-plat and develop a strategy to deal with the abundance of platted lots in the area.
- Provide for multiple water access points along the Peace River.
- Provide for wildlife corridors.
- Provide for a large area where the "University Village Area" can unfold.
- Understand that significant mining activities exist and are proposed along the US 17 corridor.
- Maintain consistency and provide for transitions to rural character areas where large lots exist.



Group 3
Drawing of Discussion

US 17 Corridor Study Stakeholder Meetings

Government

Bob Starr, District 1 Commissioner
Adam Cummings, District 2 Commissioner
Robert Skidmore, District 3 Commissioner
Richard Loftus, District 4 Commissioner
Tricia Duffy, District 5 Commissioner
Terri Kesner, Charlotte County Utilities
Jim Thompson, Charlotte County Environmental and Extension Services
Dan Quick, Charlotte County Public Works
Brian Barnes, Charlotte County Public Works
Wes Mallard, Charlotte County Public Works
Andy Stevens, Charlotte County Natural Resources Dvision
Gary Grossman, Charlotte County Public Works
David Hilston, City of Punta Gorda
Dennis Murphy, City of Punta Gorda
Mark Gumula, Charlotte County MPO
Jason Green, DeSoto County
David Crawford, Southwest Florida Regional Planning Council
Jim Beever, Southwest Florida Regional Planning Council
Laura Kleiss-Hoeft, Charlotte County Parks, Recreation and Public Resources
Don Root, Charlotte County Economic Development Office
Dr. Dave Gaylor, Charlotte County School District
Lawrence Massey, Florida Department of Transportation

Residents/Business Owners

Ted Stout – Sunshine Realty
Shawn Stoneburner – Cushman & Wakefield
Gary Tasman – Cushman & Wakefield
Ben Maltese, Maltese Development
Magnus Karlstedt – MK Construction
Karol Allard – Utopia Realty
Melinda Mohall – Shamrock Realty and Towne Mortgage, Foxes Pizza Den
Louie and Judy Panciz
Janet Minerich
Willie Keiser
CL Dunn
Dave D'Amore
Ernie Mayesca
William Miller
Paige Kreegle, FL House of Representatives
Bucky McQueen

Home Owners Association and NGO Meetings

Peace River Club HOA
Peace River Shores HOA
Charlotte County Chamber of Commerce
Charlotte/DeSoto Building Industry Association
Team Punta Gorda

Environmental Organizations

Sue Reske, Sierra Club
Percy Angelo, Sierra Club
Ruth Bromberg, Sierra Club
Steve Brown, Conservancy of Southwest Florida
Paul Holmes, Environmental Voice of Southwest Florida

Other Community Leaders

Bill Wilcox, Edison College
Stacy Calvino, Young Professionals Group

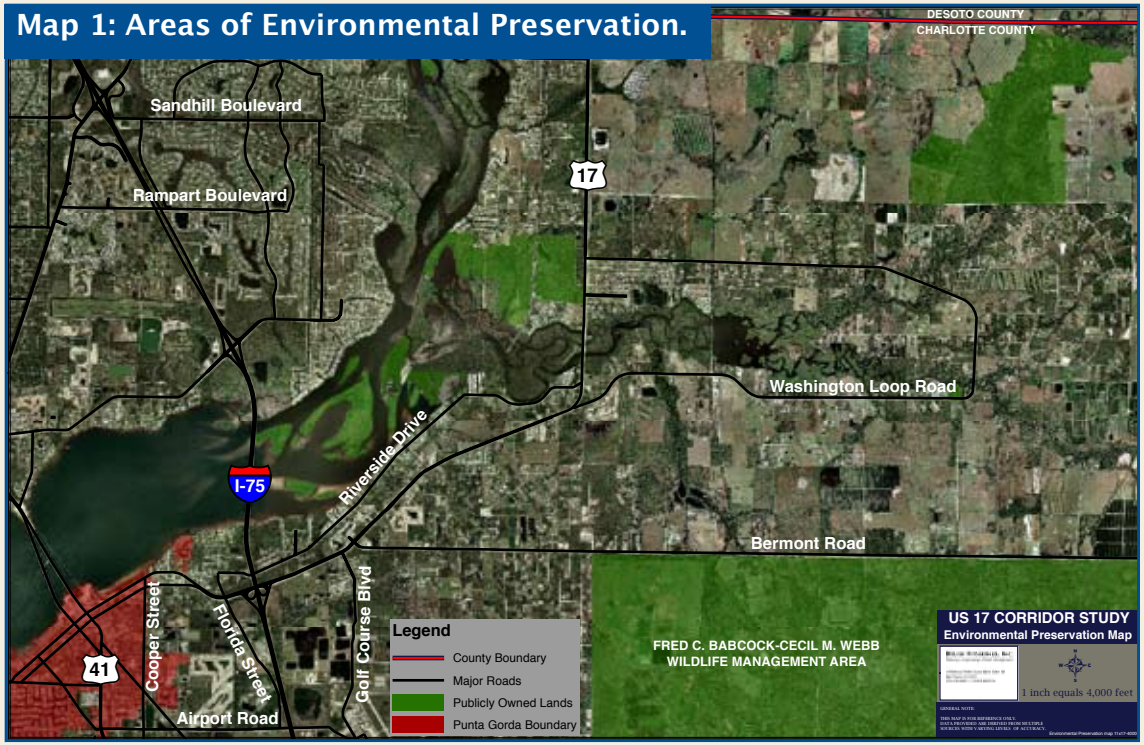
Existing Conditions

The area in this study extends from the Charlotte/DeSoto County line on the north to the City of Punta Gorda on the south, west to the Peace River and east to encompass all areas with a direct impact on or nexus with, the US 17 Corridor. The planning area is well-defined and is in many ways contained, in that it is surrounded on the north and south by separate political jurisdictions and on the west and east by natural features, the Peace River on the west and Prairie Creek on the east, much of which was recently acquired for preserve lands by Charlotte County.

To the east of the planning area is a mix of preserve lands and active agricultural uses. These lands are largely connected and dependant on Bermont Road, not US 17, for transportation and access. To the west of the Planning area is the Peace River, with the Deep Creek subdivision on the west side of the river, accessible to this planning area only via I-75 or US 41. To the north is DeSoto County, with an established enterprise zone and nearly two thousand acres of zoned industrial lands. Immediately adjacent to the planning area is a large scale Wal-Mart distribution center, right on the county line in DeSoto County. To the southwest of the planning area is the City of Punta Gorda boundary and the Enterprise Charlotte Airport Park, consisting of light industrial uses and commercial/ residential uses in the City of Punta Gorda.

Map 2: The Coastal High Hazard Area.

Map 1: Areas of Environmental Preservation.

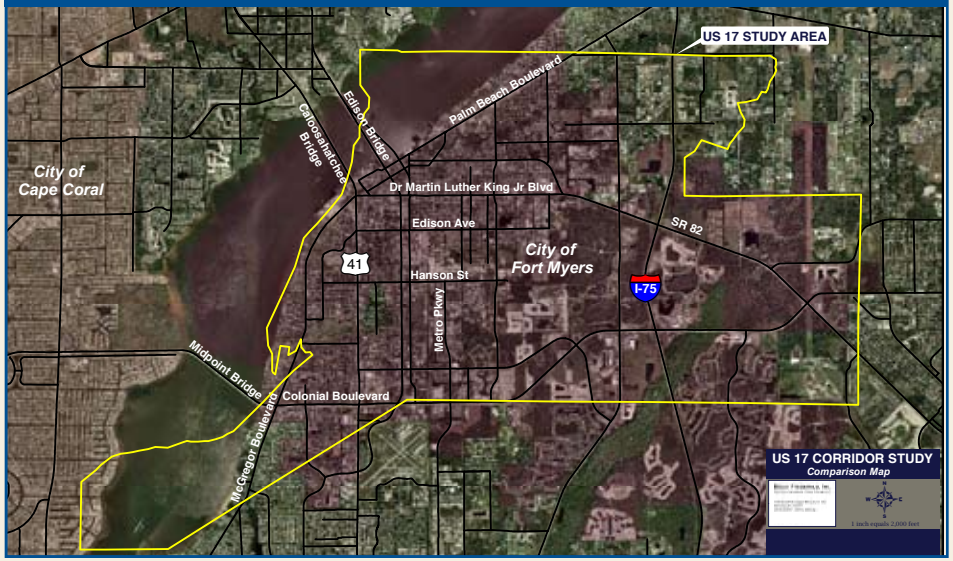


The US 17 area is generally framed in a large part by two major features: the Peace River, which extends north into DeSoto County; and Bermont Road, a highway that runs parallel to the river through the area from the City of Punta Gorda to Hardee County. There are numerous residential plats that extend along the entire length of the corridor to the DeSoto County line, and scattered strip commercial along US 17.

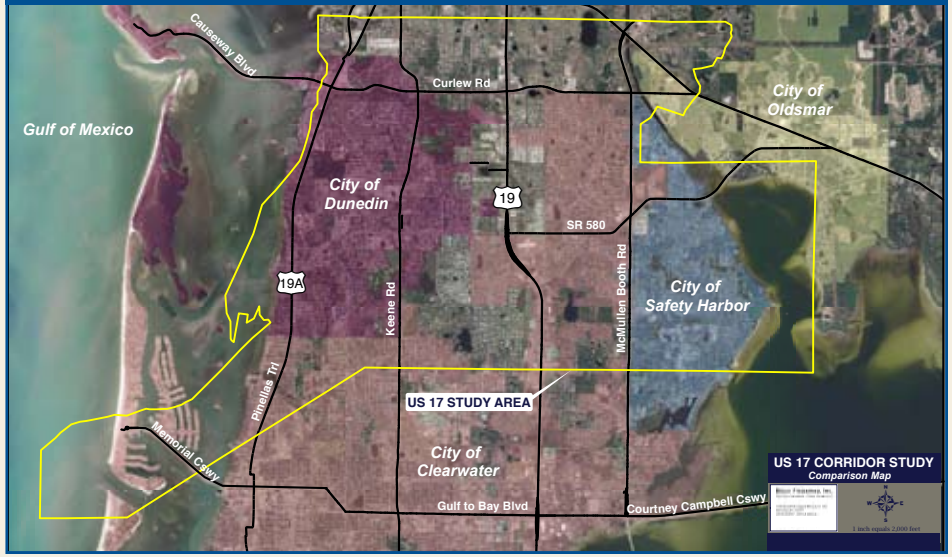
Despite the presence of the Peace River and Shell Creek most of the area lies outside of the Coastal High Hazard Area. Elevations appear to increase rapidly moving away from these water bodies, leaving only properties in close proximity to the water vulnerable to storm surge.

The transportation network is limited in this area. US 17 does not have parallel north-south or east-west facilities. There are connections to Interstate 75 which runs north-south, and to Bermont Road, which runs east to Glades County. Internal to the residential subdivisions are local roads, which serve to carry traffic from individual homes to US 17.

Map 3: Scale comparison with the City of Fort Myers.



Map 4: Scale comparison with Pinellas County.

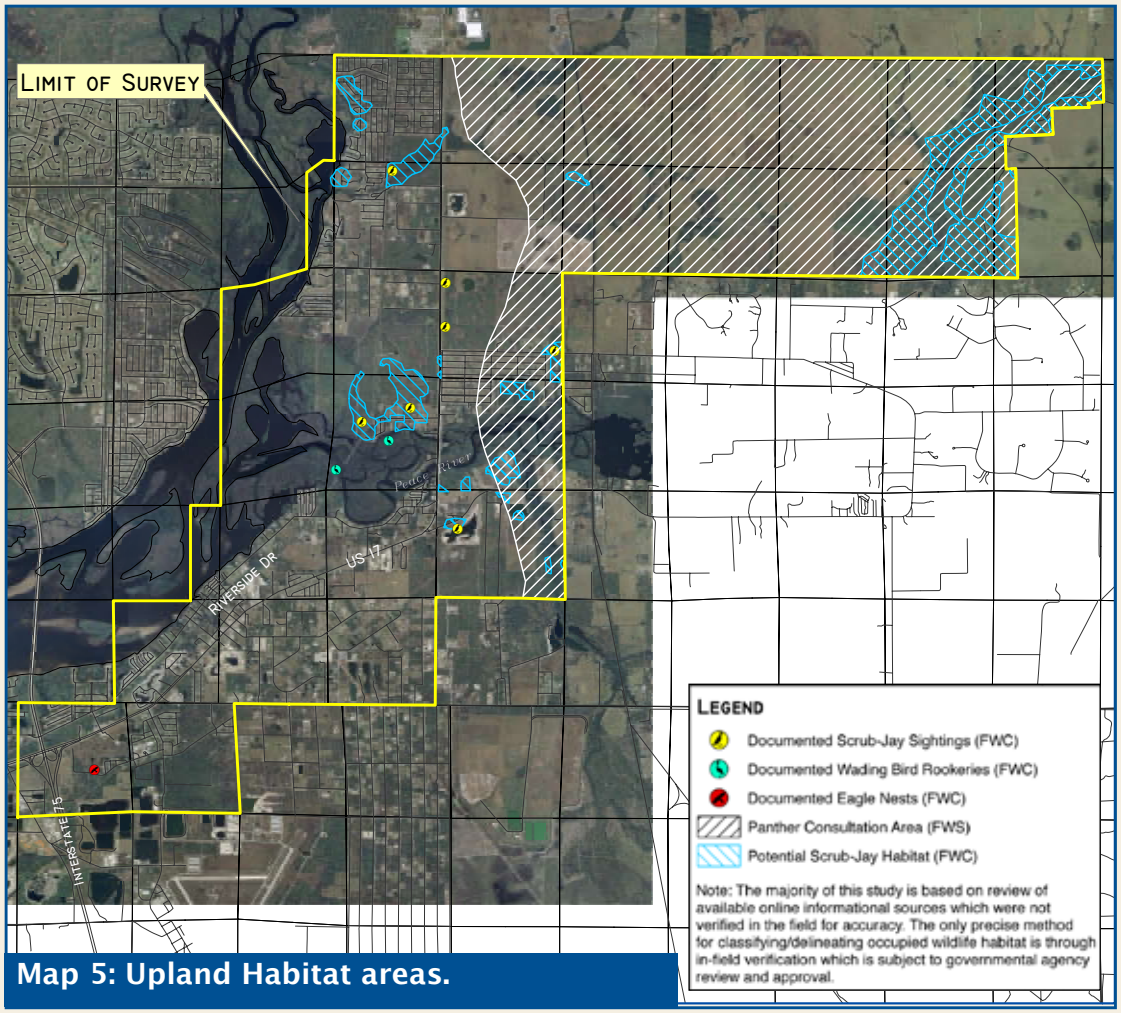


The planning area is approximately 25,000 acres in size and is comprised of a variety of land uses, including historic neighborhoods, partially developed areas, antiquated plats, strip commercial, agricultural areas, and pristine and impacted environmental areas. The US 17 study area is predominately historic settlement and scattered agricultural uses, many of which have been replaced by low and very low density suburban style residential development. In planning for an area of this size it is important to understand the scale of the area. The 8 mile US 17 corridor contains several sub areas which could be considered individual communities or urban nodes. The historic Cleveland plat for example, was an independently incorporated city in the early 1900s.

The overall study area is comparable in scale to multiple urban areas. Maps 3 and 4 show two scale comparisons. Map 3 is the subject area overlaid on the City of Fort Myers boundary extending through east Lee County. As a point of comparison, this area has multiple communities that are distinct. Map 4 shows a scale comparison with Pinellas County. As a comparison, the study area would extend from Clearwater Beach, through the City of Dunedin, the City of Safety Harbor to the City of Oldsmar. Each of these cities has its own unique character with a historic, mixed use town center.

There are areas that are clearly of environmental value, most notably Shell Creek, Prairie Creek, areas along the Peace River and the wildlife corridors that connect these lands. It appears that the development practices that have taken place over time, through clearing of land for agricultural purposes, or the development of land for suburban style residential and commercial uses, has diminished the environmental value of much of the study area as compared to other areas in region. Given the historic development patterns and land clearing activities, much of the study area that has not already been acquired by the public sector, is no longer considered prime area for targeted preservation acquisition. While there are several important environmental features in the planning area, the native vegetation for wildlife habitat that exists outside of the water systems is minimal.

Maps 1-18 in Appendix C show wetland habitat areas generally following the creek systems and along the Peace River. There are a few flow-ways that exist in the area as well as additional isolated scattered wetland pockets. There are pockets of Scrub Jay habitat scattered throughout the study area, many in existing plats. The largest area for Scrub Jays is located on the Prairie Creek Preserve property that was recently acquired by Charlotte County and acts as the natural eastern terminus of the study area. East of US 17 is shown as the FWC Panther Consultation Area. (See Map 5)



Map 5: Upland Habitat areas.

Opportunities and Challenges

Community Catalysts

The following Community Catalysts describe opportunities to meet the components of the sustainable vision for the US 17 Planning Area and provides an analysis of the study area's constraints, described as challenges. For the purpose of this study, a Community Catalyst is used to describe specific geographic land uses. Within the US 17 Planning Study, Community Catalysts are defined as those locations and/or resources that inspire and are located at the center or are the cause of the creation of a community. These are the opportunity areas where people have traditionally gathered, or where they are expected to gather in the future. Each Community Catalyst is unique; it may include a single or several built features or natural features or it may be a combination of both built and natural features. Because the primary foci of this study are community creation and environmental preservation, and not purely economic development, the term "Community Catalyst" has been selected. Community Catalysts are also described as the Opportunities.

Nine Community Catalysts are identified in this study. These areas and resources provide a meaningful framework for looking at the study area. The community catalysts are:

1. US 17 – the highway itself
2. The historic Solana neighborhood and the US 17 study area nearest to the City of Punta Gorda
3. The I-75 Interchange
4. Enterprise Charlotte Airport Park (ECAP) industrial area
5. Existing commercial development located at the Bermont/US 17 intersection
6. The historic Cleveland neighborhood
7. Peace River, Shell Creek, Prairie Creek and their tributaries
8. Railroad corridor
9. Northernmost Charlotte County developed and undeveloped properties influenced by the DeSoto County Fort Ogden Commerce Park

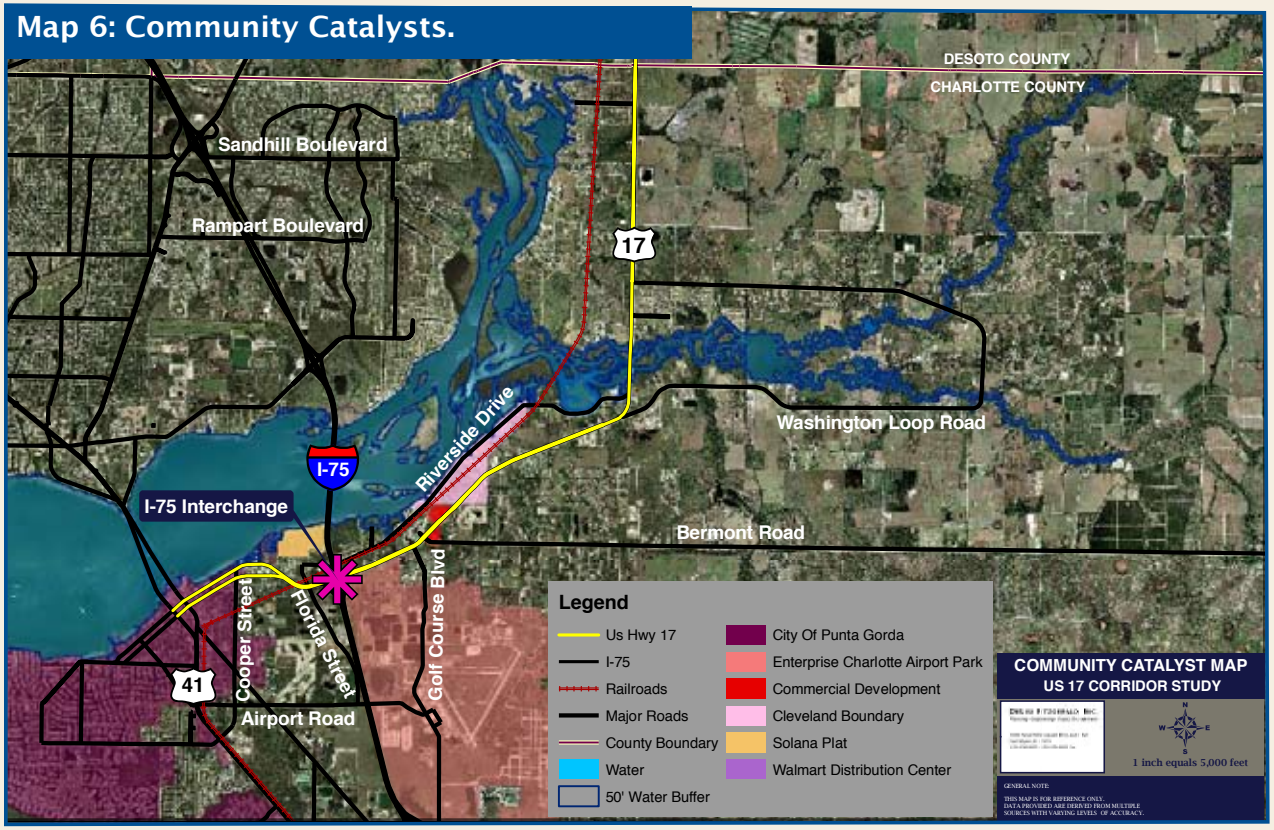
Community Catalyst No. 1: US 17: The Highway

Community Catalyst No. 1: US 17 highway has recently been widened to four lanes within the study area and has adequate capacity to serve existing development. US 17 is a state road and major arterial designated in the Strategic Inter-modal System (SIS). US 17 is also part of the Florida Intrastate Highway System (FIHS), which includes arterials that are important for emergency evacuations and the movement of primary goods. US 17 serves as the arterial connector from the City of Punta Gorda to DeSoto County, and provides access to urban lands nearer the City of Punta Gorda and rural lands closer to DeSoto County. The major intersections of US 17 with I-75 and Bermont Road (CR74) provide important east-west connections to the rest of the state.

Photo 7: The Peace River.

As new development occurs along US 17, there are opportunities to connect land use developments that occur through such methods as connected parking lots, a frontage road system, or a reverse frontage road system that would connect adjacent uses to minimize curb cuts on US 17. US 17 is within the Strategic Inter-modal System that encourages multi-modal transportation, this also creates an opportunity to consider the pedestrian, bicyclists, buses and other public transportation solutions. In addressing the needs of pedestrians, there is an opportunity to consider street tree planting and buffers that provide visual and safe landscaping along the US 17 highway corridor.

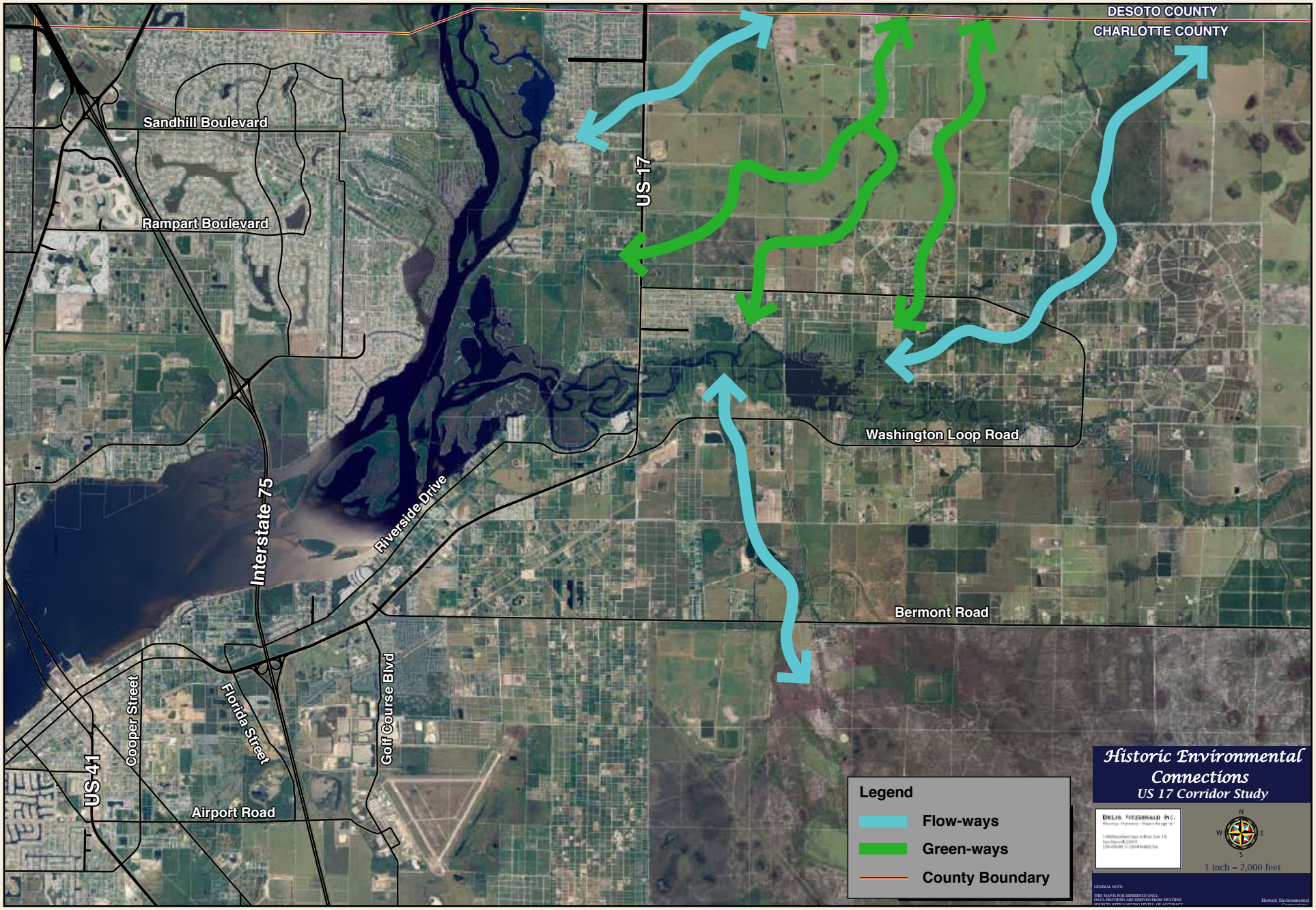
Map 6: Community Catalysts.



Community Catalyst No. 2: Solana and land near City of Punta Gorda

Community Catalyst No. 2: Solana and US 17 study area property adjacent to the City of Punta Gorda and west of I-75. Currently the City of Punta Gorda US 17 street frontage is well landscaped with street trees and lighting. There is an opportunity to beautify and revitalize the US 17 travel corridor with attractive landscaping and lighting to be consistent with adjacent Punta Gorda street frontage. The US 17 business area and Solana residential areas are places where the community fabric can be enhanced. In order to create more mixed use and urban choices, the existing set of land uses and streets can be revitalized with sustainable planning solutions.

Proposed Environmental Connections Map



In the Solana and US 17 study area west of I-75 there is an opportunity to beautify the roadway with landscaping, by approaching it with a "main street" revitalization perspective. This will lend support to the existing businesses in the corridor. In this area, several historic structures have been designated on the State's registry. There are opportunities for preservation and enhancement of the existing historic structures. There is an opportunity to increase the sense of identity in the Solana area, capturing its history and reducing trip generation by encouraging a diversity of uses in a village-like atmosphere. There is an opportunity to create an overlay district that would allow for more permitted land uses, such as live/work, bed and breakfasts, accessory dwelling and working units, mixed uses and pedestrian friendly solutions.

Community Catalyst No. 3:
I-75 Interchange Area

There are opportunities to create marketable parcels with good cross circulation between the parcels, leading to opportunities for employment.

Community Catalyst No. 3: I-75 Interchange Area has the potential to become a cohesively developed commercial or industrial property that will take advantage of its geographic market advantage provided by I-75 and US 17 traffic. Most of the properties that are in this area are zoned commercial intensive or highway commercial, but some are still zoned AE, Agricultural Estate. Several of the parcels that exist were originally severed by a right of way needed for the intersection and secondary development serving roads that have not yet been developed. There are opportunities to create marketable parcels with good cross circulation between the parcels, leading to opportunities for employment.

This intersection is located in close proximity to the Enterprise Charlotte Airport Park (ECAP) and would be an appropriate location for an office park and/or mixed use development. The opportunity exists to create such an office park and/or mixed use development as a significant job center for the area.

Community Catalyst No. 4:
Enterprise Charlotte Airport Park (ECAP)

Community Catalyst No. 4: Enterprise Charlotte Airport Park (ECAP) mixed use area was designed to attract new jobs to the area surrounding the airport, capitalizing on air transportation availability. The ECAP area provides a place to create business, commercial and industrial development; the specific allowable permitted uses could be expanded and the regulatory constraints can be resolved to expand opportunities in this area. In Florida, heavy industrial needs are not being met and major industries are relocating to the Carolinas and other states. There is an opportunity for a coalition of urban planning and economic development professionals to create strategy to capture these industries in the ECAP area.

One of the best opportunities to provide new business development is to attempt to capture every business and/or industry that makes an inquiry. Oftentimes, that is not possible, due to regulatory constraints, perhaps restricting the intensity of the industry that is permitted. With green sustainable land use policies, even heavy industries can be good neighbors to the environment and to other land uses. If a business is being unsuccessful in its attempt to relocate to Charlotte County, there is an opportunity to use that data as important input in making regulatory changes. This creates an opportunity to understand and respond to the market needs through strong information coalitions.

Community Catalyst No. 5:
Commercial at Bermont/US 17

Community Catalyst No. 5: Commercial development located at the Bermont/US 17 intersection exists within a patchwork of zoning categories. In the long term, as market forces dictate, this area will expand to meet community and regional shopping needs of the US 17 study area, the Babcock Ranch Community development and existing and new developments located on Bermont. This intersection has an opportunity to be one of the most important intersections on the US 17 corridor, as Bermont connects US 17 with east-west traffic across the state. There is an opportunity to create uniform zoning and a master commercial development plan,

coordinating plans of the owners of several large parcels on both the east and west sides of US 17 at Bermont intersection.

Community Catalyst No. 6:
Cleveland

Community Catalyst No. 6: Cleveland is an existing traditional neighborhood community that is platted into residential lots and is served by a few highway located commercial uses. There is an opportunity to enhance this area with better code enforcement and County investment in landscaping, signage or identify creating features. The area could be revitalized by applying traditional neighborhood development (TND) village principles. There is an opportunity to revitalize and increase the commercial and business development of Cleveland by expanding it with a pedestrian and bicycle friendly mixed use village approach. Existing residential and business owners are interested in enhancing the identity of the Cleveland area.

With a concerted village plan for this area, there is an opportunity to reduce trip generation by encouraging a diversity of transportation modes and permitted land uses in a village like atmosphere. There is an opportunity to create multi-modal (bike and pedestrian) transportation corridors both along US 17 and throughout Cleveland. To encourage the mixed use character of the area, there is an opportunity to allow accessory work units, where people can expand their work from inside the home and can have signage and connection with customers and other work/live business owners.

Photo 8: The Peace River.

This strategy is quite effective when encouraging creative efforts, like artist colonies and additionally, it opens up jobs for apprentices to work and learn from existing business owners.

Community Catalyst No. 7:
Peace River, Shell Creek, Prairie Creek

Community Catalyst No. 7: Peace River, Shell Creek, Prairie Creek and their tributaries provide the most powerful environmental and economic opportunities for the US 17 Study area. Here, Charlotte County has a magnificent location that can provide water access and vistas to eco-savvy tourists interested in a natural, environmentally sensitive vacations. The land adjacent to the waterways also provides opportunities for additional creation and preservation of wildlife corridors. With the right strategy and planning solutions, this area can become a significant eco-tourism destination. There are opportunities to provide additional public and private water access points for kayaks, canoes and motorboats to supplement the few existing ones and to create a "blueway" for canoes and kayaks. There is an opportunity to create natural pedestrian paths along the waterfronts that can be interconnected for nature tourists, with certain areas remaining protected for wildlife. Day trip, short term and seasonal visitors could be attracted to this area, providing meaningful employment for area residents.

The land adjacent to the waterways also provides opportunities for additional creation and preservation of wildlife corridors. With the right strategy and planning solutions, this area can become a significant eco-tourism destination.

There is an opportunity to provide incentives for low impact development (LID) site solutions in these sensitive water front developments that will decrease the amount of disturbed land and will increase the amount of nature that is protected on every developed site. The public agencies responsible for wildlife protection see an opportunity to connect possible wildlife corridors with preserve areas from the Babcock Ranch purchase and other properties to the east of US 17. There is an opportunity for Shell Creek to become a major focus for an east-west wildlife corridor.

The predominant zoning along the water frontage is residential zoning, permitting mostly low density development. There are opportunities to permit these residential properties to become the core of an eastern eco-tourism center for Charlotte County by allowing bed and breakfast establishments, small cafes, nature centers and other eco-tourism facilities, such as kayak and bicycle rental and repair shops. This would create an opportunity for seasonal Florida residents to have additional rental choices.

As the area is treasured by the residents, it can also be treasured by eco-tourists, seeking a quality of tourism that is becoming more attractive to a larger number of people. Examples of eco-tourism that Charlotte County may want to model include Palm Island, President Truman's former fishing camp in the Florida Keys, which is now a destination wedding and honeymoon site with cabins and dinner location, accessible only by boat. Another excellent eco-tourism model is the Steinhatchee Landing Resort that focuses on attracting meetings, destination weddings and tourists to this rental residential village; most units are individually owned and leased through the on-site lease manager. That facility has a conference/retreat center, a wedding chapel, boat docks, small store, and breakfast area and is very pedestrian and bicycle oriented. An eco-tourism approach would create more business opportunities, while enhancing and respecting the natural environment.

Community Catalyst No. 8:
Railroad Corridor

Community Catalyst No. 8: The existing CSX railroad corridor provides an opportunity to develop industrial uses that are served by the railroad for transportation of products and supplies. Certain industries rely on rail facilities. Some areas of the railroad corridor are located in residential and natural areas. In those areas, it may be appropriate to buffer the railroad from adjacent development. Within the buffer areas, there is an opportunity to encourage development of bicycle and pedestrian trails that could parallel a portion of the rail corridor and provide a recreational use for residents and ecotourists.

Community Catalyst No. 9:
North Study Area Charlotte County Properties

Community Catalyst No. 9: Just to the north of the US 17 study area is Desoto County's Fort Ogden Commerce Park that includes the Walmart distribution center and provides jobs for nearby Charlotte County residents. The plans of Desoto County to expand their Enterprise Zone will create a need for a diversity of appropriate and affordable housing choices to serve existing and future residents of the US 17 Corridor who may be employed within Desoto County. This provides an opportunity for Charlotte County to create new residential developments and also to create new industrial, commercial and mixed use developments to compete with Fort Ogden Commerce Park, if the urban service area is expanded to the east of US 17. Charlotte County has the opportunity to provide a variety of affordable and appropriate housing choices to serve existing and future residents of the US17 Corridor Area.

The County has an opportunity to require that green building standards are met and that low impact development techniques are required for any new developments, setting a standard for future excellence that will lead to a sustainable future.

Currently, there are existing mobile homes that provide affordable housing for workers in Charlotte County that, like any mobile home, can suffer the devastating effects of hurricanes. The lot sizes are small and can be considered urban sized lots. Now that structural insulated systems kit homes and other modular homes are available that can be constructed in a matter of days, there is an opportunity to allow more durable, hurricane proof, low cost homes to be used as replacement or new homes on the mostly small mobile home lots. Charlotte County has the opportunity to allow traditional, kit and modular homes in mobile home developments by changing it to Mobile Home Conventional (MHC) zoning.

There are a few very large properties located on the east side of US 17 that are suitable for long term mixed use development or

possible creation as village and/or development including research centers and medical facilities. Having such parcels available creates opportunities for a variety of uses, as well as new job creation, as the market dictates. The County has an opportunity to require that green building standards are met and that low impact development techniques are required for any new developments, setting a standard for future excellence that will lead to a sustainable future. To allow for new development on the east side of US 17, the Urban Service Area (USA) boundary would need to be extended to include those lands.

Challenges

This US 17 Area Plan is conducted in relation to the overall vision of achieving sustainable development. The sustainable vision for the US 17 Planning Area has five overall components:

1. Create business development
2. Stimulate redevelopment and enhancements of existing neighborhoods
3. Create and preserve wildlife corridors
4. Provide public access to the waterfront
5. Improve Roads and Transportation

There are a variety of physical, economic, planning and regulatory challenges that stand in the way of achieving that sustainable vision for the US 17 Planning Area.

These challenges are described below.

Challenges: Physical

1. The size and diversity of the US 17 Planning Area is large and complex: eight miles in length and two to several miles in width. In terms of complexity, there are thousands of individual private and public property owners, multiple zoning districts, major environmental features, an airport, a railroad, an interstate highway intersection, platted and unplatted residential, commercial, preservation and industrial lands.

2. Public water and sewer utilities are provided by the City of Punta Gorda in the south part of the study area and by Sun-River Utilities in the north part of the study area. There are major gaps in the area that is currently provided with public water and sewer service.

Photo 9: The Peace River.

3. From a transportation perspective, there are no roads that provide parallel access to US 17. There is little east west road circulation, thus there are no alternative transportation networks to US 17. In Solana and around the I-75 intersection area, a challenge is the one way character of certain roads and no clear traffic circulation patterns available to serve potential development parcels.

4. In all areas designated for commercial, there could be much better circulation and parcel development with cross parcel connections provided.

5. For the water frontages of the rivers and tributaries, there are few public access points for kayaks, canoes, motor boats and walking visitors.

Challenges: Economic

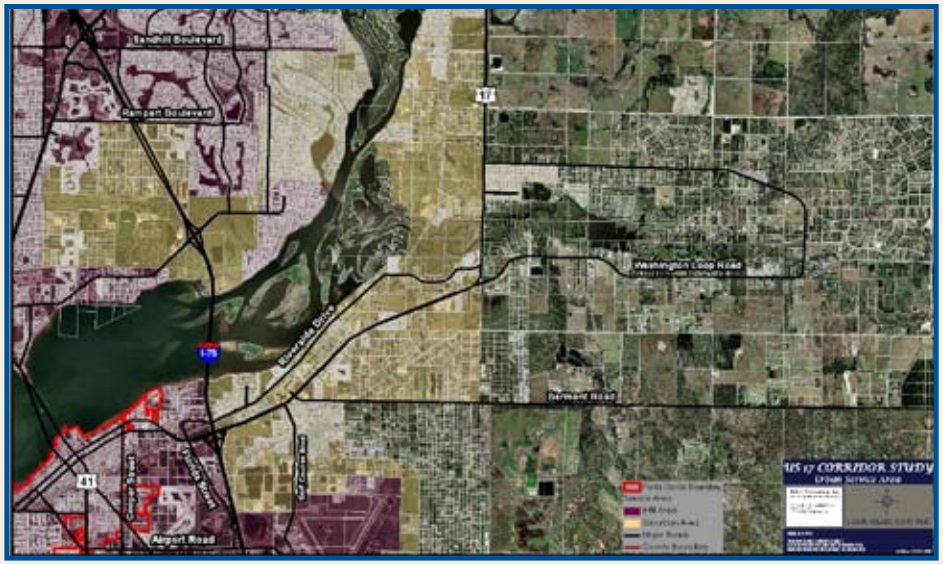
1. The CSX rail road corridor is an active corridor; the Florida Department of Transportation's ultimate goal to purchase the railroad line for future multi-modal use will require extensive funding.

2. Even though many properties are mapped to be within utility franchise areas, financial constraints have kept certain areas without water and sewer lines.

Challenges: Planning and Regulatory

1. US 17, between the DeSoto County Line and south Washington Loop Road, with the exception of Ridge Harbor Subdivision currently serves as the Urban Service Area (USA) boundary. Properties on the west side are allowed by regulation to develop at urban densities and intensities while properties on the east side of US 17 are not. The result is that the cost to provide urban services for only one side of the road becomes financially infeasible. The reason is that the cost of building and extending the infrastructure is the same but the number of users who pay for or need the infrastructure are cut in half. The cost of extending water and sewer lines, for example, will be paid for only by property owners on the west side of the street, making extension of utility lines more costly per unit.

2. According to stakeholder interviews, some people are comfortable with the location of the Urban Service Area boundary where it is; other people believe it should be expanded to the east. At the present time the USA boundary does not consider the development potential of both sides of US 17. There is an opportunity to remedy this by expanding the boundary and the area that can be served by the capacity of the highway and future utility infrastructure. Such an expansion of the USA boundary increases the properties that could be served by new infrastructure and thus reduces the economic impact for the western properties by spreading it to properties also located on the east. This will make utility infrastructure more economically feasible and most likely cause it to occur sooner, rather than later.



3. There is no cohesive master development plan, including cohesive zoning and traffic circulation at US 17 and Bermont.

4. There is no cohesive master development plan, including cohesive zoning and traffic circulation for the I-75 interchange area.

5. There is no frontage road, reverse frontage road or commercial parking lot connectivity requirement for US 17 Study Area.

6. Existing regulations do not require applying traditional neighborhood development (TND) principles in existing communities.

7. Existing zoning regulations are challenging; for instance existing ECAP regulations restrict certain uses and lot sizes. Only mobile homes are permitted in certain of the mobile home zoning districts. There is no zoning code that encourages co-housing developments.

8. There are no land uses policies in place that will stimulate new jobs focused on green technology and educational opportunities, including a university with research capabilities or a hospital/ medical site.

9. The County has not yet adopted green building incentives, including low impact development techniques, although these are being considered in various departments.

10. There are no green industrial development requirements that would protect property owners adjacent to the ECAP area and other areas, so that concerns about heavy industrial development could be resolved.

11. Specifics of an eco-tourism strategy have not yet been established and no public/private coalition has yet been established.

12. Local, regional and state existing zoning and land development regulations sometimes have unintended consequences and restrict sustainable development solutions. There is currently no review clearinghouse for overly restrictive regulations that stop business development, reduce public access to the waterfront or stop redevelopment and enhancements of existing neighborhoods. Some places, like the City of Toronto, have a long history of considering every government action within the framework of its long term consequences on sustainable development.

Planning Options

The 8-mile corridor that makes up this study area needs to be analyzed in terms of both redevelopment opportunities and future development areas. As the Pinellas County comparison demonstrates, the scale of the corridor is comparable to an area with multiple independent incorporated communities, which historically was the case for this area along US 17. As development has occurred along the corridor over the last several decades with minimal planning, those communities have visually disappeared and been replaced by strip commercial and industrial development scattered along the corridor with low density residential communities sprawling out on both sides of US 17.

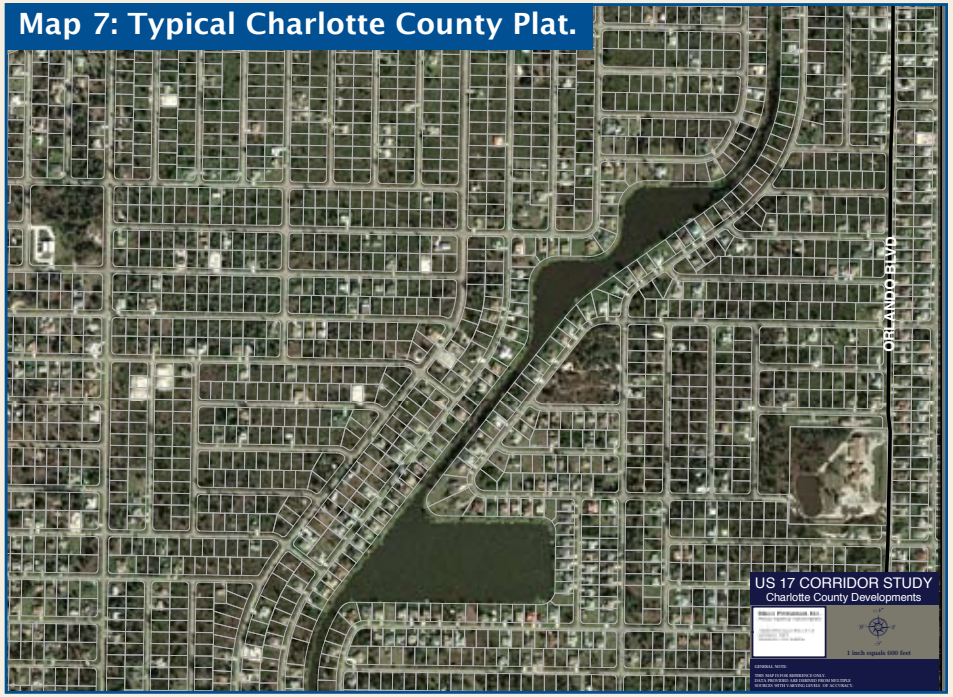
In analyzing the nature of both historic and likely future development patterns, there are really only two options in planning for the corridor: continuing with the existing comprehensive plan or looking for alternative development patterns.

Option #1 - The Existing Comprehensive Plan

The future land use map and the current comprehensive plan still do not provide a real development/ redevelopment vision for the future of the county that is sustainable economically or environmentally.

The existing comprehensive plan was originally created in 1989 in response the state's Growth Management Act. The Plan was the result of a Settlement Agreement with the Department of Community Affairs whereby density, and commercial entitlements were generally assigned to vested platted residential areas and commercial/industrial uses. Other areas were limited to agricultural uses or 1 dwelling unit per 10 acres. Rather than create a future development vision for Charlotte County, the Future Land Use Map simply recognized the development that was either permitted as of 1989 or the piecemeal changes to the

Map 7: Typical Charlotte County Plat.



Future Land Use Map that have been approved since, thus, the goal of the current future land use map is simply to limit areas of future growth in order to provide public services to the areas that are already vested.

The logic behind the existing Future Land Use Map is sound. However, the future land use map and the current comprehensive plan still do not provide a real development/redevelopment vision for the future of the county that is sustainable economically or environmentally. The vast majority of existing vested development is in a land use form that many could be defined as urban sprawl – low density, single use development over large areas of land. In fact, the vast majority of permitted development in Charlotte County, and along the US 17 Corridor is for single family residential uses, separated from any meaningful connections to the commercial services or workplaces upon which residential uses rely.

The goal is to create an area that develops in a manner that is sensitive to the environment, improves the function and health of the area's ecosystem and provides for a diversity of housing opportunities

These large antiquated plats have been sold over the last several decades to the retiree market all over the world, not with the intent of creating viable and sustainable communities, but with the intent of selling subdivided land. Most of the platted subdivisions along the US 17 Corridor and throughout Charlotte County were developed prior to the passage of modern water management regulations, that require storm water treatment and pollutant filtration. These subdivisions also were permitted prior to rules protecting wetland and upland habitats. Several of the plats that are in existence are in low lying areas, vulnerable to storm surge in a hurricane events and in locations that would otherwise be prime habitat for species such as the endangered Scrub Jay.

Without change to the Charlotte County Comprehensive Plan, development will continue in accordance with current approvals – low intensity commercial and industrial areas spread out along the US 17 corridor separated from the low density residential uses along the river and south/east of US 17. It is incorrect to assume that by keeping the current comprehensive plan, development will not continue, or somehow the nature of development will be different over the next 40 years than it has been over the last 100 years. If residential and commercial development continues to be directed toward existing plats with limited storm water treatment, non-point source pollution will continue to increase in Charlotte County. At the same time, without establishing a cohesive vision for the area, the US 17 Corridor is left vulnerable to the piecemeal development proposals that will continue into the future.

On a macro level, the Charlotte County Future Land Use Map for the US 17 Corridor has areas for improvement. The existing patterns of development rely almost entirely on one arterial road for all daily trips. One common theme expressed among many resident stakeholders was the long commutes along US 17 to purchases the smallest of daily goods. There are limited mixed use areas and no opportunities for multi-modal transportation. Pedestrian movement between different uses is minimal, even in areas where residential communities are adjacent to commercial development or public facilities.

The Charlotte County Comprehensive Plan is unique in that, unlike many comprehensive plans throughout the state, it does not rely only on regulation to implement the vision defined on the Future Land Use Map and in the Future Land Use Element. There are several methods of action that the public sector can use to implement its goals, land use regulation being only one form of action. Others include:

Incentives. For instance, the Comprehensive Plan can provide density incentives for making off-site environmental improvements or adding water quality improvements unrelated to the impacts of proposed development.

Transfers of Development Rights. Charlotte County has a program in place to transfer development rights. The program shifts development rights from areas that are environmentally sensitive to areas that are appropriate for development. One of the problems with the current program is that sufficient development rights already exist within

the Urban Service Area, limiting the need for developing properties to purchase or receive density. Typically, TDR programs have "receiving" areas that currently do not have development rights. In order to develop, these "receiving areas" must purchase their density from properties that are of environmental sensitivity.

Public Education. Public education programs can be very effective in changing public behavior on environmental practices. However, for the purpose of this study, it is the aspect of public education in reestablishing the sense of identity along the US 17 Corridor that is most important. Charlotte County already does this to a limited extent with historical signage at specific locations. The sign at the historical home of Fredrick Howard, which details the history of Solana, is an example of how public education can be a tool for place-making and the creation of identity. Although public education is used in Charlotte County for this purpose, it is far too limited to have a meaningful impact on place-making.

Public Acquisition. The most direct way of achieving environmental preservation land use goals is for the public sector to simply purchase and own property. Charlotte County purchased two significant properties along the US 17 Corridor through the Conservation Charlotte program - Prairie Creek Preserve (1,603 acres) and Shell Creek Preserve (370 acres). However, at this point almost all of the money from the Conservation Charlotte Program for the next 20 years has been spent. There are limited funds to continue public acquisition into the future.

Option #2 Create a Corridor that Highlights the Unique Character of Individual Neighborhoods and Provides New Development Rights as an Incentive to Re-Plan Existing Plats

If the goal is to create an area that develops in a manner that is sensitive to the environment, improves the function and health of the area's ecosystem and provides for a diversity of housing opportunities, the current regulations guiding development along the US 17 corridor must change, and the other four forms of government action listed above must be utilized more effectively.

Incentives, shifting development rights and public acquisition all address the issue of environmental improvements to the County.

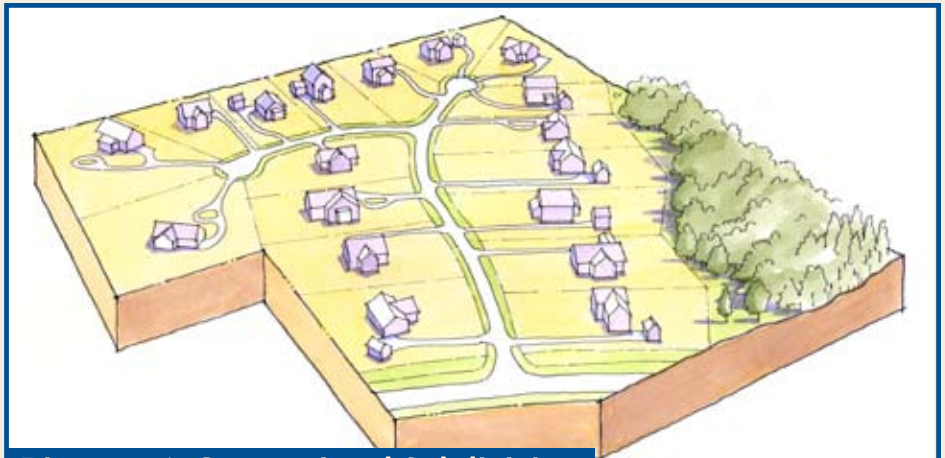


Diagram 1: Conventional Subdivision

Government regulation can be used to implement environmental best management practices, and to guide the form of development so that there is long term diversity in the local housing market. Development scales are designed to be more compact in nature, preserving environmentally sensitive properties.

The vision of the US 17 corridor is one where development along the corridor is encouraged, where the unique character of each neighborhood is highlighted and communities take pride in the

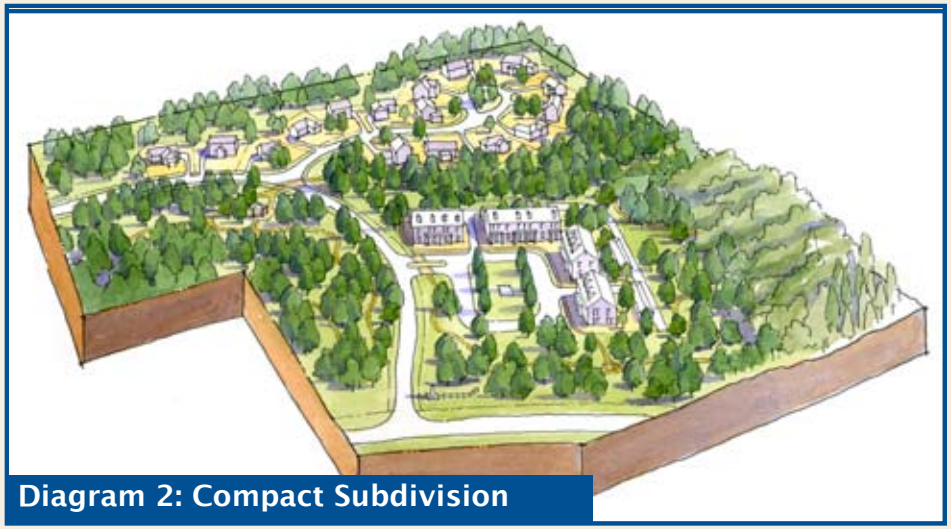


Diagram 2: Compact Subdivision

Diagram 3: Traditional Community.

appearance of the neighborhood, and where new growth opportunities are allowed and encouraged to proceed in an manner that is environmentally sensitive. There has been a lot of knowledge gained over the last two decades on how to best plan for future growth. Central to our current understanding of land use planning, economic development/revitalization, and environmental sustainability is the importance of how places are designed.

Compact Development Forms

Sustainable communities are built based on diversity and interconnectivity. Land uses, mobility options, housing types and sizes, all must be diverse and interconnected to build communities that are viable over time. Where an area's economy is based on a retiree market but does not provide mobility options other than the automobile, the ability to thrive over time is questionable. If a diversity of housing is not available for the workforce to service the retiree market, then the ability of the County to function is also questionable. It is not to say that in planning along the US 17 Corridor should move away from use of the automobile, but rather move away from a design that makes the automobile the only probable form of mobility.

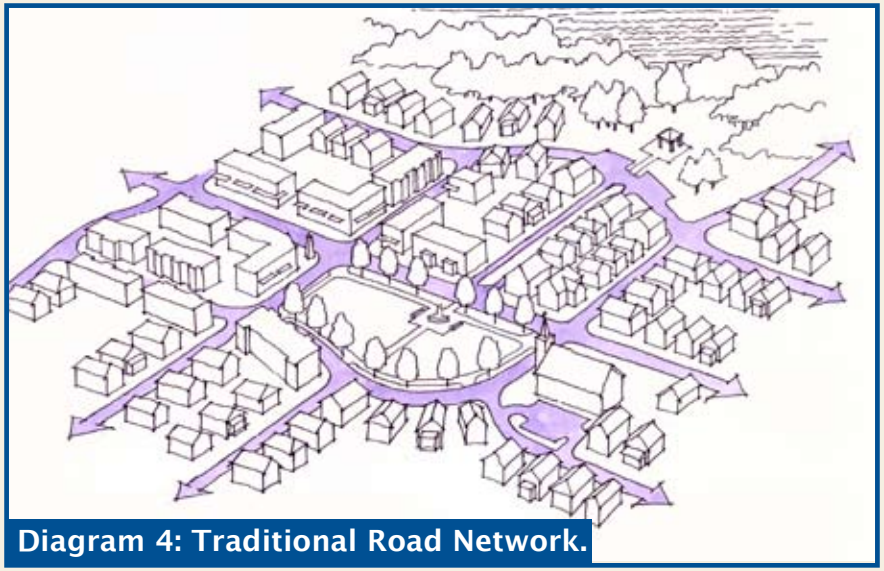


Diagram 4: Traditional Road Network.

Increase Density, Decrease Sprawl

"The fact is that continuing the sprawling, low-density, haphazard development pattern of the past 40 years is unsustainable, financially and otherwise. It will exacerbate many of the problems sprawl has already created – dwindling natural areas and working farms, increasingly longer commutes, debilitating traffic congestion, and harmful smog and water pollution. Local officials now realize that paying for basic infrastructure – roadways and schools, libraries, fire, police and sewer services – spread over large and sprawling distance is inefficient and expensive.

Most public leaders want to create vibrant, economically strong communities where citizens can enjoy a high quality of life in a fiscally and environmentally responsible manner, but many are not sure how to achieve it. Planning for growth is a comprehensive and complicated process that requires leaders to employ a variety of tools to balance diverse community interests. Arguably, no tool is more important than increasing the density of existing and new communities, which includes support for in-fill development, the rehabilitation and reuse of existing structures, and denser new development. Indeed, well designed and well integrated higher-density development makes successful planning for growth possible."

(ULI, Higher Density Development: Myth and Fact, Page 6)

Diagram 5: Public Spaces.

Diagram 6: Civic Spaces.

It is important to understand that promoting compact development by increasing density and mixing uses can be a tool for the preservation of open space and ecologically significant areas, as well as diversity in mobility options. While increasing density in itself does not necessarily lead to more preservation, neither does increasing density necessarily lead to an increase in developable area. Diagrams 1 and 2 show two different development patterns, one compact and one spread out. Both are parcels of equal size. Diagram 2 shows double the gross density of Diagram 1 while providing for more common open space and preserving environmental areas. What these examples demonstrates is that "density" by itself has no relation to preservation of environmentally areas.

It is important to understand that density can be used as an incentive to preserve more contiguous open space areas and transition from sprawling development patterns. In 2005, the Urban Land Institute co-authored a report with the Sierra Club, the American Institute of Architects, and the National Multi-Housing Council Higher Density Development Myth and Fact, which argued that urban areas should use density as a tool for creating sustainable environments. (See Sidebar)

Traditional towns and cities have been based on creating diverse environments that mix land uses and provide options for mobility. Creating mixed use environments highlight an area's sense of place and identity. Diagram 3 shows the construct of a traditional town. It is important to recognize that traditional forms of development are not ideas that are no longer practical under today's circumstances and constraints. Traditional forms of development are simply a design choice.

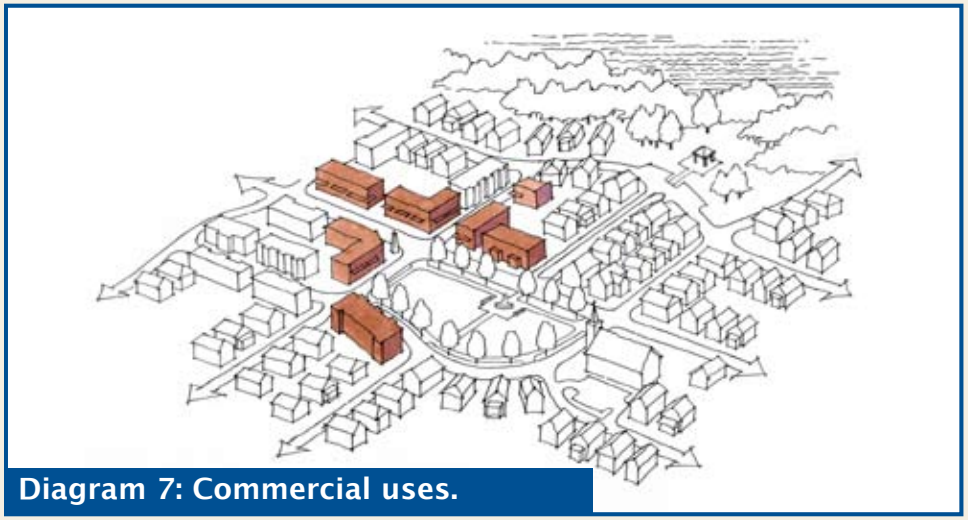


Diagram 7: Commercial uses.

The construct of a town starts with a road network that provides the backbone of the town plan (Diagram 4). The road network shows connectivity where trips can be distributed over the entire network, and cars and pedestrians have multiple options on how to move from one point to another. Within this town center, block sizes are at a human scale, meaning that walking from one area to another is possible, desirable, and practical.

Diagram 5 shows the public realm, an integration of public spaces with private development. Public spaces, such as parks, are often placed in key locations of the community and act as centering elements for the pattern of development. Pedestrian connectivity and unprogrammed open space are key elements. Formal parks and naturalized open space are both important, as they serve different uses and accommodate different activities. Parks and areas of public open space also add value to nearby properties. Options for increasing the amount of public open space areas along US 17 Corridor include using increased density as an incentive to provide public open space, and TDRs for open space or public acquisition of land. Significant research has demonstrated the link between public open space and residential value (see side bar).

Diagram 6 shows civic spaces as an integrated part of the community, not programmed to be separate. This again encourages pedestrian activity, but also provides a development anchor for town centers. As redevelopment and new development occur, civic architecture and the surrounding spaces can greatly enhance the vitality of pedestrian friendly environments.

Diagram 7 shows the location of commercial uses centered in proximity to the civic spaces, which act as anchors. Diagram 8 then shows a diversity of housing types, integrated and amongst the commercial areas. Although housing product types are typically separated by neighborhood in Southwest Florida, this is neither necessary nor it is helpful in promoting diversity in communities.

Segregation of housing types is a builder choice that has little to do with building successful neighborhoods. Examples of successful mixed product neighborhoods are abundant and are the norm.

The Value of Public Space

Public space has long played a vital role in the health and vitality of communities alike. Recent studies conducted by the Trust for Public Land demonstrates that in addition to health and community benefits, public space plays a critical role in determining property value.

The “proximate principle” states that the market values of properties located near a park or open space frequently are higher than those of a comparable properties located elsewhere.” (Trust for Public Land, 2007, p. 1).

As in the case for Southwest Florida, residential golf course communities are compelling evidence of this principle. Golf courses, although mainly private, are desired open spaces where people move to the community for access to the green space, ambiance, and convenience of a recreational facility. Due to proximity, property values located on the golf course are generally higher when compared to similar residences in the same community not situated on the golf course. In private communities, maintenance and home owners fees are often increased for properties adjacent to public space. Those fees are allocated towards maintaining the common space, which increases the value of the property around it.

In large cities such as New York and Washington, the closer the property is to Central Park or Rock Creek Park, the higher the property taxes will be because these properties are benefiting from the proximity of a public space. The taxes are allocated to maintain, develop, or renovate parks and open spaces.

Diagrams 3-8 illustrate a planning option where mobility is not confined to either pedestrian movement or automobile movement, but where a choice is provided. Through a planning program that combines requirements for form of development with incentives to preserve and restore natural areas, land use patterns can shift from the current pattern of development to one in which walking between uses is an option and community identity is present.

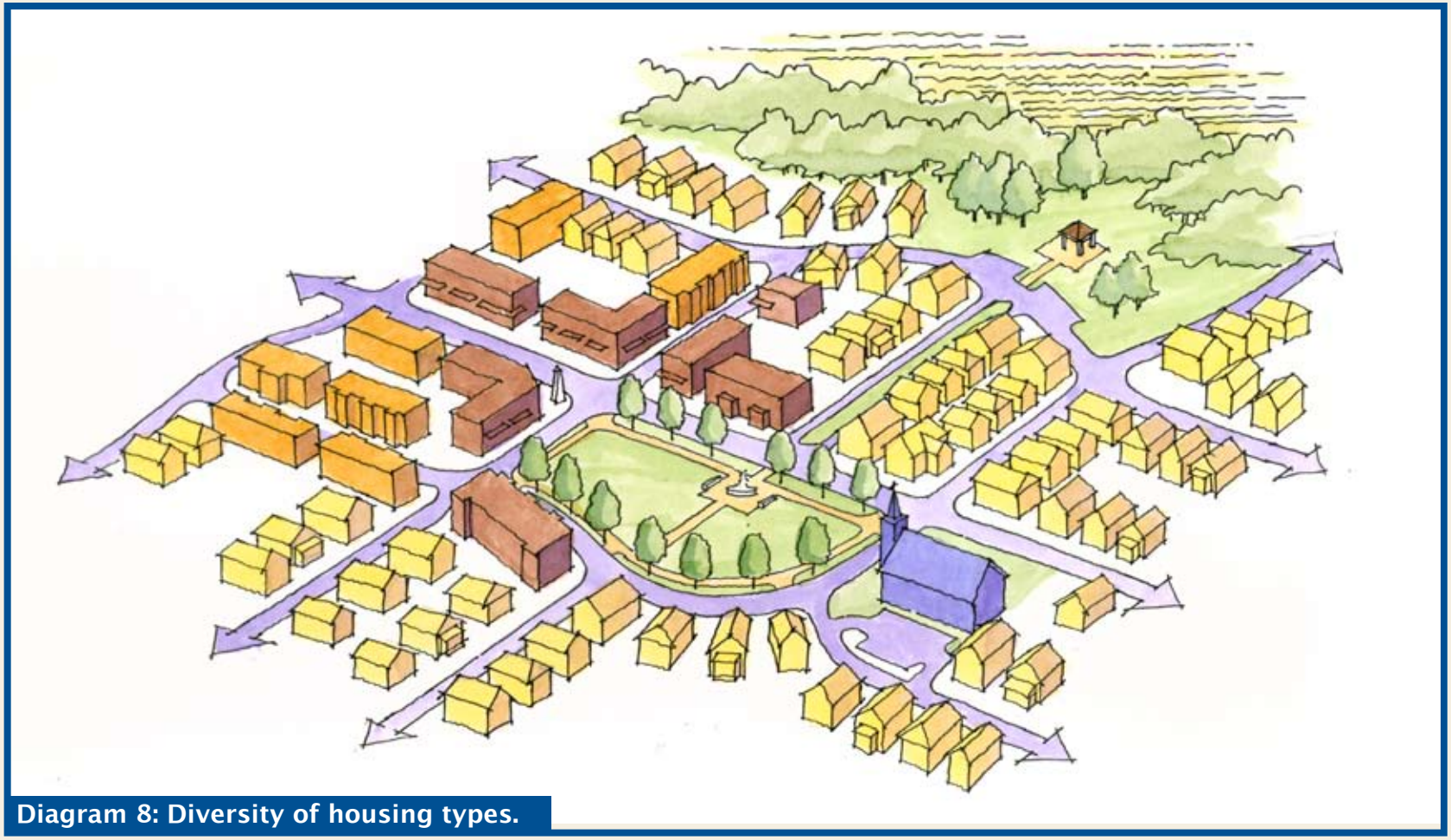


Diagram 8: Diversity of housing types.

Planning Recommendations

The following are recommendations for implementation of the US 17 vision in redevelopment, infill development and future rural settlement areas. It is important to understand that these types of areas are related. Given the current vesting of the existing plats along the US 17 corridor, improvements can only realistically happen through providing development incentives to properties that are not environmentally sensitive and not entitled for development to purchase the development rights in existing plats. The properties where development rights are extinguished can then be used for water quality improvements, re-creation of wildlife habitat areas, or, if planned and directed by the County, for urban greenways.

New Development - Needs and Recommendations

Although traditional planning theory instructs us to concentrate our efforts on redevelopment and infill development, to follow this course at the exclusion of looking for rural settlement areas in Charlotte County would simply lead to economic ruin. The land-use form and design of Charlotte County, centered around tens of thousands of acres of uniformly platted residential lots without regard to building sustainable communities with an economic base, is something to be avoided, not achieved. The traditional approach as established in the 1989 Comprehensive Plan of containing the "urban land area" is no longer applicable based on the transfer of development units that has developed since that time.

In examining the overall scale of the study area and the existing urban area, it is not enough to simply evaluate the size, but also to look at the existing uses. Over 8,000 acres are existing suburban density plats, many of which break up environmental areas, historic flow-ways and potential Scrub Jay habitat with residential lots and local roads. The antiquated plats contain little or no land for surface management or storm water treatment. Commercial areas are limited to disconnected strips along US 17, with limited opportunity for mixed use areas. The existing form of development is neither environmentally friendly, nor is it sustainable. The goal of the study is therefore to explore redevelopment or re-planning the form of development in the existing plats, partially through shifting development from inappropriate areas to more appropriate areas.

As the US 17 Corridors opens to new development areas, the strategic introduction of allowing development in the "Rural Settlement Area" can provide an opportunity for Charlotte County to focus development efforts away from the antiquated plats that are unsustainable, while achieving other county goals, including improving on the design of antiquated plats, restoring historic flow-ways, retrofitting existing plats with Low Impact Development water quality improvements, and preserving agricultural lands through transferring density to appropriate areas. This study is not recommending an extension to the Urban Service Area. Rather, this study aims to set in place criteria for when and how development within the Rural settlement area may take place in the future.

In accordance with the current Charlotte County Plan, new settlements must improve upon the current land use form in Charlotte County through transferring density in order to achieve development rights as well as create sustainable places. However, unlike the current comprehensive plan, it is not enough for development in the Rural settlement area to show that public facilities are planned for. Development within the Rural settlement area must also be designed in a land use form that is ecologically and fiscally sustainable.

The goal of the study is therefore to explore redevelopment or re-planning the form of development in the existing plats, partially through shifting development from inappropriate areas to more appropriate areas.

Although the urban land area on the Future Land Use Map may increase with future development within the Rural settlement area, as a practical matter, the actual urban land area on the ground will decrease. This is because units will be transferred from un-built existing "urban and rural" areas and will therefore never contain urban uses. At the same time, the land uses that are built will be constructed in a much more compact land use form, further decreasing the total development footprint area of urban uses.

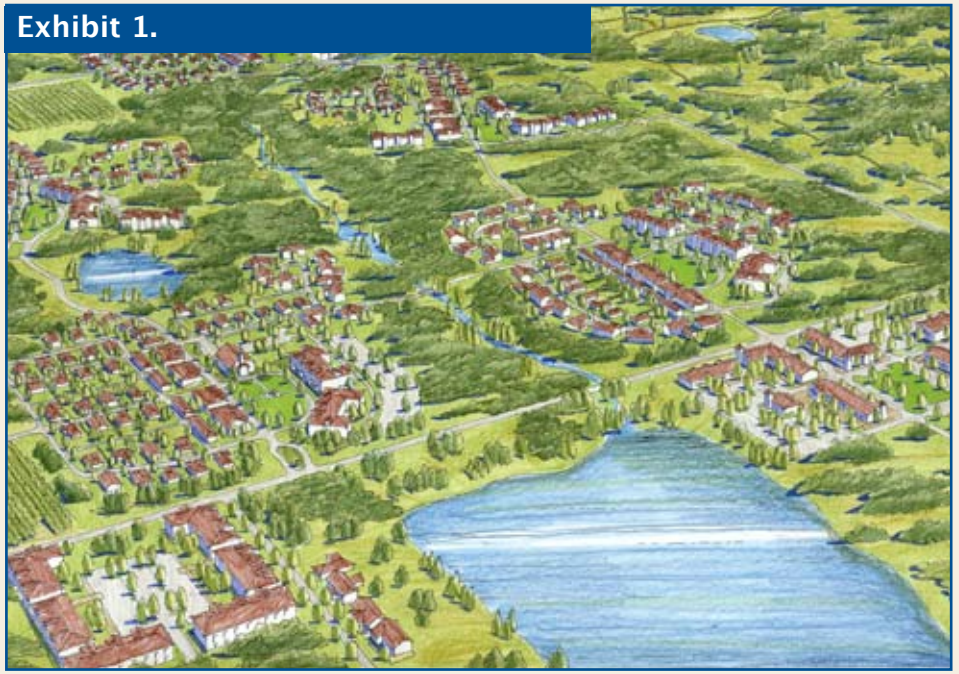
This approach to planning is different from the current county future land use map in that design of future communities is of central importance. As outlined above, sustainable communities are created through diversity of uses, interconnectivity of those uses, and compact, dense forms of development. The extent of any new development will be restricted from moving east by the natural boundaries that encapsulate the study area. The Prairie Creek Preserve property creates a natural eastern terminus for new development along the corridor. The current Urban Service Area extends along the entire west side of US 17 to the DeSoto County line and contains an existing plat on the east side of US 17. Therefore, areas that will be receiving density in the future are those properties on the east side of US 17, north of Washington Loop Road extending east to Prairie Creek Preserve. This study is recommending a series of policies in the Future Land Use Element to first define the point in time when development will become appropriate in this area, and second, guide urban form in the rural settlement area.

As suggested in the section on Planning Options, the goal of this study is to provide for not only the availability of infrastructure, but also for a sustainable form of development. Policies should be added to the Charlotte County Comprehensive Plan that require the clustering of units and commercial areas into mixed use compact development areas. Exhibit 1 to the right shows how development in the rural settlement area can serve to restore previously impacted habitat and flow ways, creating compact development areas with common preserve and open space between development areas. This image is a significant transition from current and historic planning practices along the US 17 corridor and can present a real opportunity to create unique places.

Infrastructure

It is helpful that within this area envisioned for future new settlement, property ownership is very limited. This allows for easier planning of infrastructure and public services, including road alignments, future schools, libraries and parks. Although development in the rural settlement area is not envisioned to occur in the immediate future, the following is an analysis of the level of facilities that will need to be planned for when development in the area is deemed appropriate.

Exhibit 1.



Utility Availability

Planning for new wastewater potable water facilities can be accomplished concurrent with planning for the rural settlement area. The rural settlement area is within an independent utility franchise area of the existing Sun-River Utility. The utility is permitted to serve existing and new development at the northern end of the US 17 corridor. The utility currently operates potable water and waste water treatment plants that are undersized and will need to be expanded. Through discussions with Charlotte County, the Peace River Water Authority and the Public Service Commission, it has been agreed that the Sun-River Utility will purchase water in bulk from the Peace River Water authority through Charlotte County. A water main will be constructed to serve new development and connect with the existing 24 inch water main that runs along US 17 in DeSoto County, currently ending at the Wal-Mart distribution center at the County line.

Roadway Network

US 17 should act primarily as a roadway corridor that connects adjacent communities. Currently it serves both the function of connecting adjacent communities, and the additional burden of carrying all other daily trips for goods and services. With the creation of communities along the US 17 corridor that are more diverse in land uses and internally contain more effective road networks that better distribute trips, US 17 can over time transition back to the purpose of simply connecting individual communities. Creating a parallel road along the entire length of US 17 however is not realistic given the environmental constraints of Shell Creek and the pristine wetland systems that would be impacted by another north south crossing. With this in mind, the study focused on ways to create both small relievers to certain segments of US 17 in developed areas, while ensuring that rural settlement areas provide a more extensive road network to better distribute trips.

This study recommends the adoption of a conceptual roadway map in the rural settlement area east of US 17. This map should be conceptual in nature only as detailed site planning has not yet been completed for this area and no specific development proposals have been made. However, the intent of the public roadway network should be maintained in any specific development proposal in the area.

Farther south along US 17 are suggested additional roadway improvements, consistent with the community visioning process and the US 17 By-Pass Study, that provide for additional trip distribution in the roadway network. Although none of these suggested future roadway connections are shown to be necessary for maintenance of the Level of Service along US 17, the suggested improvements add to the functionality of the network. The Transportation Study in Appendix B details these future improvements.

Schools

The need for identifying and planning for new school locations will come from planning for new areas of land. It is important to note that with the future density shifting that is proposed, there will not be any new impacts to the overall student population in Charlotte County. There will simply be a shift in locational priorities for new schools. The following is an evaluation of the additional needs for school facilities in this general area, not county-wide. The analysis is also simply for future planning purposes as no immediate development is anticipated.

The Charlotte County School District has adopted the state standard student generation rate of.33 students/unit. If it is assumed that the maximum number of units is transferred to this area, then this rural settlement area will shift the assumed generation of 1,980 students from sending properties in Charlotte County to this area. At minimum therefore, land of sufficient size for a high school (60 acres) should be planned.

Parks

Level of service for park facilities is generally calculated based on population demands for park areas. This study derives assumptions of demographics in Charlotte County from Census data projections, and examines the need for additional park facilities in the rural settlement area. Similar to the analysis for future schools, the following is to be used for future planning of the area and park facilities as immediate development is not anticipated.

The study focused on ways to create both small relievers to certain segments of US 17 in developed areas, while ensuring that rural settlement areas provide for a more extensive road network to better distribute trips.

According to the Census data, this analysis assumes there will be an average of 2.14 people per household. According to the Recreation and Open Space Element of the Comprehensive Plan, there is a projected deficit of park facilities in the southeast planning area, with the exception of environmental parks. Based on this understanding, the rural settlement area will need to off-set impacts with regard to the provision of park facilities. The following table below shows the Park Level of Service for Charlotte County.

Park	Level of Service	Need
Mini Parks	0.5 acres/1000 population	6.42 acres
Neighborhood Parks	1.5 acres/1000 population	19.26
Community Parks	2 acres/1000 population	25.68
Regional Parks	2 acres/1000 population	25.68
Environmental Park	4 acres/1000 population	N/A*

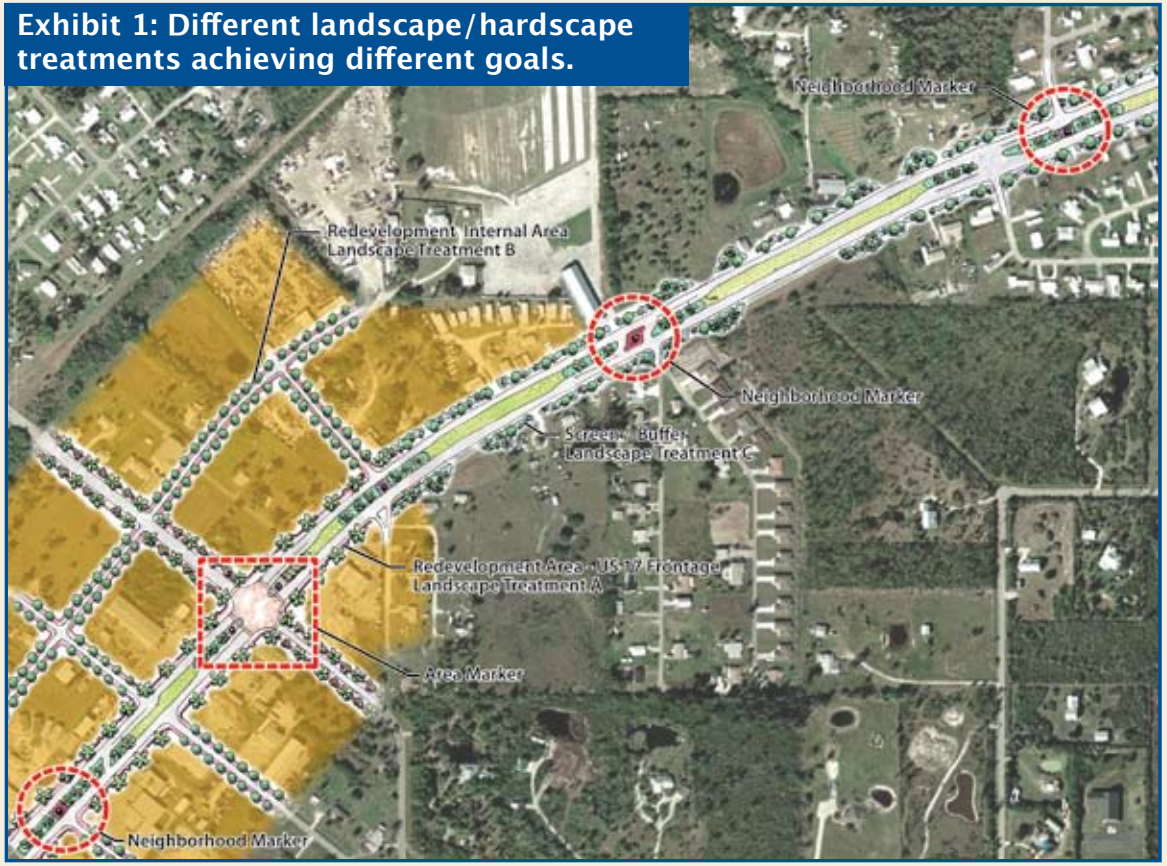
*The County projected a surplus of over 300 acres even prior to the recent purchases by Conservation Charlotte.

To meet the recreational needs of future residents this study recommends adding policies to the Future Land Use Element of the comprehensive plan that will require development in the Rural settlement area to provide for enough acreage to off-set recreational needs. Given the proposed form of development criteria that is being recommended, more than sufficient park land will be provided for.

Redevelopment Areas

Unlike growth management planning for rural settlement areas, redevelopment planning must be proactive in nature. It is rare that redevelopment will simply happen without active community participation. For this reason, one central recommendation of this report is to set up an association of local business and community leaders in each redevelopment area to implement the community's planning goals.

Exhibit 1: Different landscape/hardscape treatments achieving different goals.



Redevelopment and revitalization of the Cleveland neighborhood was a topic of much discussion in both the individual stakeholder meetings and the public workshops. Improving the image of the community and portions of US 17 was of central importance to the residents and business owners in the area. Focusing attention on elements of the corridor that can change the image will be essential in redevelopment. Simple design elements can be introduced along the corridor to highlight the different communities and add to their revitalization.

Diagram 9: Landscaping to allow view corridors.

Exhibit 2: Example of historic signage/community monument/ gathering place feature.

Corridor Landscaping

In providing landscaping for the US 17 corridor, it will be essential to work with the Florida Department of Transportation to identify the unique aspects of each community that should be displayed through landscape treatments, the purpose of landscaping in certain areas and the types of vegetation that FDOT will allow within the right of way. Landscape treatment of the corridor should correspond to the following public goals: (See exhibit 1)

1. **Screening and buffering of undesirable views in certain locations**
2. **Highlighting of important places and intersections**
3. **Maintaining views into natural areas and parks**
4. **Creating consistency in corridor experience – the blending together of disparate parts**

Redevelopment areas can contain distinct hardscape and landscape elements that serve to identify the community. Elements can include features at intersecting rights of way (not US 17) such as knee walls, pavers, formal landscaping, tree/palm lined street, widened sidewalks and on-street parking. Individual neighborhoods can be identified with markers and monuments that aid in place making, way finding, and that can help foster community pride.

Non urban sections of the US 17 Corridor should contain landscape treatments that encourage view corridors into commercial development, while not diminishing the amount of landscape material along the road. Clustering of trees and shrubs can to allow for clear views to commercial business adding to commercial viability while increasing aesthetics for the corridor.

Community Markers and Entry Features

The US 17 Corridor should tell a visual story. While driving along the corridor, shopping or passing through, visitors should feel that each community is a distinct place and get a sense of the history and the specific identity of the community. Currently there are no features to distinguish the different communities along US 17. Signage and landscaping will help tell the story of US 17 – both historical and present.

Historical Connection

Creating a sense of place is the basis for revitalizing the image of the Cleveland neighborhood, and to a lesser extent the Solana neighborhood.

Exhibit 3a: Cleveland Main Street Redevelopment Plan along Cleveland Avenue.

Exhibit 3b: Cleveland Main Street Redevelopment Plan along Cleveland Avenue.

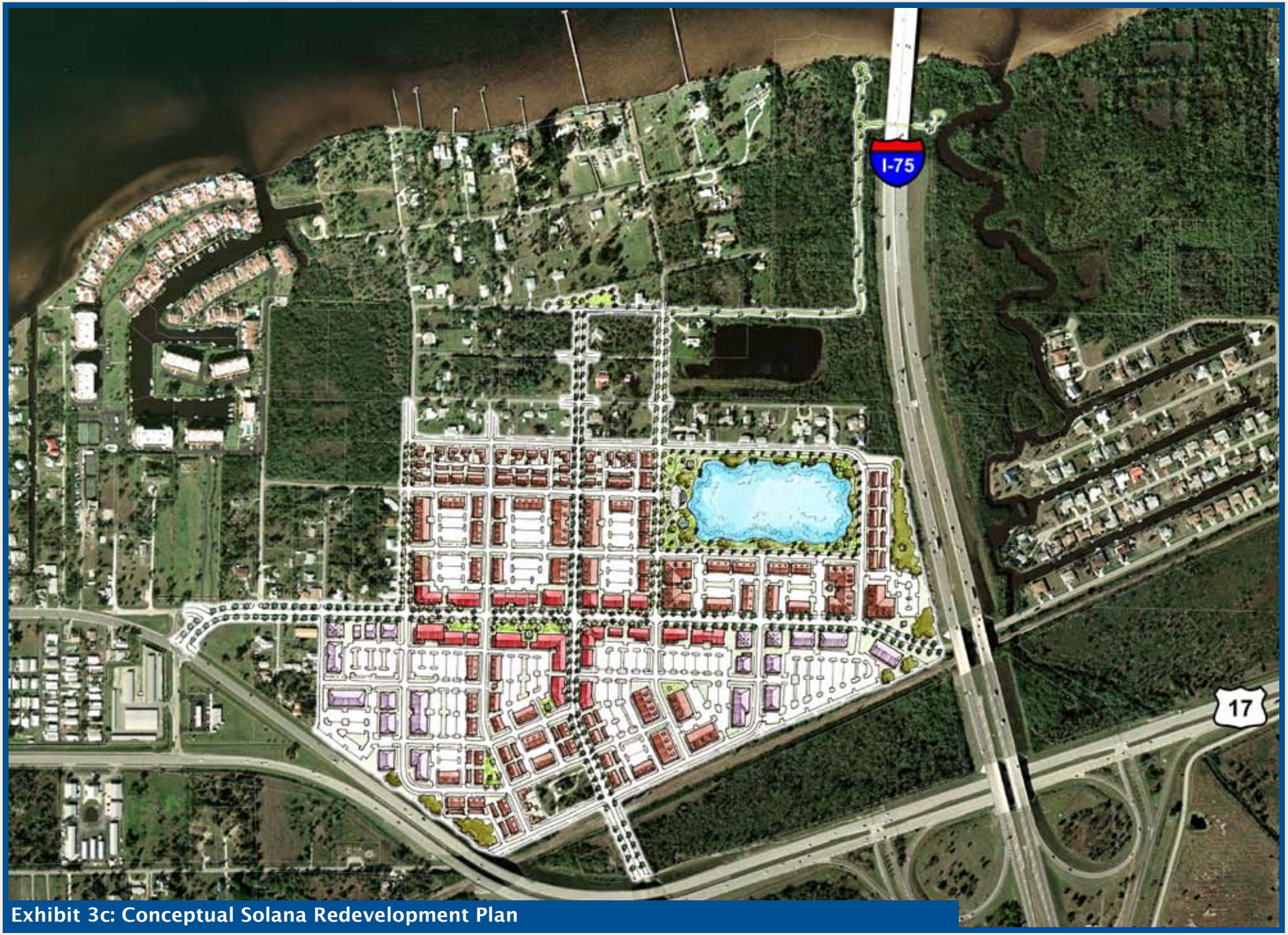


Exhibit 3c: Conceptual Solana Redevelopment Plan

Cleveland and Solana are different in that Solana has maintained a primarily residential character with very expensive homes along the river, while Cleveland has a mix of industrial development along US 17 and some properties that add blight to the neighborhood. Both neighborhoods however, have a historical identity that should be displayed and highlighted in public areas. Places become more attractive when a visitor can see that the place means something.

When people visit a place, the area becomes more attractive if there is information attached to that place. What was this neighborhood or area like 100 years ago? What was this building's original purpose? Providing additional reasons for people to visit the neighborhoods along the US 17 corridor and discovering meaning in their visit will help reinvent the corridor as an attractor.

There are currently many opportunities to display historical significance or identity to the corridor. Signage and informational kiosks strategically located could tell the story of how Cleveland developed from a small plat to an independent city with a Mayor and City Council. The county should consider increasing the entitlements of the land along Cleveland Avenue, extending from US 17 to the railroad, to allow for a mixed use town center (See Exhibit 3b). This can assist in encouraging redevelopment and the recreation of identity in the Cleveland neighborhood, consistent with the community vision.

Map 8: Area MSBU's.

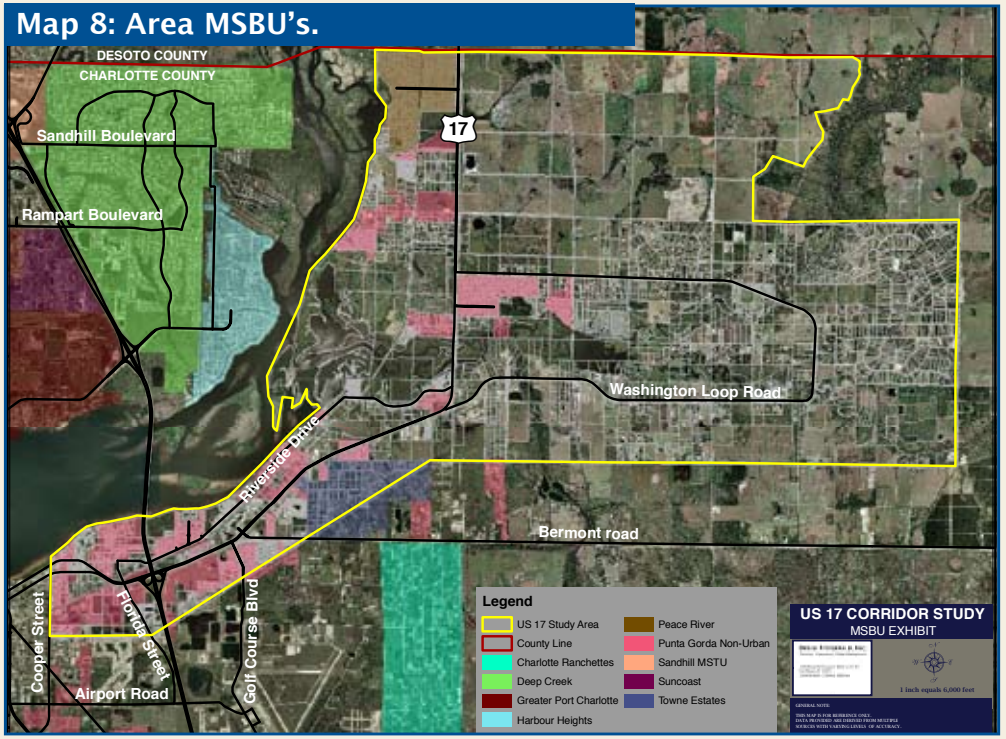


Exhibit 4: Placement of retail buildings along a mainstreet close together and to the right of way.

Waterfront

The drive-by image of the US 17 corridor is not reflective of its reality as a series of beautiful waterfront communities. The opportunity exists to increase public access to the water by providing incentives to water oriented businesses. Historic structures along the waterfront provide for an opportunity to connect to the past. The historic home of George Brown sits along the Peace River at the end of Cleveland Avenue, a public right of way that extends to the water shoreline. The terminus of Cleveland Avenue can act as a public access point or pier along the River, within a historic area, adjacent to a historic structure, adding identity to the community.

Commercial Redevelopment

Zoning along the US 17 corridor should be evaluated to ensure that uses are not disconnected and pedestrian movement is encouraged. Though buffers are appropriately required to separate distinctly incompatible commercial areas from the neighborhood districts, there should be adequately placed vehicular and pedestrian links that integrate neighborhood shopping and residential areas. Large shopping areas should maintain buffer areas to provide for pedestrian connections that are designed as safe areas – well lit and separated from traffic, to allow for better integration with the surrounding neighborhoods.

Zoning in redevelopment areas should encourage owners to identify areas to create joint parking facilities and amenities within village core areas. Joint parking facilities allow for retail buildings to be located closer together and closer to the right-of-way, to provide for the pedestrian accessibility necessary for successful retail development. Use of joint parking is necessary to deter the current strip development that exists along US 17.

The redevelopment area of Cleveland as shown on Exhibit 3b envisions positioning buildings along the street with minimal setbacks. This will encourage pedestrian movement. Cars parked along a street helps to slow traffic by creating movement and activity within the street. Main streets such as Marion Avenue in downtown Punta Gorda serve to connect people with buildings, not carry traffic through and out of downtown. The same design goals should be implemented for redevelopment of a commercial core in the Cleveland neighborhood.

Implementation of the Redevelopment Plan - PHASE I

As the residents and business along US 17 look to redevelop the corridor, the following is a recommended phasing plan and series of recommendations.

The first step in redevelopment of US 17 Corridor is to create an organization and a funding mechanism. A Business Improvement District (BID), for example, can be established to guide redevelopment efforts. A BID would be structured similar to a Municipal Service Benefit Unit (MSBU) where property owners that benefit from a series of public improvements are assessed on an annualized basis for the cost of those improvements. At the outset, the Business Improvement District can simply concentrate on the Cleveland neighborhood, the area where the desire for redevelopment and revitalization was voiced most significantly.

The mission of the BID would be to oversee and work toward the redevelopment of the neighborhood, specifically those public elements suggested in the plan - landscaping and signage. There needs to be a group of people willing to work with and attract new developers and businesses into the area. The Business Improvement District would oversee all aspects of the Plan and work with County staff to ensure implementation. Coordination with the Florida Department of Transportation on improvements in and around the state right of the way will be essential. The Business Improvement District should begin by concentrating on the small aesthetic improvements that will substantially enhance the beauty and perception of the corridor. This includes historical and identification signs to enhance perception, enhanced landscape and hardscape features at gateway nodes, adding pedestrian features and amenities along neighborhood roadways, and improvements to the waterfront access portion of Cleveland Avenue. The Business Improvement District can also work toward drafting specific aesthetic guidelines for the corridor and working with County staff to implement long term improvements.

The mission of the BID would be to oversee and work toward the redevelopment of the neighborhood, specifically those public elements suggested in the plan - landscaping and signage.

As an alternative to a BID, a Community Redevelopment Area (CRA) can be created to oversee redevelopment of the Cleveland neighborhood. The CRA would have a CRA Board to oversee expenditures of funds and implementation of the redevelopment plan. In order to create a CRA, a specific plan, meeting the requirements of Chapter 163 of the Florida Statutes must be created and adopted. The CRA planning process will include a finding of blight in the area and a plan to alleviate blight through redevelopment efforts. The benefit to establishing a CRA is the use of tax increment financing (TIF) monies to fund public improvements. Tax Increment Financing is a method to channel the incremental increase in tax revenues generated within the CRA for use specifically on improvements that benefit the CRA. Under this option, properties within the CRA would not be assessed additional tax dollars as they would under the BID model. The CRA option is all the more appealing at this moment in time because the base value for assessed properties should be low, allowing for the potential for large tax increments to fund improvements.

Redevelopment Implementation PHASE - II

Many participants in the visioning process expressed a desire for improved access to the Peace River and Shell Creek, including commercial uses along the river that would provide access for the

public. There are scattered opportunities of county owned rights of way and other land along and near the river where access could be provided in the form of fishing piers into the water or linear parks leading up to the water. Further study needs to be done to examine riverfront, recreational and open space opportunities. Phase II should include an active program to identify existing county owned properties and county funding sources to transform these properties into active public use.

Redevelopment Implementation – PHASE III

The rail line has historically been an economic driver for the area. The rail was the original impetus for the development of several communities along US 17. It has since diminished dramatically in use and function. Although it is still active, there is little nexus between the uses along the corridor and the rail line that runs the length of the corridor.

Many participants in the visioning process expressed a desire for improved access to the Peace River and Shell Creek, including commercial uses along the river that would provide access for the public.

Over the long term, the County should look into either expanding use of the rail line or encouraging its reuse. Either way, Charlotte County should work with the local community to reestablish the nexus with the rail. The current line is a real opportunity for locating industrial uses that need rail service. Where rail spurs can be established to open up additional industrial properties in the area, they should be considered.

If the rail fails to increase in usefulness, the county should look for opportunities to convert the rail line into a public trail system. Any conversion of the rail line is assumed to be a long term goal as the county does not own or operate the rail line and it is currently in active use. However, in its current state, the rail line is simply disconnected with the community. The opportunity of the rail line is either to expand or change its use.

Low Impact Development

Introduction

LID methods seek to design sites in harmony with nature. As Ian McHarg writes in Design With Nature, "we need nature as much in the city as in the countryside...Today it is nature, beleaguered in the country, too scarce in the city, which has become precious."

Although LID concepts and techniques are new to many planners in the United States, these techniques have been successfully used in Europe and Asia for many years. In the U.S. In 1999, Prince George County Maryland County produced the first municipal LID manual. This was later expanded into a nationally distributed LID manual published in 2000. Several states have adopted LID manuals and/or requirements. The Federal government has two major documents that govern most federal efforts and proposed standards initiated by the American Society of Landscape Architects are in the review period. In Florida, LID methods are anticipated in the new State Stormwater Rules, expected to be in force June 2010. Sarasota County's Preliminary LID manual, published December 2008 further champions LID best management practices.

Unintended Consequences

Most people would prefer to have land development have the least possible impact on the natural environment; in fact current stormwater regulations have not had this effect. Instead, present land development practice often results in land being completely cleared, then filled, then dug into retention and detention stormwater ponds with enough capacity to handle the biggest rainfall events.

In fact, most rainfall events in Florida, 90% to 95% of them, are small rainfall events of one inch or less of water. Such small amounts of water could be easily absorbed on site through LID practices.

Currently in most development projects, stormwater systems are designed to attenuate and treat altered hydrologic conditions that result from implementing the site plan. Plans for new development typically require the following:

- Clearing onsite vegetation.
- Disturbing and compacting native or parent soils
- Importing and grading fill material to establish the construction base and drainage contours
- Constructing infrastructure to facilitate drainage away from the site introducing new landscapes that require nutrient and water inputs above predevelopment conditions to thrive.

Rather than fitting the stormwater system into the predetermined site plan, LID encourages an alternative design approach that integrates existing site features to facilitate natural hydrologic functions into site planning. LID systems are designed to use and enhance predevelopment hydrologic, soil, and landscape conditions that promote on-site interception, capture, storage, treatment and infiltration of stormwater.

The old approach to stormwater management has had a significant negative impact to water bodies due to storm flushes carrying pollutants from streets and lawns treated with pesticides and fertilizers. The old way of stormwater management has replaced natural diverse ecosystems with suburban and urban monocultures. In the old way of stormwater management, water was sent offsite, via ponds, pipes and drainage structures, eventually reaching natural water bodies.

LID encourages an alternative design approach that integrates existing site features that facilitate natural hydrologic functions into site planning.

Land development of the future requires professionals to be sensitive to nurturing natural components rather than engineering them out of existence The new stormwater management systems, which contain innovative best management practices (BMP's) encourage rainfall to remain on site and ultimately to return to the groundwater table beneath the site, without being sent offsite.

Sustainable Site Development

Almost with one voice, various academic, government agencies and professional organizations have emerged to return land development to a spirit of designing with nature, also known as sustainable site development. Sustainable sites are created by these methods:

- Preserving existing vegetation
- Reducing impervious surfaces
- Mitigating heat island effects
- Reducing traffic impact on site and surrounding area
- Controlling construction activity to reduce impact
- Using LID techniques to understand and manage site hydrology

LID structural BMP solutions include...
Sustainable site development is achieved through the application of engineering Best Management Practices (BMPs) Many of the new stormwater approaches are BMPs for Low Impact Development, or LID. LID technology seeks to treat every raindrop as a precious water resource and manages that water on site, without creating stormwater ponds. LID BMPs include both structural and non-structural solutions for LID. Many LID components use the biological, chemical and physical processes of plant and soil interactions to filter and treat pollutants.

LID nonstructural BMP solutions include...
Together with green building methods, sustainable site development techniques lead to sustainable development which is defined as a commitment to human development within the ecological limits of the biosphere. Sustainable development includes land use policies that support ecological balance and a sustainable economy. The BMP techniques for LID support these principles; most obviously, those of ecological balance.

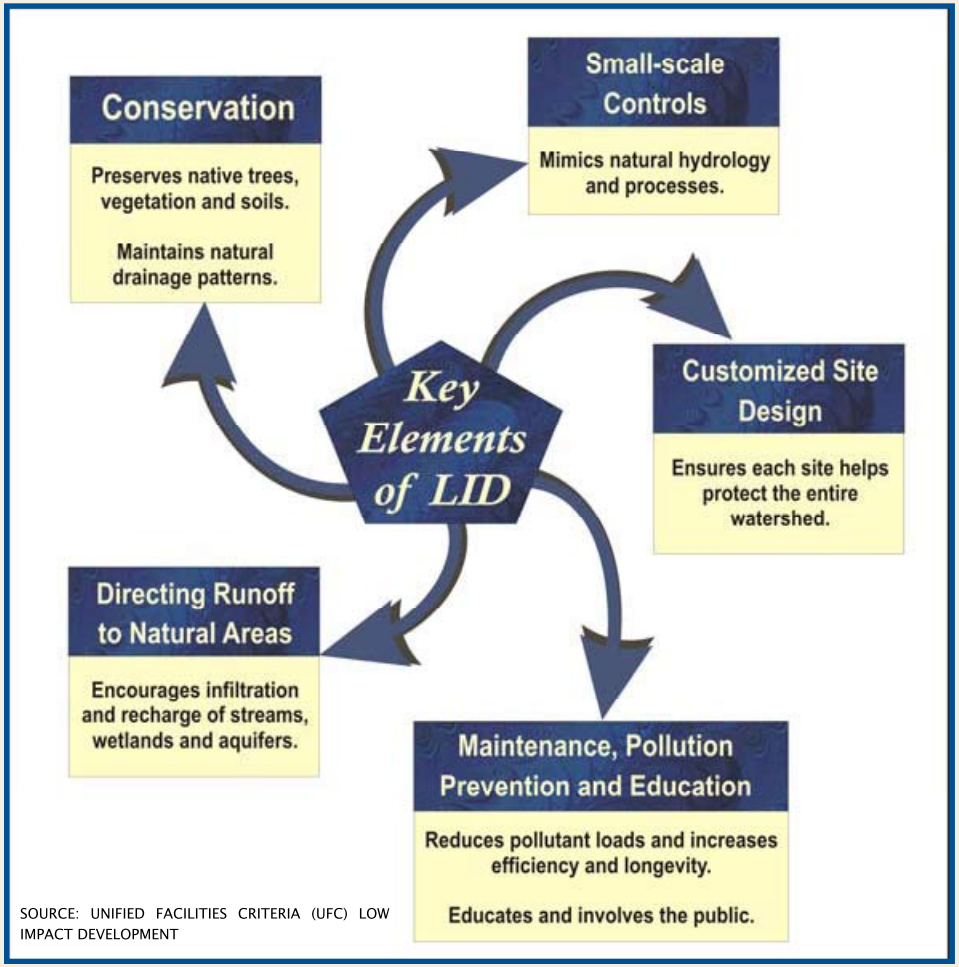
Significant State Low Impact Development Efforts

The Prince George County LID Manual, evolved into the National LID Manual, addressed: 1) Site Planning, 2) Hydrologic Analysis, 3) LID Integrated Management Practices, 4) Erosion and Sediment Control Considerations, and 5) LID Public Outreach Programs.

The Low Impact Development Center is a non-profit organization that has been active for ten years in advocating, educating and partnering in LID efforts. Visiting the organization's website, located at http://www.lowimpactdevelopment.org/ provides excellent information regarding LID.

With design pre-planning, Low Impact Development (LID) is an approach to land development that uses various land planning and design practices and technologies to simultaneously conserve and protect natural resource systems and reduce infrastructure costs.

The States of Massachusetts and Michigan have also been at the forefront of LID technology, with LID demonstration centers at universities and various green roof projects. The City of Chicago has the most green roofs, a significant LID technique, of any city in the United States.



SOURCE: UNIFIED FACILITIES CRITERIA (UFC) LOW IMPACT DEVELOPMENT

Federal Government Low Impact Design Efforts
Housing and Urban Development

In July 2003, the Department of Housing and Urban Development (HUD) published The Practice of Low Impact Development Manual where it defined Low Impact Development (LID) as an approach to land development that uses various land planning and design practices and technologies to simultaneously conserve and protect natural resource systems and reduce infrastructure costs. LID still allows land to be developed, but in a cost-effective manner that helps mitigate potential environmental impacts.

The HUD document was developed as a nationwide resource in collaboration with top low impact and sustainable site development professionals and provides analysis and cost comparisons of conventional and new Low Impact Development solutions. In this document, LID terminology is used interchangeably with the concepts of Sustainable Site design.

The HUD document established the important context for LID for implementing nontraditional, decentralized methods for handling storm water can significantly reduce site development costs, regional expenditures for storm water and planning, construction, and maintenance outlays while protecting the environment.

Second it was found that properly designed, installed, and maintained, on-site wastewater treatment systems can cost effectively treat wastewater and protect the watershed from pollutant overloads.

Finally, the HUD document proved that reconsidering traditional methods for planning and accommodating pedestrian and vehicular circulation is part of a cadre of better site design techniques that can simultaneously reduce development costs, protect the environment, and create win-win situations for builders, municipalities, and residents.

The conceptual site plan.

United Facilities Criteria Low Impact Development

The Department of Defense requirements for Low Impact Development were published in October 2004 and are contained within The Unified Facilities Criteria (UFC) Low Impact Development Document.

Low Impact Development (LID) is a stormwater management strategy concerned with maintaining or restoring the natural hydrologic functions of a site to achieve natural resource protection objectives and fulfill environmental regulatory requirements. LID employs a variety of natural and built features that reduce the rate of runoff, filter out its pollutants, and facilitate the infiltration of water into the ground. By reducing water pollution and increasing groundwater recharge, LID helps to improve the quality of receiving surface waters and stabilize the flow rates of nearby streams.

LID incorporates a set of overall site design strategies as well as highly localized, small-scale, decentralized source control techniques known as Integrated Management Practices (IMP's). IMP's may be integrated into buildings, infrastructure, or landscape design. Rather than collecting runoff in piped or channelized networks and controlling the flow downstream in a large stormwater management facility, LID takes a decentralized approach that disperses flows and manages runoff closer to where it originates. Because LID embraces a variety of useful techniques for controlling runoff, designs can be customized according to local regulatory and resource protection requirements, as well as site constraints. New projects, redevelopment projects, and capital improvement projects can all be viewed as candidates for implementation of LID.

Ongoing LID Efforts: Landscape Architects with Others

Perhaps the most impressive effort to date that is underway and available for review is the Sustainable Sites Initiative, a joint project of the Sustainable Sites Initiative (http://www.sustainablesites.org)

The Sustainable Sites Initiative is an interdisciplinary effort by the American Society of Landscape Architects, the Lady Bird Johnson Wildflower Center and the United States Botanic Garden to create voluntary national guidelines and performance benchmarks for sustainable land design, construction and maintenance practices. It will become a sustainable site development standard for which individual sites will be awarded points, similar to LEED for green building construction.

The conceptual site plan incorporates several of the LID BMP's that would be judged positively within the Sustainable Sites Initiative. Included are: green roofs, biologically maintained retention pond, pervious parking, preservation of existing habitat, native landscaping and bioswales.

Ongoing Florida LID Efforts

On the Federal government level, Section 303(d) of the Clean Water Act (CWA) requires states to develop a list of waters not meeting water quality standards or not supporting their designated uses. Florida State Stormwater rules, implemented by the Department of Environmental Protection (DEP) are found in Florida Statutes 373 and Florida Administrative Code 40D. These rules seek to minimize the Total Maximum Daily Load of Pollutants (TMDL) that occur in water bodies, thus maintaining water quality standards. To keep Florida's water quality high, the several water management districts in the state are responsible for permitting individual land development actions.

When land development occurs, an Environmental Resource Permit (ERP) must be obtained. In order to obtain an ERP, an applicant consults the ERP Permitting Information Manual, which contains best management practices which form the basis of review by SWFWMD. Contained within that document are criteria that presume to protect our water bodies. Lately, a more comprehensive "treatment train" combining several BMP's is considered appropriate to provide even better treatment for stormwater. While conventional stormwater design typically involves constructing a single retention or detention pond to meet volume storage and pollutant control requirements for each basin, treatment train design involves constructing multiple practices in series, where each practice provides incremental benefits.

The "treatment train" approach introduces many LID BMP practices into use across the state. Both the University of Florida and the University of Central Florida are assisting government agencies in analyzing and validating LID practices for Florida communities, including Sarasota County.

Sarasota County and the US 17 Corridor Study Area portion of Charlotte County are both under the jurisdiction of SWFWMD. In Sarasota County, a Preliminary Low Impact Development Manual was prepared by several consultants and a working team that included representatives from several Sarasota government agencies, the Charlotte Harbor National Estuary Program, Pinellas County and others. This manual provides technical guidance and design specifications on LID and is a supplement to other documents already in place. It is intended for use by site designers, including professionals such as stormwater design engineers, stormwater utility staff, natural resource managers, planning officials and administrators, building officials, architects, and landscape operations and maintenance professionals. This is an educational document to encourage new approaches to site design that will be more effective and more sustainable. The Sarasota LID manual notes that LID site planning extends well beyond structural stormwater controls to include guidance on the fundamental design of a development; methods for protecting water quality and minimizing runoff generation at the source; practices that use physical, biological, and geochemical processes for stormwater treatment; and innovative stormwater reuse options.

Most if not all LID practices provide multiple stormwater, environmental, and aesthetic benefits, but it is useful to consider the entire suite of practices that might be applied in terms of their relationship to the five fundamental LID principles discussed within the manual:

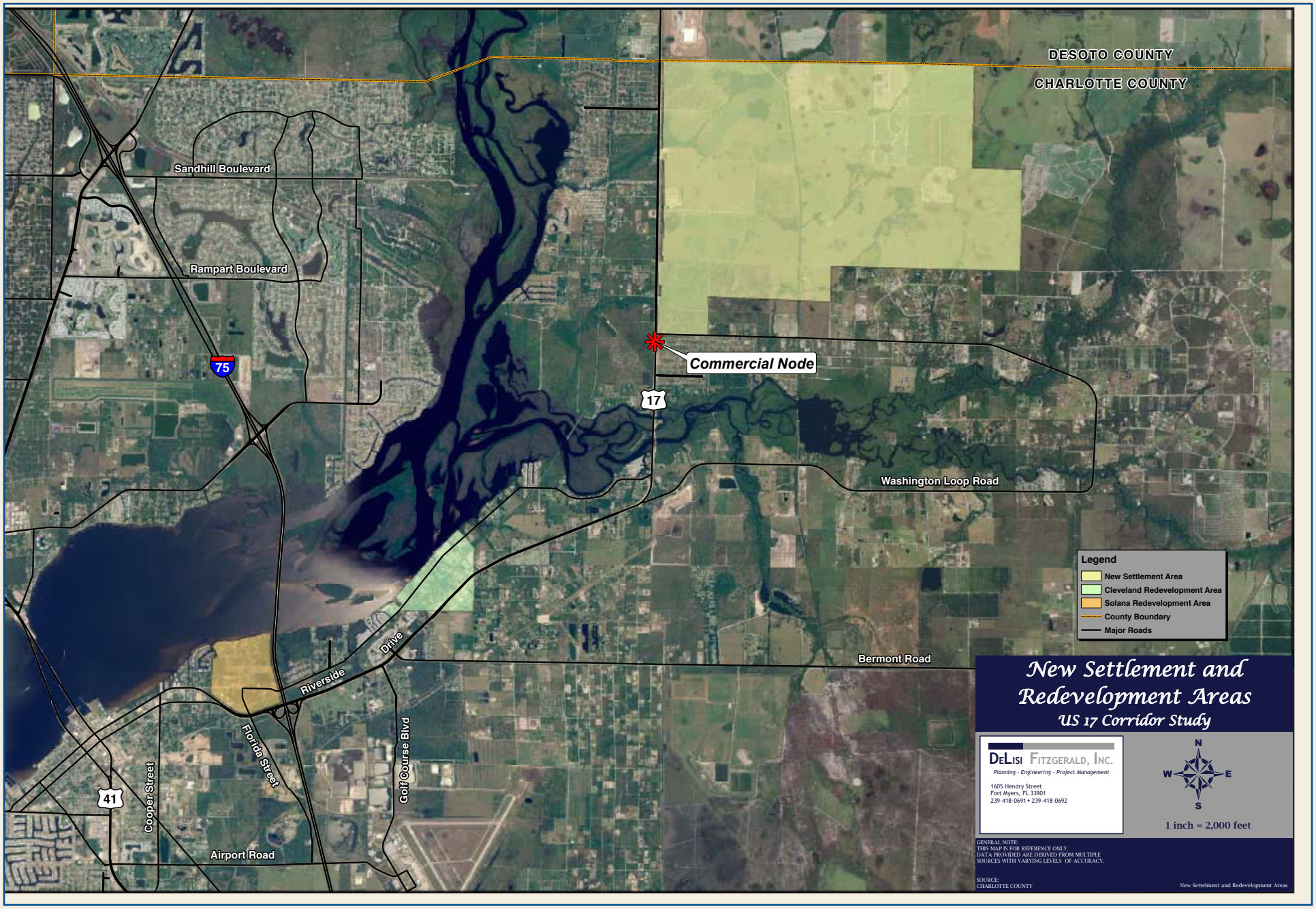
- Preserve existing site assets.
- Minimize and control runoff generation at the source.
- Promote infiltration.
- Promote stormwater reuse.
- Minimize site disturbance.

The new Florida State Stormwater Rules were initially expected to be in place in 2009, but now are expected to be in place as of 2010. No draft of the new Florida State Stormwater Rules is currently available, but through interviews, the Florida Department of Environmental Protection has reported that the proposed new state stormwater rule will:

- Change the way stormwater is managed.
- Offer incentives for LID features.
- Will replace individual rules in force in the state's five water-management districts.
- Will require that post-development runoff measures be equal or less than pre-development for peak discharge rate, volume, recharge and pollutant loading.

In the new state stormwater rule, credit will be given for using non-structural BMPs such as preserving vegetation and minimizing soil compaction, and incorporating green development practices, such as green roofs, pervious paving, and Florida-friendly landscaping. Credit will be taken away for clear-cutting and connecting impervious areas.

Proposed Redevelopment and Development Areas Map



Appendix A-Resources

Vernon Peeples; Punta Gorda and the Charlotte Harbor Area: A Pictoral History; The Donning Company; 1986

Lindsey Williams and U.S. Cleveland; Our Fascinating Past, Charlotte Harbor: The Later Years; Charlotte Harbor Area Historical Society; 1996

Southeastern Archeological Research, Inc.; Survey of Historic Resources, Charlotte County, FL; May 2008

David Plummer and Associates; US 17 Bi-pass Study; Charlotte County Metropolitan Planning Organization; June 1996

The Trust for Public Land; The Economic Benefits of Land Conservation; 2007

Haughey, Richard M.; Higher-Density Development: Myth and Fact; Washington, D.C.: ULI-the Urban Land Institute, 2005

Appendix B – US 17 CORRIDOR PLANNING STUDY TRAFFIC ASSESSMENT

Summary

This traffic study is based on the following land use assumptions for the study area, made to reflect the "maximum development potential".

- 100% of the proposed Residential units are assumed as Single-family units.
- 100% of the proposed Commercial uses are assumed to be Retail uses.
- 100% buildout of the proposed uses by the horizon year 2030.

The resultant land use assumptions are summarized below.

Land Use Assumptions – Maximum Development Potential

Land Use	Size
Residential (Single-family)	6,000 d.u.
Commercial (Retail)	500,000 sq.ft.
Industrial	1,000,000 sq.ft.
Civic uses	150,000 sq.ft.

In reality, the above assumptions are never likely to be realized. As presented in the March 2009 report, it is likely that a portion of the Residential units (approximately 40%) are likely to be developed as Multifamily units and a portion (approximately 50%) of the commercial uses are likely to be developed as Office.
For purposes of this traffic assessment, however, the "maximum development potential" scenario was used.
The FDOT District 1 travel model was used to run comparative travel model assignments, both with and without the proposed CPA, under the adopted Charlotte County 2030 Financially-Feasible Plan. Conclusions from the traffic assessment are summarized below.

- All road segments in the study area are expected to operate at or better than the adopted LOS standard in 2030 without the proposed CPA (Exhibit 5).
- All road segments in the study area continue to operate at or better than the adopted LOS standard in 2030 with the proposed CPA (Exhibit 6).
- Based on this traffic assessment and a review of the comments received from various stakeholders and at public meetings, a number of transportation recommendations are made for the US 17 Corridor (Exhibit 7).
- The proposed CPA would generate approximately $32.3 million in roads impact fees.

In addition to the roads impact fees, other transportation revenues will be produced by these properties as they develop. These additional revenues would include those from ad valorem taxes, motor fuel taxes, user fees, sales taxes, and the like.

INTRODUCTION

In 2005, US 17 (Duncan Road) in Charlotte County was expanded from two to four lanes. The expansion, as well as the establishment of the Wal-Mart Distribution Center across the Charlotte County line in DeSoto County, is contributing to increased pressure to change the semi-rural character of the area to more urban uses. As a result, Charlotte County has determined that a Corridor Planning Study is necessary.

The core study area for the US 17 Corridor Planning Study is the approximately 8-mile corridor extending from Charlotte County's boundary with the City of Punta Gorda to the Charlotte / DeSoto County line. The study area encompasses essentially one mile on either side of US 17, coincident with property lines on the east of US 17, which is outside the Urban Service Area, and with the natural water body edges on the west of US 17.

This Traffic Assessment represents the transportation analysis of the US 17 corridor study. Currently scheduled and planned road and intersection improvements have been identified. Existing traffic conditions have been evaluated.

In addition, traffic conditions in the US 17 corridor are projected through 2030, which is the horizon year for the 2030 Long Range Transportation Plan (LRTP) prepared by the Charlotte County – Punta Gorda Metropolitan Planning Organization (MPO). The road improvements needed to accommodate general growth in the area through 2030, have been identified, and a list of transportation recommendations is provided.

Public Out-Reach and Coordination with Charlotte County Staff

This Traffic Assessment has benefited from the extensive public out-reach program for this corridor study. This included meetings with several stakeholders in the corridor and two early public meetings held on Thursday, September 4, 2008, and Saturday, September 13, 2008, to solicit input on the vision for the US 17 Corridor Planning Study, and two additional meetings in the summer of 2009.

In addition, DPA met with the Charlotte County staff on October 28, 2008, to discuss the transportation methodology prior to initiating the Traffic Assessment. Those in attendance included the following: Mr. Jeff Ruggieri and Mr. Jim Fendrick of the Charlotte County Growth Management Department; Mr. Wes Millard and Mr. Gary Grossman of Charlotte County Public Works; Mr. Dan DeLisi of DeLisi-Fitzgerald; and, Mr. Ronald Talone and Mr. Walter Bertschinger of DPA.

Prior to the meeting, DPA distributed a draft Transportation Methodology Outline. The methodology was revised based on comments received during the meeting. The revised Transportation Methodology Outline is provided at the end of this Traffic Assessment.

Existing Roadway Network

The existing road network in the study area is shown in Exhibit 1.

US 17 is a Principal Arterial connecting US 41 and I-75 in Punta Gorda with several State roads and towns to the north, including Arcadia, Zolfo Springs, Wauchula, Fort Meade, Bartow, Haines City and Kissimmee. US 17 from I-75 to SR 60 is designated as part of the State's Strategic Intermodal System (SIS), due to its importance for regional travel and for freight and goods movement.

The widening of US 17 to four lanes from south of Washington Loop Road (CR 764) to the Charlotte / Desoto County line was completed in April 2005. The four lanes were constructed within a cross section and right-of-way for an eventual six lanes. The fifth and sixth lanes will be added in the median when found to be necessary.

CR 74 (Bermont Road) is a two-lane, east-west road connecting US 17 with SR 31 and SR 29 to the east.

Riverside Drive is a local collector road, which runs parallel to and west of US 17 from Punta Gorda to US 17 just south of Shell Creek.

Washington Loop Road (CR 764) provides local traffic circulation for residential areas east of US 17, both north and south of Shell Creek.

Scheduled Road Improvements

DPA reviewed the Charlotte County Capital Improvement Program (CIP), the FDOT Adopted Work Program, and the MPO Transportation Improvement Program (TIP) to identify road and intersection improvements scheduled for construction in the next five years.

- As shown in Exhibit 2, there are three scheduled road improvements that will benefit residents of the study area in the near future.

- The FDOT Work Program includes the re-surfacing of US 17 from I-75 to north of CR 74 (Bermont Road) in FY 2010/11 at a cost of approximately $2.7 million.

- The FDOT Work Program includes the widening of US 17 to four lanes from the Charlotte / Desoto County line to SW Collins Street, including $24.8 million for ROW in FY 09 and FY 10 and $49.3 million for Construction in FY 11.

Charlotte County has scheduled Phase 1 of the Piper Road project, which is the widening/re-alignment of Piper Road as a four-lane facility between Jones Loop Road and Henry Street, in 2010. Phase 2, which is not yet funded and programmed, will extend Piper Road north to US 17.

Planned Road Improvements

The Charlotte County-Punta Gorda MPO's 2030 Long Range Transportation Plan was adopted by the MPO Board on December 12, 2005. The 2030 LRTP includes the 2030 Needs Plan, which identifies improvements that are needed by 2030, and the 2030 Cost-Feasible Plan, which identifies those needed improvements that are considered affordable (given revenues projections) through 2030. Both the 2030 Needs Plan and the 2030 Cost-Feasible Plan are included in this Traffic Assessment.

As shown in Exhibit 3, the 2030 Cost-Feasible Plan includes two key road improvements in the study area.

- Widening of US 17 to six lanes from Piper Road to CR 74 (Bermont Road) at a cost of approximately $863,850.

- Widening/Re-Alignment/Extension of four-lane Piper Road from North Loop Road to US 17 at a cost of approximately $20.2 million.

Existing, Approved and Proposed Developments in the Study Area

Existing communities in the study area include Cleveland near the intersection of US 17 and CR 74 (Bermont Road), Bayshore Park, Pelican Harbor, Palm Shores and Peace River Shores on the west side of US 17, Ridge Harbor, Three Rivers and Prairie Creek are located on the east side of US 17 along Washington Loop Road, and Charlotte Highlands near CR 74 (Bermont Road).

There are no Developments of Regional Impact (DRIs) or other large-scale developments in the US 17 study area. However, Babcock Ranch is located east of the study area on the south side of Bermont Road.

To be conservative, the MPO 2030 zonal data projections for southeast Charlotte County were updated to include TAZ 4200 for the initial Babcock development. However, pending traffic mitigation for the Babcock development has not been considered in this Traffic Assessment.

A Comprehensive Plan Amendment (CPA) that would primarily affect the area east of US 17 between Washington Loop Road (North) and the Charlotte / Desoto County line was studied. In general, the CPA would change the land use from one unit per acre to mixed use. For purposes of this Traffic Assessment, it was assumed that the CPA would allow up to 6,000 residential units, 500,000 sq. ft. of commercial space, 1,000,000 sq.ft. of industrial space and 150,000 sq. ft. of civic uses.

For purposes of this traffic assessment, "maximum development potential" scenario was used. The following assumptions were made to reflect the "maximum development potential".

- 100% of the proposed Residential units are assumed as Single-family units.

- 100% of the proposed Commercial uses are assumed to be Retail uses.

- 100% buildout of the proposed uses by the horizon year 2030.

The resultant land use assumptions are summarized below.

Land Use Assumptions – Maximum Development Potential

Land Use	Size
Residential (Single-family)	6,000 d.u.
Commercial (Retail)	500,000 sq.ft.
Industrial	1,000,000 sq.ft.
Civic uses	150,000 sq.ft.

In reality, the above assumptions are never likely to be realized. As presented in the March 2009 report, it likely that a portion of the Residential units (approximately 40%) are likely to be developed as Multifamily units and a portion (approximately 50%) of the commercial uses are likely to be developed as Office.

Level of Service Standards

Roadway level of service (LOS) standards are adopted in the Charlotte County Comprehensive Plan. The LOS standard on roads in Charlotte County is LOS "D".

However, for State roads on the Florida Intrastate Highway System (FIHS) and Strategic Intermodal System (SIS), State level of service standards apply.

The State LOS standards are as follows:

- Two-lane highway in Rural Areas LOS "C"
- Multilane highway in Rural Areas LOS "B"
- Controlled access highway in Transitioning Urbanized Areas LOS "C"
- Controlled access highway in Urbanized Areas under 500,000 LOS "C"

As noted above, US 17 from I-75 to SR 60 is on the State's Strategic Intermodal System (SIS). Therefore, State LOS standards apply on US 17 east of I-75.

As shown on Map B-4 of the FDOT District 1 Federal Functional Classification Study, the North Port / Punta Gorda Urbanized Area extends along the US 17 corridor north to the south leg of the Washington Loop Road. Therefore, the current LOS standard on US 17 is LOS "C" from Punta Gorda to Washington Loop Road (South) and LOS "B" from Washington Loop Road (South) to the Charlotte / Desoto County line.

However, Map No. 2 in Charlotte County's Future Land Use Map Series identifies the area west of US 17 from Washington Loop Road (South) to the Charlotte / Desoto County line as a Suburban Area. This indicates that this area west of US 17 is transitioning into a suburban area. For these reasons, DPA used LOS "C" as the standard on US 17 from Washington Loop Road (South) to the Charlotte / Desoto County line for the analysis of future 2030 traffic conditions.

Existing Traffic Conditions

DPA relied on a concurrency spreadsheet obtained from the Charlotte County Community Development Department to determine existing conditions on roads in the US 17 study area. The spreadsheet is updated on a monthly basis, so that it incorporates the latest traffic counts conducted by the County.

The roadway service volumes reported in the Charlotte County concurrency spreadsheet, which were derived from FDOT generalized service volumes, were used for this analysis.

The results of the existing conditions analysis are shown in Exhibit 4, which provides existing volumes and levels of service on roads in the study area. As shown in Exhibit 4, all roads in the study area currently operate at or better than the adopted LOS standards.

Future Traffic Conditions

DPA originally intended to use the 3-County Sarasota-Manatee-Charlotte County model for this Traffic Assessment. However, DPA concluded that this wasn't the best model available for evaluating future traffic conditions in the US 17 corridor.

The US 17 corridor is situated at the edge of the area covered by the SMC model, because the model does not extend into Desoto County. Because of this, residential trip productions in the US 17 study area cannot match up with attractions to the north. This results in an overestimation of trips on US 17 to the south.

Similarly, the Babcock development is located at the edge of the area covered by the SMC model, because the model does not extend into Lee County. Because of this, residential trip productions in the Babcock development cannot match up with attractions to the south. This results in an overestimation of trips on SR 31 to the north and CR 74 (Bermont Road) to the west.

DPA therefore concluded that better results would be achieved using FDOT's 12-County District model, which extends into both Desoto and Lee Counties. FDOT developed the 12-County District 1 model by joining the SMC model with other models in District 1, calibrating and validating the District model, and then presenting it to the various MPOs in the District for review and comment prior to authorizing its use.

DPA used the FDOT District 1 model to produce comparative 2030 travel model assignments, both with and without the proposed CPA. The potential traffic impacts of the proposed CPA can be determined by comparing the two travel model assignments.

Future 2030 Traffic Conditions Without the CPA

Exhibit 5 provides Future Traffic Conditions without the proposed CPA. This 2030 travel model assignment reflects future traffic conditions under the 2030 Cost-Feasible Plan in Charlotte County and the 2030 financially-feasible plans in other Counties in District 1.

The only modification in the MPO zonal data made by DPA was the addition of new TAZ 4200 for the initial Babcock development, which is still under review. No other changes were made in the FDOT District 1 travel model zonal data.

The roadway service volumes reported in the Charlotte County concurrency spreadsheet, which were derived from FDOT generalized service volumes, were used for this analysis. The service volumes for US 17 between the Piper Road Extension and CR 74 (Bermont Road), however, were updated to reflect the planned six-laning of this section of US 17, in accordance with the MPO 2030 Cost-Feasible Plan.

As shown in Exhibit 5, all road segments in the study area are expected to operate at or better than the adopted LOS standard in 2030 without the proposed CPA.

Future 2030 Traffic Conditions With the CPA

Exhibit 6 provides Future Traffic Conditions With the proposed CPA. This 2030 travel model assignment reflects future traffic conditions under the 2030 Cost-Feasible Plan in Charlotte County and the 2030 financially-feasible plans in other Counties in District 1.

As for Future Conditions Without the CPA, DPA added new TAZ 4200 in southeast Charlotte County for the initial Babcock development. Except as described below, no other changes were made in the FDOT District 1 travel model.

As explained above under Existing, Approved and Proposed Developments in the Study Area, the proposed CPA would change the land use in the area east of US 17 between Washington Loop Road (North) and the Charlotte / Desoto County line from one unit per acre to mixed use. For purposes of this Traffic Assessment, it was assumed that the CPA will allow up to 6,000 residential units (single-family), 500,000 sq. ft. of commercial space (retail), 1,000,000 sq.ft. of industrial space, and 150,000 sq. ft. of civic uses. This represents the CPA's maximum development potential.

Some of the commercial and civic uses were assumed to be located along US 17, and some were assumed to be located internally within the residential communities east of US 17. To reflect this, the development parameters were input into four Traffic Analysis Zones:

- TAZ 4196 for commercial development just east of US 17
- TAZ 4197 for residential development just east of US 17
- TAZ 4198 for commercial development further east of US 17
- TAZ 4199 for residential development further east of US 17

For modeling purposes, these four new TAZs were connected to US 17 via an east-west collector road and to Washington Loop Road (North) via a north-south collector road. These new roads represent a generalization of the actual future road network, which may include other local roads and/or driveways.

To be conservative, the residential units and employment in background TAZ 5 were not reduced below the MPO 2030 projections, even though the land area affected by the CPA is included in TAZ 5.

As shown in Exhibit 6, all road segments in the study area are expected to operate at or better than the adopted LOS standard in 2030 with the proposed CPA. As noted above, the MPO 2030 Cost-Feasible Plan includes the widening of US 17 to six lanes from the Piper Road Extension to CR 74 (Bermont Road). The four-lane section of US 17 from CR 74 (Bermont Road) to the Charlotte / Desoto County line will accommodate the traffic generated by all area development, including the proposed CPA, at the future LOS "C" standard.

Transportation Recommendations for the US 17 Corridor

Based on this traffic assessment and a review of the comments received from various stakeholders and at public meetings, DPA has the following recommendations. Exhibit 7 highlights some of these recommendations.

- **US 17 Cross Section/Right-of-Way.** DPA's traffic projections using the FDOT 1 District model indicate that the four-lane section of US 17 north of CR 74 (Bermont Road) will accommodate future traffic volumes through 2030. Yet, it's important to note that the widening of this section of US 17 to four lanes was done within a right-of-way and cross section for an eventual six lanes. Therefore, whenever it becomes necessary to widen the road to six lanes, the fifth and sixth lanes can be added at relatively low cost within the median.

- **US 17 Corridor Access Management Plan (CAMP).** A high level of access control, consistent with FDOT's US 17 Corridor Access Management Plan (CAMP), must be maintained along US 17. The Department's access standards can be met through consolidated or shared access, where possible, and through the construction of parallel access roads, where necessary.

- **Seminole Gulf Railway Line.** The FDOT 2007 Strategic Intermodal System (SIS) Data and Designation Update identifies the Seminole Gulf Railway Line from North Naples to Arcadia as an Emerging SIS Freight Rail Corridor. Charlotte County and the State should continue to explore opportunities for shared use of this right-of-way for rail, transit and/or bicycle/pedestrian facilities.

- **Realignment of Washington Loop Road (South) at US 17.** Washington Loop Road (South) intersects US 17 on a curve at a very sharp angle. Alternatives should be examined for realigning the Loop Road so that it intersects US 17 north of the curve at a 90 degree angle. Consideration should be given to having the Loop Road intersect US 17 opposite Riverside Drive, as shown in Exhibit 7. The carrying capacity of US 17 would be enhanced by the consolidation of these two intersections. This realignment could be constructed when (and if) the properties on the east side of US 17 redevelop. Alternatively, design, right-of-way acquisition and construction of the realignment could be funded through the additional road impact fees generated by new development.

- Right-of-Way Reservations for Future Road Connections. New development on the east side of US 17 north of Washington Loop Road should be connected to Washington Loop Road (North), as well as US 17. This interconnection will allow residents along Washington Loop Road to access new commercial development east of US 17 without having to drive on US 17. Other similar interconnections are recommended to reduce reliance on US 17 for local travel, in particular, interconnections between Washington Loop Road (South) and CR 74 (Bermont Road). Charlotte County should use whatever legal means are available to reserve right-of-way for these interconnections, which are illustrated on Exhibit 7, and to require their construction when adjacent lands develop.

Transportation Revenues Generated by the Proposed CPA

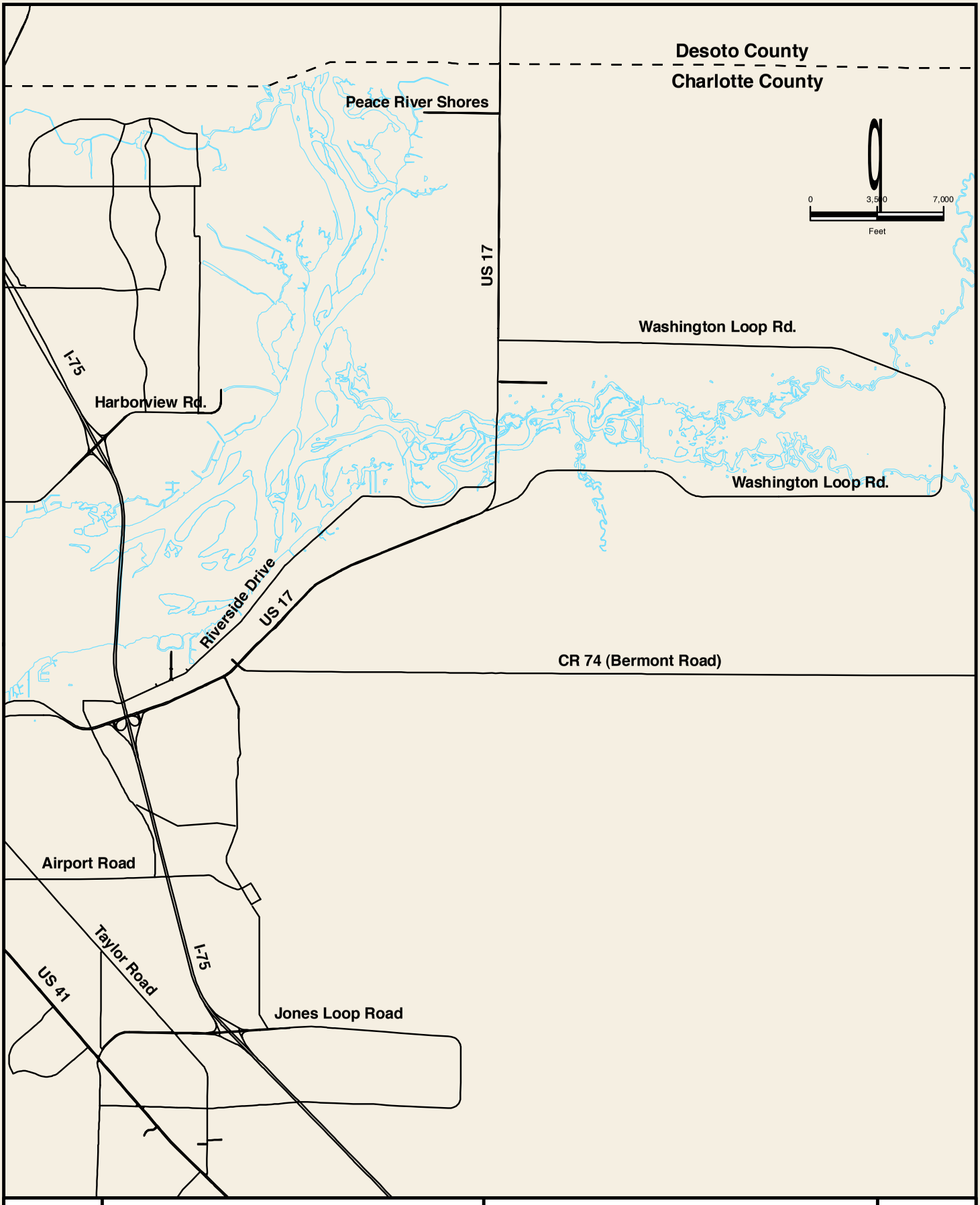
Based on the current Charlotte County road impact fees schedule, the additional development associated with the proposed CPA would generate approximately $32.3 million in road impact fees. These estimates are provided in Exhibit 8.

This estimate is based on the maximum development potential of the affected properties: up to 6,000 single-family residential units, 500,000 sq. ft. of retail commercial space, 1,000,000 sq.ft. of general industrial space, and 150,000 sq. ft. of civic uses. The actual development parameters will be determined over time as the area develops.

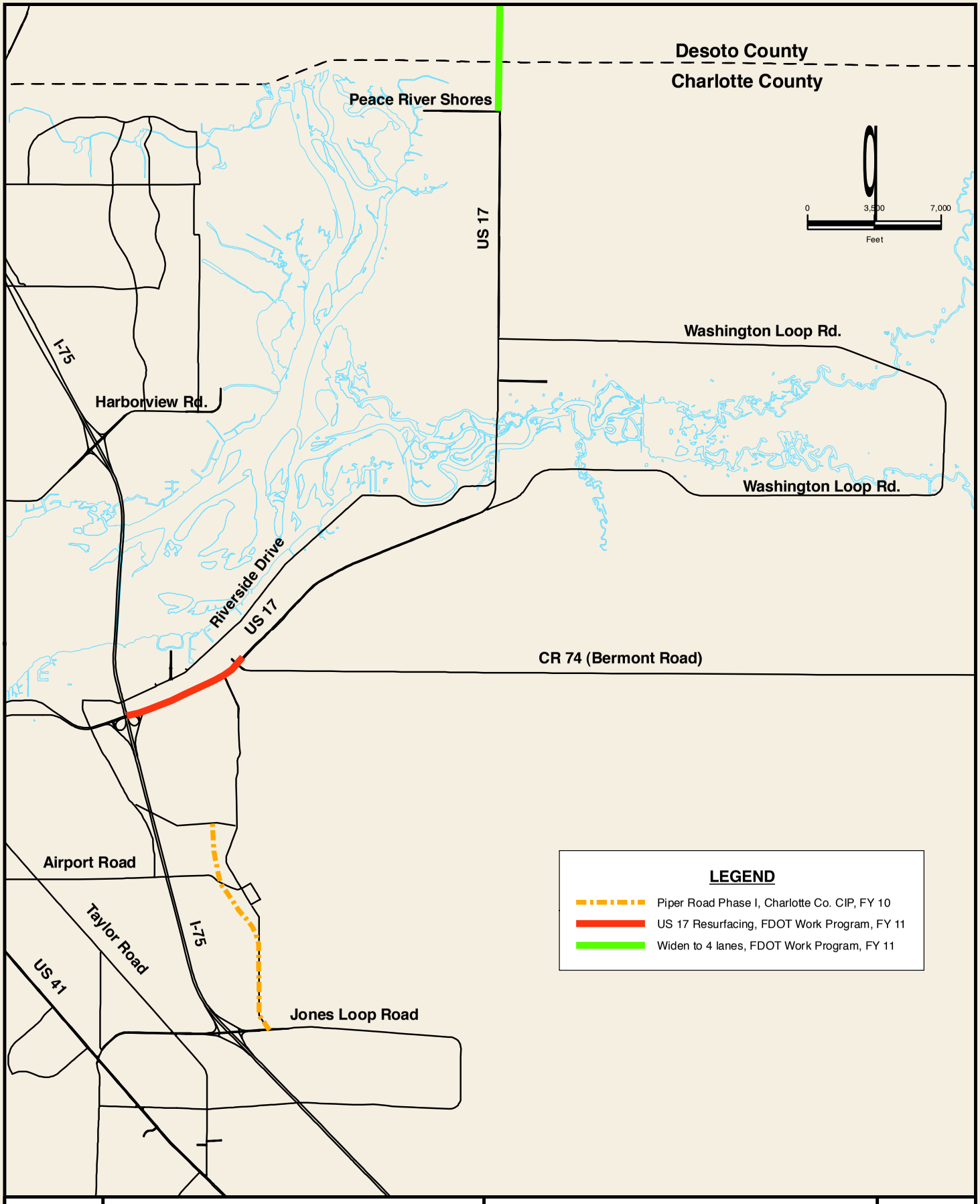
For purposes of these road impact fee projections, it was assumed that an average single-family unit will be approximately 1,500 sq. ft. Obviously, these dimensions may vary depending upon the type of housing actually constructed.

As explained above, the four-lane section of US 17 from CR 74 (Bermont Road) to the Charlotte / Desoto County line will accommodate the traffic generated by all area development, including the proposed CPA, at the future LOS "C" standard. Funds will not be needed to widen this section of US 17 beyond four lanes through 2030. Therefore, the projected $32.3 million in road impact fees generated by new development will be available to make other necessary improvements in this road impact fee district. As noted above, some portion of the fees could be used to fund the re-alignment of the Washington Loop Road (South) intersection with US 17.

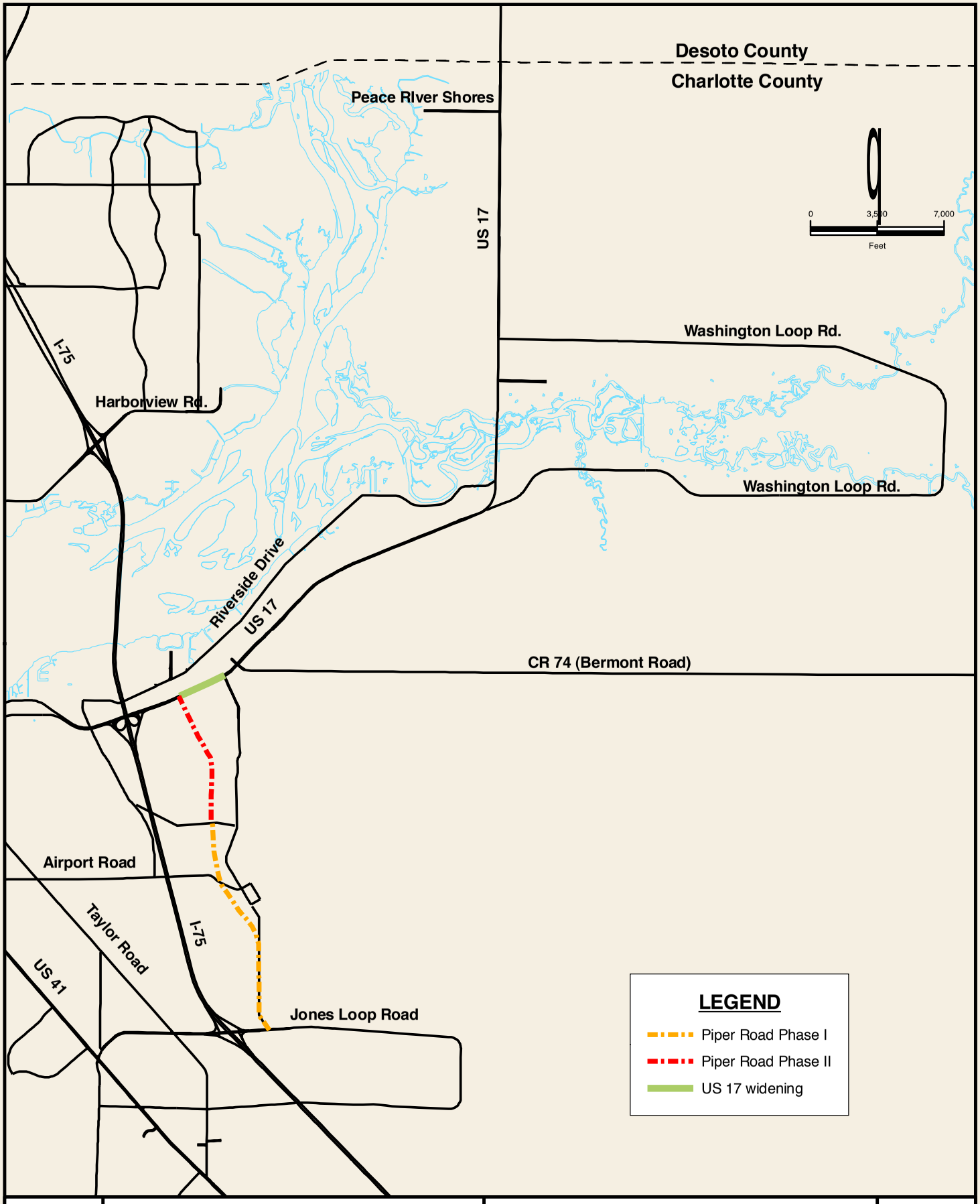
In addition to road impact fees, other future transportation revenues will be produced by these properties as they develop. These additional revenues would include those from ad valorem taxes, motor fuel taxes, user fees, sales taxes, and the like.



dpa	US 17 CORRIDOR PLANNING STUDY TRAFFIC ASSESSMENT	EXISTING ROAD NETWORK	08589/03A/0309 1



dpa	US 17 CORRIDOR PLANNING STUDY TRAFFIC ASSESSMENT	SCHEDULED ROAD IMPROVEMENTS	08589/04A/0309 2



dpa	US 17 CORRIDOR PLANNING STUDY TRAFFIC ASSESSMENT	2030 COST FEASIBLE PLAN	08589/05A/0309 3

EXHIBIT 4
US 17 CORRIDOR PLANNING STUDY, TRAFFIC ASSESSMENT #08589
EXISTING TRAFFIC CONDITIONS
TWO-WAY, PEAK HOUR, PEAK SEASON

Roadway	From	To	(1) # of Lanes	(2) LOS Std	(3) AADT	(3) K Factor	(3) Peak Hr Volume	(3) Service Volumes LOS B	LOS C	LOS D	LOS E	Service Volume @ LOS STD	LOS
CR 74	US 17	SR 31	2LN	D	5,403	0.0920	497	500	1,070	1,460	1,550	1,460	B
	SR 31	Glades County Line	2LN	D	5,403	0.0920	497	500	1,070	1,460	1,550	1,460	B
RIVERSIDE DRIVE	I-75	Cleveland Avenue	2LN	D	558	0.0920	52	500	1,070	1,460	1,550	1,460	B
	Cleveland Avenue	US 17	2LN	D	558	0.0920	52	500	1,070	1,460	1,550	1,460	B
US 17	Marlympia Way	I - 75	6LD	C	17,521	0.0930	1,629	4,240	4,950	5,080	5,080	4,950	B
	I - 75	Regent Road	6LD	C	20,374	0.0930	1,895	4,240	4,950	5,080	5,080	4,950	B
	Regent Road	CR 74	4LD	C	15,321	0.0930	1,425	2,780	3,300	3,390	3,390	3,300	B
	CR 74	Washington Loop Road S.	4LD	C	15,312	0.0930	1,424	2,780	3,300	3,390	3,390	3,300	B
	Washington Loop Road S.	Riverside Drive	4LD	B	10,989	0.0930	1,022	2,780	3,300	3,390	3,390	2,780	B
	Riverside Drive	Washington Loop Road N.	4LD	B	10,989	0.0930	1,022	2,780	3,300	3,390	3,390	2,780	B
	Washington Loop Road N.	Peach River Shores Boulevard	4LD	B	10,989	0.0930	1,022	2,780	3,300	3,390	3,390	2,780	B
	Peach River Shores Boulevard	Desoto County Line	4LD	B	7,649	0.0930	711	2,780	3,300	3,390	3,390	2,780	B
WASHINGTON LOOP ROAD N.	US 17	Mangrove Road	2LN	D	1,317	0.0930	122	500	1,070	1,460	1,550	1,460	B
WASHINGTON LOOP ROAD S.	US 17	Rustic Drive	2LN	D	1,637	0.0930	152	500	1,070	1,460	1,550	1,460	B

FOOTNOTES:

(1) Number of lanes.
(2) Charlotte County roadway LOS standard.
US 17 based on FDOT FIHS standards.
(3) Based on the current Charlotte County Road Concurrency Worksheet.

EXHIBIT 5
US 17 CORRIDOR PLANNING STUDY, TRAFFIC ASSESSMENT #08589
FUTURE (2030) TRAFFIC CONDITIONS WITHOUT PROPOSED CPA
DIRECTIONAL, PEAK HOUR, PEAK SEASON

Roadway	From	To	(1) # of Lanes	(3) LOS Std	(4) FSUTMS PSWDT	(5) PSWDT/ AADT Factor	AADT	(6) K Factor	Peak Hr Volume	(5) D Factor Dir1	(5) D Factor Dir2	Peak Hr Volume Dir1	Peak Hr Volume Dir2	(2) Directional Service Volumes LOS A	LOS B	LOS C	LOS D	LOS E	Service Volume @ LOS STD	Future 2030 V/C Dir1	Future 2030 V/C Dir2	Future 2030 LOS Dir1	Future 2030 LOS Dir2
CR 74	US 17	SR 31	2LN	D	6,576	0.86	5,700	0.0920	520	0.533	0.467	280	240	1	100	590	810	850	810	0.35	0.30	C	C
	SR 31	Glades County Line	2LN	D	9,306	0.86	8,000	0.0920	740	0.533	0.467	390	350	1	100	590	810	850	810	0.48	0.43	C	C
RIVERSIDE DRIVE	I-75	Cleveland Avenue	2LN	D	5,036	0.86	4,300	0.0920	400	0.533	0.467	210	190	1	100	590	810	850	810	0.26	0.23	C	C
	Cleveland Avenue	US 17	2LN	D	1,674	0.86	1,400	0.0920	130	0.533	0.467	70	60	1	100	590	810	850	810	0.09	0.07	B	B
US 17	Marlympia Way	I - 75	6LD	C	33,769	0.86	29,000	0.0930	2,700	0.533	0.467	1,440	1,260	380	2,330	2,720	2,790	2,790	2,720	0.53	0.46	B	B
	I - 75	Regent Road	6LD	C	37,337	0.86	32,100	0.0930	2990	0.533	0.467	1590	1400	380	2,330	2,720	2,790	2,790	2,720	0.58	0.51	B	B
	Regent Road	CR 74	6LD	C	36,623	0.86	31,500	0.0930	2,930	0.533	0.467	1,560	1,370	380	2,330	2,720	2,790	2,790	2,720	0.57	0.50	B	B
	CR 74	Washington Loop Road S.	4LD	C	29,552	0.86	25,400	0.0930	2,360	0.533	0.467	1,260	1,100	250	1,530	1,810	1,860	1,860	1,810	0.70	0.61	B	B
	Washington Loop Road S.	Riverside Drive	4LD	C	19,021	0.86	16,400	0.0930	1,530	0.533	0.467	810	720	250	1,530	1,810	1,860	1,860	1,810	0.45	0.40	B	B
	Riverside Drive	Washington Loop Road N.	4LD	C	19,096	0.86	16,400	0.0930	1,530	0.533	0.467	810	720	250	1,530	1,810	1,860	1,860	1,810	0.45	0.40	B	B
	Washington Loop Road N.	Peach River Shores Boulevard	4LD	C	17,897	0.86	15,400	0.0930	1,430	0.533	0.467	760	670	250	1,530	1,810	1,860	1,860	1,810	0.42	0.37	B	B
	Peach River Shores Boulevard	Desoto County Line	4LD	C	15,219	0.86	13,100	0.0930	1,220	0.533	0.467	650	570	250	1,530	1,810	1,860	1,860	1,810	0.36	0.31	B	B
WASHINGTON LOOP ROAD N.	US 17	Mangrove Road	2LN	D	551	0.86	500	0.0930	50	0.533	0.467	30	20	1	100	590	810	850	810	0.04	0.02	B	B
WASHINGTON LOOP ROAD S.	US 17	Rustic Drive	2LN	D	4,791	0.86	4,100	0.0930	380	0.533	0.467	200	180	1	100	590	810	850	810	0.25	0.22	C	C

FOOTNOTES:

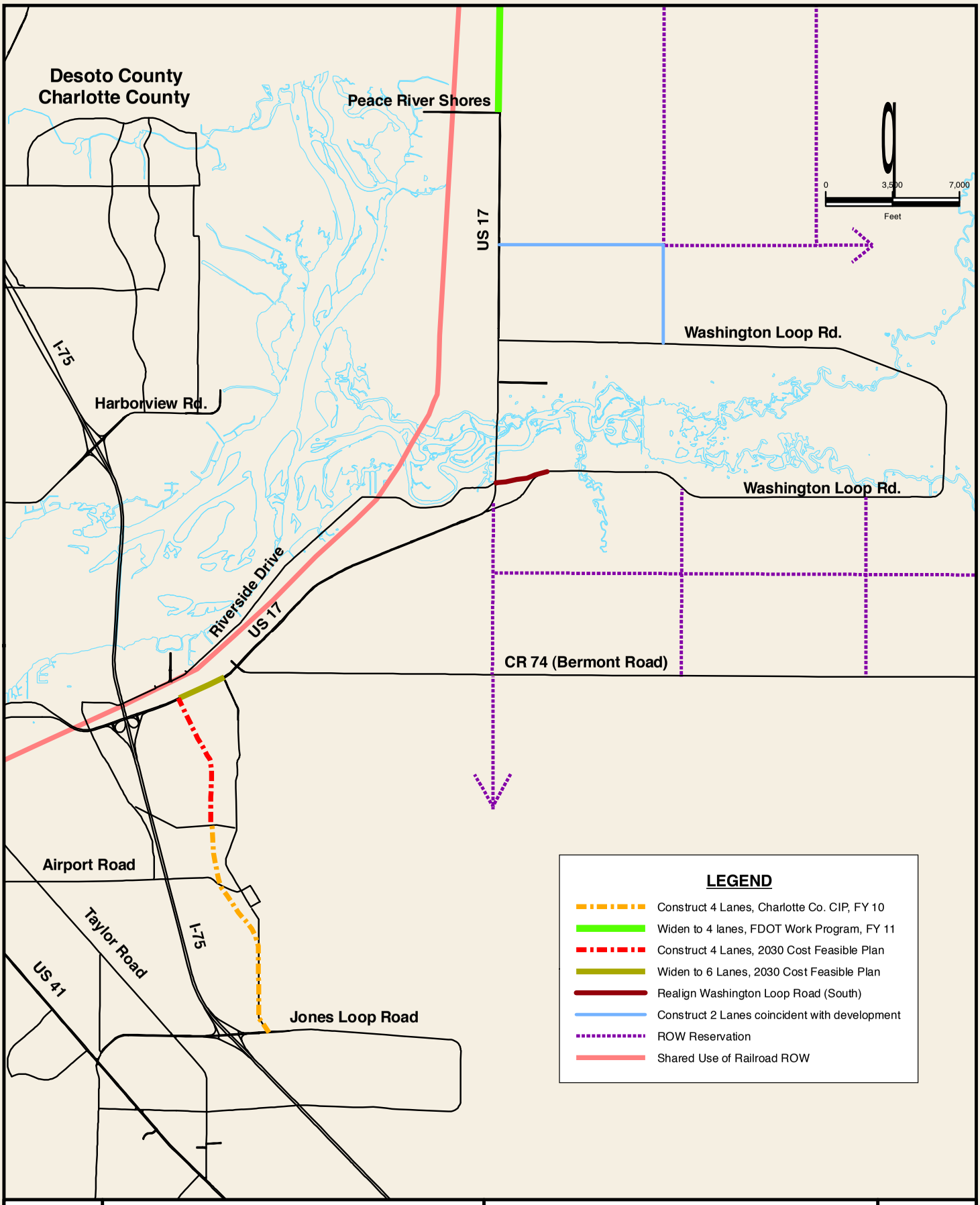
(1) Number of lanes.
(2) Florida DOT Generalized Service Volumes, May 2007.
(3) Charlotte County roadway LOS standard.
US 17 based on FDOT FIHS standards.
(4) 2030 Peak season traffic distribution and assignment based on 2030 FDOT District 1 FSUTMS travel model assignment.
(5) Based on FDOT 2007 Florida Traffic Information CD - Charlotte County.
(6) Based on the current Charlotte County Road Concurrency Worksheet.

EXHIBIT 6
US 17 CORRIDOR PLANNING STUDY, TRAFFIC ASSESSMENT #08589
FUTURE (2030) TRAFFIC CONDITIONS WITH PROPOSED CPA
DIRECTIONAL, PEAK HOUR, PEAK SEASON

Roadway	From	To	(1) # of Lanes	(3) LOS Std	(4) FSUTMS PSWDT	(5) PSWDT/ AADT Factor	AADT	(6) K Factor	Peak Hr Volume	(5) D Factor Dir1	(5) D Factor Dir2	Peak Hr Volume Dir1	Peak Hr Volume Dir2	(2) Directional Service Volumes LOS A	LOS B	LOS C	LOS D	LOS E	Service Volume @ LOS STD	Future 2030 V/C Dir1	Future 2030 V/C Dir2	Future 2030 LOS Dir1	Future 2030 LOS Dir2
CR 74 (BERMONT ROAD)	US 17	SR 31	2LN	D	8,032	0.86	6,900	0.0920	630	0.533	0.467	340	290	1	100	590	810	850	810	0.42	0.36	C	C
	SR 31	Glades County Line	2LN	D	9,198	0.86	7,900	0.0920	730	0.533	0.467	390	340	1	100	590	810	850	810	0.48	0.42	C	C
RIVERSIDE DRIVE	I-75	Cleveland Avenue	2LN	D	8,966	0.86	7,700	0.0920	710	0.533	0.467	380	330	1	100	590	810	850	810	0.47	0.41	C	C
	Cleveland Avenue	US 17	2LN	D	4,651	0.86	4,000	0.0920	370	0.533	0.467	200	170	1	100	590	810	850	810	0.25	0.21	C	C
US 17	Marlympia Way	I - 75	6LD	C	34,003	0.86	29,200	0.0930	2,720	0.533	0.467	1,450	1,270	380	2,330	2,720	2,790	2,790	2,720	0.53	0.47	B	B
	I - 75	Regent Road	6LD	C	40,504	0.86	34,800	0.0930	3240	0.533	0.467	1730	1510	380	2,330	2,720	2,790	2,790	2,720	0.64	0.56	B	B
	Regent Road	CR 74	6LD	C	41,413	0.86	35,600	0.0930	3,310	0.533	0.467	1,760	1,550	380	2,330	2,720	2,790	2,790	2,720	0.65	0.57	B	B
	CR 74	Washington Loop Road S.	4LD	C	33,498	0.86	28,800	0.0930	2,680	0.533	0.467	1,430	1,250	250	1,530	1,810	1,860	1,860	1,810	0.79	0.69	B	B
	Washington Loop Road S.	Riverside Drive	4LD	C	27,086	0.86	23,300	0.0930	2,170	0.533	0.467	1,160	1,010	250	1,530	1,810	1,860	1,860	1,810	0.64	0.56	B	B
	Riverside Drive	Washington Loop Road N.	4LD	C	30,475	0.86	26,200	0.0930	2,440	0.533	0.467	1,300	1,140	250	1,530	1,810	1,860	1,860	1,810	0.72	0.63	B	B
	Washington Loop Road N.	Peach River Shores Boulevard	4LD	C	22,007	0.86	18,900	0.0930	1,760	0.533	0.467	940	820	250	1,530	1,810	1,860	1,860	1,810	0.52	0.45	B	B
	Peach River Shores Boulevard	Desoto County Line	4LD	C	18,155	0.86	15,600	0.0930	1,450	0.533	0.467	770	680	250	1,530	1,810	1,860	1,860	1,810	0.43	0.38	B	B
WASHINGTON LOOP ROAD N.	US 17	Mangrove Road	2LN	D	12,910	0.86	11,100	0.0930	1,030	0.533	0.467	550	480	1	100	590	810	850	810	0.68	0.59	C	C
WASHINGTON LOOP ROAD S.	US 17	Rustic Drive	2LN	D	3,503	0.86	3,000	0.0930	280	0.533	0.467	150	130	1	100	590	810	850	810	0.19	0.16	C	C

FOOTNOTES:

(1) Number of lanes.
(2) Florida DOT Generalized Service Volumes, May 2007.
(3) Charlotte County roadway LOS standard.
US 17 based on FDOT FIHS standards.
(4) 2030 Peak season traffic distribution and assignment based on 2030 FDOT District 1 FSUTMS travel model assignment.
(5) Based on FDOT 2007 Florida Traffic Information CD - Charlotte County.
(6) Based on the current Charlotte County Road Concurrency Worksheet.



dpa	US 17 CORRIDOR PLANNING STUDY TRAFFIC ASSESSMENT	TRANSPORTATION RECOMMENDATIONS	08589/06A/0309 7

EXHIBIT 8

US 17 CORRIDOR PLANNING STUDY
TRAFFIC ASSESSMENT

ESTIMATED ROAD IMPACT FEES THROUGH BUILD-OUT OF CPA MAXIMUM DEVELOPMENT POTENTIAL
(Based on Charlotte County 2006 Road Impact Fee Schedule)

	Land Use Category	Size		Fee Rate	/Unit	Amount
			sq.ft./du			
Residential:	Single-Family - Detached	3,600	1,500	$2.54	/sq.ft.	$13,716,000
	Multiple Family Building	2,400	1,200	$2.54	/sq.ft.	$7,315,200
Office 1	General Office (Under 100,000FT. SQ.)	250,000	-	$6,198	/1,000 s.f.	$1,549,500
Office 2	General Office (100,000-199,000 FT. SQ.)	250,000	-	$4,417	/1,000 s.f.	$1,104,250
Civic	General Office (100,000-199,000 FT. SQ.)	150,000	-	$4,417	/1,000 s.f.	$662,550
Retail 1	Shopping Center (Under 100,000FT. SQ.)	250,000	-	$8,304	/1,000 s.f.	$2,076,000
Retail 2	Shopping Center (100,000-199,000 FT. SQ.)	250,000	-	$10,585	/1,000 s.f.	$2,646,250
						$29,069,750

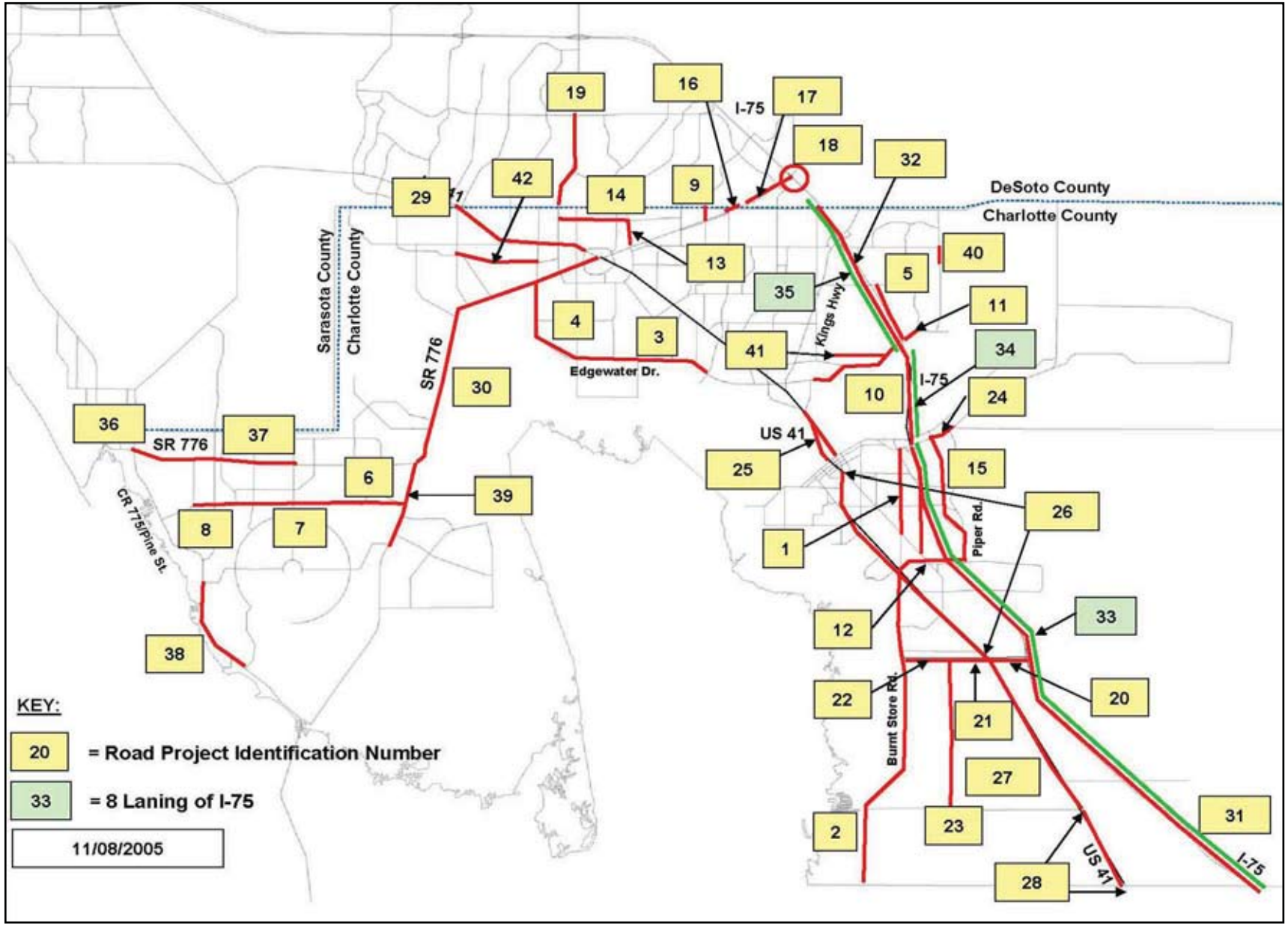
2030 Needs Plan – Highway

Project ID	Roadway	From	To	Proposed Improvement	Year 2030 ADT (approximate)	Total Project Cost **
1	CR 765/Burnt Store Road Extension	CR 765A/Taylor Road	Florida Street	New 4-lane facility	19,000	$5,290,530
2	CR 765/Burnt Store Road	Lee County Line	US 41	Expand to 4-lanes	57,000	$30,381,000
3	Edgewater Drive	Collingswood Boulevard	Harbor Boulevard	Expand to 4-lanes	40,000	$21,391,360
4	Flamingo Road	Edgewater Drive	SR776/El Jobean Road	Expand to 4-lanes	30,000	$15,154,812
5	I-75 Frontage Road/Luther Road Ext.	CR 776/Harborview Road	Rampart Boulevard	New 2-lane facility	16,000	$3,333,668
6	Gulfstream Extension	Coach Road	CR 771/Gasparilla Road	New 4-lane facility	17,000	$10,666,087
7	Gulfstream Boulevard	Forkland Avenue	Coach Road	Expand to 4-lanes	25,000	$18,252,091
8	Gulfstream Extension	San Casa Road	Forkland Avenue	New 4-lane facility	15,000	$11,610,824
9	Harbor Boulevard Extension	Veterans Boulevard	Hillsborough Boulevard	New 4-lane facility	10,000	$2,163,449
10	CR 776/Harborview Road	Melbourne Street	West of I-75	Expand to 4-lanes	35,000	$9,828,797
11	CR 776/Harborview Road	I-75	Rio de Janeiro Avenue	Expand to 4-lanes	35,000	$3,879,936
12	CR768/North Jones Loop Road	US 41	Piper Road	Expand to 6-lanes	40,000	$12,726,332
13	Liddy Street Extension	Veterans Boulevard	Wilton Avenue	Expand to 4-lanes	16,000	$3,967,371
14	North Toledo Blade Extension	CR 39/Toledo Blade Boulevard	Liddy Street	New 4-lane facility	24,000	$18,514,012
15	Piper Road	North Jones Loop Road	US 17	Expand to 4-lanes	17,000	$20,164,736
16	Raintree Boulevard Connector	Veterans Boulevard	Sarasota County Line	New 4-lane facility	41,000	$5,000,000
17	Raintree Boulevard Extension	Sarasota County Line	I-75 (Sarasota County)	Expand to 4-lanes	41,000	$10,154,812
18	Raintree Boulevard Interchange at I-75 (Sarasota Co.)		N/A	New Interchange	--	$40,000,000
19	CR 39/Toledo Blade Boulevard (Sarasota Co.)	Hillsborough Boulevard	Price Boulevard (Sarasota Co.)	Expand to 4-lanes	31,000	$14,725,944
20	Tuckers Grade	US 41	I-75	Expand to 6-lanes	31,000	$6,980,950
21	Tuckers Grade Extension	New N/S Roadway	US 41	New 6-lane facility	22,000	$11,104,683
22	Tuckers Grade Extension	CR 765/Burnt Store Road	New N/S Roadway	New 6-lane facility	22,000	$12,293,691
23	New N/S Roadway	Zemel Road	Tuckers Grade Extension	New 2-lane facility	5,000	$24,416,354
24	US 17	Piper Road	CR 74/Bermont Road	Expand to 6-lanes	36,000	$863,850
25	US 41 Bridges	US 17 SB/Marion Avenue	Melbourne Street	Expand to 6-lanes	125,000	$55,224,811
26	US 41	Tuckers Grade	US 41 Split	Expand to 6-lanes	50,000	$32,878,626
27	US 41	Zemel Road	Tuckers Grade	Expand to 6-lanes	55,000	$24,449,552
28	US 41	Lee County Line	Zemel Road	Expand to 6-lanes	50,000	$12,250,953
29	US 41	Enterprise Drive	Sarasota County Line	Expand to 6-lanes	60,000	$22,966,174
30	SR 776/El Jobean Road	CR771/Gasparilla Road	US 41	Expand to 6-lanes	90,000	$56,256,008
31	I-75 *	Lee County Line	US 17	4-lanes to 6-lanes	90,000	$236,374,000
32	I-75 *	CR 776/Harborview Road	Sarasota County Line	4-lanes to 6-lanes	124,000	$71,997,000
33	I-75	Lee County Line	US 17	6-lanes to 8-lanes	108,000	$148,364,160
34	I-75 (Peace River Bridges)	US 17	CR 776/Harborview Road	Expand to 8-lanes	132,000	$41,299,920
35	I-75	CR 776/Harborview Road	Sarasota County Line	6-lanes to 8-lanes	134,000	$40,019,280
36	SR 776/South McCall Road	CR 775/Placida Road	San Casa Road	Expand to 6-lanes	45,000	$8,167,302
37	SR 776/South McCall Road	San Casa Road	Sunnybrook Boulevard	Expand to 6-lanes	43,000	$13,350,398
38	CR 775/Placida Road	Cape Haze Drive	Rotonda Boulevard West	Expand to 4-lanes	16,000	$15,137,213
39	CR 771/Gasparilla Road	Rotonda Boulevard East	SR 776/South McCall Road	Expand to 4-lanes	23,000	$12,295,571
40	Sulstone Road Extension	Sulstone Road	Sandhill Boulevard	New 2-lane facility	5,000	$2,891,024
41	Westchester Boulevard Extension	Westchester Boulevard	Harborview Road	New 2-lane facility	11,000	$4,754,128
42	Biscayne Drive Extension	Cornelius Boulevard	Flamingo Boulevard	New 4-lane facility	11,000	$15,034,301
Total Cost						**$1,126,575,710**

* Costs from SIS Cost Feasible Plan
** Costs are stated in present value dollars (includes Design, R/W, CEI, and Construction)
All costs are stated in present day dollars (2006)

42 Projects at Costs of over $1.1 Billion

2030 Needs Plan – Highway



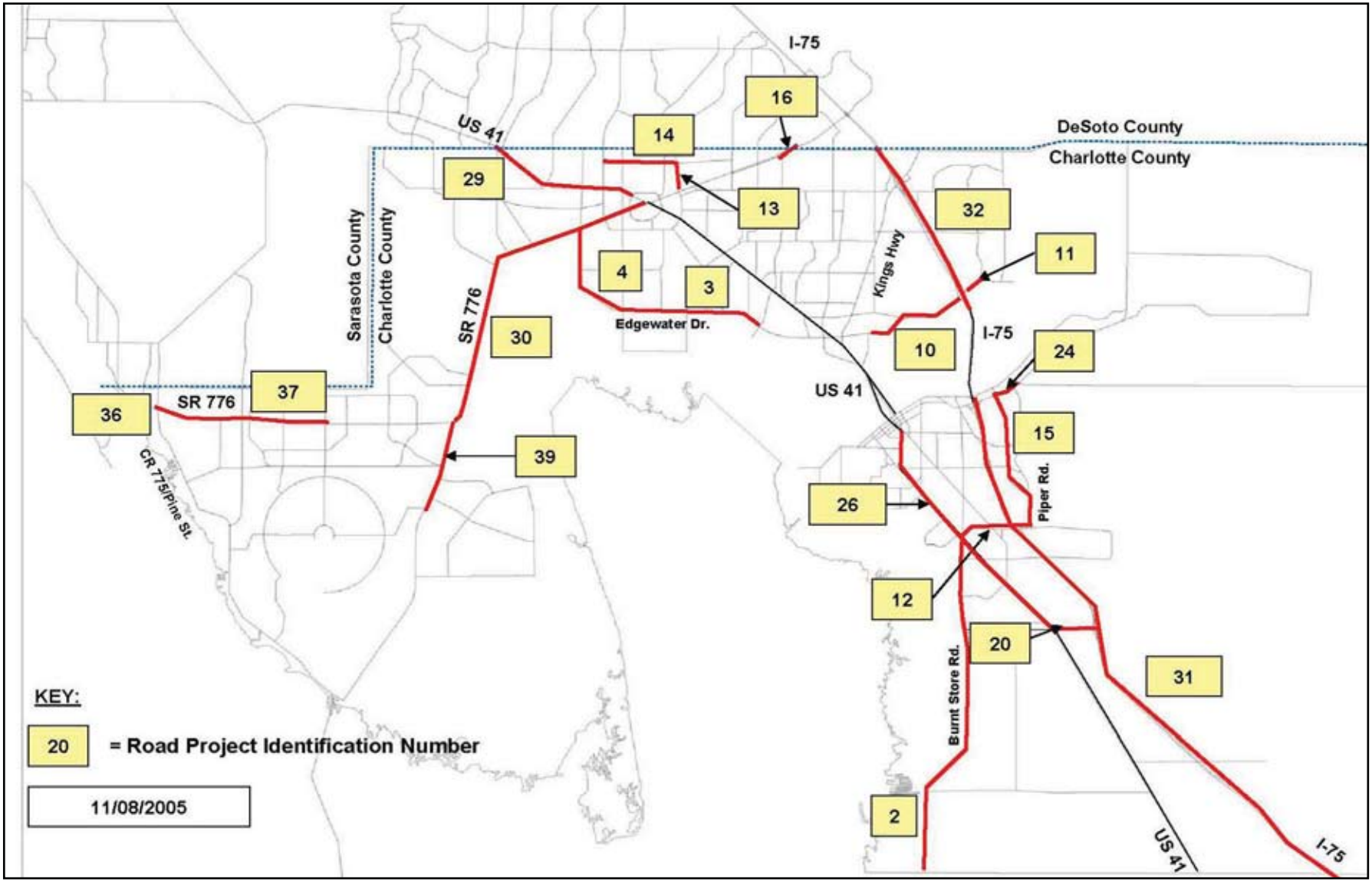
2030 Cost Feasible Plan – Highway Projects

Project ID	Roadway	From	To	Proposed Improvement	Year 2030 ADT (approximate)	SIS Project Cost *	Other State & County Project Cost **	Total Cost
2	CR 765/Burnt Store Road	Lee County Line	US 41	Expand to 4-lanes	57,000	$0	$30,381,000	$30,381,000
3	Edgewater Drive	Collingswood Boulevard	Harbor Boulevard	Expand to 4-lanes	40,000	$0	$21,391,360	$21,391,360
4	Flamingo Road	Edgewater Drive	SR776/El Jobean Road	Expand to 4-lanes	30,000	$0	$15,154,812	$15,154,812
10	CR 776/Harborview Road	Melbourne Street	West of I-75	Expand to 4-lanes	35,000	$0	$9,828,797	$9,828,797
11	CR 776/Harborview Road	I-75	Rio de Janeiro Avenue	Expand to 4-lanes	35,000	$0	$3,879,936	$3,879,936
12	CR768/North Jones Loop Road	US 41	Piper Road	Expand to 6-lanes	40,000	$0	$12,726,332	$12,726,332
13	Liddy Street Extension	Veterans Boulevard	Wilton Avenue	Expand to 4-lanes	16,000	$0	$3,967,371	$3,967,371
14	North Toledo Blade Extension	CR 39/Toledo Blade Boulevard	Liddy Street	New 4-lane facility	24,000	$0	$18,514,012	$18,514,012
15	Piper Road	North Jones Loop Road	US 17	Expand to 4-lanes	17,000	$0	$20,164,736	$20,164,736
16	Raintree Boulevard Connector	Veterans Boulevard	Sarasota County Line	New 4-lane facility	41,000	$0	$5,000,000	$5,000,000
20	Tuckers Grade	US 41	I-75	Expand to 6-lanes	31,000	$0	$6,980,950	$6,980,950
24	US 17	Piper Road	CR 74/Bermont Road	Expand to 6-lanes	36,000	$863,850	$0	$863,850
26	US 41	Tuckers Grade	US 41 Split	Expand to 6-lanes	50,000	$0	$32,878,626	$32,878,626
29	US 41	Enterprise Drive	Sarasota County Line	Expand to 6-lanes	60,000	$0	$22,966,174	$22,966,174
30	SR 776/El Jobean Road	CR771/Gasparilla Road	US 41	Expand to 6-lanes	90,000	$0	$56,256,008	$56,256,008
31	I-75 *	Lee County Line	US 17	4-lanes to 6-lanes	90,000	$236,374,000	$0	$236,374,000
32	I-75 *	CR 776/Harborview Road	Sarasota County Line	4-lanes to 6-lanes	124,000	$71,997,000	$0	$71,997,000
36	SR 776/South McCall Road	CR 775/Placida Road	San Casa Road	Expand to 6-lanes	45,000	$0	$8,167,302	$8,167,302
37	SR 776/South McCall Road	San Casa Road	Sunnybrook Boulevard	Expand to 6-lanes	43,000	$0	$13,350,398	$13,350,398
39	CR 771/Gasparilla Road	Rotonda Boulevard East	SR 776/South McCall Road	Expand to 4-lanes	23,000	$0	$12,295,571	$12,295,571
Total Cost						**$309,234,850**	**$293,903,385**	**$603,138,235**

* Costs from SIS Cost Feasible Plan
** Costs are stated in present value dollars (includes Design, R/W, CEI, and Construction)
All costs are stated in present day dollars (2006)

20 Projects at Cost of over $603 Million

2030 Cost Feasible Plan – Highway Projects



APPENDIX B - TRANSPORTATION METHODOLOGY OUTLINE US 17 CORRIDOR PLANNING STUDY TRAFFIC ASSESSMENT

Overview

The US 17 Area Study (hereafter referred to as the Project) is a study of future conditions along US 17 from Punta Gorda City Limit/Cooper Street to the Charlotte/DeSoto County Line and the surrounding area with an enhanced Future Land Use Plan scenario. David Plummer and Associates (DPA) will be performing the analysis of future traffic conditions under the proposed development scenario.

This study is being prepared in support of a Comprehensive Plan Amendment. Therefore, the horizon year will be 2030, consistent with the adopted Charlotte County MPO 2030 Long Range Transportation Plan (LRTP).

Study Area

The study area for the Project is shown in Exhibit 1 and described below. The Project will focus on US 17 from the Punta Gorda City Limit north to the Charlotte/DeSoto County Line. The Project will also consider conditions on other important area roads, including, but not limited to Riverside Drive, CR 74 (Bermont Road), CR 764 (Washington Loop Road), and Piper Road. The major focus of the Project is on the future traffic conditions of the US 17 study segments. The operation of specific intersections is not within the scope of this study.

Existing Traffic Conditions

Year 2008 peak season will represent existing traffic conditions. Traffic volumes on a roadway link basis will be reported for the peak hour (K100) and on a directional basis.

Several sources will be used to establish existing traffic volumes. They include FDOT counts, Charlotte County traffic counts, and traffic counts obtained for development projects. Original traffic counts are not anticipated to be required.

Roadway Capacities and Level of Service

As US 17 is a Strategic Intermodal System (SIS) facility, FDOT level of service standards will apply. The applicable Charlotte County maximum service volumes will be used.
The level of service standards of the Charlotte County Comprehensive Plan will be used for non-SIS roadways.

Plan Amendment Parameters

The specific uses to be included in the proposed Future Land Use Plan Amendment are being reviewed, and will be provided to staff for consideration when finalized.

Projected Future Traffic Volumes

Future (2030) projected traffic volumes in the study area will be established using the adopted Charlotte County travel model (FSUTMS) financially feasible network. The MPO's socioeconomic (zonal) data projections will be used for the Project. However, the socio-economic data for the 2030 will be reviewed and adjusted to reflect approved developments not adequately reflected in the study area. Adjustments will also be made to the socio-economic data to account for the proposed Future Land Use Plan Amendment (FLUPA).

Model runs will be performed without and with the proposed FLUPA. Future Peak-Season Weekday Traffic volumes for the without and with FLUPA scenarios will be tabulated by roadway segment.

Trip Generation

The adopted Charlotte County travel model will be utilized to estimate trip generation characteristics for the Project.

Future Conditions

Future peak-hour, directional volumes will be identified for the without and with FLUPA scenarios. K100 and directional factors for the study corridor will be derived using FDOT and/or Charlotte County conversion factors.

The projected future levels of service for the study corridor segments will be tabulated for the two study scenarios. Any study segments that exceed the adopted level of service for the without or with FLUPA scenarios will be identified.

Traffic Mitigation/Improvements

If study road segments are expected to exceed the adopted level of service with the FLUPA, which met the adopted standard without it, mitigation alternatives will be explored. Based on the roadway analyses, potential roadway improvements to address impacted road segments will be identified.

Road impact fees that would be assessed based on the proposed new land uses associated with the FLUPA will be estimated per the current Charlotte County Impact Fee Schedule and compared to the estimated costs of needed improvements.

Appendix C-Environmental Analysis

INTRODUCTION

The subject study area is comprised of portions and/or all of 20 Sections directly adjacent to US 17 within north-central Charlotte County, Florida. A map depicting the study area boundaries is attached; see US 17 CORRIDOR STUDY – KEY MAP. More specifically, the subject study area includes the following Sections:

Township 40S; Range 23E
Sections: 01, 11, 12, 13, 14, 23, 24, 25, 26, 27, 34, 35, and 36

Township 40S; Range 24E
Sections: 06, 07, 18, 19, and 30

Township 41S; Range 23E
Sections: 03 and 04

METHODOLOGY

The focus of this study is to identify environmental issues, specifically wetland and protected wildlife species related issues, which could potentially affect the future development of the subject study area. The majority of this assessment was conducted through investigation of available online databases, including review of: soil surveys; wetland inventories; wildlife databases; and aerial pictometry. In addition, several areas were visually inspected in the field from public right-of-ways. The findings contained within this report are based on information obtained from the online and field investigations, as well as W. Dexter Bender & Associates' local knowledge of Charlotte County, specifically within the subject study area.

EXISTING LAND USES AND HABITATS

The following table below displays the nine (9) land use/habitat associations found within the study area. Due to the large size of the study area, as well as numerous micro-habitats/land uses, the land use designations utilized for this assessment are relatively generalized, classifying large portions of property which exhibit similar characteristics. A description of the land uses/habitats is also included. Maps depicting the land uses/habitats contained within the study area are attached.

Please note that the majority of this study is based on review of available online informational sources which were not verified in the field for accuracy. The only precise method for classifying/ delineating wetlands, surface waters, and occupied wildlife habitat is through in-field verification which is subject to governmental agency review and approval.

Land Use/Habitat ID	Description
	Wetlands
	Surface Waters
UPL	Undeveloped Uplands
LDR	Low-Density Residential and Other Open Lands
RES	Residential
COM	Commercial
GC	Golf Course
	Railway
PU	Public Utilities

Wetlands

These areas are depicted on the attached Land Use/Habitat Maps by cross-hatching and display characteristics typical of wetland habitats over which wetland-regulating government agencies would assert jurisdiction. This land use/habitat designation includes both forested and herbaceous wetland systems. Wetland ecosystems provide a variety of ecologically beneficial functions and are vulnerable to

relatively minor land use changes within or surrounding the system. These habitats are often utilized by various listed/protected wildlife species (i.e. Florida panther, bald eagle, wood stork, red-cockaded woodpecker). As such, wetland habitats are afforded certain protective measures by law; these protective measures are outlined later in this report.

Surface Waters

These areas are depicted on the attached Land Use/Habitat Maps by a blue outline and display characteristics typical of surface waters over which surface water-regulating government agencies would assert jurisdiction. This land use/habitat designation includes both natural and man-made surface waters. Surface water systems provide a variety of ecologically beneficial functions and can significantly influence wetland ecosystem health. These habitats are also often utilized by various listed/protected wildlife species (i.e. bald eagle, wood stork). As such, surface waters are afforded certain protective measures by law; these protective measures are outlined later in this report.

UPL – Undeveloped Uplands

This upland habitat designation includes a variety of land uses and micro-habitats. These range from natural forests and prairies, to manipulated pastureland, agricultural fields, and undeveloped lands surrounded by development. Uplands are typically regarded as developable land. However, uplands are also capable of providing habitat for a variety of listed/protected wildlife species (i.e. Florida panther, gopher tortoise, Florida scrub-jay, bald eagle, red-cockaded woodpecker, crested caracara, eastern indigo snake). Wildlife species which may affect future development of the uplands within the study area are discussed later in this report.

LDR – Low Density Residential and Other Open Lands

This upland land use designation includes low-density residential development as well as undeveloped areas (the majority of which display relatively natural vegetative structure) directly adjacent and surrounding the residential development. These upland areas are also capable of providing habitat for a variety of listed/protected wildlife species (i.e. gopher tortoise, Florida scrub-jay, bald eagle, crested caracara, eastern indigo snake). However, the scattered development within these areas limits wildlife usage to less than that of Undeveloped Uplands (UPL). Wildlife species which may affect future development of the Low Density Residential and Other Open Lands within the study area are discussed later in this report.

RES – Residential

This upland land use designation includes residential development as well as relatively small undeveloped areas (the majority of which have been disturbed and/or cleared) directly adjacent and surrounding the residential development. These areas have limited potential to support listed/protected wildlife species (i.e. gopher tortoise, Florida scrub-jay, bald eagle). Wildlife species which may affect future development of the Residential areas within the study area are discussed later in this report.

COM – Commercial

This upland land use designation includes commercial development as well as relatively small undeveloped areas (the majority of which have been disturbed and/or cleared) directly adjacent and surrounding the commercial development. These areas have very little potential to support listed/protected wildlife species (i.e. gopher tortoise). Wildlife species which may affect future development of the Commercial areas within the study area are discussed later in this report.

GC – Golf Course

This upland land use designation includes an inactive golf course at the intersection of US 17 and I-75. This area currently displays limited potential to support listed/protected wildlife species (i.e. bald eagle, gopher tortoise). However, wildlife usage may increase with time as the golf course remains inactive and vegetation is not maintained (mowed). Wildlife species which may affect future development of the Golf Course is discussed later in this report.

Railway

This upland land use designation includes a transportation railway which spans along the west-side of US 17. This area is unlikely to support listed/protected wildlife species.

Public Utilities
This upland land use designation includes a relatively large electric substation located within Section 35; Township 40S; Range 23E. This area is unlikely to support listed/protected wildlife species.

RESULTS

Wetlands
These areas are depicted on the attached Land Use/Habitat Maps. Wetlands are protected habitats, and impacts to the wetlands within the study area will be regulated by one or more of the following government agencies: Southwest Florida Water Management District (SWFWMD); Florida Department of Environmental Protection (DEP); U.S. Army Corps of Engineers (USACE). Based on the current policy of the above government agencies, impacts to wetlands are to be avoided if feasible. If impacts are unavoidable, the subject wetland must be assessed based on its existing ecological functions prior to proposed impacts. If development will result in adverse effects to the existing ecological function provided by the subject wetland, mitigation will be required. Mitigation can be provided through numerous means both on-site and/or offsite. One option for mitigation is to purchase wetland credits from an approved Wetland Mitigation Bank. Fortunately, two existing mitigation banks meet the necessary criteria to be viable options for provision of offsite mitigation required for future wetland impacts.

Surface Waters
These areas are depicted on the attached Land Use/Habitat Maps. Natural surface waters (i.e. lakes, ponds, rivers, creeks) are typically provided the same protective/management measures as wetland habitat. Man-made surface waters less than one acre in size and entirely constructed within uplands (i.e. cattle watering ponds) are seldom afforded protection, unless protected wildlife species utilization of the surface water is documented. Man-made surface waters greater than one acre in size, and/or constructed within or adjacent to wetlands may be provided the same protection as wetlands, but should be assessed on a case-by-case basis.

Protected Wildlife Species
Characteristic of most of Florida, a large variety of wildlife species listed by the Florida Fish and Wildlife Conservation Commission (FWC) and/or the U.S. Fish and Wildlife Service (FWS) could potentially utilize portions of the subject study area. Each listed wildlife species is afforded different/individual protective measures based on its typical habitat requirements and behavioral patterns. With this in mind, the attached US 17 CORRIDOR STUDY – WILDLIFE MAP depicts documented locations regarding several listed species. The following descriptions discuss each listed wildlife species which may be anticipated to utilize portions of the subject study area. These descriptions more specifically address the potential presence and/or effects that each species may have on the future development of the study area. Please note that this assessment is based on current protective measures and regulations; these regulations are subject to future change.

Florida Panther (Felis concolor coryi)
The Florida panther is listed as “Endangered” by both the FWC and FWS. This species requires extensive blocks of mostly forested communities. Large wetlands that are generally inaccessible to humans are important for diurnal refuge. Florida panthers will also utilize improved areas, such as pasture lands, in a mosaic of natural communities. Currently, the primary protection mechanism for the panther is the FWS established “Panther Consultation Area”. Typically, development within this consultation area does not trigger the necessary consultation and potential mitigation for impacts to suitable panther habitat. However, if government (SWFWMD, DEP, USACE) jurisdictional wetlands/surface waters are to be impacted within this consultation area, it is possible that additional species specific surveys and/or FWS/FWC consultation will be required. Mitigation for impacts to panther habitat may or may not be necessary, depending on the type and quality of habitat being impacted. Mitigation for impacts to panther habitat is determined on a case-by-case basis.

Within Charlotte County, the FWS Panther Consultation Area lies east of US 17 and I-75. The eastern-most portions of the subject study area lie within the consultation area. These areas are depicted on the attached US 17 CORRIDOR STUDY – WILDLIFE MAP.

Bald Eagle (Haliaeetus leucocephalus)

Bald eagle populations have recovered sufficiently enough to recently been de-listed from "Threatened" status in 2007. Since delisting, the primary law protecting bald eagles has shifted from the Endangered Species Act to the Bald and Golden Eagle Act. Bald eagle habitat most commonly includes areas close to coastal areas, bays, rivers, lakes, or other bodies of water that provide concentrations of food sources, including fish, waterfowl, and wading birds. Bald eagles usually nest in tall trees, typically live pines, which provide clear views of surrounding areas. FWS and FWC provide standard project criteria to ensure the protection of bald eagles and bald eagle nests. Per the criteria, existing bald eagle nests are afforded a protection zone up to a 660-foot radius from the nest tree. Protection does not necessarily result in un-developable land. Dependent upon the intensity of the proposed development and existing adjacent development, proposed development may be permitted within the 660-foot protection zone. Typically, projects can be designed in adherence with the standard criteria with relatively minor hindrance to the project itself. Although no formal permitting through FWC and/or FWS is required, minor coordination with these agencies may be necessary.

One documented bald eagle nest (per the FWC nest locator database) was identified within the study area; see US 17 CORRIDOR STUDY – WILDLIFE MAP. The FWC database documents this nest (nest ID No. CH030) as "active" from the 2005 through the 2008 nesting season. Per current agency guidelines, if the nest becomes and remains inactive for five or more consecutive breeding seasons, it can be declared as "abandoned" and is no longer afforded protection.

Florida Scrub-Jay (Aphelocoma coerulescens)

The Florida scrub-jay is listed as "Threatened" by both the FWC and FWS. The scrub-jay typically inhabits fire-dominated, low-growing, oak scrub habitat found on well-drained sandy soils. Scrub-jays may persist in areas with sparser oaks or scrub areas that are overgrown, but at much lower densities and with reduced survivorship. Mitigation for impacts to documented Florida scrub-jay habitat is relatively expensive. Current agency policy stipulates that 2 acres of contiguous documented scrub-jay habitat must be preserved and maintained for every 1 acre of occupied habitat impacted. Otherwise, development should be designed in such a way to avoid impacts to documented scrub-jay habitat, and establishment of a +/- 25-acre scrub-jay habitat preserve is typically required.

The subject study area contains both potential Florida scrub-jay habitat and documented scrub-jay habitat (scrub-jay sightings). These areas are depicted on the US 17 CORRIDOR STUDY – WILDLIFE MAP. Areas labeled as potential habitat and/or documented habitat (documented sightings) would likely require a field survey prior to developing these areas to confirm the presence/absence of scrub-jay utilization of the property.

Crested Caracara (Caracara cheriway)

The crested caracara is listed as "Threatened" by both the FWC and FWS. Caracaras typically utilize open habitats, including dry prairie and pasture lands with cabbage palm, cabbage palm/live oak hammocks, and shallow ponds and sloughs. Preferred nest trees are cabbage palms, followed by live oaks. Currently, the primary protection mechanism for the caracara is the FWS established "Crested Caracara Consultation Area". Typically, development within this consultation area does not trigger FWS consultation and potential mitigation for impacts to occupied caracara habitat. Typically, development within this consultation area does not trigger the necessary consultation and potential mitigation for impacts to suitable panther habitat. However, if government (SWFWMD, DEP, USACE) jurisdictional wetlands/surface waters are to be impacted within this consultation area, it is possible that additional species specific surveys and/or FWS/FWC consultation will be required. Similar to the bald eagle, protection measures for caracaras are primarily focused on a protected buffer around nests sites. Nest sites/nest trees are provided a protection zone which is divided into a primary and secondary zone. The primary zone encompasses 984 feet around the nest, whereas the secondary zone encompasses 4,920 feet around the nest. Ideally, no development activities beyond low intensity agriculture are to be conducted within the protection zones, especially the primary zone. However, development is not prohibited. Case-by-case coordination with the FWS will be necessary if development is proposed within the protection zone of a documented caracara nest.

No crested caracara nest sites are currently documented within the subject study area. However, the majority of the subject study area lies within the FWS Crested Caracara Consultation Area. Therefore, areas displaying suitable caracara habitat (i.e. large, open pastures, rangelands, and prairies with cabbage palms) may require a species specific field survey for caracara utilization prior to developing these areas. If caracara utilization is confirmed, coordination with FWS will be required. Currently, there is no standard mitigation process regarding impacts to caracara habitat. Proposed mitigation, which may include preservation, enhancement, and/or maintenance of confirmed caracara habitat, will be reviewed on a case-by-case basis.

Gopher Tortoise (Gopherus polyphemus)

The gopher tortoise is listed as "Threatened" by the FWC. Gopher tortoises are typically found in dry upland habitats, including sandhills, scrub, xeric oak hammock, and dry pine flatwoods. This species also commonly utilizes disturbed habitats such as pastures, fallow cropland, and road shoulders. All areas classified as uplands (UPL, LDR, RES, COM, and GC) are considered potential gopher tortoise habitat. Areas displaying relatively natural vegetative coverage (i.e. upland forest and palmetto prairies) are more likely to contain significant numbers of gopher tortoises than manipulated areas such as agricultural fields, cattle pastures, and previously cleared open lands surrounded by development. A permit from FWC will be required prior to developing areas containing gopher tortoises. Similar to wetland impacts, impacts to confirmed gopher tortoise habitat requires mitigation and/or the relocation of affected tortoises out of harms way, to a property approved by FWC and to be protected in perpetuity. Within Florida, obtaining permits to impact documented gopher tortoise habitat is a relatively common and expeditious undertaking. Dependent on the density of tortoises found within a given area proposed for impact, mitigation can be relatively expensive.

Wood Stork (Mycteria americana)

The wood stork is listed as "Endangered" by both the FWC and FWS. Wood storks nest colonially in a variety of inundated forested wetlands, including cypress strands and domes, mixed hardwood swamps, sloughs, and mangroves. Wood storks forage mainly in shallow water in freshwater marshes, swamps, lagoons, ponds, tidal creeks, flooded pastures, and ditches, where they are attracted to falling water levels that concentrate food sources (mainly fish). Mitigation for impacts to wood stork foraging habitat (wetlands) can typically be offset through provision of wetland mitigation, necessary when impacting wetlands. The primary limitations resulting from wood stork utilization are associated with documented nesting colonies. Nesting colonies can be mobile from year to year, but are typically maintained within a relatively close proximity once established. Four Wading Bird Rookeries are documented within and/or adjacent to the subject study area; see US 17 CORRIDOR STUDY – WILDLIFE MAP. Two of these rookeries have been documented to be utilized by wood storks for nesting/breeding. If development is proposed with 0.54 miles of a documented wood stork colony, potential adverse effects resulting from the proposed development as well as required mitigation will be more closely scrutinized by FWS and/or FWC.

Red-cockaded Woodpecker

The red-cockaded woodpecker (RCW) is listed as "Threatened" by the FWC and "Endangered" by the FWS. The red-cockaded woodpecker typically inhabits open, mature pine woodlands that have a diversity of grass, forb, and shrub species. This species can forage in several forested habitat types that include pines of various ages, but prefer to nest more mature pines. The majority of the subject study area lies within the FWS "Red-cockaded Woodpecker Occurrence Area". Similar to the bald eagle and crested caracara, documented RCW cavity clusters (equivalent to nests) are afforded a protected buffer of approximately 0.5 mile radius around the cluster site. Ideally, no development activities beyond low intensity agriculture are to be conducted within the protection zone. However, development is not prohibited. Case-by-case coordination with the FWS will be necessary if development is proposed within the protection zone of a documented RCW cavity cluster.

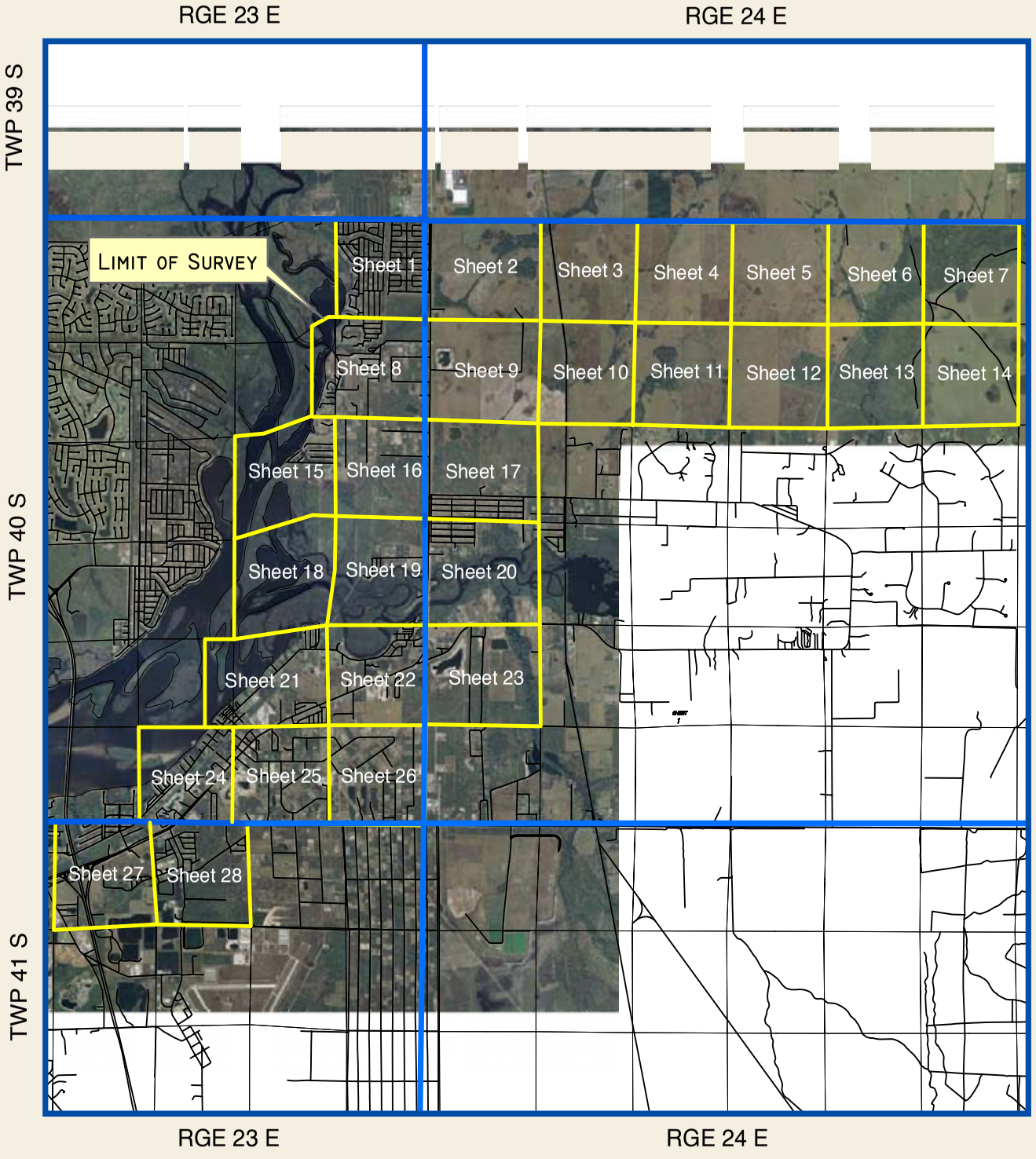
No active RCW cavity clusters are currently documented within the subject study area. However, the majority of the subject study area lies within the FWS RCW consultation area. Therefore, areas displaying suitable RCW habitat (i.e. large, open stands of pine forest) may require a species specific field survey for RCW utilization prior to developing these areas. If RCW utilization is confirmed, coordination with FWS will be required. Currently, there is no standard mitigation process regarding impacts to RCW habitat.

Proposed mitigation, which may include preservation, enhancement, and/or maintenance of confirmed RCW habitat, will be reviewed on a case-by-case basis.

Other Listed Wildlife Species

Protection measures afforded other wildlife species listed by FWC and/or FWS which are likely to utilize the subject study area are unlikely to significantly affect future development. These species include, but are not limited to the Florida burrowing owl (Athene cunicularia floridana), smalltooth sawfish (Pristis pectinata), West Indian manatee (Trichechus manatus), eastern indigo snake (Drymarchon corais couperi), and Florida sandhill crane (Grus canadensis pratensis).

US 17 CORRIDOR STUDY - KEY MAP



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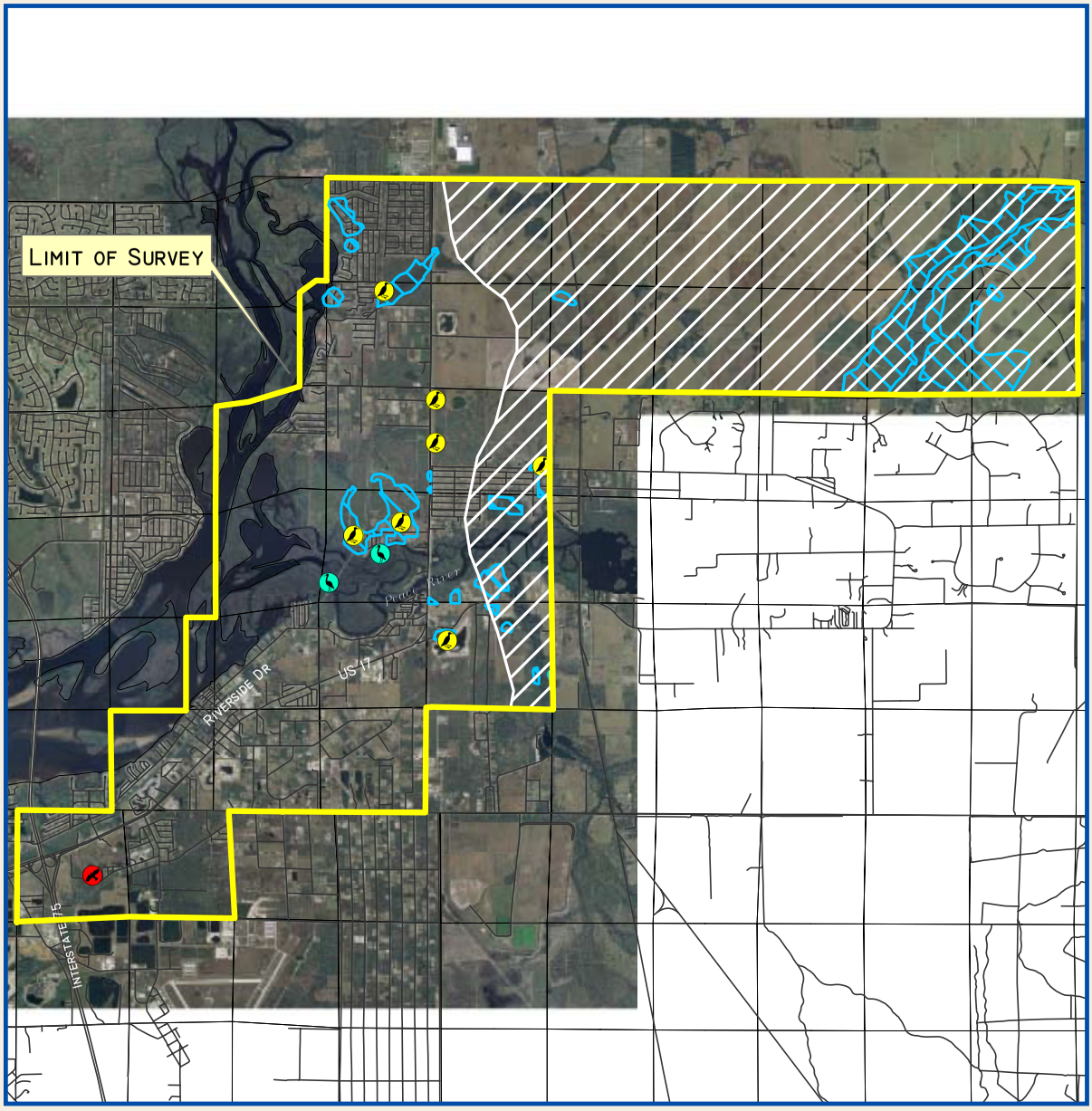
US 17 CORRIDOR STUDY - WILDLIFE MAP

MAY 2009

LEGEND

- Documented Scrub-Jay Sightings (FWC)
- Documented Wading Bird Rookeries (FWC)
- Documented Eagle Nests (FWC)
- Panther Consultation Area (FWS)
- Potential Scrub-Jay Habitat (FWC)

Note: The majority of this study is based on review of available online informational sources which were not verified in the field for accuracy. The only precise method for classifying/delineating occupied wildlife habitat is through in-field verification which is subject to governmental agency review and approval.



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Map based on GIS data obtained from the Florida Fish and Wildlife Conservation Commission and the Florida Department of Transporatation.

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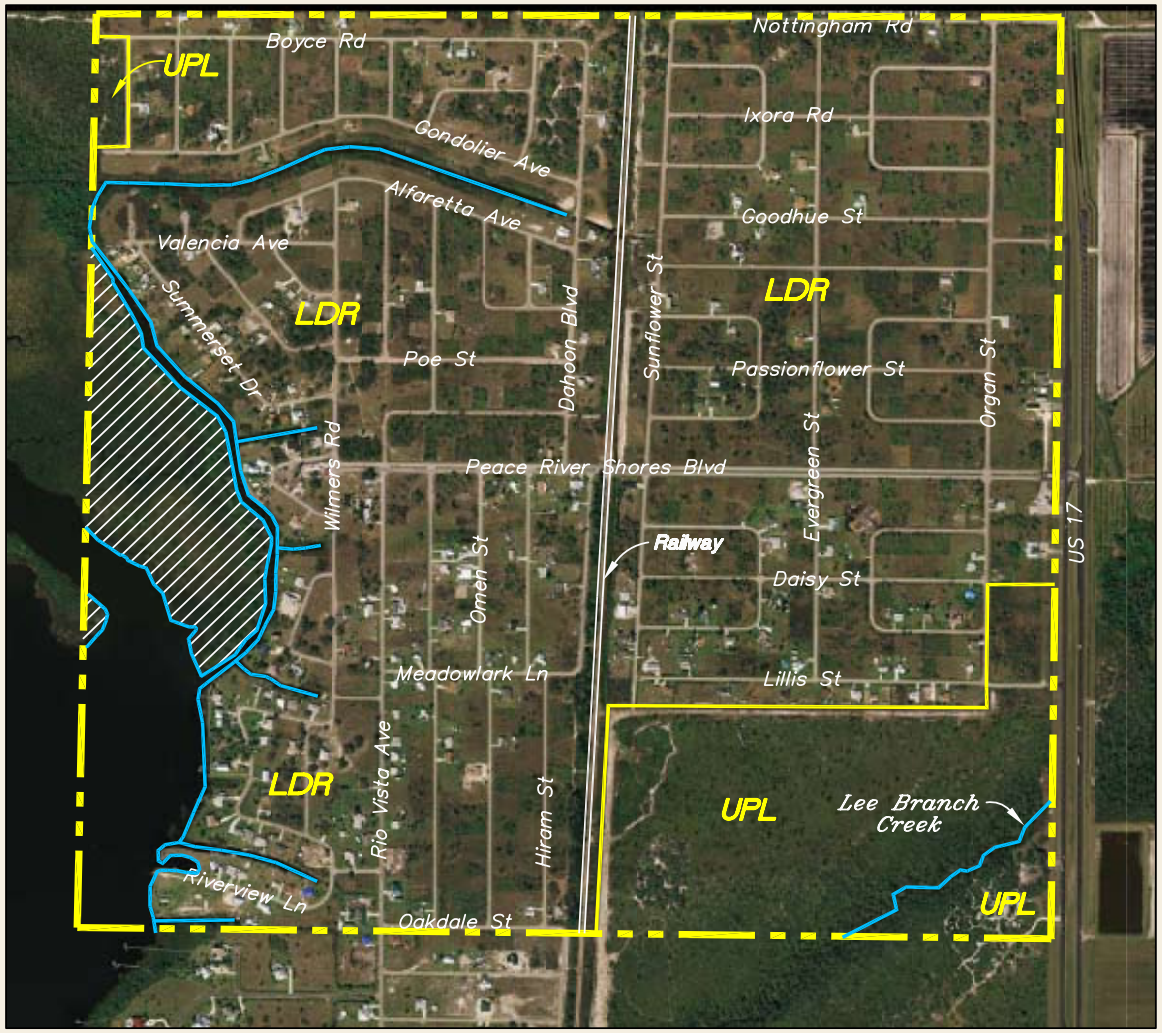
SECTION 1, TOWNSHIP 40S, RANGE 23E



0 500 1000
SCALE FEET

Approximate Wetland Limits

LDR – Low Density Residential and Other Open Lands

UPL – Undeveloped Upland

– Surface Water

Note: Wetland/surface water limits are approximate and determined by aerial interpretation, review of online databases, and/or roadside surveys using public right-of-ways. The only precise method for classifying/delineating wetlands/surface waters is through in-field verification and subject to field review/approval by applicable regulatory agencies.

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April 30, 2009 3:10:18 p.m.
Drawing: WOTI–1.S1,T40S,R23E.DWG (TJA)

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US 17 Corridor Study

SHEET 1

SECTION 6, TOWNSHIP 40S, RANGE 24E

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SCALE FEET

Approximate Wetland Limits

UPL - Undeveloped Upland

- Surface Water

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SHEET 2

SECTION 5, TOWNSHIP 40S, RANGE 24E

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SCALE FEET

Approximate Wetland Limits

UPL - Undeveloped Upland

- Surface Water

Note: Wetland/surface water limits are approximate and determined by aerial interpretation, review of online databases, and/or roadside surveys using public right-of-ways. The only precise method for classifying/delineating wetlands/surface waters is through in-field verification and subject to field review/approval by applicable regulatory agencies.

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SHEET 3

SECTION 4, TOWNSHIP 40S, RANGE 24E

0 500 1000
SCALE FEET

Approximate Wetland Limits

UPL - Undeveloped Upland

- Surface Water

Note: Wetland/surface water limits are approximate and determined by aerial interpretation, review of online databases, and/or roadside surveys using public right-of-ways. The only precise method for classifying/delineating wetlands/surface waters is through in-field verification and subject to field review/approval by applicable regulatory agencies.

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SHEET 4

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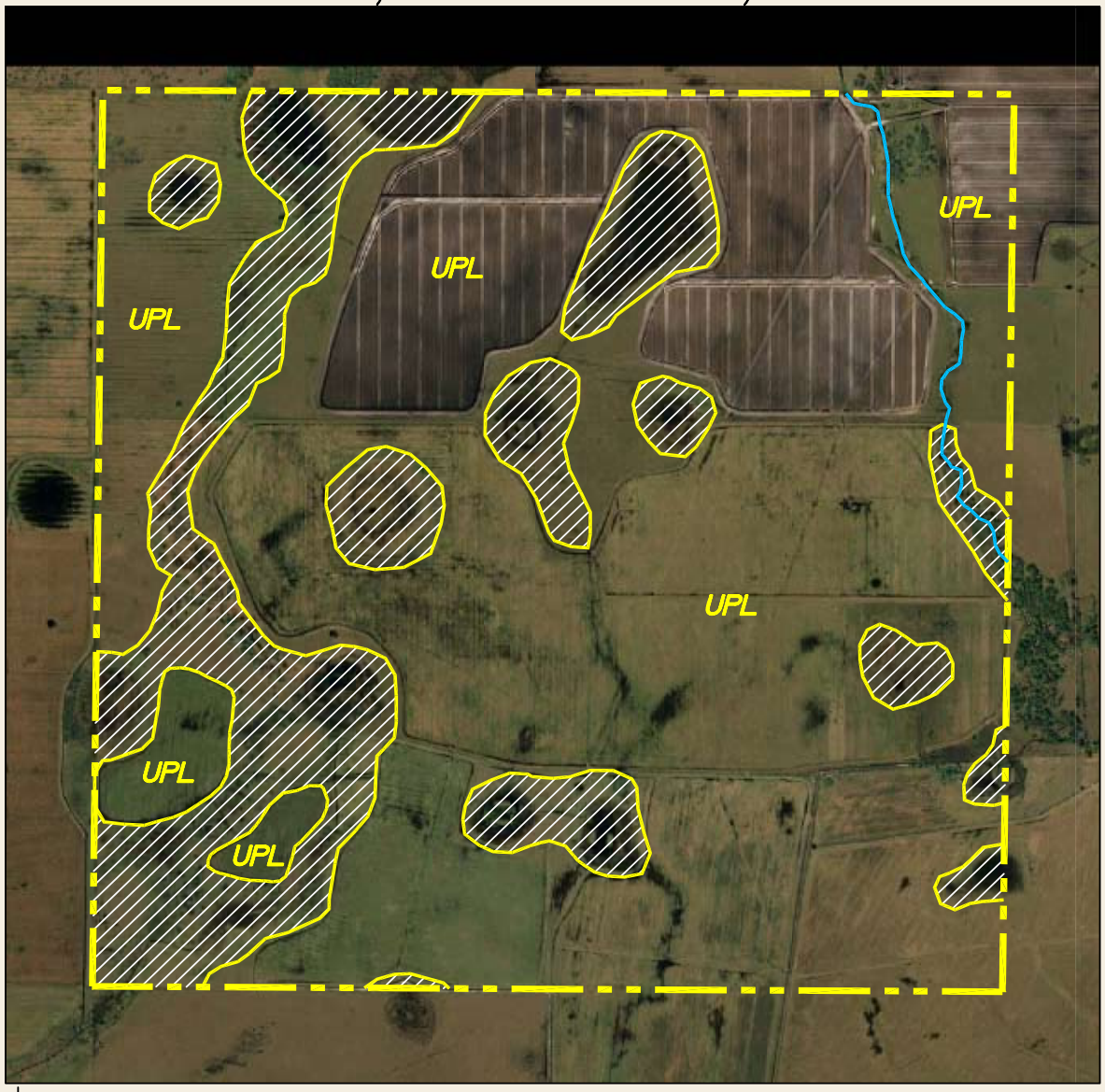

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SCALE FEET

Approximate Wetland Limits

UPL - Undeveloped Upland

- Surface Water

Note: Wetland/surface water limits are approximate and determined by aerial interpretation, review of online databases, and/or roadside surveys using public right-of-ways. The only precise method for classifying/delineating wetlands/surface waters is through in-field verification and subject to field review/approval by applicable regulatory agencies.

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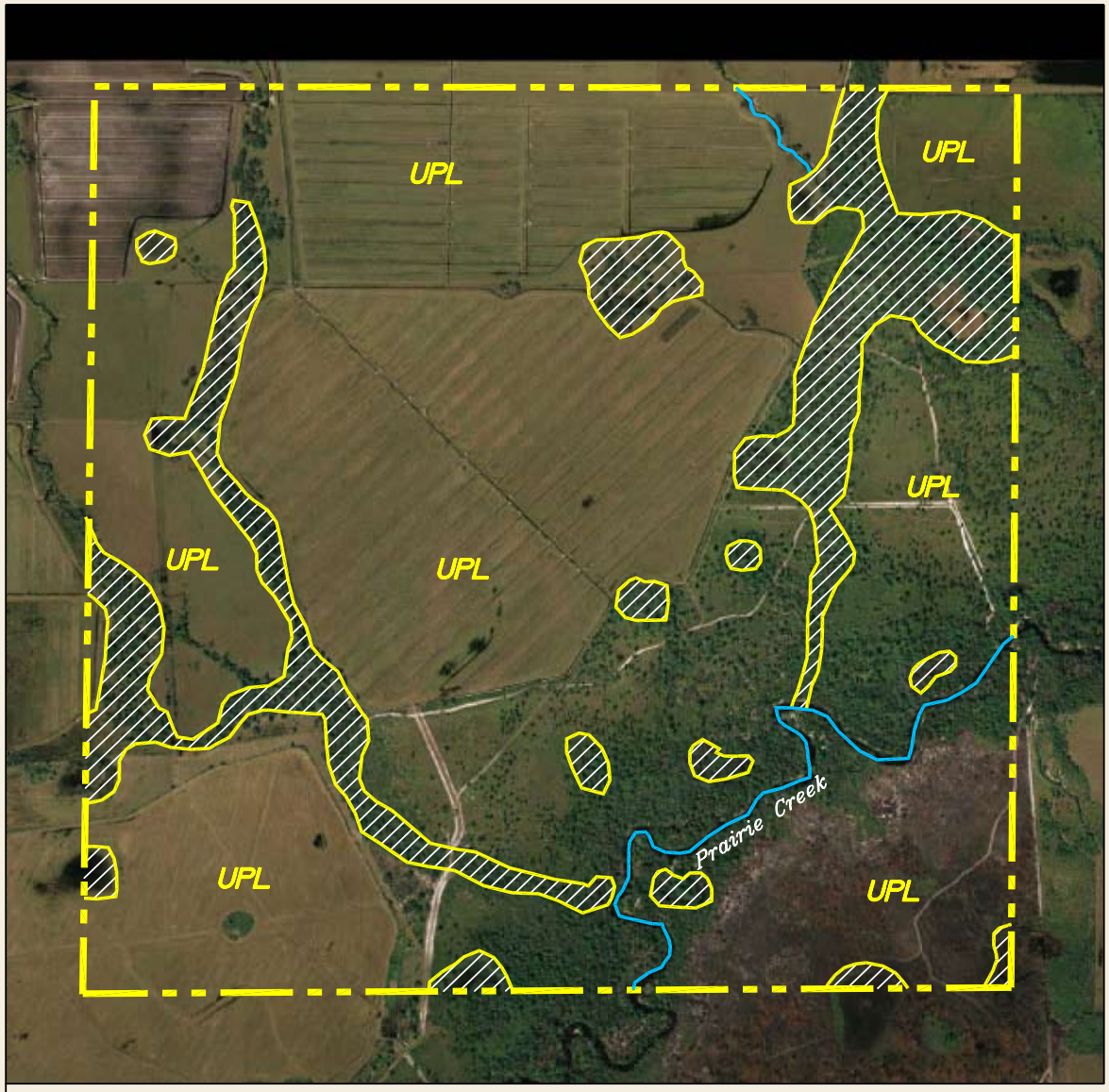
SHEET 5

SECTION 2, TOWNSHIP 40S, RANGE 24E



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Approximate Wetland Limits

UPL - Undeveloped Upland

- Surface Water

Note: Wetland/surface water limits are approximate and determined by aerial interpretation, review of online databases, and/or roadside surveys using public right-of-ways. The only precise method for classifying/delineating wetlands/surface waters is through in-field verification and subject to field review/approval by applicable regulatory agencies.

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US 17 Corridor Study

SHEET 6

SECTION 1, TOWNSHIP 40S, RANGE 24E

0 500 1000
SCALE FEET

Approximate Wetland Limits

UPL - Undeveloped Upland

- Surface Water

Note: Wetland/surface water limits are approximate and determined by aerial interpretation, review of online databases, and/or roadside surveys using public right-of-ways. The only precise method for classifying/delineating wetlands/surface waters is through in-field verification and subject to field review/approval by applicable regulatory agencies.

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April 30, 2009 3:14:00 p.m.
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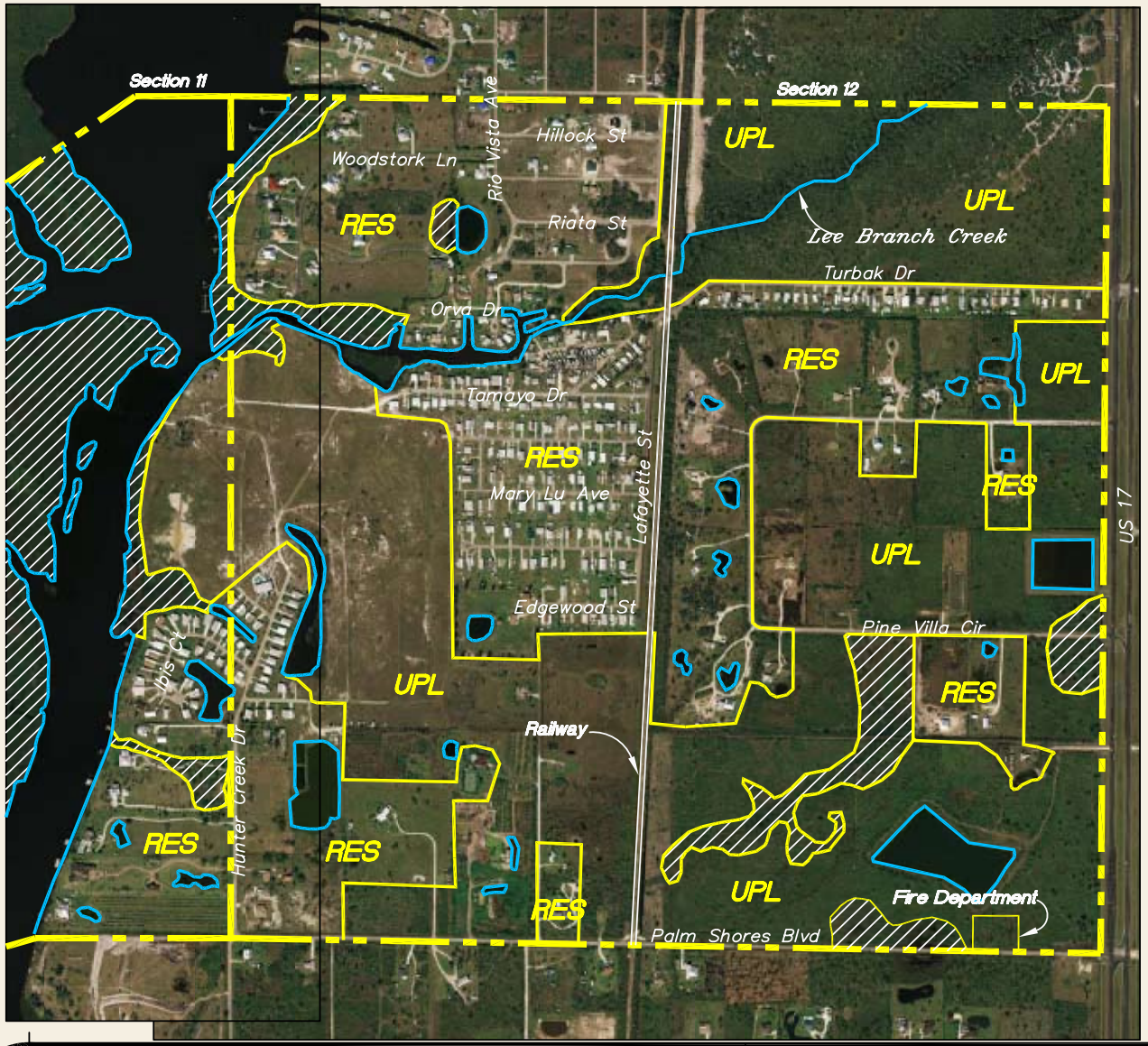
SHEET 7

SECTION 11 and 12, TOWNSHIP 40S, RANGE 23E



0 500 1000
SCALE FEET

Approximate Wetland Limits

RES - Residential

UPL - Undeveloped Upland

- Surface Water

Note: Wetland/surface water limits are approximate and determined by aerial interpretation, review of online databases, and/or roadside surveys using public right-of-ways. The only precise method for classifying/delineating wetlands/surface waters is through in-field verification and subject to field review/approval by applicable regulatory agencies.

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April 30, 2009 3:18:12 p.m.
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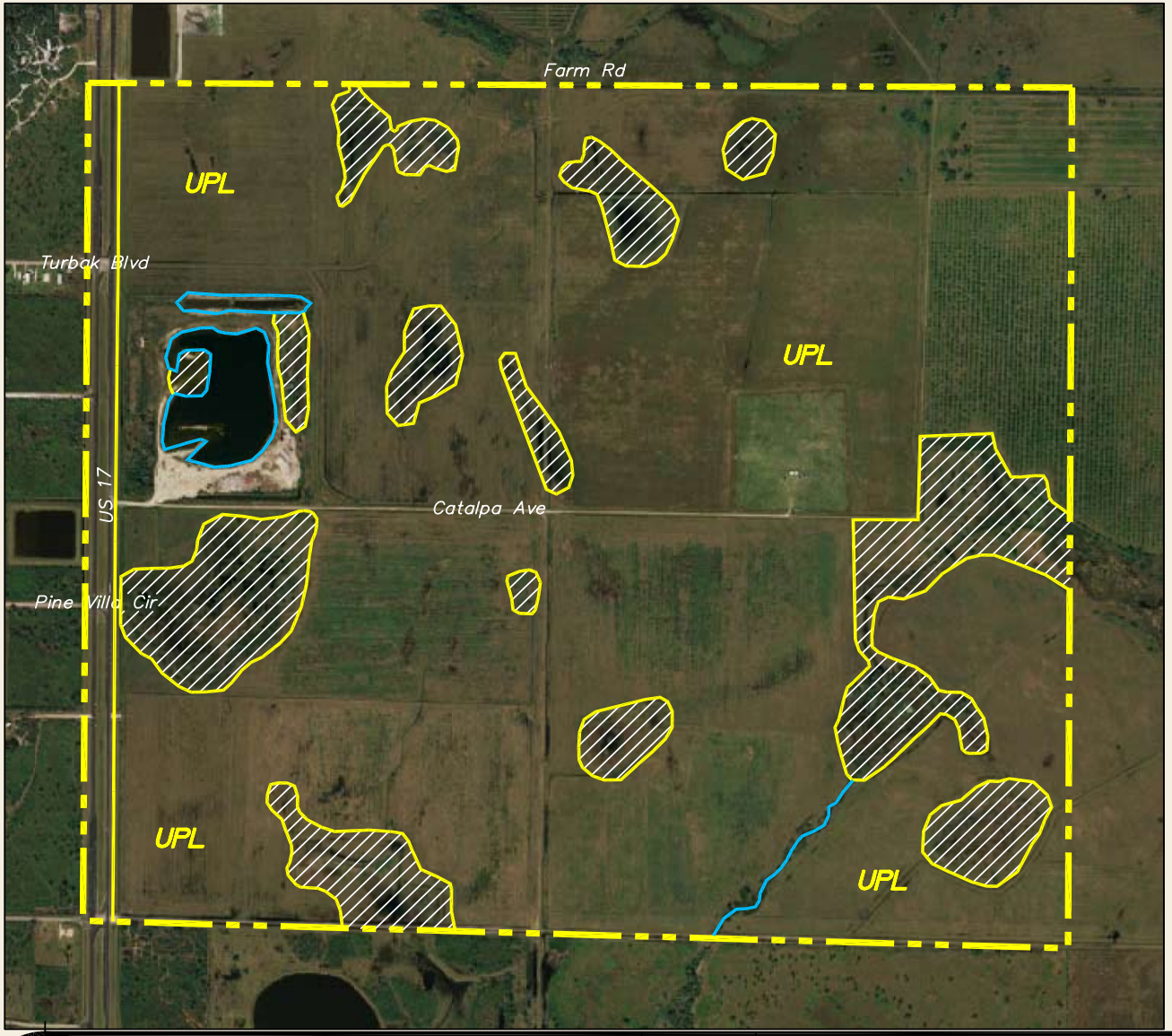
SHEET 8

SECTION 7, TOWNSHIP 40S, RANGE 24E



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Approximate Wetland Limits

UPL - Undeveloped Upland

- Surface Water

Note: Wetland/surface water limits are approximate and determined by aerial interpretation, review of online databases, and/or roadside surveys using public right-of-ways. The only precise method for classifying/delineating wetlands/surface waters is through in-field verification and subject to field review/approval by applicable regulatory agencies.

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February 02, 2009 2:58:49 p.m.
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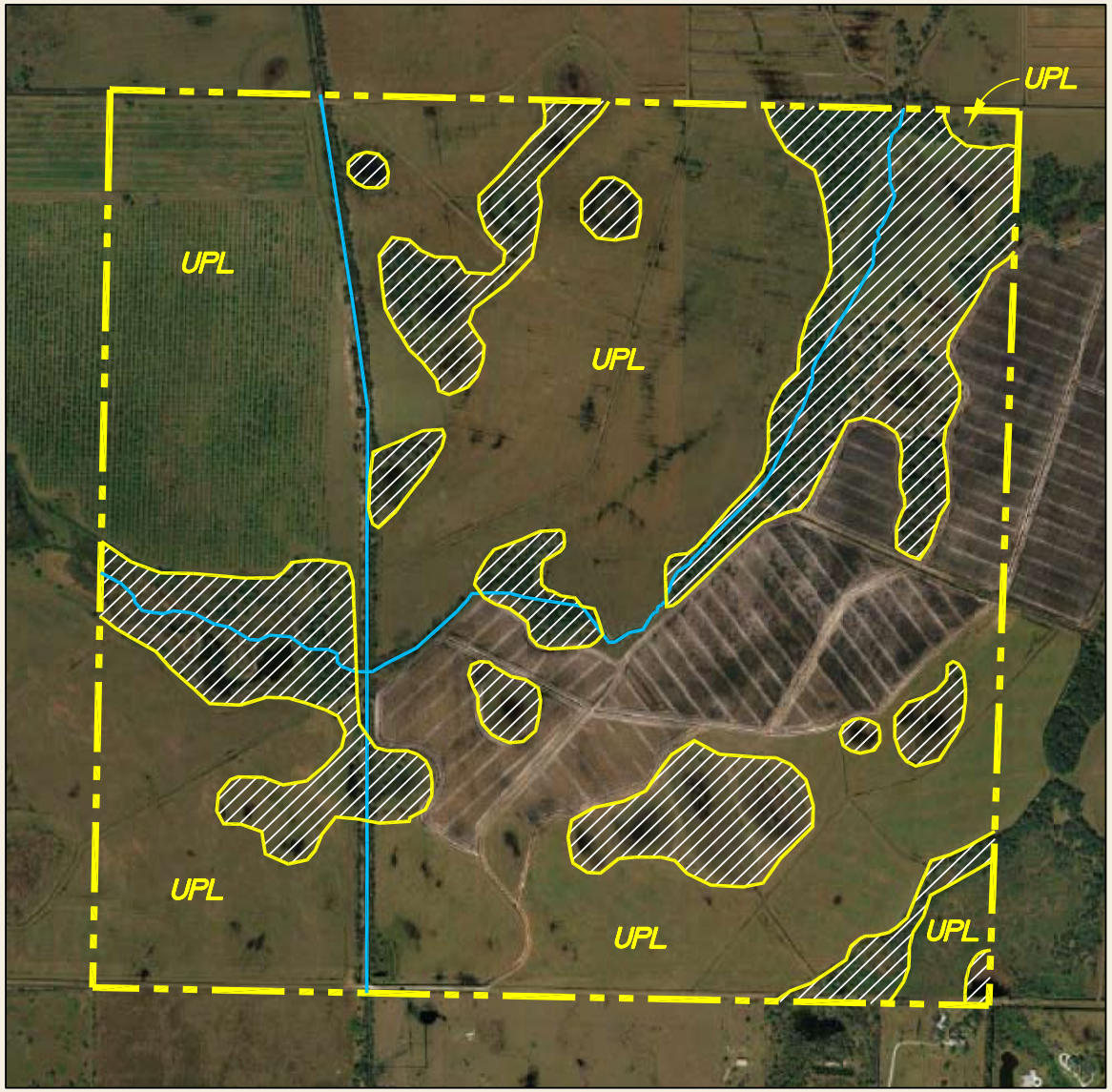
SHEET 9

SECTION 8, TOWNSHIP 40S, RANGE 24E



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SCALE FEET

Approximate Wetland Limits

UPL - Undeveloped Upland

- Surface Water

Note: Wetland/surface water limits are approximate and determined by aerial interpretation, review of online databases, and/or roadside surveys using public right-of-ways. The only precise method for classifying/delineating wetlands/surface waters is through in-field verification and subject to field review/approval by applicable regulatory agencies.

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May 04, 2009 6:07:58 p.m.
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US 17 Corridor Study

SHEET
10

SECTION 9, TOWNSHIP 40S, RANGE 24E

0 500 1000
SCALE FEET

Approximate Wetland Limits

UPL - Undeveloped Upland

- Surface Water

Note: Wetland/surface water limits are approximate and determined by aerial interpretation, review of online databases, and/or roadside surveys using public right-of-ways. The only precise method for classifying/delineating wetlands/surface waters is through in-field verification and subject to field review/approval by applicable regulatory agencies.

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April 30, 2009 1:38:26 p.m.
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US 17 Corridor Study

SECTION 10, TOWNSHIP 40S, RANGE 24E

0 500 1000
SCALE FEET

Approximate Wetland Limits

UPL - Undeveloped Upland

Note: Wetland/surface water limits are approximate and determined by aerial interpretation, review of online databases, and/or roadside surveys using public right-of-ways. The only precise method for classifying/delineating wetlands/surface waters is through in-field verification and subject to field review/approval by applicable regulatory agencies.

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April 30, 2009 3:48:48 p.m.
Drawing: WOTI-1.S10,T40S,R24E.DWG (TJA)

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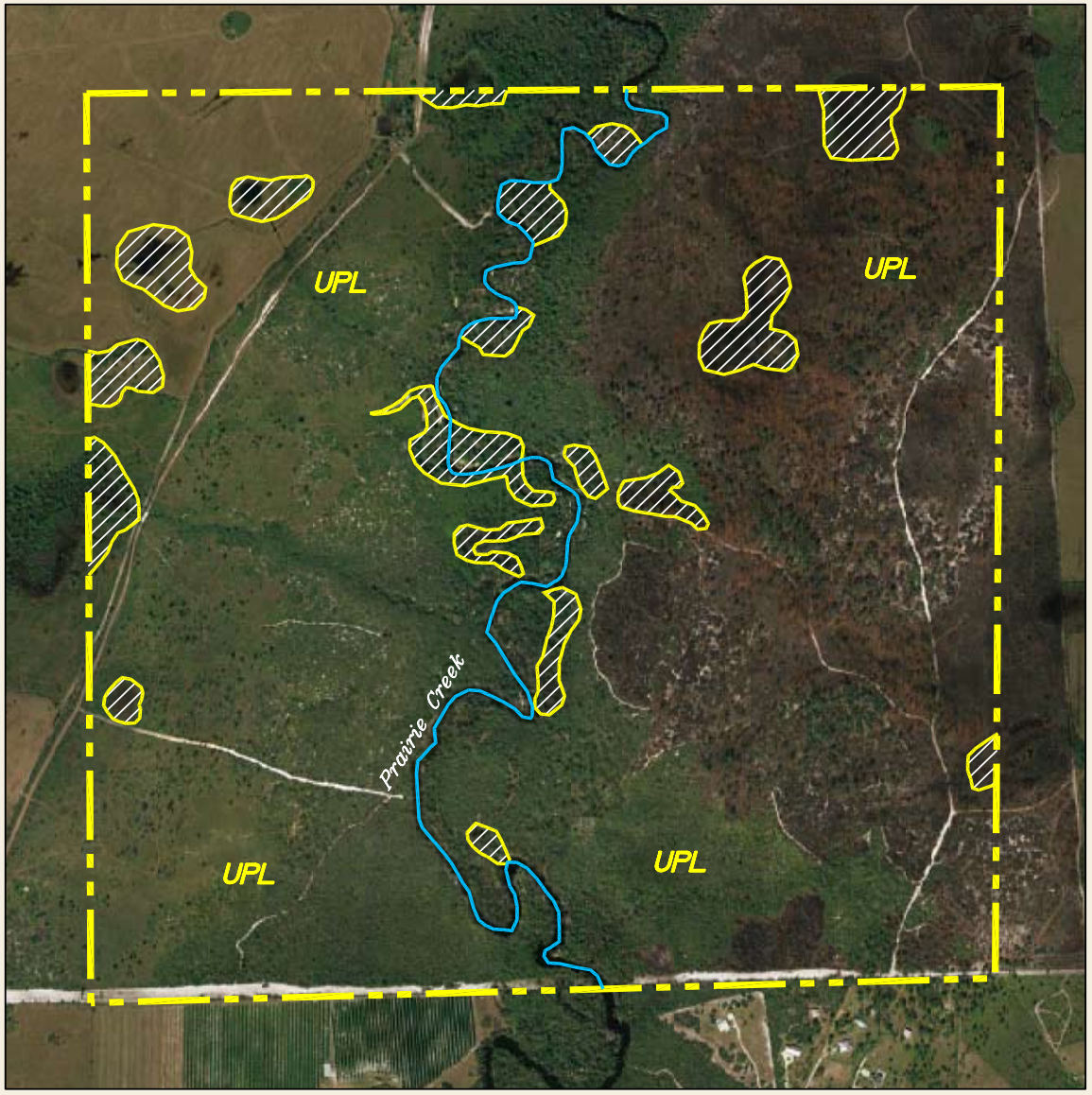
US 17 Corridor Study

SHEET 12

SECTION 11, TOWNSHIP 40S, RANGE 24E



0 500 1000
SCALE FEET

Approximate Wetland Limits

UPL - Undeveloped Upland

- Surface Water

Note: Wetland/surface water limits are approximate and determined by aerial interpretation, review of online databases, and/or roadside surveys using public right-of-ways. The only precise method for classifying/delineating wetlands/surface waters is through in-field verification and subject to field review/approval by applicable regulatory agencies.

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April 30, 2009 3:31:16 p.m.
Drawing: WOTI-1.S11,T40S,R24E.DWG (TJA)

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US 17 Corridor Study

SHEET
13

SECTION 12, TOWNSHIP 40S, RANGE 24E

0 500 1000
SCALE FEET

Approximate Wetland Limits

UPL - Undeveloped Upland

Note: Wetland/surface water limits are approximate and determined by aerial interpretation, review of online databases, and/or roadside surveys using public right-of-ways. The only precise method for classifying/delineating wetlands/surface waters is through in-field verification and subject to field review/approval by applicable regulatory agencies.

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April 30, 2009 3:35:04 p.m.
Drawing: WOTI-1.S12,T40S,R24E.DWG (TJA)

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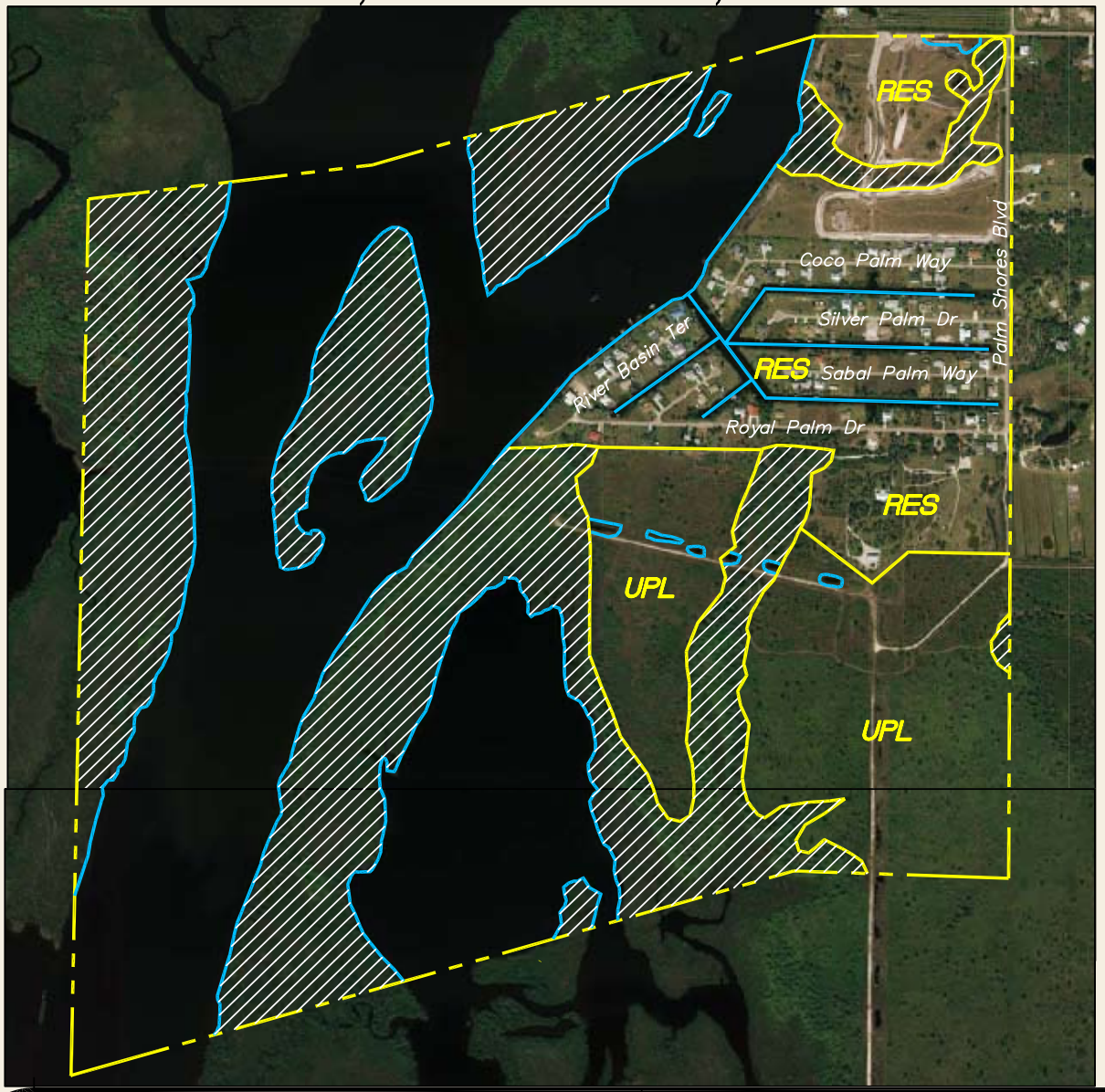
SHEET 14

SECTION 14, TOWNSHIP 40S, RANGE 23E



0 500 1000
SCALE FEET

Approximate Wetland Limits

RES - Residential

UPL - Undeveloped Upland

- Surface Water

Note: Wetland/surface water limits are approximate and determined by aerial interpretation, review of online databases, and/or roadside surveys using public right-of-ways. The only precise method for classifying/delineating wetlands/surface waters is through in-field verification and subject to field review/approval by applicable regulatory agencies.

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April 30, 2009 3:38:49 p.m.
Drawing: WOTI-1.S14,T40S,R23E.DWG (TJA)

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US 17 Corridor Study

SHEET 15

SECTION 13, TOWNSHIP 40S, RANGE 23E

0 500 1000
SCALE FEET

Approximate Wetland Limits

LDR – Low Density Residential and Other Open Lands

UPL – Undeveloped Upland

– Surface Water

Note: Wetland/surface water limits are approximate and determined by aerial interpretation, review of online databases, and/or roadside surveys using public right-of-ways. The only precise method for classifying/delineating wetlands/surface waters is through in-field verification and subject to field review/approval by applicable regulatory agencies.

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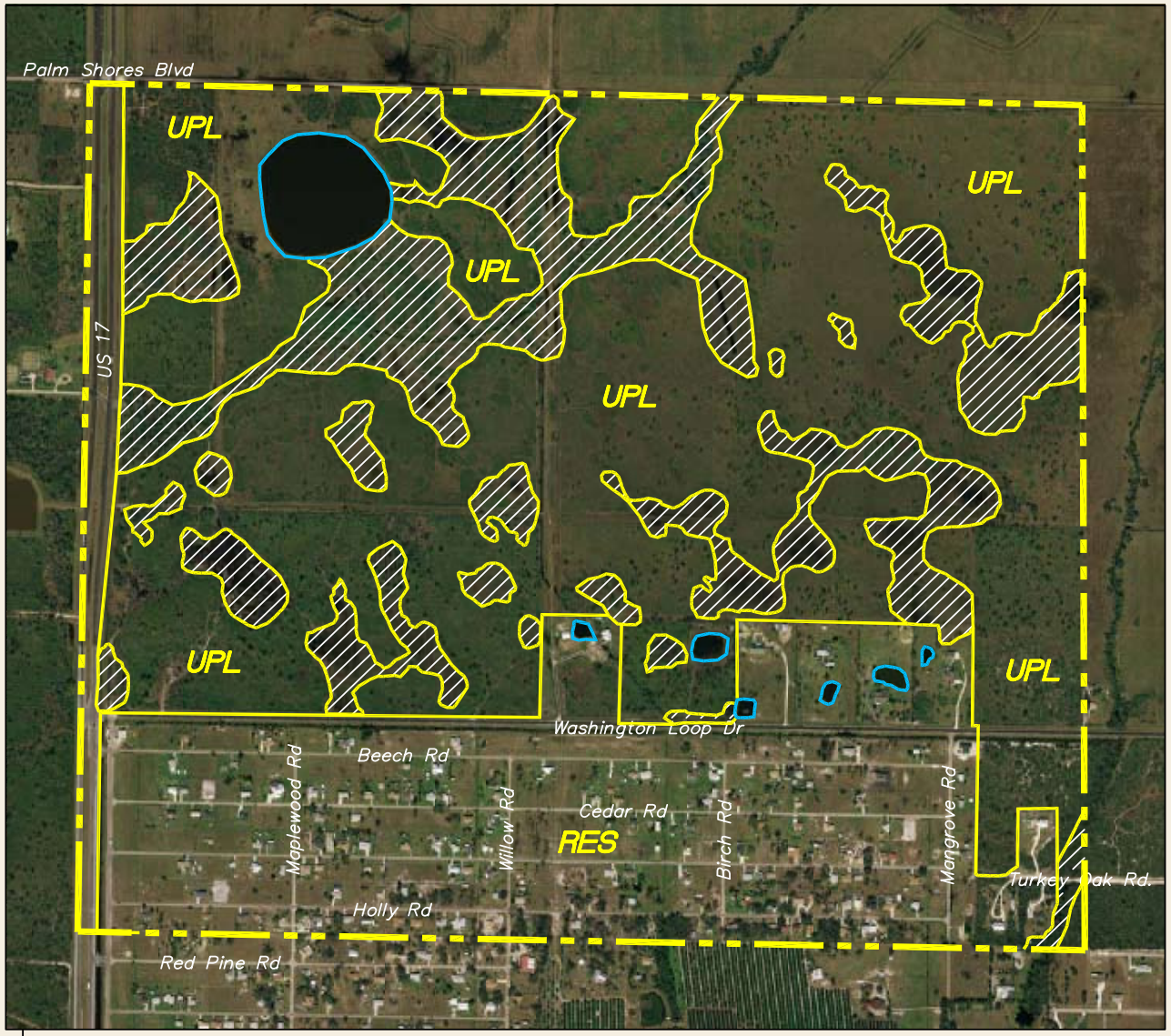
April 30, 2009 3:40:54 p.m.
Drawing: WOTI–1.S13,T40S,R23E.DWG (TJA)

SECTION 18, TOWNSHIP 40S, RANGE 24E



0 500 1000
SCALE FEET

Approximate Wetland Limits

RES - Residential

UPL - Undeveloped Upland

- Surface Water

Note: Wetland/surface water limits are approximate and determined by aerial interpretation, review of online databases, and/or roadside surveys using public right-of-ways. The only precise method for classifying/delineating wetlands/surface waters is through in-field verification and subject to field review/approval by applicable regulatory agencies.

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April 30, 2009 3:43:23 p.m.
Drawing: WOTI-1.S18,T40S,R24E.DWG (TJA)

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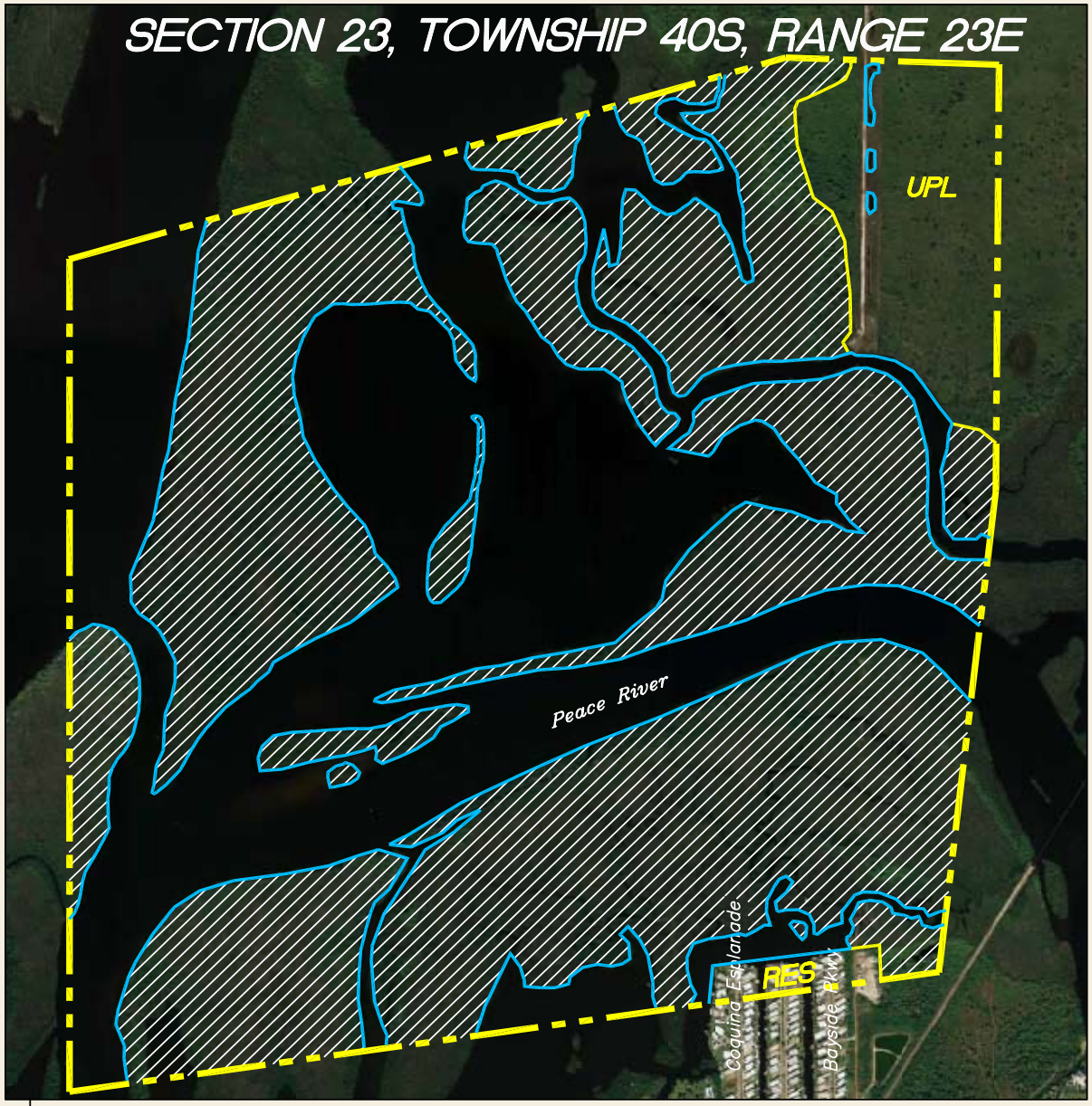
SHEET 17



0 500 1000
SCALE FEET

Approximate Wetland Limits

RES - Residential

UPL - Undeveloped Upland

- Surface Water

Note: Wetland/surface water limits are approximate and determined by aerial interpretation, review of online databases, and/or roadside surveys using public right-of-ways. The only precise method for classifying/delineating wetlands/surface waters is through in-field verification and subject to field review/approval by applicable regulatory agencies.

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April 30, 2009 3:50:19 p.m.
Drawing: WOTI-1.S23,T40S,R23E.DWG (TJA)

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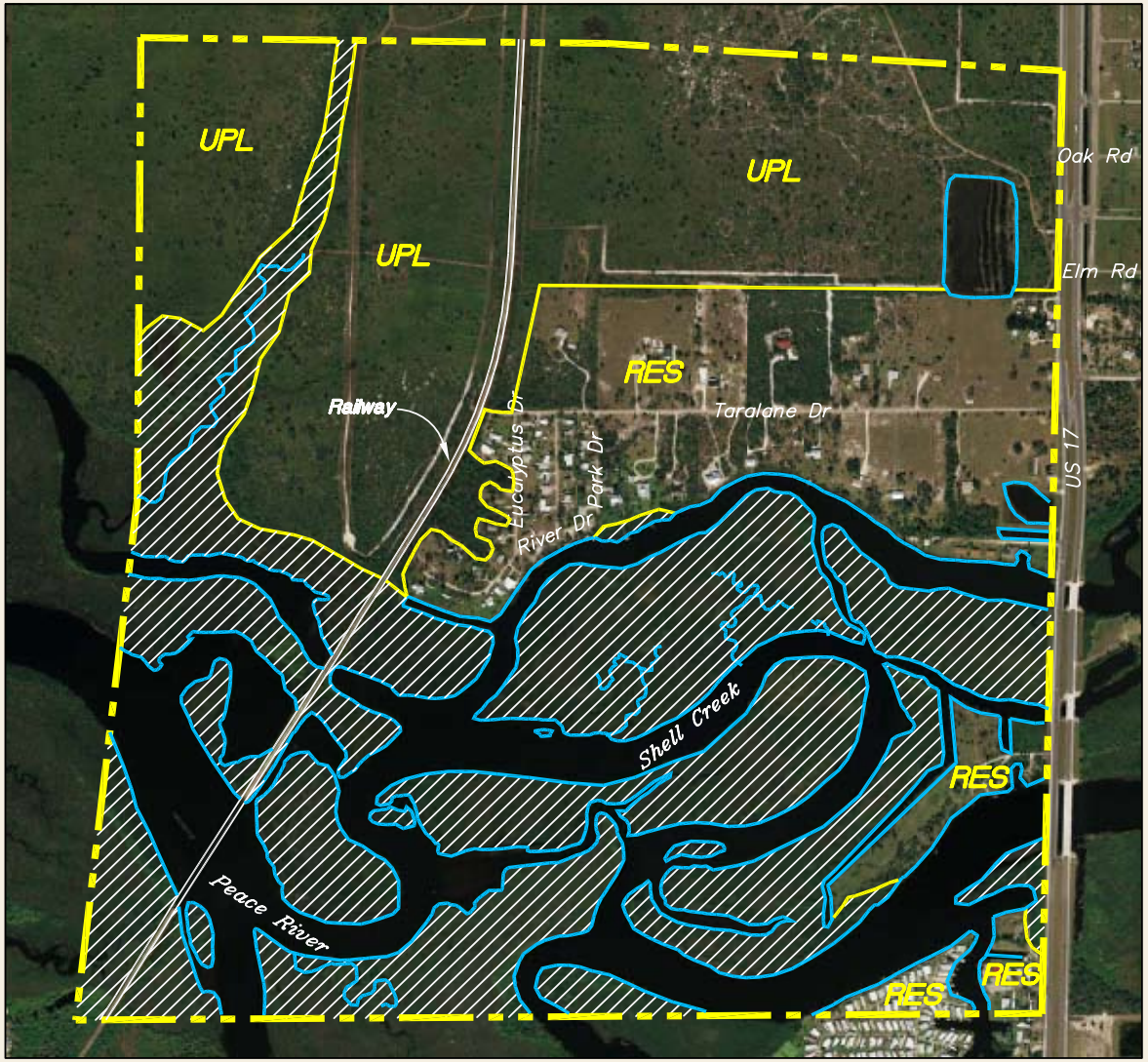
SECTION 24, TOWNSHIP 40S, RANGE 23E



0 500 1000
SCALE FEET

Approximate Wetland Limits

RES - Residential

UPL - Undeveloped Upland

- Surface Water

Note: Wetland/surface water limits are approximate and determined by aerial interpretation, review of online databases, and/or roadside surveys using public right-of-ways. The only precise method for classifying/delineating wetlands/surface waters is through in-field verification and subject to field review/approval by applicable regulatory agencies.

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April 30, 2009 3:51:43 p.m.
Drawing: WOTI-1.S24,T40S,R23E.DWG (TJA)

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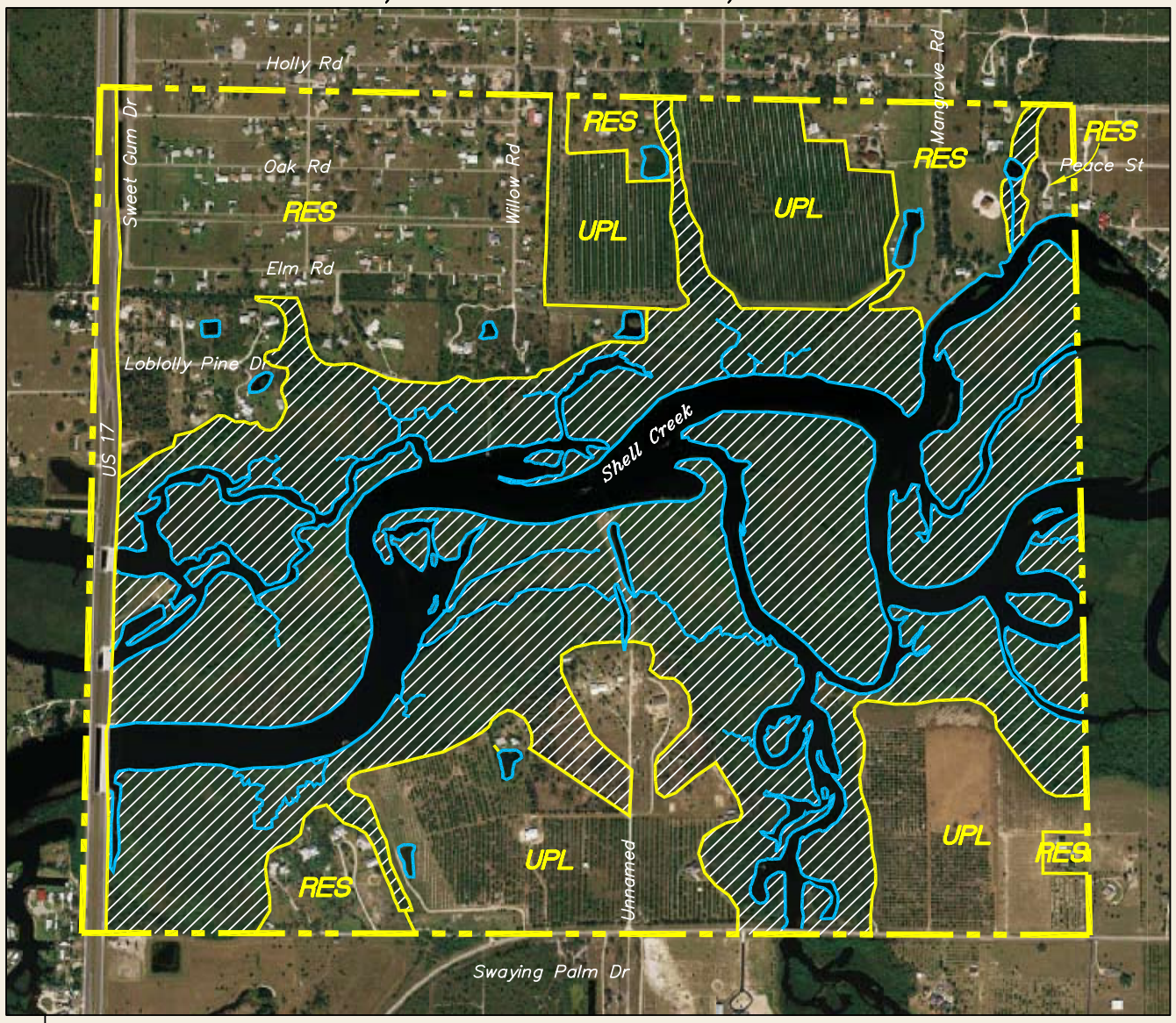
SECTION 19, TOWNSHIP 40S, RANGE 24E



0 500 1000
SCALE FEET

Approximate Wetland Limits

RES - Residential

UPL - Undeveloped Upland

- Surface Water

Note: Wetland/surface water limits are approximate and determined by aerial interpretation, review of online databases, and/or roadside surveys using public right-of-ways. The only precise method for classifying/delineating wetlands/surface waters is through in-field verification and subject to field review/approval by applicable regulatory agencies.

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April 30, 2009 3:53:04 p.m.
Drawing: WOTI-1.S19,T40S,R24E.DWG (TJA)

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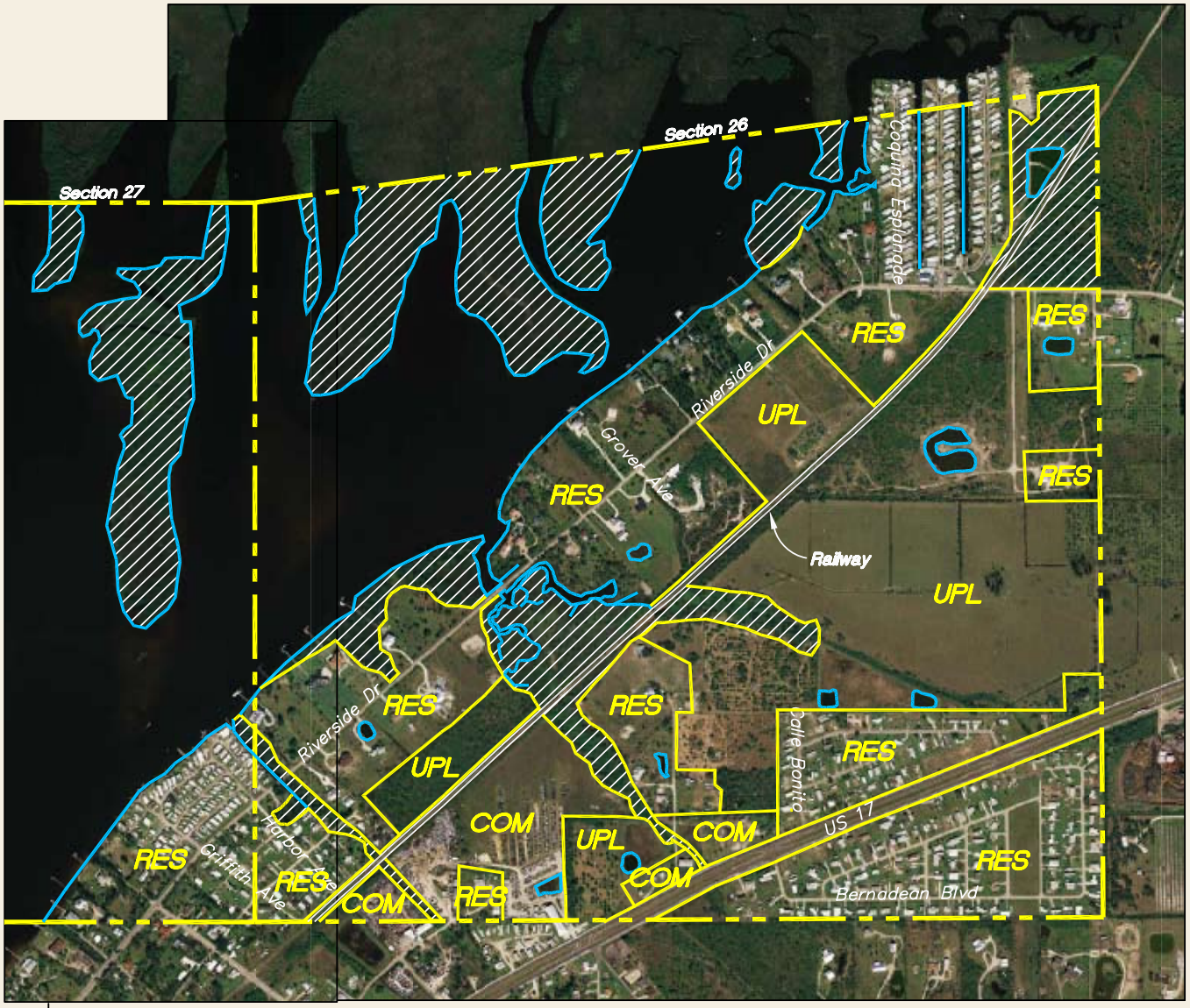
SHEET 20

SECTION 26 and 27, TOWNSHIP 40S, RANGE 23E



0 500 1000
SCALE FEET

Approximate Wetland Limits
COM – Commercial
RES – Residential
UPL – Undeveloped Upland
– Surface Water

Note: Wetland/surface water limits are approximate and determined by aerial interpretation, review of online databases, and/or roadside surveys using public right-of-ways. The only precise method for classifying/delineating wetlands/surface waters is through in-field verification and subject to field review/approval by applicable regulatory agencies.

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April 30, 2009 3:54:52 p.m.
Drawing: WOTI–1.S26&27,T40S,R23E.DWG (TJA)

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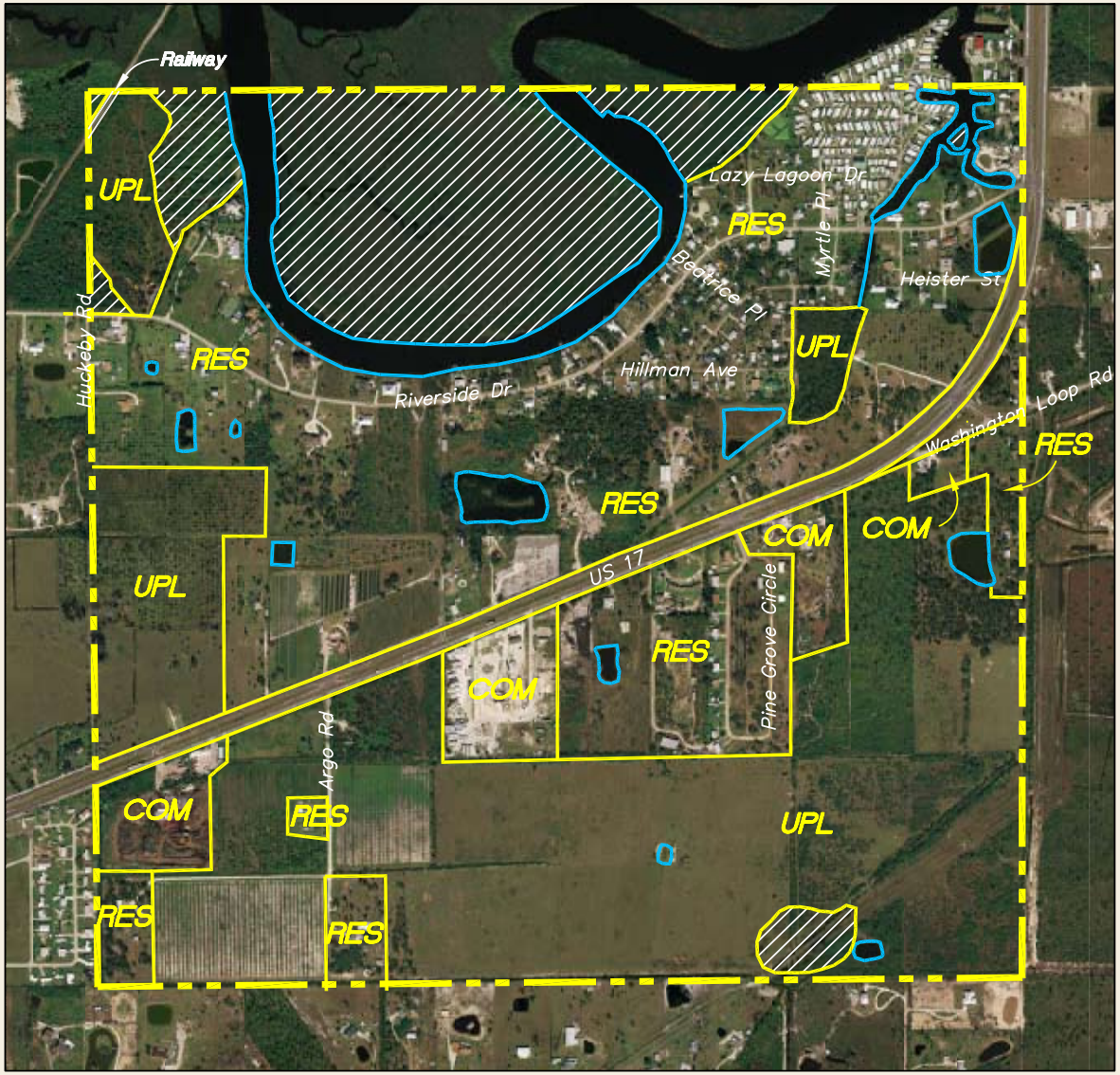
SHEET 21

SECTION 25, TOWNSHIP 40S, RANGE 23E



0 500 1000
SCALE FEET

Approximate Wetland Limits

RES - Residential

UPL - Undeveloped Upland

COM - Commercial

- Surface Water

Note: Wetland/surface water limits are approximate and determined by aerial interpretation, review of online databases, and/or roadside surveys using public right-of-ways. The only precise method for classifying/delineating wetlands/surface waters is through in-field verification and subject to field review/approval by applicable regulatory agencies.

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April 30, 2009 3:57:17 p.m.
Drawing: WOTI-1.S25,T40S,R23E.DWG (TJA)

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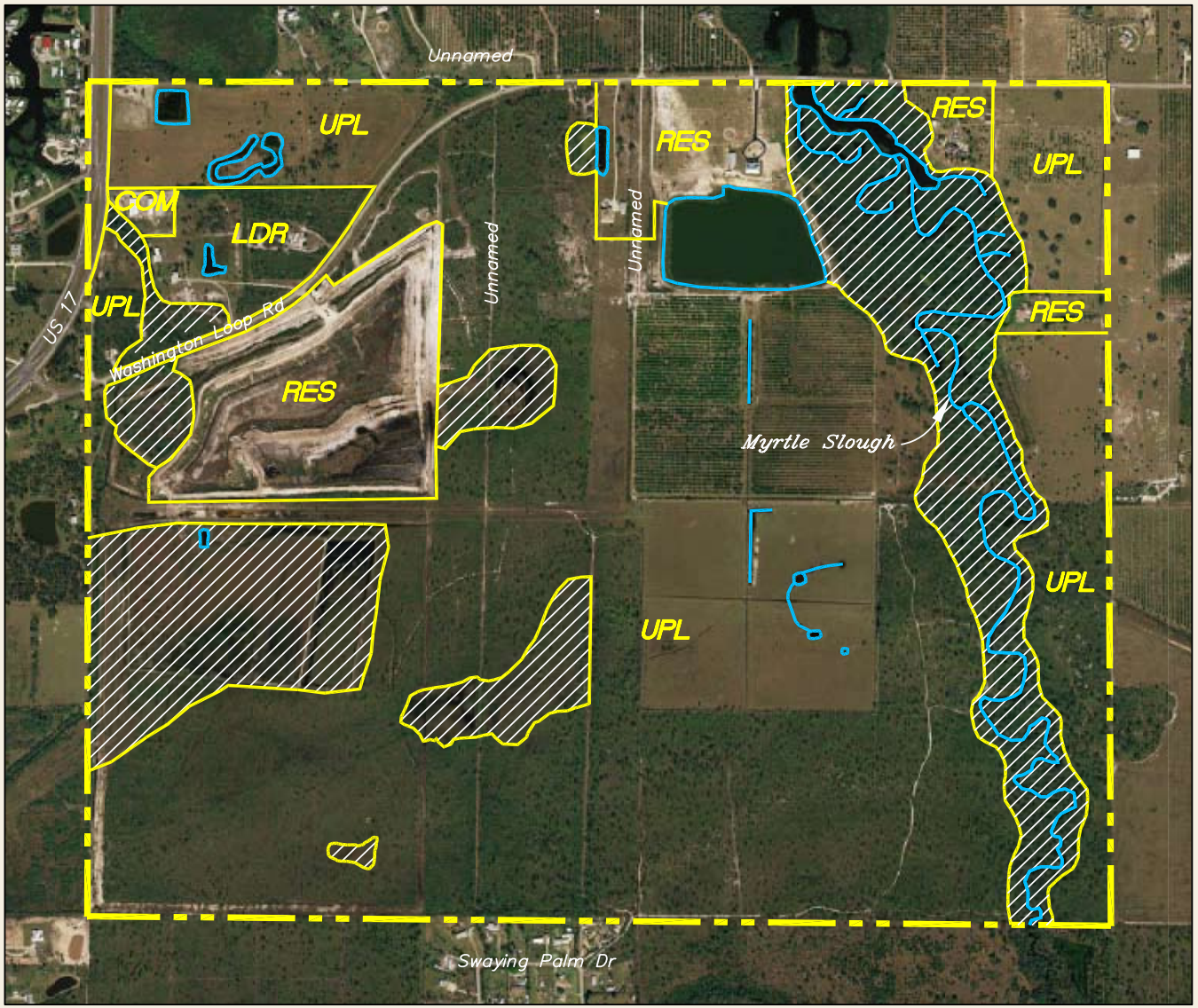
SECTION 30, TOWNSHIP 40S, RANGE 24E



0 500 1000
SCALE FEET

Approximate Wetland Limits

RES - Residential

LDR - Low Density Residentia
Other Open Lands

UPL - Undeveloped Upland

- Surface Water

Note: Wetland/surface water limits are approximate and determined by aerial interpretation, review of online databases, and/or roadside surveys using public right-of-ways. The only precise method for classifying/delineating wetlands/surface waters is through in-field verification and subject to field review/approval by applicable regulatory agencies.

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April 30, 2009 4:06:37 p.m.
Drawing: WOTI-1.S30,T40S,R24E.DWG (TJA)

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SECTION 34, TOWNSHIP 40S, RANGE 23E

0 500 1000
SCALE FEET

Approximate Wetland Limits

RES - Residential

UPL - Undeveloped Upland

COM - Commercial

- Surface Water

Note: Wetland/surface water limits are approximate and determined by aerial interpretation, review of online databases, and/or roadside surveys using public right-of-ways. The only precise method for classifying/delineating wetlands/surface waters is through in-field verification and subject to field review/approval by applicable regulatory agencies.

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April 30, 2009 4:09:07 p.m.
Drawing: WOTI-1.S34,T40S,R23E.DWG (TJA)

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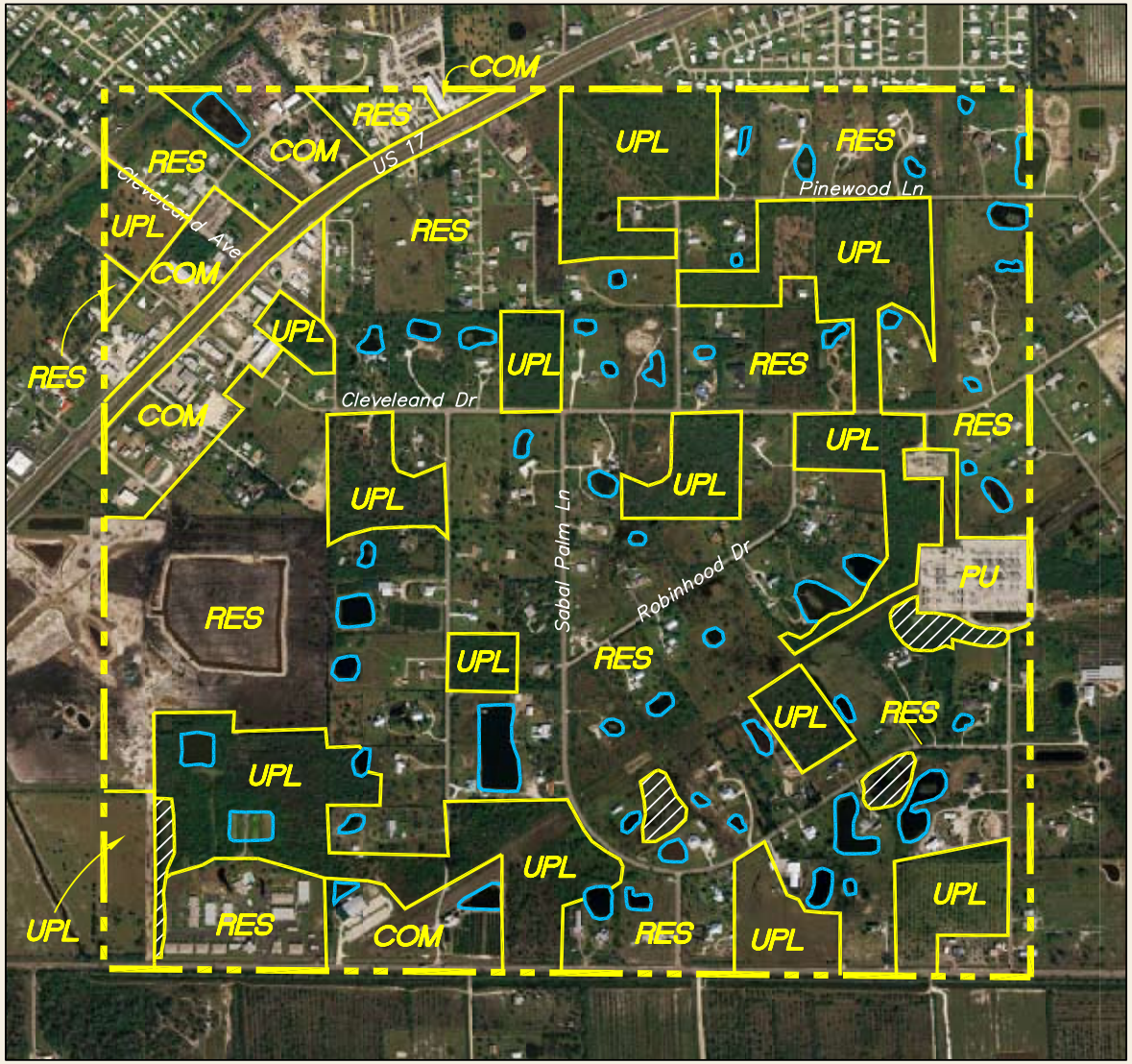
SECTION 35, TOWNSHIP 40S, RANGE 23E



0 500 1000
SCALE FEET

Approximate Wetland Limits

RES - Residential

UPL - Undeveloped Upland

COM - Commercial

PU - Public Utilities

- Surface Water

Note: Wetland/surface water limits are approximate and determined by aerial interpretation, review of online databases, and/or roadside surveys using public right-of-ways. The only precise method for classifying/delineating wetlands/surface waters is through in-field verification and subject to field review/approval by applicable regulatory agencies.

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April 30, 2009 4:10:22 p.m.
Drawing: WOTI-1.S35,T40S,R23E.DWG (TJA)

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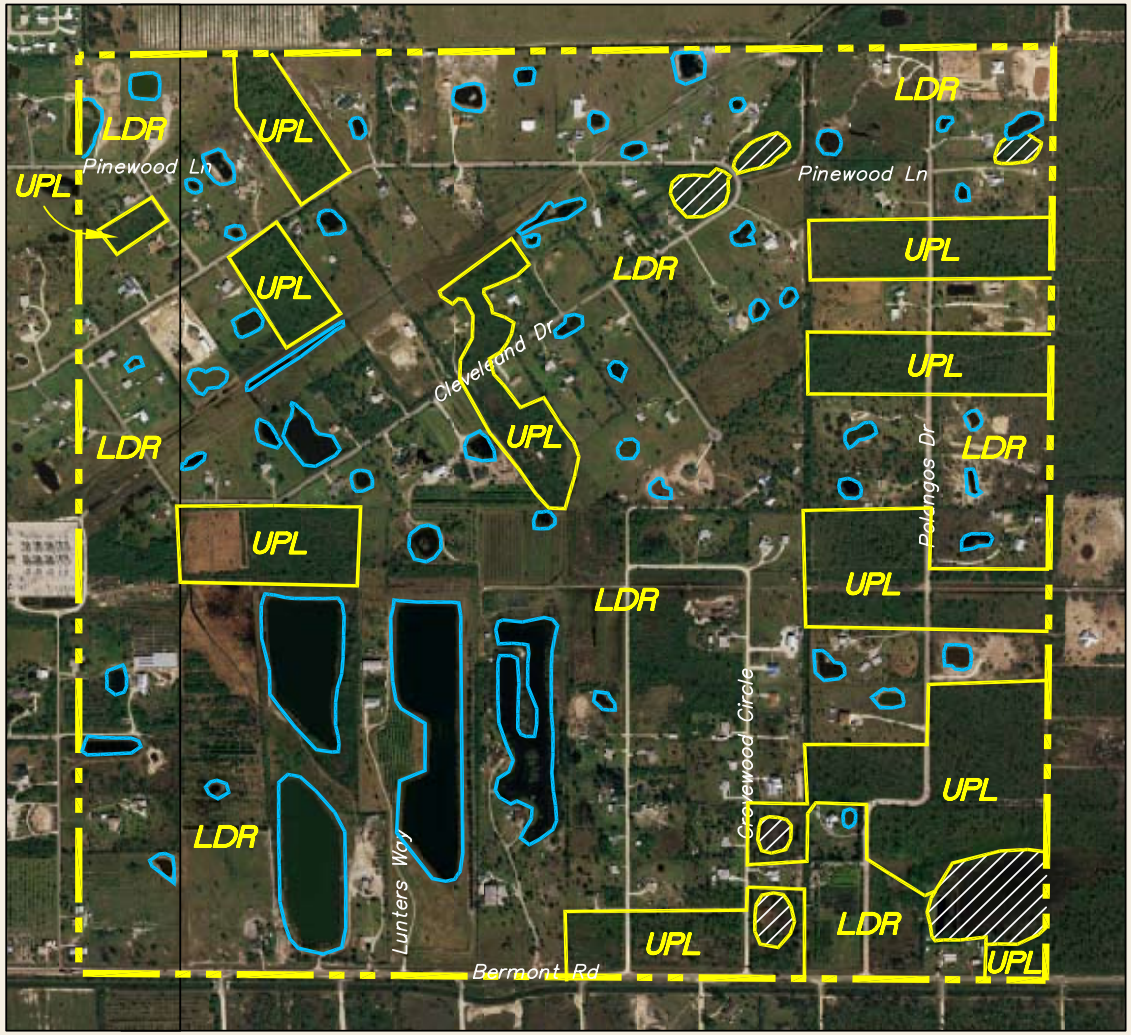
SECTION 36, TOWNSHIP 40S, RANGE 23E



0 500 1000
SCALE FEET

Approximate Wetland Limits

LDR - Low Density Residential

UPL - Undeveloped Upland

- Surface Water

Note: Wetland/surface water limits are approximate and determined by aerial interpretation, review of online databases, and/or roadside surveys using public right-of-ways. The only precise method for classifying/delineating wetlands/surface waters is through in-field verification and subject to field review/approval by applicable regulatory agencies.

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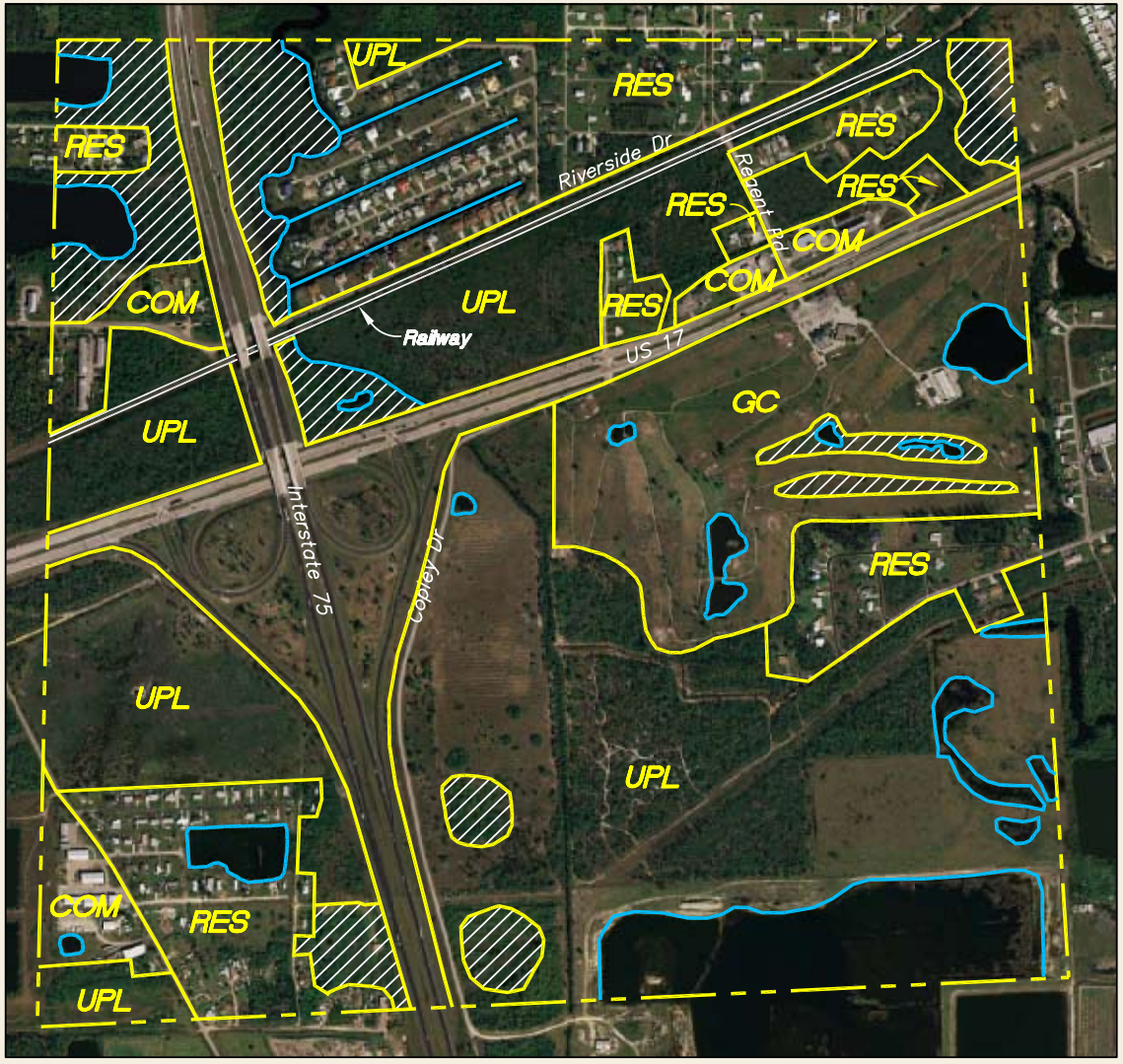
April 30, 2009 4:12:30 p.m.
Drawing: WOTI-1.S36,T40S,R23E.DWG (TJA)

SECTION 4, TOWNSHIP 41S, RANGE 23E



0 500 1000
SCALE FEET

Approximate Wetland Limits

RES - Residential

UPL - Undeveloped Upland

COM - Commercial

GC - Golf Course

- Surface Water

Note: Wetland/surface water limits are approximate and determined by aerial interpretation, review of online databases, and/or roadside surveys using public right-of-ways. The only precise method for classifying/delineating wetlands/surface waters is through in-field verification and subject to field review/approval by applicable regulatory agencies.

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April 30, 2009 4:17:59 p.m.
Drawing: WOTI-1.S4,T41S,R23E.DWG (TJA)

SECTION 3, TOWNSHIP 41S, RANGE 23E

0 500 1000
SCALE FEET

Approximate Wetland Limits

RES - Residential

UPL - Undeveloped Upland

COM - Commercial

- Surface Water

Note: Wetland/surface water limits are approximate and determined by aerial interpretation, review of online databases, and/or roadside surveys using public right-of-ways. The only precise method for classifying/delineating wetlands/surface waters is through in-field verification and subject to field review/approval by applicable regulatory agencies.

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April 30, 2009 4:15:41 p.m.
Drawing: WOTI-1.S3,T41S,R23E.DWG (TJA)

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