IN THE FOURTH JUDICIAL
CIRCUIT COURT IN AND FOR
NASSAU COUNTY, FLORIDA

RAYONIER INC. and
RAYDIENT LLC,

Plaintiffs,

vs.

Case No. 2019-CA-000051
Division: A

MICHAEL MULLIN and
NASSAU COUNTY, a
political subdivision of
the State of Florida,

Defendants.

_____/

SECOND AMENDED COMPLAINT

Plaintiffs Rayonier Inc. and Raydient LLC (f/k/a TerraPointe LLC, collectively "Rayonier"), by and through their undersigned attorneys, file this Second Amended Complaint against Defendants Michael S. Mullin ("Mullin") and Nassau County ("County"), and state as follows:

INTRODUCTION

By switching sides and representing interests directly adverse to his former client, Mullin has violated and continues to violate a lawyer's most fundamental obligation - the duty of loyalty. Mullin represented Rayonier for approximately eight years, conceiving the strategy to secure fundamental land-use approvals for a 24,000 acre real estate development that would take decades to build out—a master-planned development project known as the East Nassau Community Planning Area ("ENCPA"). During that representation, Mullin negotiated a framework on Rayonier's behalf that, among other things, relied on the fundamental premise that

Rayonier's recreational impact mitigation requirement was limited to donating land to the County. Rayonier formulated the plans for its project on this framework and, with Mullin's help and advice, secured the County's approval of a detailed specific area plan that only required Rayonier to donate lands to the County.

Mullin left his law firm to become County Attorney for the County and, despite owing Rayonier a fiduciary duty of loyalty, Mullin has represented and continues to represent the County adversely to Rayonier on matters that are directly related to the work he performed for Rayonier regarding the ENCPA. To satisfy the political desires of the Board of County Commissioners – the body that hired him as County Attorney and would soon give him a second position as County Manager at a combined salary in excess of $270,000 – Mullin rejected the positions he previously took on Rayonier's behalf and, contrary to the very legal standards he negotiated, argued that Rayonier had to spend millions to construct and maintain recreational facilities to satisfy the County's requirements. Though his policy was directly at odds with his successful efforts for Rayonier and then-existing County requirements, Mullin rejected Rayonier's second detailed specific area plan ("DSAP") application. He has effectively halted the forward progress of future DSAP approvals and placed a cloud over the forward progress of the project unless Rayonier agrees to the County's demands for millions of dollars of additional spending.

Mullin, who negotiated the applicable standards for Rayonier, knew that the County's position contradicted the County's regulations, standards and policies and his prior work for Rayonier, yet, he took these positions with the knowledge and intention of causing massive harm to Rayonier. When others within the County's staff expressed contradictory views as to the requirements applicable to Rayonier, Mullin shut them down and then lied to the Board of

County Commissioners about the position taken by County staff. When inconsistencies between the factual record and Mullin's invented narrative concerning the requirements of a "public/private partnership" were raised by the County's public relations consultant – a consultant hired at Mullin's request to spread Mullin's views to the general public – those inconsistencies were ignored to mislead the general public. Mullin undertook these acts of deception with the intention of harming Rayonier so that he could protect his job as County Attorney, his job as County Manager, and the significant benefits these positions afforded him.

Mullin's conduct represents a breach of his fiduciary duty of loyalty to Rayonier through his conflicting representation of the County as to the same or a substantially related matter to his prior work for Rayonier regarding the ENCPA. Mullin has also used confidential information learned during his representation of Rayonier against Rayonier to try to force Rayonier to capitulate to the County's demands. Mullin's many breaches have been undertaken at the insistence of the County, which, despite their knowledge of Mullin's preexisting duties, have instructed him to breach those obligations to avoid the political ramifications of the County's obligation to fund, build and maintain recreational facilities for its citizens. Despite many efforts - both informal and formal - to convince him to stop, Mullin persists, leaving Rayonier to seek injunctive relief to force Mullin to cease the conflicting representation and direct relief against the County for aiding and abetting Mullin's breach of fiduciary duty.

PARTIES, JURISDICTION AND VENUE

1. This is an action for injunctive relief as to Mullin individually and as to the County.

2. Rayonier Inc. is a North Carolina corporation with its principal place of business in Wildlight, Florida.

3. Raydient LLC is a Delaware limited liability company with its principal place of business in Wildlight, Florida.

4. Mullin is, on information and belief, a citizen of Florida and a resident of Nassau County, Florida.

5. County is a political subdivision of the State of Florida.

6. This Court has jurisdiction over this dispute pursuant to Fla. Stat. § 26.012(2) and (3).

7. Venue is proper in this Court pursuant to Fla. Stat. § 47.011 on the grounds that: (1) Mullin is subject to personal jurisdiction in Nassau County, (2) Mullin is a resident of Nassau County, and (3) substantially all of the events giving rise to this action took place in Nassau County.

FACTS TO SUPPORT THE CAUSES OF ACTION

I. *Mullin's Representation of Rayonier Regarding the ENCPA*

8. Upon information and belief, at all material times, Mullin has been an attorney licensed to practice law in the State of Florida and a member of the Florida Bar. From 2007 until early 2015, Mullin was engaged in private practice with the law firm of Rogers Towers, P.A. in Jacksonville, Florida. Mullin primarily worked from Rogers Towers' Amelia Island office.

9. While an attorney at Rogers Towers, P.A., Mullin represented Rayonier in connection with a large-scale, master-planned development project within what became the 24,000 acre ENCPA. Rayonier retained Mullin to represent it in connection with all aspects of the County approval and regulatory process relating to the ENCPA.

10. For almost eight years, Mullin served as Rayonier's lead counsel in Rayonier's efforts to obtain the necessary approvals to develop the 24,000 acres of land in the ENCPA.

Mullin developed a strategy based on Rayonier's economic and development objectives by which the County would approve the necessary land use applications that would set forth the controlling ENCPA standards, development conditions and entitlements for a project that would take decades to complete and would ultimately transform the County's economy. In the course and scope of that representation, Mullin worked directly with Rayonier's senior managers and executives, who were not attorneys, without the direct involvement of Rayonier's in-house attorneys.

11. Mullin's strategy, which Rayonier adopted, was comprehensive in its approach: rather than secure entitlements and establish development conditions on a parcel-by-parcel piecemeal basis over time – a method that would subject the project to the vagaries of the political environment and regulatory environment at the time each new parcel came up for consideration – Mullin proposed that Rayonier secure a large-scale, long-term master plan land use approval that would control the project in its entirety. By obtaining the land use approvals at the outset, all involved parties would understand the applicable standards and development conditions to enable the ENCPA development to proceed in a predictable and efficient manner.

12. Beginning during the initial meetings between Mullin and Rayonier regarding the concept of a master-planned development with standards and requirements that would govern the entire life of the project, Mullin was made privy to every aspect of Rayonier's plan so that he could develop a legal strategy for securing the necessary approvals for the project. This included all of Rayonier's financial projections and assumptions that were necessary to make the project financially feasible.

13. Mullin's first step as Rayonier's counsel was the establishment of the ENCPA and the incorporation of development conditions and standards and entitlements into the County's

Comprehensive Plan to direct development within the ENCPA. The incorporation of the ENCPA in the County's Comprehensive Plan brought the entirety of the project's 24,000 acres under one long-term, large-scale land use master plan, commonly referred to as the ENCPA Sector Plan.

14. For over a year and a half, Mullin and James Sellen, an urban planner engaged by Rayonier in connection with the development of the master-planned concept, met with Rayonier's team to develop Rayonier's approach. Once the ENCPA was established, the Comprehensive Plan would ultimately set the development requirements for the ENCPA through at least 2030, so Rayonier, with Mullin's help, worked to influence the standards ultimately adopted by County in the Comprehensive Plan, including the site-specific policies related to the ENCPA Sector Plan, to be favorable to Rayonier's interests.

15. Rayonier desired, to the greatest extent possible, to satisfy its obligations through land donations, including provisions relating to land donation in satisfaction of Rayonier's recreational impact mitigation requirements. Mullin participated in numerous meetings with Rayonier personnel to provide counsel and advice concerning Rayonier's approach to County's regulatory environment and then served as the primary point of interaction with County staff and elected officials, leading numerous meetings to advance Rayonier's interests in connection with the revisions to the Comprehensive Plan.

16. Mullin himself has admitted publicly that there were discussions between Rayonier and the County regarding recreational facilities during the 2013-2014 timeframe before he became employed by the County. As Rayonier's point person for relations with the County, Mullin represented Rayonier's interests during those discussions.

17. Mullin represented Rayonier to secure the adoption of the ENCPA, which the County describes as a plan that "allows for large-scale planning that recognizes the integral relationships between transportation, land use and urban design." Development within the ENCPA is intended to, among other things, "[c]reate a connected network of community amenities consisting of public parks, multi-use pathways, schools and playfields…" [ENCPA Master Land Use Plan (the "MLU") at 220, attached at **Exhibit 1**]. The MLU sets forth the entitlements, development conditions and standards for development within the ENCPA, addressing all aspects of the development, including parks and recreational spaces.

18. The MLU requires the inclusion of "common open spaces" – a term that encompasses parks and recreation – in all future development plans, and it sets forth the requirements for parks and recreation throughout the ENCPA's development guidelines and standards for the various ENCPA land use sub-categories. [*See id.* at 226 *et seq.*] The MLU would include a Conservation and Habitat Network ("CHN") that would be available to residents of the County "…for a variety of passive and nature-oriented recreational uses including, but not limited to, canoeing/kayaking, equestrian activities, walking/hiking and bicycle trails…" [*Id.*] The CHN would be available for a wide range of recreational activities for the benefit of the County's citizens.

19. Within the guidelines for Residential Neighborhoods, the MLU requires neighborhood parks, which are generally private and intended for the residents, and community or regional parks that serve the general public and should be near planned public schools. [*See id.* at 233]. Mullin represented Rayonier in all aspects of the development of the ENCPA and the MLU, helping develop strategy with the company's executives and consultants to meet these requirements within the CHN and the donation of additional lands as might be required.

20. As planned, Mullin and his law firm represented Rayonier during the County's drafting and adoption of the Nassau County 2030 Comprehensive Plan (the "Comp Plan"), which was a holistic, statutorily mandated update to the prior Comprehensive Plan. One of the reasons for the update was to assist the County in planning for the future and, given the size of Rayonier's land holdings within the County, long-term planning for the ultimate development of the ENCPA lands had to be considered. Mullin and his law firm represented Rayonier in the development of the MLU and in negotiations with the County to incorporate and ultimately adopt the MLU within the Comp Plan.

21. As part of Mullin's counsel on ENCPA matters, he also advised Rayonier as to the Comp Plan update and its impacts on the ENCPA development. His advice and counsel during the MLU and Comp Plan approval process was instrumental to the ENCPA development conditions and mitigation framework applicable to the project and, more importantly, Rayonier's understanding of the relevant development mitigation requirements and how they would impact the project going forward.

22. The Comp Plan sets forth the County's objectives for providing adequate recreational facilities for its citizens. [*See* Nassau County 2030 Comprehensive Plan Capital Improvements Element (the "Comp Plan CI"), attached as **Exhibit 2**]. The Comp Plan CI establishes Level of Service standards for various kinds of public facilities based on population and other data and requires the County to maintain these standards. [*See id.*]

23. The County primarily maintains these standards by reviewing development applications to determine if the project will cause the Level of Service standard to be maintained or fail. For example, if a failure in community or regional park Level of Service occurs due to a proposed residential development or portion thereof, the developer may donate (as applicable)

community and regional park land to the County to cure the failure and allow the proposed development to proceed. The County is responsible for funding, constructing and maintaining community and regional park facilities and its funding source is derived from recreation and park impact fees, and ad valorem taxes and other funding sources (e.g. grants). The ability to donate land to meet recreational impact mitigation requirements was part and parcel of Rayonier's strategy and Mullin represented Rayonier to accomplish this objective.

24. The County has generally failed to provide adequate recreational land and facilities to meet the needs of its population. Notwithstanding that historical failure, the prime objective of the Comp Plan relative to recreational spaces states that "[t]he County shall acquire, develop and efficiently maintain adequate community and regional recreation facilities to achieve and maintain the adopted Level of Service (LOS) in order to meet projected recreational needs through the year 2030." [*See* Nassau County 2030 Comprehensive Plan Recreation and Open Space Element (the "Comp Plan ROSE"), attached as **Exhibit 3**]. The Comp Plan ROSE puts the burden on Nassau County to fund, construct, and maintain community and regional parks and recreational spaces in order to meet the citizens' needs and sets out the means and methods to satisfy this requirement.

25. Mullin represented Rayonier's interests throughout the passage of the Comp Plan, working with the company to advise it as to the County's recreation and other public facility standards for the development of the ENCPA and to ensure that the project would meet the County's standards and be economically viable. While the Comp Plan is applicable to all projects in Nassau County, the MLU and the ENCPA Sector Plan, which were both subsumed within the Comp Plan, were specifically negotiated and applied only to Rayonier's project. Rayonier conformed the modeling of its project accordingly, relying on Mullin's understanding,

interpretation and advice to Rayonier as to the County's recreation and other public facility standards contained in the Comp Plan.

26. Stated differently, the objectives for Mullin's work on the Comp Plan resulted from Rayonier's economic needs for the project and, once those goals were achieved, Rayonier revised its projections based on Mullin's legal advice concerning the meaning and requirements of the standards. Had the County refused to implement recreation standards that met Rayonier's economic needs, Mullin's efforts would have been directed to secure different countywide standards or standards for the ENCPA that differed from those that applied elsewhere. But because Mullin successfully negotiated standards that allowed developers to meet their recreational mitigation requirements exclusively through the donation of land, Rayonier moved on and Mullin turned his efforts towards advising Rayonier how to meet the County's requirements.

27. Mullin's advice as to public facilities provided a very necessary, predictable and discernable understanding for Rayonier as to recreation impact mitigation requirements for the ENCPA. Such predictability is essential in developing a large-scale, long-term master planned community like the ENCPA, as it enables developers and landowners to plan the project with the requisite mitigation requirements, which assists in enabling essential development and financial planning and prevents piecemeal development and the uncertainty of the timing, costs, location and other factors related to development mitigation requirements. Mullin knew this predictability was and would be key in Rayonier commencing development within the ENCPA as this development was a drastic departure from Rayonier's core operation as a timber company. Predictability, viability and economic feasibility were essential to Rayonier's long-term development plan. Mullin, through his legal counsel, provided the framework, entitlements and

development conditions that Rayonier required in order to progress the ENCPA project. Without Mullin's representation, advocacy, and his ability to draft, negotiate and obtain the necessary ENCPA approvals (e.g. MLU, Comp Plan amendments, DSAP, etc.), the ENCPA would not have been successful.

28. With the passage of the Comp Plan and the MLU, Mullin's work proceeded to the development and approval of the East Nassau Employment Center Detailed Specific Area Plan ("DSAP 1"). DSAP 1 specified the development conditions for the development of almost twenty percent of the total ENCPA land area, a 4,202 acre area along Highway A1A that includes the project known as Wildlight.

29. DSAP 1 identified the initial segments of the Conservation Habitat Network ("CHN"), which would consist of approximately 1,700 acres within DSAP 1. At buildout of the ENCPA project, approximately 12,000 acres (or half of the ENCPA property) will be protected as a regional CHN, which will form interconnected wetlands, uplands and wildlife habitat and provided much needed open space and regional park lands for the County. Based on Mullin's advice concerning the requirements of the Comp Plan and the MLU, Rayonier submitted its application which proposed to meet all of Rayonier's recreational requirements for DSAP 1 through the donation of the CHN lands. [Original DSAP 1 Application, attached as **Exhibit 4**]. Mullin developed this approach with Dan Camp, based on confidential discussions regarding Rayonier's objectives for the DSAP 1 area and the legal requirements that Mullin created on behalf of Rayonier and the greater ENCPA.

30. Negotiations with County followed, with Mullin continuing to confer with Rayonier's team to develop strategies that met the Comp Plan's requirements and Rayonier's objectives. Mullin represented Rayonier throughout this process.

31. The County ultimately approved DSAP 1, allowing the CHN to satisfy Rayonier's park mitigation requirements. The DSAP 1 Development order also requires that "…a community park of approximately 20 acres is reserved within the Central Planning Area for conveyance to the County…" in satisfaction of the Comp Plan ROSE and CI requirements. [*See* Ordinance No. 2013-11 (the "DSAP 1 Development Order") at 20, a copy of which is attached as **Exhibit 5**]. The DSAP 1 Development Order also provides for neighborhood parks as required by the MLU. *See id*. If the County later determined to implement an impact fee (the only funding mechanism contemplated for public improvements within the ENCPA by the applicable County regulations), the DSAP 1 Development Order required the inclusion of a credit to Rayonier for "any and all land or public facilities" required by the DSAP 1 Development Order. [*See id.*] Accordingly, with Mullin's help and in furtherance of his representation of Rayonier, the County accepted and approved a plan that would satisfy the development conditions for parks of the MLU through donated lands alone, as contemplated by the Comp Plan.

32. Importantly, the DSAP 1 Development Order recognized that, at build out, the public facilities within DSAP 1 would be of significant benefit to the County as a whole. Specifically, the DSAP 1 Development Order states that:

> Nassau County is currently deficient in recreation and open space facilities. The proposed DSAP 5 year and build-out programs are estimated to increase demand by approximately 12 acres and 141 acres, respectively. This demand is being met within the DSAP through the provision of significant open space and an extensive multi-use trail, bike lanes and/or sidewalk system which includes 1,700 acres of open space in the form of interconnected wetlands, surface waters, and upland preserves forming a CHN. The significant open space system provided by the DSAP is capable of not only accommodating DSAP impacts, but helping the County address a County-wide deficiency in regional parks through 2030.

[*See id.*] Summed up, Rayonier, represented by Mullin, agreed to dedicate 1,700 acres in the CHN (including over 20 miles of multi-use trails) to meet its park mitigation requirements and

20 acres in the planned community park to public uses, well in excess of the 141 acres Rayonier was obligated to provide by the MLU. The excess 1,579 acres – land Rayonier was not obligated to dedicate to public use – would help remediate the County's overall failure to provide adequate recreational facilities for its citizens. Stated differently, the County gained 1,579 acres of land inside the ENCPA that could help it meet its open space and recreational requirements without any expense to the citizens outside the ENCPA. More importantly, DSAP 1 was approved with the recognition that Rayonier more than met its mitigation requirement through a simple land donation—without any obligation to build or fund public facilities or other improvements.

33. Mullin and his law firm also represented Rayonier in connection with the ENCPA Mobility Fee Agreement, which addressed the construction of transportation improvements (e.g. roads, multi-use trails) within the ENCPA. Rayonier and the County entered a Mobility Fee Agreement, which was subsequently amended, whereby in excess of $138 million in transportation improvements would be provided to mitigate transportation impacts from the ENCPA project, funded by ENCPA developers and landowners.

34. Thus, Mullin indisputably represented Rayonier in connection with:

a) the creation of the ENCPA, including the development of the overall strategy and the passage of the necessary implementing legislation;

b) the agreement negotiated with the County as to the public facility requirements specific to ENCPA developers, which is solely to donate lands and for builders to pay impact fees to maintain the recreation Level of Service standards;

c) DSAP 1 and the passage of the DSAP 1 Development Order, which allowed Rayonier to donate lands in full satisfaction of its obligations under the Comp Plan and yielded a massive and unnecessary surplus of recreational lands that would address the County's failure to otherwise provide for its citizens;

d) the Mobility Fee Agreement that would result in the provision of desperately needed roadways within the County, easing overall traffic congestion and dramatically improving the County's public safety and mobility.

35. To say that Mullin represented Rayonier throughout the development of the most significant site-specific legislation in the County's recent history would not be an overstatement.

Mullin's work established a structure for development that would correct the County's historical issues, create economically efficient means for the creation of new public recreational resources and provide Rayonier with certainty for the decades that the ENCPA would require to reach full development. For these accomplishments, Rayonier paid Mullin and his firm hundreds of thousands of dollars in the course of their eight-year engagement, with Mullin personally billing Rayonier for approximately one-half million dollars for his work.

II. *Mullin Switches Sides and Represents the County Against Rayonier*

36. With the unfortunate passing of David Hallman, Mullin resigned from his firm and returned to the County. Rayonier reasonably believed that, in light of the purpose and scope of the structures created by Mullin during his time as Rayonier's counsel and Mullin's own duty of loyalty to his former client and his professional ethical obligations, Mullin's transition back into service of the County would not present any issues. Rayonier was wrong, and Mullin took numerous conflicting and adverse actions that have caused Rayonier extensive harm and significant monetary losses as a result of his breaches of fiduciary duty.

A. The Stewardship District

37. In 2017, the Florida Legislature established the East Nassau Stewardship District (the "Stewardship District") which encompasses the ENCPA. [*See* House Bill 1075, a copy of which is attached as **Exhibit 6**]. A stewardship district is a limited purpose, independent special district form of local government that is granted certain general and special purposes within a given area, akin to a homeowner's association. The Stewardship District is overlaid onto the area comprising the 24,000 acres of the ENCPA.

38. The Stewardship District has a range of powers, but it is not under any particular obligation to exercise them. Section 7(i) grants the Stewardship District the power "..[t]o

provide public parks and public facilities for indoor and outdoor recreational, cultural, and educational uses," but the Stewardship District – an entity that holds no development rights and is not burdened by mitigation obligations – is not obligated to do so. No legislation, contract or written obligation compels the Stewardship District to exercise this power or, for that matter, any of the other powers granted in Section 7.

39. Nevertheless, as explained below, Mullin, while representing the County, now takes the position that Rayonier, through the Stewardship District, is obligated to construct, maintain and fund public facilities on the land donated by Rayonier pursuant to its recreational impact mitigation requirement under the ENCPA. This position—which is contrary to the plain language of the legislation establishing the Stewardship District and the requirements of the ENCPA itself— seeks to ultimately result in Rayonier not only donating the land, but building and funding the public facilities. This position is directly adverse to Mullin's representation of Rayonier concerning the recreational mitigation requirements applicable to the ENCPA and, if successful, would undo Mullin's work in the negotiation and adoption of the ENCPA Sector Plan, the MLU and DSAP 1.

40. Rayonier currently owns essentially all of the 24,000 acres within the ENCPA. By arguing that the Stewardship District must raise the funds from the "landowners" within the ENCPA to fund the entirety of the building and maintenance of any recreational improvements within the ENCPA, Mullin is directly undermining the regulatory structure of the MLU and the relevant Comp Plan policies that apply specifically to the ENCPA, all of which Mullin negotiated on Rayonier's behalf. In other words, (1) although Mullin is aware that Rayonier's development approach regarding the ENCPA relied in part on the premise that Rayonier's mitigation obligation was limited to donating land, with the County later building and

maintaining the public facilities itself, and (2) although he was instrumental in codifying that position for Rayonier and secured approvals in accordance with that approach, Mullin is now representing a client that takes the position that Rayonier— either directly or indirectly via the Stewardship District—is responsible for not only donation, but also funding, building and maintaining of the public facilities for the benefit of County.

B. DSAP 2

41. On March 16, 2016, Rayonier submitted an application to the County for the Chester Road Detailed Specific Area Plan ("DSAP 2") on generally the same terms and conditions as DSAP 1, which had been approved without incident while Mullin was representing Rayonier. [*See* East Nassau County Planning Area Detailed Specific Area Plan: Chester Road, attached as **Exhibit 7**]. Rayonier took steps to move ahead with DSAP 2, until Commissioner Pat Edwards, who was running for reelection against a "no growth" opponent, asked Rayonier to delay the approval of DSAP 2 until after the November elections. Rayonier agreed and delayed its plans.

42. As with the DSAP 1 application, Rayonier proposed to meet its recreational mitigation requirements with lands contained within the CHN elements of DSAP 2. Per the Comprehensive Plan, DSAP 2 would, at build out, require 60.9 acres of regional and community parks. The DSAP 2 application proposed to meet these requirements in the same way as DSAP 1 proposed – through land donations within the CHN:

> The proposed DSAP land use plan includes approximately 553.6 acres of open space in the form of interconnected wetlands, surface waters and upland preserves forming a Conservation Habitat Network (CHN). This open space system is intended to serve both residents and employees of the Chester Road DSAP as well as the remainder of the County. The significant open space system provided by the DSAP is capable of not only accommodating DSAP impacts, but also addressing a County wide deficiency in regional parks through 2030.

[Appendix C to DSAP 2 Application at C-11, a copy of which is attached as **Exhibit 8**]. As was the case with DSAP 1, DSAP 2 exceeded the requirement of the Comp Plan, this time by 492.7 acres.

43. After the elections, DSAP 2 began to be processed and political pressure began to increase from County residents for the County to upgrade and provide additional community and regional park facilities. In response, Commissioner Edwards demanded additional development exactions from Rayonier and the Stewardship District.

44. While land contribution satisfied Rayonier's obligations with regard to DSAP 1, the County now represented by Mullin, took the position that Rayonier could not simply donate land, but had to contribute further resources, particularly with regards to the Yulee Sports Complex which had become a pet project for Commissioner Edwards. The County's demands were without any legal basis and were an attempt at a retroactive exaction to cure the County's existing park deficiencies. Notwithstanding the fact that these demands attempted to illegally modify the County park regulations applicable to the ENCPA that Mullin helped secure while representing Rayonier and in light of the fact that the County made it plain that DSAP 2 would not be approved unless Rayonier capitulated, Rayonier made proposals aimed at satisfying the County's demands. Yet, the County consistently sought to retrade the transaction; when Rayonier made its counters, the County would demand more and greater concessions from Rayonier. .

45. During the negotiations over DSAP 2, Mullin met with Rayonier personnel to discuss DSAP 2's status. At a meeting in April 2017, Mullin told Rayonier's representatives that no approval would be forthcoming for DSAP 2 unless Rayonier fully funded the construction of

major additions and improvements to the Yulee Sports Complex at a cost of approximately $13-15 million.

46. Mullin's demand was contrary to the structure of the ENCPA, the MLU, the Comp Plan and the approach Mullin successfully negotiated on Rayonier's behalf as to DSAP 1, and the assumptions and interpretation that Mullin knew Rayonier required in order for the development to be financially feasible when he negotiated the framework in the first place. Mullin, as the chief legal officer for the County, not only took a position directly contrary to then-existing law to extract additional (and arguably illegal) exactions from Rayonier, he switched sides and began working against his former client on matters squarely within the scope of his prior representation of Rayonier. By rejecting the notion that Rayonier could meet its mitigation responsibilities through land donations – the approach Mullin successfully used concerning DSAP 1 and consistent with the law Mullin was instrumental in obtaining approval – Mullin began to undermine a key element of his prior representation of Rayonier.[1] Ever since that meeting, the County, with Mullin's encouragement, has consistently maintained the position that Rayonier is now somehow obligated to fund all recreational improvements within the ENCPA.

47. Discussions concerning DSAP 2 continued to deteriorate. By the end, the County demanded exactions (in excess of land donations) of up to $15 million as a condition of approval. Rayonier withdrew the application for DSAP 2 because of the County's continuing

[1] Again, the MLU provided that approximately half of the ENCPA property—all of which was then owned by Rayonier—would be donated to the CHN as recreational space. The notion that the donation of 12,000 acres of land to the County would meet Rayonier's obligations was deeply embedded in the planning for the project and Mullin's counsel was critical to this approach.

demands—losing out on a lucrative development sale that cost Rayonier tens of millions and has delayed the further development of the ENCPA, preventing Rayonier from selling other lands.

48. Prior to the withdrawal of the application for DSAP 2, counsel for Rayonier polled County staff assembled for the negotiation as to whether Raydient's draft of DSAP 2 met its obligations under the County's Comp Plan, ordinances and Rayonier's existing development approvals, despite the absence of any funding of recreation facilities by Raydient. Every County staff member present responded in the affirmative other than Mullin, who abruptly terminated further discussion. When questioned by counsel for Raydient as to the source of the purported obligation for Raydient to fund all costs for the construction and maintenance of recreation facilities in the ENCPA, Mullin demurred and merely responded that it was the impression of the members of the BOCC that Raydient had agreed to fund those improvements.

49. Indeed, Mullin has perpetuated this myth, even to the point of misrepresenting facts to the County. Shanea Stankiewicz, the former County Manager, recently testified by deposition that Mullin repeatedly misrepresented to the Nassau County Board of County Commissioners ("BOCC") that staff agreed with his argument that the "public/private partnership" excuses the County from any obligation to fund recreational facilities since, according to Mullin, the Stewardship District carries all responsibility for funding the public facilities that are at the center of this dispute. In reality, multiple staff members did not agree that this was the Stewardship District's obligation at all. Yet Mullin intentionally and in bad faith mispresented to the BOCC that the staff was in agreement with his interpretation, misleading the BOCC in order to continue the battle against Mullin's former client. This was done for the purpose of harming Rayonier and with Mullin's full knowledge that it was contrary to law (including law specifically authored by Mullin at Rayonier's request) and facts known to Mullin,

Rayonier's basic objectives and confidential financial assumptions he was privy to over an almost eight year representation.

50. Subsequently, Rayonier attempted to negotiate a resolution with the County, but the County made it plain that it believed that Rayonier, the Stewardship District and any developers would have to bear all costs associated with recreational facilities within the ENCPA.

C. The MOU to Renegotiate the Terms of the ENCPA

51. On November 15, 2017, Mullin sent a letter to Rayonier attaching a "draft agreement." [*See* Letter from Michael S. Mullin to Charles Adams dated November 15, 2017, attached as **Exhibit 9**]. Both the letter and the attachment referred repeatedly to the notion of a "public/private partnership" between the County and Rayonier; the recitals of the draft Agreement open with the statement that "the ENCPA Sector Plan was planned as a public/private partnership" and the letter asserts that Nassau County wants "…to move forward with the public/private partnership and we believe this agreement accomplishes that goal." Thus, Mullin, who represented Rayonier as the "private partner" in connection with the development of the ENCPA, now represented Nassau County, the "public partner," in its effort to amend the "partnership agreement" (the ENCPA, MLU, DSAP 1 development order, and all future development applications) through the draft agreement, which would shift the entire burden of funding recreation facilities from the County to Rayonier.

52. The reference to a "public/private partnership" is important, because it is a consistently moving target that Mullin uses to conceal his duplicity and to attack his former client. Mullin's November 15 letter expressly connects this concept to the ENCPA, which Mullin helped develop on Rayonier's behalf. The members of the BOCC have also been plain that the "public/private partnership" refers to the relationship with Rayonier:

Mr. Edwards: Thank you. One other question I'll just throw this to the Board as chairman. As chairman of the board twice during this period – Mr. Leeper, I know you've served at least once or twice as Commissioner. Have any of you-all ever spoken with a board member of the Stewardship since its inception?
Mr. Kelley: No, sir.
Mr. Spicer: No, sir.
Mr. Edwards: Have any of you-all agreed to a partnership with them?
Mr. Kelley: No, sir.
Mr. Spicer: No.
Mr. Edwards: The only partnership I'm aware of is our Partnership through the ENCPA and Raydient. I've never spoken with any who is a Stewardship commissioner or anything else.[2]

[Transcript of Nassau County Board of Commissioners Meeting dated February 16, 2018 at 28, a true and correct copy of which is attached as **Exhibit 10**]. Given Mullin's express understanding as reflected in the November 15 letter and the BOCC's statements as to what is meant by the "public/private partnership," there can be no doubt that the term refers to the ENCPA.

53. Mullin's proposal was entirely adverse to Rayonier's interests and represented a renegotiation of the structure of the ENCPA. According to Mullin's draft, "[t]he public recreation improvements required within the ENCPA and the Stewardship District shall be the financial responsibility of [Rayonier] and its successors, the Stewardship District and Developers within the ENCPA and the Stewardship District." [**Exhibit 9**]. The County could – but would not be required to – contribute impact fees collected in the county "…for supplemental funding of public recreation." [*Id.*] Finally and importantly, Mullin made it clear that the County would not consider any further applications within the ENCPA until Rayonier, the Stewardship District and the County executed an agreement on public facilities within the ENCPA. Unless Rayonier (a) agreed to pay for ***all*** public recreation improvements in the ENCPA and (b) agreed to

[2] The fact that the Commissioners acknowledge that their relationship was with Rayonier and not the Stewardship District is significant. For the purposes of the development of the ENCPA, the Commissioners plainly viewed Rayonier as the pertinent party and/or one in the same as the Stewardship District.

whatever facilities the County might demand, development within the ENCPA would come to a stop.

54. Mullin's proposed agreement sought to formalize, as an invalid amendment to the ENCPA, the demand he made during his meeting with Rayonier personnel in April 2017 during the negotiations over DSAP 2. Mullin, who masterminded the creation of the ENCPA as Rayonier's counsel, knew that the MOU was entirely at odds with Rayonier's understanding and position while he was Rayonier's attorney representing it in connection with the development of the ENCPA and the terms of the Comp Plan Mullin negotiated on Rayonier's behalf. In other words, Mullin had not only changed sides to represent Rayonier's adverse party, but he was knowingly advancing a legal position directly contrary to the position he successfully advanced for Rayonier as Rayonier's counsel. And he did so knowing that his new position would financially impact Rayonier's ability to continue the project as envisioned and planned while he was Rayonier's attorney.

55. Rayonier ultimately rejected Mullin's effort to extort it into renegotiating the terms of the ENCPA, further preventing Rayonier from obtaining DSAP developmental approvals and advancing the project.

D. Mullin's Legislative Effort to Undermine the ENCPA

56. In February 2018, the County learned that Rayonier and a number of industry groups sponsored legislation that would codify common-law standards concerning local government's ability to impose impact fees on developers, would require mitigation requirements inside sector plans to be treated in the same manner as mitigation requirements outside of sector plans and impose deadlines on local governmental approval of DSAPs within sector plans (the "Clarification"). Though elements of the legislation were already the law of

Florida, the County vehemently opposed the Clarification because it would diminish local governments' ability to abuse the development process as the County had done with DSAP 2 and would weaken the Country's ability to extract exactions from Rayonier beyond the requirements of the MLU and the Comp Plan.

57. On February 25, 2018, Mullin decided to take the fight against Rayonier regarding the Clarification to the court of public opinion. [*See* Email from Michael Mullin to Pat Edwards, Daniel Leeper, George Spicer, Justin Taylor, Steve Kelley, Shanea Jones, Justin Stankiewicz, Taco Pope and Joyce Bradley dated February 25, 2018, a copy of which is attached as **Exhibit 11**]. Mullin advised that:

> We have been providing info. [sic] To callers about SB 324 and we have also noticed "social media" info. [sic] About SB 324 and reviewed info. "put out" by the other side. It is crucial, in my opinion to seek professional assistance to help with information and responses on social media and to have assistance in co-ordinating [sic] media responses. I have engaged, under my office, a professional, [sic] to accomplish that. The person will also scan social media and co-ordinate responses and research websites to insure the correct info. is being distributed. The cost are reasonable. I wanted to make you aware of this. If you have any questions, please call separately and donot [sic] respond to the group e-mail.

[*Id.*]

58. Mullin sent this e-mail subsequent to the engagement of Kristi Dosh, a local public relations specialist, who Mullin paid in excess of $5,000 to publish the anti-Rayonier narrative in various citizen groups on Facebook and to engage the local press. At Mullin's direction, Dosh prepared a question & answer document that purported to describe the issue of Rayonier's obligations regarding recreational facilities within the ENCPA. Among other things the document quoted a purported statement from Rayonier employee Dan Camp from a September 16, 2018 BOCC meeting based on a review of the video from that meeting. Dosh recently admitted in her deposition that the statement attributed to Camp was incomplete and that

she had commented on the draft to Mullin by stating that the attributed quote had failed to acknowledge that Camp had emphasized that the County was responsible for basic services (like the building and maintenance of public facilities) but that the landowners within the ENCPA would fund additional enhancements above the basic services to be provided. Camp's full statement was never provided to the public as Dosh recommended. Instead, Mullin directed the publication of the prior version, a version that misrepresented the true facts concerning Rayonier's position. Dosh, acting at Mullin's direction, broadly distributed the deceptive document and it remains posted on County's website, on a page entitled "BOCC Statement on Raydient/ENCPA." Mullin continued to push his false narrative regarding Rayonier's obligations under the ENCPA and directed the publication of an obviously misleading statement to the public.

59. Ultimately, Mullin testified before the Florida Senate Appropriates Committee on Finance and Tax in opposition to the Clarification on February 27, 2018. Mullin attacked the Clarification, claiming that it would "eviscerate" the legislation that created the Stewardship District. Mullin testified that the Clarification would cost the County between $25-$50 million dollars—dollars Mullin now wants Rayonier to pay—although Mullin offered no basis for any of his statements. Ultimately, despite the absence of any supporting facts and regardless of the fact that the Clarification largely reflected the common law, Mullin's efforts succeeded and the Clarification failed to pass, preserving the County's ability to extort Rayonier.

E. Mullin Discusses Rescinding the ENCPA with the County and Both Acknowledge Mullin's Conflict

60. As the dispute over the Clarification escalated, the BOCC began discussing the rescission of the ENCPA with the lawyer who was instrumental in its creation for Rayonier—

Mullin. At the February 16, 2018 meeting, Commissioner Danny Leeper raised the prospect of undoing the ENCPA:

> Mr. Leeper: Thank you Mr. Chairman. Mike, is there – first and foremost, I hope – I think it's the wishes of everyone that we try to work this agreement out, if you would, this concern and get back to the partnership – true partnership for what it is.
> But is there – in case it doesn't happen, worst-case scenario, do we have any ability – do we have an option to rescind, if you will, the ENCPA? It may be – I don't want to put you on the spot, but it's – have you thought about that?
> Mr. Mullin: I have, Commissioner Leeper and let me – I want to do some more research on that before I get back to you on that because I anticipated that question and I'm certainly – as much as I don't like to say it – started looking at that just because of the failure, as the movie said, to communicate not on your part but no one here to communicate. So, yes sir. Simple answer is I will research and get that back to the whole Commission.

[**Exhibit 10** at 29-30]. Mullin, as counsel to the County, publicly acknowledged that he had started work to rescind the ENCPA, which he helped pass for Rayonier, and would continue in that effort.

61. Spurred on by Mullin, this concept took hold at the meeting as other members of the BOCC voiced support for the idea of rescission of the "public/private partnership":

> Mr. Leeper: One more comment. I know, Mike, you said sometimes there's disagreements in partnerships. I agree with that. We all – we all -- even on this board, we thankfully agree to disagree and we move on. But my opinion, based on what I've learned in the last few days and based upon what I learned today is, again, my opinion. This is a very deliberate act upon what the partnership that we have with those officials to break the promises they've made to the taxpayers of this county. That's how I feel at the moment based on what I know.
> Mr. Mullins: Yes, sir.
> Mr. Edwards: I'll agree with that. Commissioner Kelley?
> Mr. Kelley: Thank you, Mr. Chairman. Once again, I can't stress enough just as Commissioner Leeper. A group of people who have been thus far so concerned about public image and public perception, they're starting a project of this sheer magnitude that we all agreed would take 20 to 30 years to fully develop to enter into this type of

> adverse relationship so early in our partnership, I am puzzled. I am more than puzzled. I'm baffled. Because, if they don't like bad press, I know they're not going to like the next chapter in this partnership. Because it's only going to go downhill from here, I can assure you. Because I don't like bad press either, and I answered 81,000 stockholders called taxpayers. It's going to get bad. So I'm -- like Commission Leeper, I certainly hope that there is some way that we can resolve it. If not -- if we can't resolve it, then let's dissolve it. How's that? Thank you, Mr. Chairman.

[*Id.* at 32-33]. Led and represented by Rayonier's former lawyer, the County began raising the possibility of rescinding the ENCPA, an outcome that would have a massively negative impact on Rayonier and would undo the crown jewel of Mullin's representation of the company. More importantly, Mullin's willingness to explore undoing the very framework he had negotiated on Rayonier's behalf demonstrated a clear and obvious conflict of interest; a lawyer may not draft and negotiate an agreement and then switch sides to the other party and seek to rescind or amend its terms without the former client's consent. This newfound opposition to Rayonier and the development of the ENCPA was a natural consequence of Mullin's continued effort, through intentionally misleading representations and knowingly false statements about Rayonier's obligations under the ENCPA, to turn the County against his former client in order to further his own interest in pleasing his new employer and client.

62. To be sure, Mullin's effort to assist the County with undoing or rescinding the ENCPA is a direct conflict—one which both Mullin and the County have ultimately acknowledged. The law firm of Nabors Giblin & Nickerson was engaged to assist the County in any rescission efforts because Mullin ultimately correctly acknowledged that he could not assist the County in rescinding the ENCPA. But Mullin's acknowledgement of the conflict presented by his representation was limited to only recusing himself from issues involving documents signed prior to March 2015. Although a key component of Mullin's prior representation of

Rayonier involved establishing a developmental framework whereby Rayonier would donate land and the County would build and maintain the recreational facilities, Mullin nevertheless has taken the position that any actions, agreements or other documents entered into after March 2015—regardless of their substantial relationship to his prior representation—do not present a conflict for which he must recuse himself. Mullin's view of his ethical obligations is temporal, rather than substantive – so long as an event occurs after the date he joined the County, Mullin feels free to attack his former client, regardless of the connection of the new event to his prior representation of Rayonier.

F. Mullin Violates Public Records Laws and Directs County Staff to Violate Public Records Laws in an Effort to Avoid Production of Responsive Documents to Rayonier

63. On January 7, 2019, Justin Stankiewicz, the County's former Office of Management and Budget Director, filed a grievance asserting that he had been terminated for refusing to destroy documents responsive to a then-pending public records request from Rayonier's counsel in October 2018. [*See* Employee Grievance dated January 7, 2019, a true and correct copy of which is attached as **Exhibit 12**]. Rayonier's public records request sought documents and communications relating to the County's dispute with Rayonier over the ENCPA.

64. Stankiewicz has now testified under oath regarding a November 6, 2018 meeting where Stankiewicz informed Mullin that he had text messages on his phone regarding County business that were responsive to Rayonier's public records request. In response, Mullin directed Stankiewicz to delete the text messages on Stankiewicz's phone despite knowing the text messages qualified as public records and were required under Florida law to be produced to Rayonier.

65. Stankiewicz also testified that Mullin admitted that he had deleted similar messages from his phone. Thus, not only had Mullin knowingly and intentionally directed other County staff to destroy public records, but he had knowingly and intentionally violated Florida law himself as well.

66. Stankiewicz refused to comply with Mullin's directive to violate Florida law. He spoke with multiple other County staff members regarding Mullin's directive at the November 6 meeting to destroy public records; staff were also dumbfounded that Mullin would instruct them to violate the law. Unsurprisingly, he was terminated from his position with the County shortly thereafter upon returning from vacation.

67. Mullin claimed that Stankiewicz's termination related to funds missing from petty cash and not Stankiewicz's refusal to violate Florida's public records laws; the County sheriff's office subsequently investigated Mullin's allegations, but found insufficient evidence to support any further action. Stankiewicz's allegations suggest that, in addition to advising the County on matters adverse to his former client, Mullin was violating Florida law to impede Rayonier's efforts to defend itself against Mullin's assault on his prior work for Rayonier.

68. Stankiewicz's grievance attached a number of text messages between Mullin and various County Commissioners and senior county personnel, none of which were produced in response to Rayonier's counsel's public records request prior to their attachment to Stankiewicz's grievance. Each of them relate to the County's attacks on Rayonier and, throughout, Mullin is revealed to be directing the County's strategy in those efforts to undermine the ENCPA.

IV. Mullin is Informed of the Conflicting Representation and Refuses to Step Aside

69. Before and during the adverse actions taken by Mullin against Rayonier as described above, Rayonier raised the issue of its former counsel's adversity in a face-to-face meeting in early February 2018. Rayonier explained its position and requested that Mullin step aside to remedy the obvious conflict of interest in light of Mullin's duty to his former client. Mullin declined, refusing to acknowledge any problem with his behavior.

70. Having attempted an informal resolution, Rayonier demanded Mullin's recusal by letter, which was e-mailed to Mullin on February 26, 2018, and which copied the BOCC. [*See* Letter from Mark R. Bridwell to Michael S. Mullin dated February 26, 2018 (the "Conflict Letter"), a true and correct copy of which is attached as **Exhibit 13**]. Rayonier's letter discussed Mullin's multiple challenges to the ENCPA, concluding that Mullin's conduct presented a violation of Mullin's professional obligations not to undertake representations adverse to former clients on matters that are the same or substantially related to the prior representation.

71. Twenty-three minutes later after Rayonier emailed the Conflict Letter, Mullin responded by e-mail, stating:

> I am in receipt of your letter regarding conflict. I have not had time to review it or seek a legal opinion. A cursory review leads me to a different conclusion than stated in the letter. I will certainly have someone do a legal review and respond. The board of county commissioners, representing 81,000 residents has responded to actions taken by ray dient [sic] that are contrary to the public private partnership and everything represented to them by ray dient [sic] since late 2015 and 2016 and 2017. As you know the board asked for the company representatives to come to a public workshop for a partner discussion and the company refused. They also asked the stewardship board to come to a public meeting and they declined.

[E-mail string between Mark Bridwell and Michael Mullin, attached as **Exhibit 14**]**.** While claiming not to have read the Conflict Letter sufficiently to form an opinion, Mullin disagreed that he had a conflict.

72. Mullin did, apparently have sufficient time to discuss the Conflict Letter with various County Commissioners and other county employees via text message. Among the texts attached to Stankiewicz's grievance is the following, which began three minutes after Mullin sent his terse response to Bridwell and which Stankiewicz testified he was later ordered to delete by Mullin:

Shanea Jones:	Oh Lordy…Raydient taking a new angle to shut Mike down. Lol
Commissioner Justin Taylor:	They're pulling out all the stops.
Mullin:	***They luv me***
Taco Pope:	?Did we miss the memo?
Jones:	I feel the love vibes being sent your way. I just forwarded the email to you Taco & Justin.
Mullin:	I feel them everywhere
Jones:	It's all of a sudden a conflict of interest even though you've been back since March of 2015 & had countless meetings with them as u represent the Board.
Mullin:	Yes isn't that strange. There goes my thanksgiving day invitation
Justin Stankiewicz:	Think we need a new word stronger than irretrievably broken
Mullin:	Yes
Commissioner Danny Leeper:	***What would happen if we deny the conflict. I say let them spend their money.***
Mullin:	***We may do that.*** I guess I am off the easter dinner list
Leeper:	Lol. All of us
Mullin:	Yes

[Text Messages between Mike Mullin, Justin Stankiewicz, Shanea Jones, Taco Pope, Justin Taylor and Danny Leeper dated February 26, 2018, a true and correct copy of which is attached as **Exhibit 15** (emphasis added)]. Approximately twenty-six minutes after Rayonier raised the issue of Mullin's conflicts, Mullin had formulated a strategy with members of the BOCC and senior County staff to increase the harm to Rayonier by ignoring Rayonier's legitimate concerns for the purpose of making Rayonier spend money to seek a remedy for Mullin's malfeasance,

despite the tacit admission of a conflict that Mullin and the County would later partially acknowledge

73. Hearing nothing, Rayonier asked Mullin for a response to the Conflict Letter on March 7, 2018. [*See* Email from Mark Bridwell to Michael Mullin dated March 7, 2018, a true and correct copy of which is attached as **Exhibit 16**]. Rayonier explained that Mullin's continued representation of the County in matters relating to the ENCPA generally – in light of Mullin's eight-year stint as Rayonier's lead counsel during the formation of the ENCPA and the negotiation of a number of bedrock agreements and land use approvals – required him to abstain from continuing to represent the County.

74. Mullin responded by letter on March 12, asserting that Rayonier's position was not specific enough, but claiming that he would have outside counsel review Rayonier's assertions. [*See* Letter from Michael S. Mullin to Mark Bridwell dated March 12, 2018, a true and correct copy of which is attached as **Exhibit 17**].

75. Hearing nothing further from Mullin, Rayonier took the action it believed to be appropriate and filed a bar complaint against Mullin on March 29, 2018. [*See* Florida Bar Inquiry/Complaint Form dated March 29, 2018 (the "Bar Complaint"), a true and correct copy of which is attached as **Exhibit 18**]. Generally speaking, the complaint described the scope of Mullin's lengthy representation of Rayonier, discussed Mullin's antagonistic representation since assuming the role of County Attorney and asked the Bar to take action to stop Mullin's impermissible infidelity to his former client.

76. Mullin responded to the Bar Complaint by letter on May 3, 2018. [*See* Letter from Michael S. Mullin dated May 2, 2018 (the "Bar Response"), a true and correct copy of which is attached as **Exhibit 19**]. The sum of Mullin's responsive position was that his

representation of Rayonier involved participation in numerous public meetings and hearings and helping prepare numerous publicly filed documents, such that he – despite representing Rayonier for eight years – had no confidential information. Mullin also asserted that the Stewardship District was formed after Mullin joined the County, so that the present disagreement could not relate to Mullin's service to Rayonier irrespective of the fact that the Stewardship District is an integral part of the overall strategy that Mullin himself devised. The Bar Complaint process has since concluded.

77. Mullin became Interim County Attorney on July 2, 2018, expanding the scope of Mullin's involvement in matters relating to the ENCPA. Mullin's appointment prompted Rayonier to send yet another letter concerning the conflict of interest presented by Mullin's involvement in matters adverse to his former client. [*See* Letter from Mark R. Bridwell to Michael S. Mullin dated June 29, 2018, a true and correct copy of which is attached as **Exhibit 20**]. Rayonier pointed out that Mullin's role as County Attorney left Mullin in a conflict when he was merely advising the County on matters relating to the ENCPA; in his new role as Interim County Manager, he would be making substantive decisions on matters involving his former client. Accordingly, Rayonier once again asked that Mullin recuse himself from matters relating to the ENCPA. As before, Mullin did not respond.

78. Instead of withdrawing, during a September 17, 2018 meeting, Mullin asserted that modifications to or rescission of the Stewardship District might be necessary and discussed the ENCPA at length in furtherance of the County's narrative that Rayonier made commitments to unilaterally fund public recreational facilities. [*See* Transcript of September 17, 2018 BOCC Meeting, relevant excerpts of which are attached as **Exhibit 21**]. Importantly, Mullin's comments related directly to the time period when Mullin led Rayonier's efforts to obtain

approval of the ENCPA and his related work for Rayonier. Perhaps even more importantly, based on Mullin's guidance and advocacy, the BOCC continued to express its willingness to rescind the ENCPA in its entirety and dissolve the "public/private partnership" between the County and Rayonier. [*See id.* at 69-72]. Both Mullin and the County ultimately acknowledged that Mullin is conflicted from representing the County with any effort to rescind the ENCPA based on Mullin's prior engagement by Rayonier, leading the County to retain Nabors Giblin to provide advice on the ENCPA documents. Mullin has separately acknowledged his conflict relative to the rescission of the ENCPA and the Mobility Fee Agreement.

79. The disputes between Rayonier and the County concerning Rayonier's duties, rights and obligations under the ENCPA, Mobility Fee Agreement and other associated development submittals and approvals continue as of the date of this filing. Mullin has continued his adverse representation of the County on those matters, despite Rayonier's multiple requests that he stop and the admission of the existence of a conflict of interest.

80. Mullin has now assumed the role of County Manager, while maintaining his position as County Attorney. Mullin is not only in a position to render legal opinions and give advice in the course of his continuing dispute with Rayonier, his new role puts him in a position to make decisions contrary to his former client on matters within the scope of his prior representation, including, among other things, pursuing dissolution of the "public/private partnership" in the ENCPA.

81. In his dual roles – both considered full-time jobs – Mullin will receive two salaries, totaling more than $270,000, and double retirement contributions by the County.

82. Mullin's representation as County Attorney and his work as Interim County Manager and now County Manager presents a direct conflict to his prior representation of

Rayonier in the same or a substantially related matter and amounts to a violation of Mullin's fiduciary obligation to his former client, Rayonier.

83. Any actions taken by Mullin to investigate or provide any legal advice to his current client, the County, that may affect Rayonier's ongoing development rights granted pursuant to the ENCPA and development conditions therein are directly adverse to Rayonier's interests. Such actions violate Mullin's common law duty of loyalty to Rayonier and constitute a conflict as established by Rule 4-1.9 of the Rules of Professional Conduct of the Florida Bar:

> A lawyer who has formerly represented a client in a matter must not afterwards:
>
> (a) Represent another person in the same or a substantially related matter on which that person's interests are materially adverse to the interests of the former client unless the former client gives informed consent;
>
> (b) Use information relating to the representation to the disadvantage of the former client except as these rules would permit or require with respect to a client or when the information has become generally known; or
>
> (c) Reveal information relating to the representation except as these rules would permit or require with respect to a client.[3]

84. Based on the facts above, it is indisputable that Mullin has provided advice and counsel to the County contrary to Rayonier's interests on matters directly within the scope of his representation of Rayonier relative to the ENCPA.

85. On learning of Mullin's adverse representation of the County with respect to matters on which he previously represented Rayonier, Rayonier immediately—and repeatedly—demanded that Mullin stop all such representation due to the obvious conflict of interest.

86. Rayonier repeatedly informed Mullin orally and in writing over the course of several months that it would not consent to his representation of the County adversely to its interests in any ENCPA matters. Because Mullin refused to substantively respond or to accede

[3] Rule 4-1.11 specifically states that Rule 4-1.9 applies to attorneys serving as public officers or employees.

to Rayonier's requests, Rayonier was forced to go so far as to file a bar complaint against Mullin. Still this had no effect and Mullin continued to intentionally breach his fiduciary obligations to Rayonier.

87. Mullin continues to refuse to cease representing the County with respect to Rayonier's ENCPA project, nor has the County undertaken any meaningful efforts to restrain him. Indeed, Mullin's transition from County Attorney to County Manager appears to be part of an effort by Mullin and the County to avoid the strictures of his professional obligations so that he can continue to breach his duty of loyalty to Rayonier and its affiliates by continuing to advise and represent the County and the BOCC with respect to the ENCPA.

88. Not only has Mullin intentionally engaged in a directly conflicting legal representation adverse to his former client, Rayonier, but Mullin has taken multiple actions with the malicious intention of harming Rayonier in order to benefit his current client, the County. Indeed, this dispute is not simply a disagreement regarding the scope of Mullin's ethical obligation to not engage in conflicting representations against former clients. Rather it concerns a former attorney's intentional and malicious actions in affirmatively seeking to harm that former client by leveraging his prior representation and exploiting his authority as the County Attorney and now County Manager. Such malicious, bad faith conduct includes but is not limited to:

a. Making knowingly false statements that County staff agreed with his position that the Stewardship District (and therefore Rayonier) was obligated to fund and build improvements;

b. Destroying public records responsive to public records requests served by Rayonier and directing County staff to violate public records laws by destroying and/or withholding responsive documents;

c. Advocating for denying the conflict of interest so that Rayonier would be forced to expend money to force Mullin to cease the conflicting representation;

d. Attempting to extort Rayonier into renegotiating the ENCPA framework that he had helped establish on its behalf and refusing to process and grant lawful applications for development within the ENCPA unless Rayonier agreed to execute the MOU all the while knowing through his prior representation the financial assumptions and limitations placed on Rayonier's ability to resist the attempted extortion; and

e. Advocating for the rescission and/or modification of the ENCPA altogether

Mullin's intentional and malicious conduct and his reinforcement of the false representations is driven by an obvious motivation: despite serving a county of approximately 85,000 people, Mullin is being paid more than $270,000 for his dual roles as County Attorney and County Manager. By contrast, Governor Ron DeSantis, the chief executive of a state with a population of over 21 million people, has a salary of approximately $130,000. In other words, Mullin is intentionally, maliciously, and in bad faith violating his fiduciary obligations to Rayonier in order to maintain an income that is more than twice that of Florida's governor and over five times greater than the median household income of Nassau County's residents.

89. Because the ENCPA dispute is ongoing, Rayonier's confidential and attorney-client privileged information regarding relevant business issues, risk and reward analyses, and possible negotiating leverage points that Mullin obtained during the course of his nearly eight year representation of Rayonier are, upon information and belief, being used by Mullin to Rayonier's disadvantage. Indeed, Florida law presumes that Mullin has obtained privileged and confidential communications from Rayonier. And there is a continuing danger that Mullin will

use that information to benefit the County and the BOCC to the detriment of Rayonier and its affiliates—his former clients. This danger is all the more pertinent given Mullin's apparent willingness to ignore public records laws, misrepresent the positions of County staff regarding Rayonier and the Stewardship's obligations, and openly advocate for rescinding the regulatory framework that he negotiated and drafted on Rayonier's behalf for almost eight years.

COUNT I – Injunctive Relief Against Existing and Future Breaches of Fiduciary Duty (Mullin)

90. Rayonier realleges and incorporates Paragraphs 1-89 above as if set forth fully herein.

91. This is an action for temporary and permanent injunction against Mullin to enjoin him from continuing to represent Nassau County in any capacity in matters regarding the ENCPA, including, but not limited to, the Mobility Fee Agreement, the Stewardship District, and any other associated land development approvals and matters relating to the ENCPA that are adverse to Rayonier and its affiliates' interests and from divulging any confidential or otherwise privileged information concerning Rayonier and its affiliates that Mullin obtained or created during the course of his representation of Rayonier.

92. Mullin occupied a special and confidential relationship with Rayonier as its adviser and attorney over the course of almost eight years.

93. Rayonier reposed trust and confidence in Mullin as its adviser and attorney.

94. Mullin knowingly accepted Rayonier's trust and confidence and, as Rayonier's adviser and attorney acted in reliance on that trust and confidence.

95. As a result of the relationship between Rayonier, Mullin owed and owes Rayonier fiduciary duties, including but not limited to the duty of loyalty and the duty of confidentiality. Mullin's fiduciary duties continued after his representation ceased in March 2015.

96. Mullin has breached his fiduciary duties to Rayonier in connection with his directly adverse representation of County as described above. Mullin has repeatedly and openly represented County adversely to his former client Rayonier on matters that are substantially related to his prior representation of Rayonier in violation of his fiduciary obligations.

97. Not only has Mullin breached his fiduciary duties to Rayonier, but he has done so in bad faith, willfully and wantonly, intentionally and with actual malice toward Rayonier. Mullin has actively sought to harm his former client, misrepresenting facts to the BOCC and to the public and knowingly committing violations of Florida law to conceal his duplicity. Mullin's conduct goes well beyond the scope of his duties as a County employee and serves only to further his efforts to, at all costs, maintain his positions with County and harm Rayonier.

98. Mullin's current representation of the County is the same or substantially related to his prior representation of Rayonier and its affiliates with respect to the ENCPA and the regulatory environment applicable to the project. Rayonier and its affiliates have not provided their consent to the materially adverse representation.

99. Rayonier and its affiliates have suffered and will continue to suffer irreparable injury as a result of Mullin's actions and failures to act described in this Complaint. Mullin's violations of his fiduciary obligations have existed and continues despite Rayonier's efforts to convince Mullin to cease his breaches of his obligation to Rayonier. Mullin has encouraged Nassau County's government to undermine the basic development conditions Mullin helped craft and on which the ENCPA rests, if not to rescind the entire ENCPA. Mullin's representation of Nassau County will continue to harm Rayonier by virtue of his obvious conflict of interest and will disadvantage Rayonier in its efforts before the County to move forward with the ENCPA

development as Mullin divulges privileged and confidential information to the disadvantage of Rayonier, Mullin's former client, and to the advantage of the County, Mullin's current client.

100. Mullin's actions have caused Rayonier significant damages by preventing progress on Rayonier's development efforts. Rayonier has expended millions of dollars to move the project ahead and, like all land development, undue delays in the life of a project result in financial harm. Mullin's conduct directly prevented the approval of DSAP 2, which would have resulted in a sale of land valued in the millions of dollars. In addition, Mullin's wrongful acts have forced Rayonier to expend substantial legal fees to attempt to obtain his compliance with his fiduciary duties, expenses that Mullin himself indicated he expected would happen in his text message exchanges with BOCC members. While Mullin's conduct has forced Rayonier to incur significant damages, an award of damages is not sought in this action since any such award against Mullin would not adequately remedy the harm Rayonier has suffered and will continue to suffer because of his conduct and, in any event, would be virtually impossible to quantify.

101. Under the circumstances described in this Complaint, Mullin's representation of the County as described above is a violation of his fiduciary duty of loyalty and is a direct and prohibited conflict of interest under the Florida Rules of Professional Conduct governing attorneys admitted to practice in Florida and a violation of Florida common law.

102. As such, there is a substantial likelihood of Rayonier's success on the merits.

103. A temporary and permanent injunction will serve the public interest in protecting the attorney-client privilege, protecting Rayonier's confidential information and upholding the Florida Rules of Professional Conduct.

104. Rayonier has a clear legal right to the relief sought.

105. Rayonier does not have an adequate remedy at law.

106. All conditions precedent to the maintenance of this action have been obtained or have been waived by Mullin.

WHEREFORE, Rayonier respectfully requests that this Court (a) enjoin Michael Mullin from continuing to represent Nassau County and/or its Board of County Commissioners in any capacity in connection with matters regarding the ENCPA, (b) enjoin Michael Mullin from divulging privileged communications and confidential information he obtained during his representation of Rayonier, and (c) provide any other relief the Court deems just and appropriate.

COUNT II – Injunction Against Aiding and Abetting Breach of Fiduciary Duty (Nassau County)

107. Rayonier realleges and incorporates Paragraphs 1-89 above as if set forth fully herein.

108. This is an action for temporary and permanent injunction against the County to enjoin it from continuing to aid and abet Mullin's continuing breach of fiduciary duty owed to Rayonier. Specifically, Rayonier seeks to enjoin the County from continuing to permit Mullin to represent it in any capacity in matters regarding the ENCPA, including, but not limited to, the Mobility Fee Agreement, the Stewardship District, and any other associated land development approvals and matters relating to the ENCPA that are adverse to Rayonier and its affiliates' interests and to prevent Mullin from divulging any confidential or otherwise privileged information concerning Rayonier and its affiliates that Mullin obtained or created during the course of his representation of Rayonier.

109. Mullin occupied a special and confidential relationship with Rayonier as its adviser and attorney over the course of almost eight years.

110. Rayonier reposed trust and confidence in Mullin as its adviser and attorney.

111. Mullin knowingly accepted Rayonier's trust and confidence and, as Rayonier's adviser and attorney, acted in reliance on that trust and confidence.

112. As a result of the relationship with Rayonier, Mullin owed and owes Rayonier fiduciary duties, including but not limited to the duty of loyalty and the duty of confidentiality, including the duty to safeguard and not disclose Rayonier's confidential and attorney-client privileged information. Mullin's fiduciary duties continued after his representation ceased in March 2015.

113. Mullin has breached his fiduciary duties to Rayonier in connection with his directly adverse representation of the County as described above.

114. Mullin's current representation of the County is the same or substantially related to his prior representation of Rayonier and its affiliates with respect to the ENCPA. Rayonier and its affiliates have not provided their consent to the materially adverse representation.

115. The County is and was aware of Mullin's breaches of fiduciary duty. County officials were aware that Mullin had previously represented Rayonier against the County for nearly eight years in connection with the development of the ENCPA. And the County was aware of Rayonier's repeated efforts to inform Mullin of his conflicting representation and that it did not consent to the representation.

116. The County was not only aware of Mullin's breaches of fiduciary duty, but encouraged his wrongdoing by refusing to instruct him to cease the conflicting representation. Indeed, the County communicated with Mullin that the conflict should be denied so that Rayonier would be forced to spend money on attorneys' fees and costs to obtain the required injunction.

117. Rayonier and its affiliates have suffered and will continue to suffer irreparable injury as a result of the County's wrongful acts and/or negligence and failures to act described in this Complaint.

118. While the County's actions in aiding and abetting Mullin's breach of fiduciary duty have harmed Rayonier by preventing development from being approved, such as most specifically through the nonapproval of DSAP 2, an award of damages is not sought in this action since any such award would not adequately remedy the harm Rayonier has suffered and will continue to suffer because of the County's misconduct and, in any event, would be virtually impossible to quantify.

119. Under the circumstances described in this Complaint, Mullin's representation of the County as described above is a violation of his fiduciary duty of loyalty and is a direct and prohibited conflict of interest under the Florida Rules of Professional Conduct governing attorneys admitted to practice in Florida and a violation of Florida common law. In turn, the County's knowledge and encouragement of the breach of fiduciary duty constitutes aiding and abetting a breach of fiduciary duty. The County's wrongful acts are thus a necessary element for the requested injunctive relief.

120. As such, there is a substantial likelihood of Rayonier's success on the merits.

121. A temporary and permanent injunction will serve the public interest in protecting the attorney-client privilege, protecting Rayonier's confidential information and upholding the Florida Rules of Professional Conduct.

122. Rayonier has a clear legal right to the relief sought.

123. Rayonier does not have an adequate remedy at law.

124. All conditions precedent to the maintenance of this action have been obtained or have been waived by the County. The County received notice of the claim in accordance with Fla. Stat. § 768.28, and the time has expired for the County to make a final disposition of the claim.

125. Rayonier and its affiliates have suffered and will continue to suffer damage as a result of Mullin's actions and the County's assistance and encouragement in Mullin's breaches of fiduciary duty.

WHEREFORE, Rayonier requests that this Court (a) enjoin the County from aiding and abetting Mullin's breaches of fiduciary duty by instructing the County to relieve Michael Mullin of his representation of the County and/or its Board of County Commissioners in any capacity in connection with matters regarding the ENCPA, (b) enjoin the County from permitting Michael Mullin to divulge privileged communications and confidential information he obtained during his representation of Rayonier, and (c) provide any other relief the Court deems just and appropriate.

DATED this 9th day of September, 2019.

GUNSTER, YOAKLEY & STEWART, P.A.

By /s/ *William E. Adams, Jr.*

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Attorneys for Plaintiff Rayonier

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 9th day of September, 2019, I electronically filed the foregoing with the Clerk of the Court using the Florida Courts E-Filing Portal, and served the document electronically by email on the following:

Robert H. Farnell, II, Esq.
Bedell, Dittmar, Devault, Pillans & Coxe, P.A.
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101 East Adams Street
Jacksonville, FL 32202
Phone: (904) 353-9211 x 128
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/s/ *William E. Adams, Jr.,*
Attorney

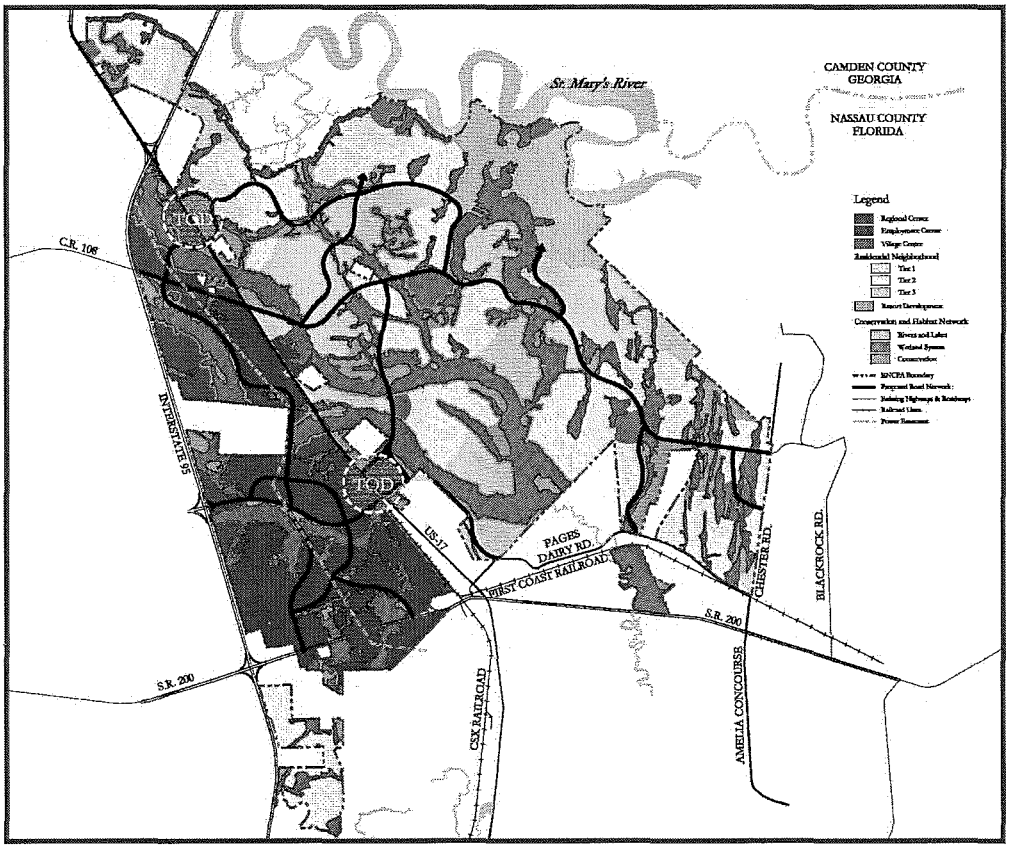
JAX_ACTIVE 4177728.8

EXHIBIT 1

OBJECTIVE FL.13

East Nassau Community Planning Area

Consistent with the Multi-Use Community Planning Area land use provisions of Future Land Use Element Policy FL.01.02, the East Nassau Community Planning Area (ENCPA) is hereby created and adopted. The principles and standards of the following policies will be implemented during future development orders within the ENCPA and are enforceable as provided for in Chapter 163, F.S. The ENCPA shall recognize the inherent, integral relationship between transportation, land use and urban design and the degree that these elements affect one another and shall provide high value regional employment and economic development opportunities through the promotion of compatible and financially sustainable land use patterns. To facilitate the use of multiple modes of transportation, leading to a reduction in automobile use and vehicle miles traveled, development shall be in the form of complete communities that discourage urban sprawl; strengthen long range transportation planning efforts through creation of parallel transportation corridors, walkable and transit-supporting environments; preserve environmental resources; and create a greater diversity of housing types and prices.



Policy FL.13.01

Development Principles

Nassau County shall promote a sustainable and efficient land use pattern within the ENCPA by requiring development within the ENCPA to incorporate the following development principles:

A) Protect certain unique physical and visual characteristics of the ENCPA which include bluff topography, the St. Mary's River, Lofton Creek and significant historic or archaeological resources; and

B) Create a connected network of community amenities consisting of public parks, multi-use pathways, schools and playfields; and

C) Provide a variety of housing types with the higher residential densities near village centers; and

D) Design communities that support alternative modes of transportation with an emphasis on bicycle and pedestrian mobility and the opportunity for rail or bus rapid transit component located along the existing railroad corridor and U.S. 17 corridor; and

E) Dedicated rights-of-way designed to accommodate necessary utility infrastructure, dedicated bike lanes and a variety of transit opportunities; and

F) Enable regional employment and activity centers that encourage targeted economic development and job-supporting uses that maximize the benefits of existing or reserved highways, rail and transit-accommodating corridors; and

G) Conserve energy, conserve water resources and reduce greenhouse gas emissions through innovative, energy-efficient building construction and development practices; and

H) Establish a Conservation and Habitat Network of uplands, wetlands, blackwater creeks and wildlife corridors that define, connect and protect significant natural habitats; and

I) Accommodate a new interchange at Interstate 95 to serve the ENCPA and facilitate implementation of the Long Range Transportation Plan.

Policy FL.13.02

Definitions and Interpretations

For the purpose of Objective FL.13 and its supporting Policies, the following terms, phrases, words and their derivations shall have the meaning contained herein, except where the context clearly requires otherwise. Terms not otherwise defined herein shall be first interpreted by reference to the Nassau County Land Development Code, if specifically defined therein; and secondly by reference to generally accepted planning, engineering, or other professional terminology if technical, and otherwise according to common usage, unless the context clearly indicates otherwise. In each case, the range of allowable uses shall be broadly interpreted so as to allow those types of uses compatible with listed uses in these ENCPA policies and consistent with the overall intent of the applicable land use sub-category.

A) Block: A unit of land bounded by streets or a combination of streets and public land, railroad rights-of-way, waterways, or other barrier to the continuity of development.

B) Block, Civic: A block where civic space or uses exceed 75% of the total block land area.

C) Block, Mixed-Use: A block with a minimum of two (2) land uses, with one (1) of the land uses being residential. For any mixed use block containing only 2 land uses, neither land uses shall represent less than 25% of the total block floor area. For any mixed use block containing three (3) or more land uses, none of the land uses shall contain less than 15% of the total block floor area.

D) Block, Office: A block where office uses exceed 75% of the total block floor area.

E) Block, Residential: A block where residential uses exceed 75% of the total block floor area.

F) Block, Retail: A block where retail, eating/drinking and service uses exceed 75% of the total block floor area.

G) Common Area: Any portion of a development designed and intended to be used in common by the owners, residents or tenants of the development. These areas may contain such complementary structures and improvements as are necessary and appropriate for the benefit and enjoyment of the owners, residents or tenants.

H) Common Open Space: All open space, or portions thereof, including landscaping, screening, and buffering, which is part of a common area.

I) Density (Residential): The number of residential dwelling units per unit of land.

J) Density, Average Net (Residential): The residential density, based on the area of a development site, less waterbodies, wetlands, designated public lands, conservation uplands, public open space and stormwater management areas.

K) Development Site: The property under consideration for a development, which may contain one or more potential building sites. Where the development site may contain more than one building site, any applicable development site setback requirements may be established from the development site perimeter.

L) Intensity (of Use): The bulk or mass of a use upon a building site or development site, as expressed by either residential density or non-residential floor area ratio (F.A.R.), which is the gross floor area of all buildings or structures on a development site divided by its developable area.

M) Minimum/Maximum Intensity Criteria: In land use sub-categories where mixed use development is permitted or required, a development site shall meet the following minimum and/or maximum

intensity criteria.

1. Minimum intensity criteria:

a) Residential development shall meet the minimum residential average net density required within the land use sub-category; or

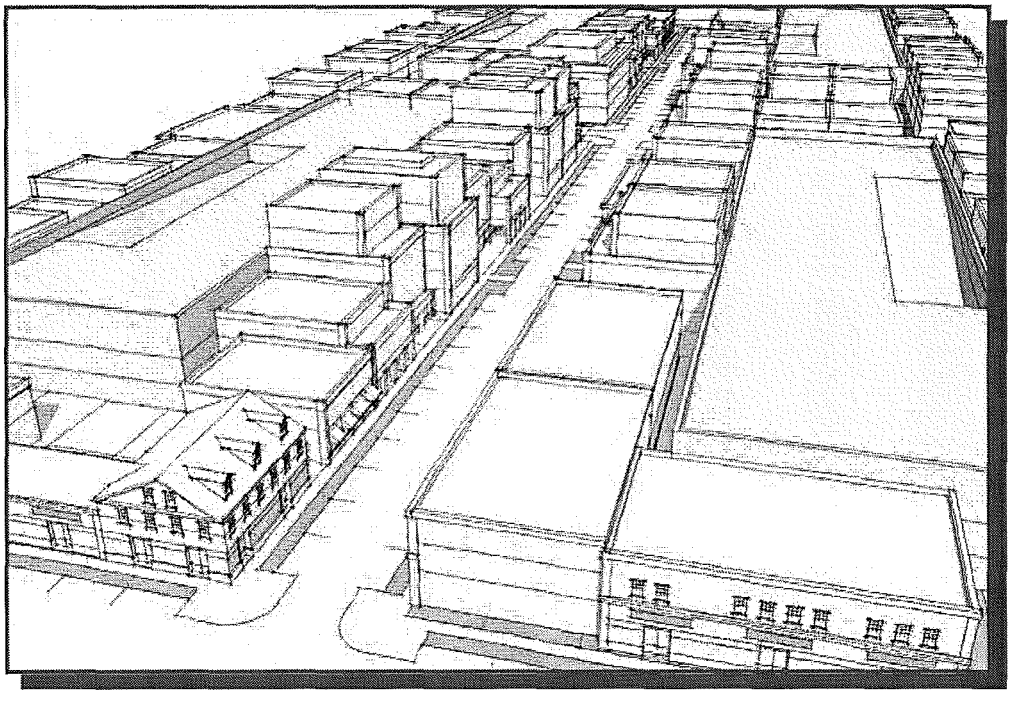
b) Non-residential development shall meet the minimum F.A.R. required within the land use sub-category; or

c) Where both residential and non-residential development is proposed or required, the percentage sum of both the minimum residential average net density and the minimum F.A.R., when calculated separately, equals or exceeds 100%.

2. Maximum intensity criterion:

a) Where both residential and non-residential development is proposed or required, the maximum residential average net density and maximum F.A.R. standards shall be considered and applied separately.

N) Preliminary Development Plan (PDP): The procedures, review criteria and application requirements provided for in the Nassau County Land Development Code. To ensure that development in the ENCPA achieves the principles of Policy FL.13.01, the PDP shall include a minimum of one-hundred (100) gross acres.



Policy FL.13.03

Green Development Practices

Development within the ENCPA shall promote sustainable community and building design techniques and energy conservation strategies consistent with recognized green building standards. These techniques and strategies shall be established during the Nassau County development review process and shall include the following:

A) Protecting and enhancing natural systems, as provided for in Policy FL.13.07.(A);

B) Considering surface waters, conservation lands and environmental open space as a visual amenity;

C) Encouraging alternative modes of transportation that reduce the average vehicle miles traveled and greenhouse gas emissions;

D) Developing incentives for water conservation;

E) Incorporating Florida water-wise vegetation and natural (native) planting area into site landscaping to limit and reduce the use of potable water;

F) Providing education to promote green living practices; and

G) Promoting energy conservation by encouraging green building practices.

Policy FL.13.04

Recreational Trails and Multi-Use Pathways

As a means of promoting walkability and connectivity, recreational trails and multi-use pathways shall be required as an integral component of development in the ENCPA. Such trails and pathways may be developed in lieu of a sidewalk when located alongside an arterial, collector or local roadway. In addition, minimum design and safety standards for all recreational trails and multi-use paths shall be established during the Nassau County development review process.

Policy FL.13.05

Multi-Modal Transportation District Design

In accordance with the requirements of Chapter 163.3184 F.S. and subject to approval by the Florida Department of Community Affairs (DCA) and the Florida Department of Transportation (FDOT), Nassau County may designate the ENCPA Regional Center as a Multi-Modal Transportation District (MMTD). In anticipation of a future designation, development within the ENCPA Regional Center shall incorporate the following:

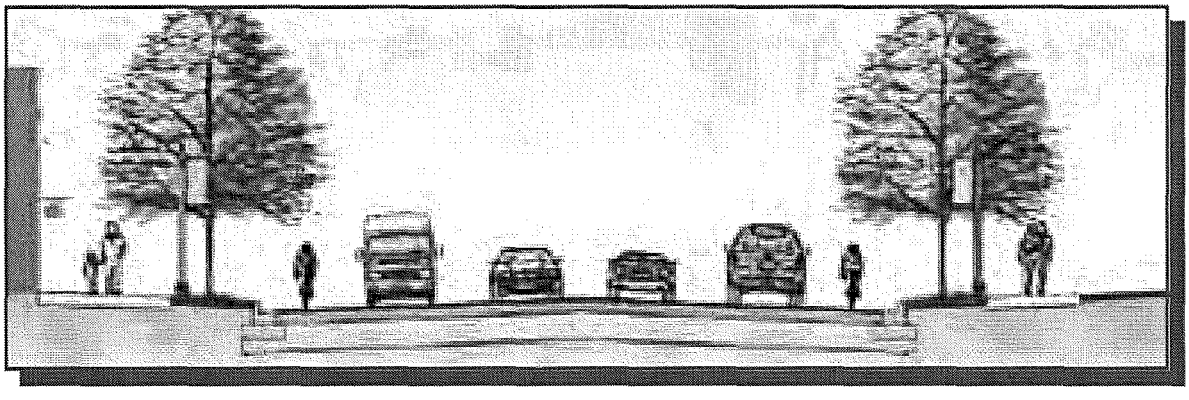
A) **A complementary mix and range of land uses, including educational, recreational, and cultural uses;**

B) **Interconnected networks of streets designed to encourage walking and bicycling, with traffic-calming where desirable;**

C) **Appropriate densities and intensities of use within walking distance of transit stops;**

D) **Daily activities within walking distance of residences, allowing independence to persons who do not drive; and**

E) **Public uses, streets, and squares that are safe, comfortable, and attractive for the pedestrian, with adjoining buildings open to the street and with parking not interfering with pedestrian, transit, automobile, and truck travel modes.**



Policy FL.13.06

U.S. 17 Transit Oriented Development (TOD)

Transit Oriented Development (TOD) areas are designated on the Master Land Use Plan along the existing U.S. 17 and adjacent rail corridor. The Transit Oriented Developments (TOD) will be designed to support a multimodal transportation center. The TODs shall consist of residential, commercial, office, and employment generating land uses that benefit from the adjacent rail and highway corridor and will be designed to encourage walking, biking and transit ridership. The TODs shall be characterized by the following:

A) Compact building and site design;

B) A walking and biking environment;

C) A mix of transit-supportive uses;

D) Attention to pedestrian access;

E) Highest concentration of population and employment will be located closest to transit stations;

F) Transit-supportive parking;

G) Development within an area designated as TOD shall contain the following percentage of block types.

1. Mixed Use Blocks - 15% to 80%

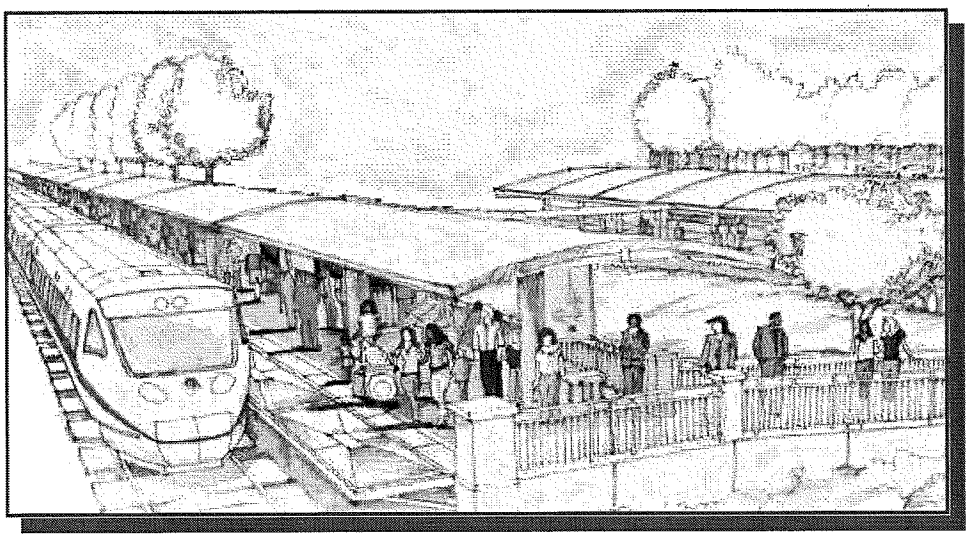
2. Retail Blocks - 0% to 50%

3. Office Blocks - 0% to 60%

4. Residential Blocks - 15% to 60%

5. Civic Blocks - 5% to 30%; and

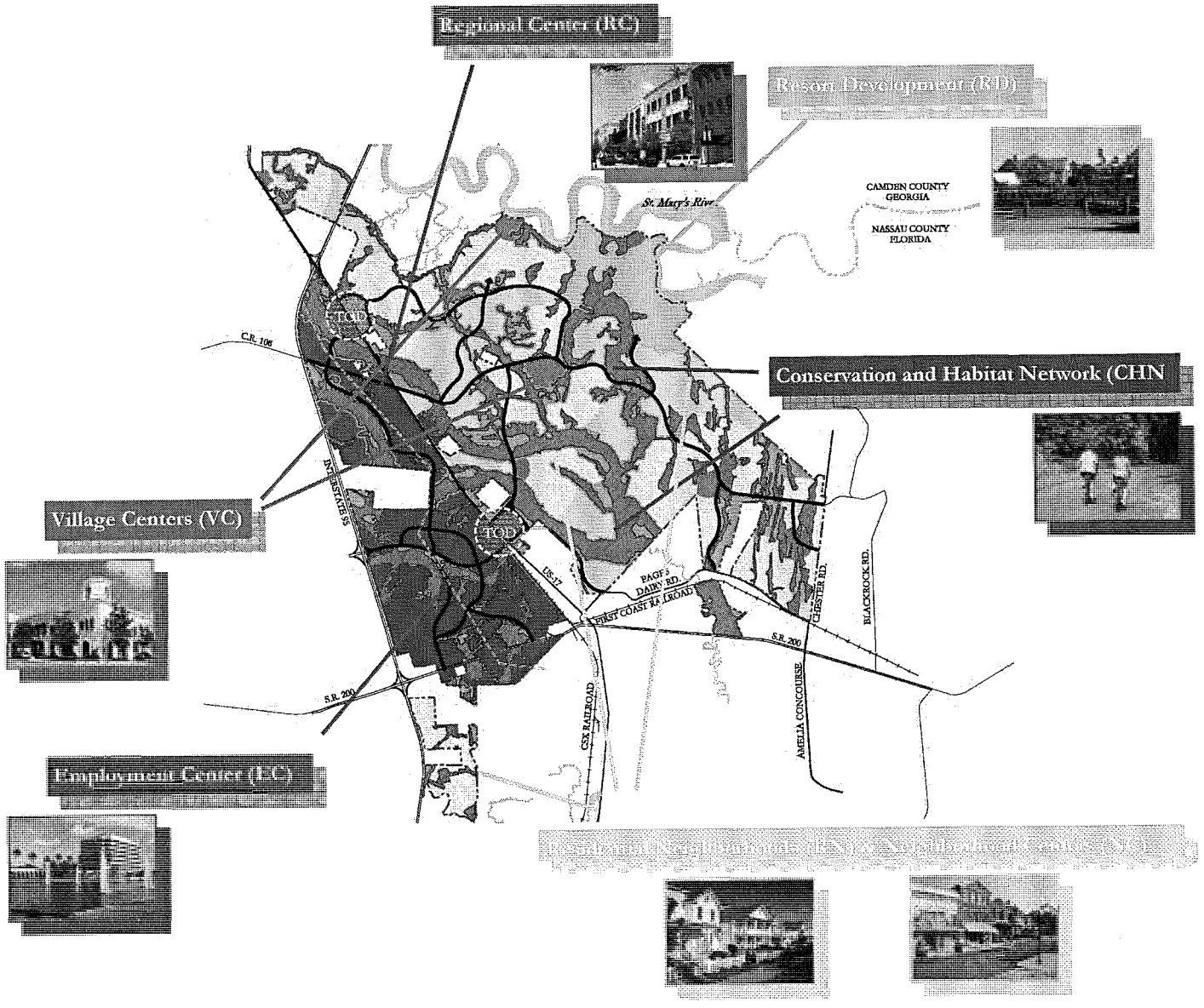
H) On-site parking for commercial and office land uses shall be located behind or beside buildings fronting on primary streets (excluding internal access lanes).



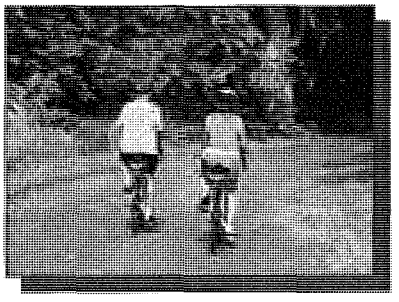
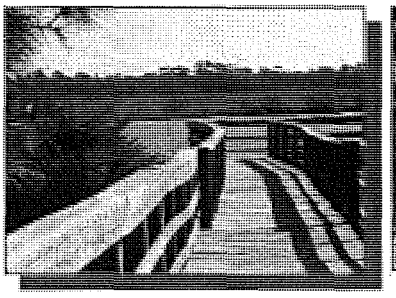
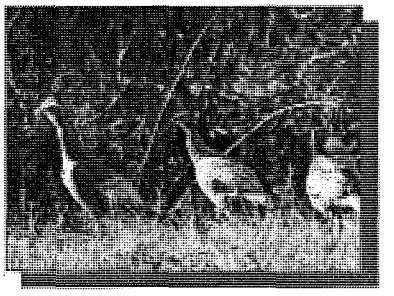
Policy FL.13.07

Land Use Sub-Categories

The following land use sub-category descriptions and general development guidelines and standards shall be used by Nassau County in conjunction with the adopted ENCPA Master Land Use Plan (FLUMS-6) to implement the criteria of Objective FL.13:



A) Conservation and Habitat Network (CHN)

The Conservation and Habitat Network as depicted on Map FLUMS-6 (Master Land Use Plan) is designed to provide viable environmental communities that are sustained during and after development of the ENCPA. The CHN consists of natural waterbodies, wetlands, buffers and other uplands which will not be converted to development uses, but will allow for a variety of passive and nature-oriented recreational uses including, but not limited to, canoeing/kayaking, equestrian activities, walking/hiking and bicycle trails as well as timber management. The CHN contains the connected wetland strands encompassing over 80% of the ENCPA wetlands; and over 80% of the mapped 100 year floodplain. The CHN, as placed under a conservation easement, may be used as mitigation areas for state, Federal and local wetland permitting; and as protected habitats to fulfill state and Federal protected species permitting requirements.

1) CHN General Guidelines and Standards

The Conservation and Habitat Network shall be subject to the following general guidelines and standards:

a) Prior to development of portions of the ENCPA that abut boundaries of the CHN which preserve wildlife habitat, a management plan shall be developed that promotes maintenance of native species diversity in such areas and which may include provision for controlled burns.

b) New roadway crossings of wildlife corridors within the CHN for development activity shall be permitted in conjunction with the design of the internal road network, but shall be minimized to the greatest extent practical.

c) Road crossings within the CHN will be sized appropriately and incorporate fencing or other design features as may be necessary to direct species to the crossing and enhance effectiveness of such crossings.

d) Prior to commencement of development within the ENCPA, an environmental education program shall be developed for the CHN and implemented in conjunction with a property owners association, environmental group or other community association or governmental agency so as to encourage protection of the wildlife and natural habitats incorporated within the CHN.

e) The boundaries of the CHN are identified on Map FLUMS-6. The boundaries of the CHN shall be formally established as conservation tracts or placed under conservation easements when an abutting development parcel to portions of the CHN undergoes development permitting in accordance with the requirements of the St. John's River Water Management District (SJRWMD) and pursuant to the following criteria:

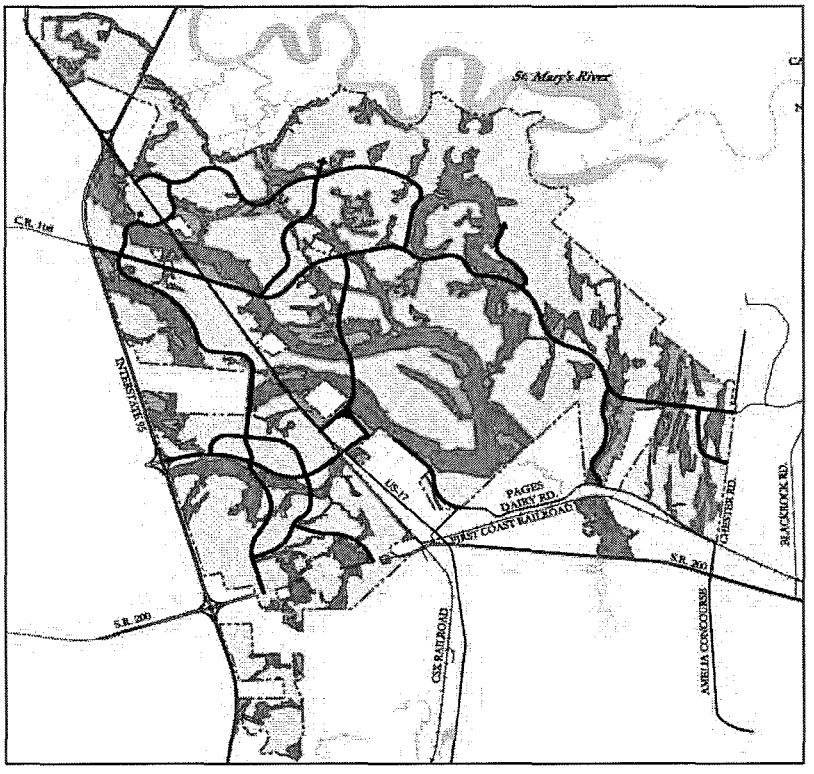
i. As to wetland edges forming the CHN boundary, the final boundary shall be consis-

tent with the limits of the jurisdictional wetlands and associated buffers as established in the applicable SJRWMD permit;

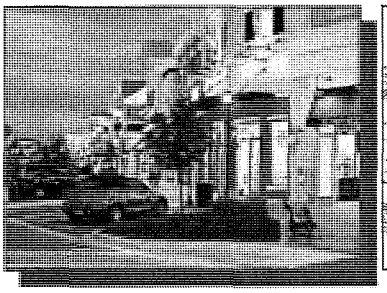
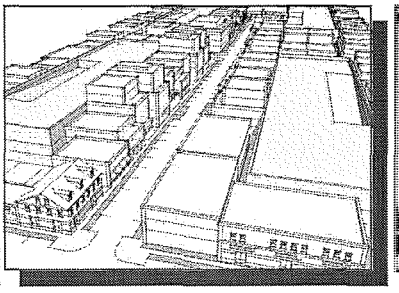
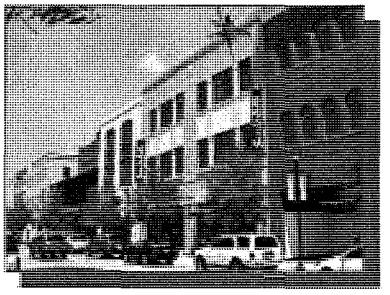
ii. As to upland edges forming the CHN boundary, the final boundary shall be established generally consistent with Map FLUMS-6, recognizing that minor adjustments may be warranted based on more or refined data and any boundary adjustments in the upland area shall (i) continue to provide for an appropriate width given the functions of the CHN in that particular location (i.e., wetlands species or habitat protection), the specific site conditions along such boundary and the wildlife uses to be protected and (ii) ensure that the integrity of the CHN as a wildlife corridor and wetland and species habitat protection area is not materially and adversely affected by alteration of such boundary; and

iii. Boundary modifications meeting all of the criteria described in this Policy subjection shall be incorporated into the Conservation and Habitat Network and the ENCPA Master Land Use Plan upon issuance of the applicable SJRWMD permits and shall be effective without the requirement for an amendment to the Nassau County Future Land Use Map, ENCPA Future Land Use Element Policies or any other Nassau County Comprehensive Plan Elements defined in Chapter 163, F.S.

f) Silvicultural and agricultural activities allowed in the Agricultural classification of the Future Land Use Element of the Nassau County Comprehensive Plan, excluding residential land uses, shall continue to be allowed within the CHN. When the final boundaries of any portion of the CHN are established as described above, a silvicultural management plan will be developed in accordance with best management practices to protect the overall conservation objective of such portion of the CHN.



B) Regional Center (RC)

The Regional Center land use sub-category shall be used to reflect compatible locations for a mixture of high density residential, highway commercial/interchange-related uses, regional-scale retail, commercial, hotel, office, business/research parks and light industrial development. The Regional Center shall provide residential and employment opportunities designed to be supported by the adjacent highway and rail corridors, while encouraging multi-modal transportation options and Transit Oriented Development ("TOD") as located on the Master Land Use Plan.

Range of Allowable Uses: Residential, retail (including highway-oriented, regional malls), vehicle sales, restaurants, big box retailers, and hotels/motels), office, research parks, personal services, business service and light industrial, parks/plazas and other civic uses, public facilities, transit stations and other land uses that are similar and compatible.

Average Net Density: Minimum – 4.0 du/ac.; 7.0 du/ac. in the TODs Maximum – 30 du/ac.

Intensity*: Minimum – 0.25 F.A.R.; 0.50 F.A.R. in the TODs Maximum – 3.00 F.A.R.

** Where residential and non-residential uses are included within the same structure, floor area ratio will exclude those portions devoted to residential dwelling units.*

1) Regional Center General Development Guidelines

Development within the Regional Center land use sub-category shall be zoned to one or more zoning districts consistent with the uses, densities, intensities described above, which zoning shall include County approval of a Preliminary Development Plan (PDP) and shall be consistent with the following general development guidelines:

a) The Regional Center shall be designed to incorporate the key elements of a Multi-Modal Transportation District, pursuant to Policy FL.13.05.

b) Residential development shall be permitted as detached single family units, attached townhomes, multi-family units; and live-work units; residential units may be located above ground floor commercial and professional office. Residential development within the Regional Center is not subject to density bonuses found elsewhere in the Comprehensive Plan.

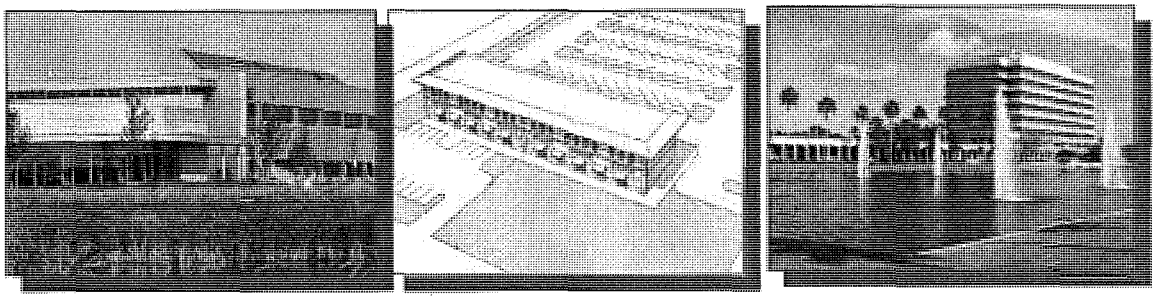
c) Subject to a binding agreement, shared parking areas shall be permitted for all Regional Center uses, including any public and civic land uses. The County's land development regulations may provide reduced minimum parking ratios for development located with a 15-minute walk of a rail transit stop or within a 5-minute walk of a feeder transit line.

d) Development shall be designed to incorporate landscaping and pedestrian amenities such as benches and bicycle parking along neighborhood sidewalks and multi-use paths.

e) Development shall be designed to incorporate high quality plazas and parks that serve residents, employees and visitors of the Regional Center.

f) Development shall be designed to accommodate feeder bus/transit stops.

C) Employment Center (EC)



The Employment Center land use sub-category is intended to provide residential, office, research park, technology, office and service uses, manufacturing, warehousing distribution, commercial and civic uses that serve greater Nassau County and the region. Employment Centers shall be located adjacent to or near other intense land uses and potential transit corridors, including Interstate 95, U.S. Highway 17, S.R. 200/ A-1-A and existing rail lines.

Range of Allowable Uses: Multi-family residential dwellings (whether free standing or part of a mixed use structure), office, personal services, research park, high technology, high value business industry and service uses, manufacturing, warehousing distribution, commercial, hotel and civic uses, public facilities, transit stations and other land uses that are similar and compatible.

Average Net Density: Minimum – 5.00 du/ac. Maximum – 20.00 du/ac.

Intensity*: Minimum – 0.00 F.A.R. Maximum – 1.00 F.A.R.

** Where residential and non-residential uses are included within the same structure, floor area ratio will exclude those portions devoted to residential dwelling units.*

1) Employment Center General Development Guidelines

Development within the Employment Center land use sub-category shall be zoned to one or more zoning districts consistent with the uses, densities and intensities described above. Such zoning shall be subject to County approval of a Preliminary Development Plan (PDP) and shall be consistent with the following general development guidelines:

a) Development in the Employment Center land use sub-category shall be subject to the following land use mix percentage requirements:

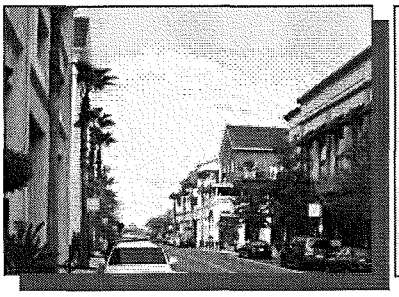
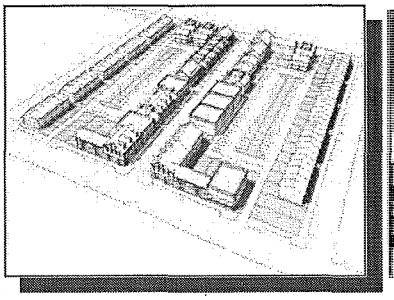
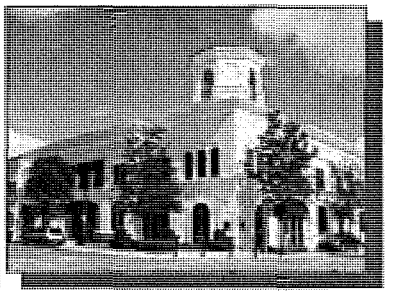
i. Office, research park and business service - 15% to 90%;
ii. Industrial (manufacturing and warehousing distribution) - 0% to 60%;
iii. Support retail, hotel and services - 0% to 10%;
iv. Civic, public facilities and transit stations - 10% minimum; and
v. Residential - 0% to 10%

b) Shared parking areas and garages shall be permitted for all Employment Center uses, including any civic and public facilities.

c) Development shall be designed to incorporate landscaping and pedestrian amenities such as benches and bicycle parking along sidewalks and multi-use paths and streets.

d) Development shall be designed to accommodate feeder bus, bus rapid transit and other transit stops.

D) Village Center (VC)

The purpose of the Village Center land use sub-category is to recognize areas within the ENCPA which shall include a mixture of higher density residential development and larger-scale commercial, office or civic (including schools) land uses are appropriate. Village Centers are intended to support the needs of more than one neighborhood.

Range of Allowable Uses: Single family, two-family, ancillary (accessory) dwelling units; multi-family residential either free standing or in mixed use structures, retail sales, personal services, business and professional offices, recreational and commercial-working waterfront uses, parks/ plazas, recreation and open spaces, government, other public uses and other land uses that are similar and compatible.

Average Net Density: Minimum – 7.0 du/ac. Maximum – 20.0 du/ac.

Intensity*: Minimum – 0.20 F.A.R. Maximum – 1.00 F.A.R.

**** Where residential and non-residential uses are included within the same structure, floor area ratio will exclude those portions devoted to residential dwelling units.***

1) Village Center General Development Guidelines

Development within the Village Center land use sub-category shall be zoned to one or more zoning districts consistent with the uses, densities, intensities described above. Such zoning shall be subject to County approval of a Preliminary Development Plan (PDP) and shall be consistent with the following general development guidelines:

a) Residential development shall be permitted as single family, multi-family or attached live-work units and shall be permitted above ground floor commercial and professional office.

b) On-site parking for commercial and office land uses shall be located behind or beside buildings fronting on primary streets.

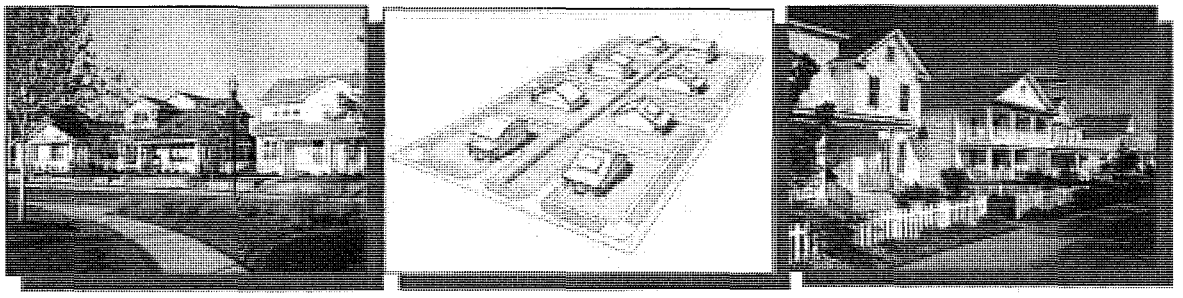
c) Shared parking areas shall be encouraged for all Village Center uses, including any public and civic land uses.

d) Sites shall be designed to incorporate landscaping and pedestrian amenities such as benches and bicycle parking along neighborhood sidewalks and multi-use paths.

e) Sites shall be designed to incorporate plazas and parks that serve the Village Center and surrounding neighborhoods.

f) Sites shall be designed to accommodate existing or future feeder bus/transit stops.

E) Residential Neighborhood (RN)



The Residential Neighborhood ("RN") land use sub-category is intended to create a variety of residential densities, housing types and neighborhoods that are organized around a community Village Center. Development shall be designed using compact land use patterns that are conducive to walking or bicycling.

All neighborhoods shall be served by a connected transportation network suitable for pedestrians, bicycles and motorized vehicles. Streets are to be constructed for slower vehicular travel speed and designed to accommodate transit through reservation of bus bays, etc. Neighborhoods should also be designed to provide public parks and accessible open space, including multi-use paths and trails.

The RN land use sub-category shall be based on a three-tiered residential density approach around designated Village Centers. Tier 1 shall be adjacent to, and generally within, a ¼ mile of designated Village Centers and shall include the highest minimum average net densities of the three (3) tiers. Tier 2 shall be generally located within one (1) mile of designated Village Centers and include slightly lower minimum average net densities. Tier 3 shall be generally located beyond one (1) mile from Village Centers and provide opportunities for the lowest minimum average net densities and large rural lots, while allowing for a clustered residential development pattern. The allowable uses and average net densities for each tier are described below.

Table 18 Average Net Density Proximate to Village Centers (ENCPA)

Development Tier	Minimum Average Net Density	Maximum Average Net Density
Tier 1 – Adjacent to and generally within ¼ mile from Village Centers	**5.0 du/ac.**	**N/A**
Tier 2 – Generally between ¼ and one (1) mile from Village Centers	**2.5 du/ac.**	**N/A**
Tier 3 – Generally beyond one (1) mile from Village Centers	**N/A**	**0.50 du/ac.***

**Where residential development is not clustered as described in Policy FL-13.07(E)(2)(b), Tier 3 shall be limited to a maximum residential density of one (1) dwelling unit per 10 gross developable acres.*

Range of Allowable Uses: Single family detached, two-family, townhomes and multi-family residential; ancillary (accessory) dwelling units; clustered residential lots (in Tier 3); parks; schools and day care centers; other public/civic facilities; and neighborhood scale commercial and office (in Neighborhood Centers), and other land uses that are similar and compatible.

1) Residential Neighborhood General Development Guidelines – Tiers 1 and 2 Only

Development in Tiers 1 and 2 of the Residential Neighborhood land use sub- category shall be zoned to one or more zoning districts consistent with the uses, densities, intensities described above. Such zoning shall be subject to County approval of a Preliminary Development Plan (PDP) and shall be consistent with the following general development guidelines:

a) Private neighborhood parks, plazas and civic areas shall provide an identity for individual neighborhoods.

b) Community or regional parks and community facilities shall be located near or adjacent to planned and existing public school facilities. Joint-use recreational facilities with a public school facility shall be encouraged.

c) Private neighborhood parks are improved areas and shall provide recreational space and may include such amenities as informal play fields, play equipment, seating areas and other such improvements.

d) Private neighborhood parks shall be generally a minimum of ¼ acre in size and publicly accessible.

e) Public schools shall be located in accordance with the goals, objectives and policies of the Public Schools Facilities Element.

f) Stormwater management areas shall be designed as a visual amenity and may count towards the minimum park and common open space requirements when publicly accessible.

g) Transit stops, where public transit is available, should be incorporated as a focal point and designed as a civic feature in a visible and secure setting of the neighborhood.

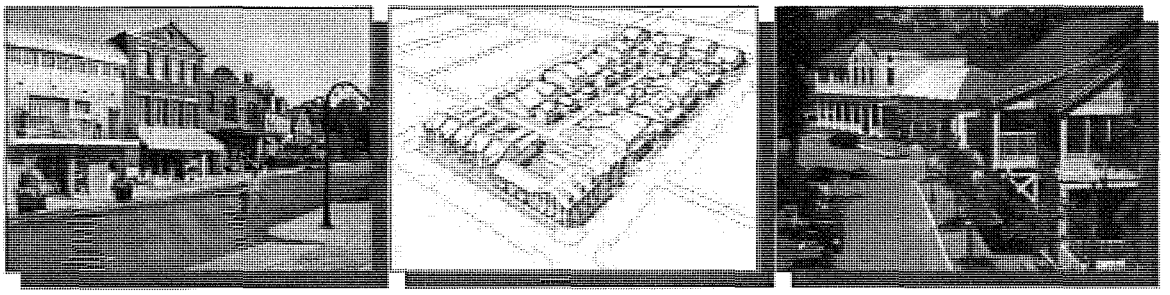
2) Residential Neighborhood General Development Guidelines – Tier 3 Only

Within Tier 3, the County shall establish measures to achieve the desired rural land use pattern. Development in Tier 3 shall be zoned in one or more districts consistent with the uses, densities, intensities described above. Such zoning shall be subject to County approval of a Preliminary Development Plan (PDP) and shall be consistent with the following general development guidelines:

a) Development shall not exceed an average maximum density of one (1) dwelling unit per ten (10) gross acres. However, where development is clustered to preserve open space, the County shall permit densities up to an average maximum net density of one (1) dwelling unit per two (2) acres.

b) Clustered development areas shall contain a minimum of eight (8) lots and a maximum of thirty (30) lots, with a maximum front lot width of 150 feet.

3) Neighborhood Center (NC)



General Development Guidelines

The Residential Neighborhood land use sub-category may contain centrally located "Neighborhood Centers" that serve as a focal point of a neighborhood and provide limited neighborhood-serving land uses designed to support the daily needs of residents in accordance with the following criteria.

Range of Allowable Uses: General retail, personal services, offices, attached residential and civic uses including religious institutions, day care facilities, parks/plazas, other neighborhood- serving uses, and other land uses that are similar and compatible.

Average Net Density: Consistent with the Residential Neighborhood land use sub-category criteria above

Intensity: Maximum - 0.20 F.A.R.

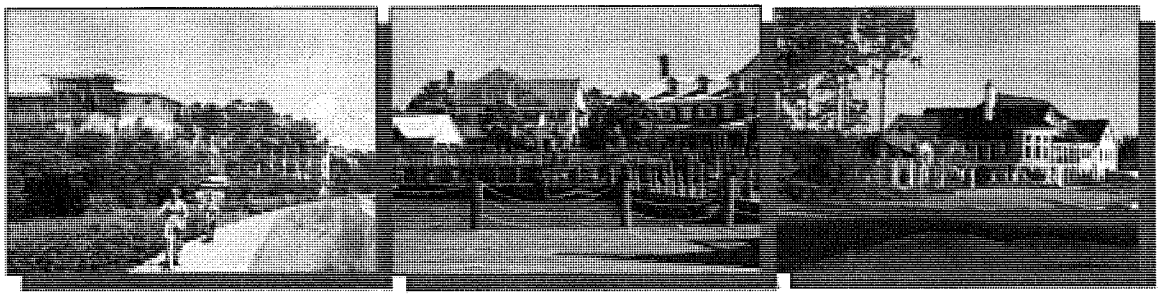
Development within Neighborhood Centers shall be zoned to one or more zoning districts consistent with the uses, densities, intensities described above. Such zoning shall be subject to County approval of a Preliminary Development Plan (PDP) and shall be consistent with the following general development guidelines:

a) The gross land area for Neighborhood Centers shall include a maximum of twelve (12) acres and shall include a park square or green of at least one (1) acre in area.

b) Residential development shall be permitted as attached live-work units or located above ground floor commercial and professional office.

c) Shared parking areas shall be permitted for all neighborhood center uses, including any public and civic land uses.

F) Resort Development (RD)



The Resort Development land use sub-category is intended for a mixture of seasonal and year-round housing types in a neighborhood- like setting. Non-residential uses such as hotels, restaurants and resort-serving commercial, retail and service uses shall be permitted in the Resort Development land use sub-category.

Range of Allowable Uses: Seasonal and year-round single family detached, two-family, townhomes, apartments, condominiums, timeshares, and ancillary (accessory) dwelling units; parks; golf courses; resort commercial, personal services and office uses; recreational and commercial-working waterfront uses; hotels; educational facilities and day care; other civic facilities essential to neighborhood residents; and other land uses that are similar and compatible.

Average Net Density: Minimum – 4.0 du/ac. Maximum – 20.0 du/ac.

Intensity*: Minimum – 0.00 F.A.R. Maximum – 2.00 F.A.R.

** Where residential and non-residential uses are included within the same structure, floor area ratio will exclude those portions devoted to residential dwelling units.*

1) Resort Development General Development Guidelines

Development in the Resort Development land use sub-category shall be zoned to one or more zoning districts consistent with the uses, densities, intensities described above. Such zoning shall be subject to County approval of a Preliminary Development Plan (PDP) and shall be consistent with the following general development guidelines:

a) Neighborhood parks may provide recreational space and include such amenities as play fields, play equipment, seating areas and other such improvements. Open space may provide alternatives to parks when it provides areas for uses such as hiking, biking or picnicking.

b) Parks shall be a minimum of ¼ acre in size. Parks shall be privately owned and maintained, unless accepted for public dedication.

Policy FL.13.08

General Development Standards

When applicable, the following General Development Standards shall be addressed for development within each land use sub-category, with more specific development standards established during the Preliminary Development Plan (PDP) review process.

A) **Block size and connectivity standards;**

B) **Minimum and maximum lot area and size;**

C) **Maximum lot depth and width;**

D) **Principle building setbacks (buildings close to and oriented to the street);**

E) **Other building setbacks (including balconies, canopies, accessory structures, porches, stoops, driveways, other encroachment limitations, etc.);**

F) **Building heights measured by the number of stories;**

G) **Accessory dwelling unit standards;**

H) **Street-front building transparency standards (window and doors);**

I) **Other building façade and street orientation standards;**

J) **Parking location, delivery and loading standards;**

K) **Multi-use pathways, sidewalks and roadway standards (conflicts between pedestrian and vehicular movements decided in favor of the pedestrian);**

L) **Street cross sections;**

M) **Alley requirements for residential lots less than sixty-feet (60') in width;**

N) **Common open space and storm water retention location and general design;**

O) **Landscaping standards;**

P) **Pedestrian amenities such as benches and bicycle parking along neighborhood sidewalks and multi-use paths;**

Q) **Buffering and screening standards;**

R) **Sign standards;**

S) **Public, civic and park space standards; and**

T) **Public area lighting standards.**

Policy FL.13.09

St. Marys River Greenway

The St Mary's River Greenway ("Greenway") shall consist of areas with uniquely high topography adjacent to the St Mary's River or Bells River in locations as depicted on the adopted ENCPA Master Land Use Plan (Map FLUMS-6). The Greenway shall be developed in a manner to protect the view shed to and from the river bluffs and preserve portions of the unique visual and physical characteristics of the riverfront and its bluffs. The following development guidelines shall be enforced to ensure consistency with this Policy:

A) **The Greenway shall have an average minimum width of one-hundred feet (100'), with a minimum width of fifty feet (50');**

B) **Development within the Greenway shall include points of public access for the purposes of providing non-vehicular pedestrian connectivity to key locations in the resort area and to the internal ENCPA multi-use pathway system; and**

C) **Development within the Greenway shall be limited to river access facilities, observation decks and walkways, educational or conservation centers, golf courses, walking trails and other passive recreational uses. Golf course areas within the Greenway shall not be permitted within the minimum required fifty feet (50') buffer area.**

Policy FL.13.10

Sustainable Development Program

For the purpose of providing a more sustainable land use pattern, the ENCPA has been designed to restrict development within the designated Conservation Habitat Network and to establish a new regional employment center for Nassau County. Given the significant economic development potential formed by access to planned regional rail service along the U.S. 17 corridor, two existing interchanges and a planned new interchange for Interstate 95, these areas of the ENCPA are uniquely situated to foster job growth and have been designated as a regional employment center. To ensure that a functional land use mix is realized through the ENCPA, the following maximum development program quantities are hereby established:

Table 19 Maximum ENCPA Development Program

2010 – 2015 MAXIMUM ENCPA DEVELOPMENT PROGRAM	
Residential	1,200 Dwelling Units
Non-Residential	1,210,000 Sq. Ft.
2030 MAXIMUM ENCPA DEVELOPMENT PROGRAM (Cumulative)	
Residential	24,000 Dwelling Units
Non-Residential	11,000,000 Sq. Ft.

Policy FL.13.11

Jobs-to-Housing Balance

The ENCPA shall provide a functional mix of land uses to assist the County in achieving a countywide jobs-to-housing balance goal of 1.19 jobs per employed resident. The primary intent for establishing an appropriate jobs-to-housing balance program is to:

A) Support sustainable, energy efficient development patterns by placing residential and non-residential uses in close proximity to each other and thereby, effectively reduce commuting distances for a significant percentage of ENCPA and county residents;

B) Encourage land use patterns that help attract additional job growth for Nassau County; and

C) Maintain a mix of residential and non-residential land uses within the ENCPA that will meet or exceed the established jobs-to-housing balance ratio at buildout, while taking market conditions into consideration.

For purposes of this Policy, ENCPA development shall be considered to have an acceptable jobs-to-housing balance (JHB) if the ratio of proposed jobs to the number of projected employed residents (jobs divided by employed residents) meets or exceeds 0.84 at buildout. Calculations shall be based upon 1.21employed residents per household and typical 450 square feet per employee by land use.

Policy FL.13.12

Distribution of Uses by Land Use Sub-Category

The following minimum and maximum uses within each ENCPA land use sub-category are required to implement mixed-use controls, ensure an appropriate spatial relationship between housing and services and demonstrate the ability to achieve the desired jobs-to-housing balance ratio in Nassau County. The specific mixture of uses shall be established and monitored by the County through the Preliminary Development Plan review processes.

Table 20 Distribution of Uses in ENCPA by Land Use Sub-Category

Land Use Sub-Category	Maximum Residential Uses* (dwelling units)	Minimum Non-residential Uses* (Building Sq. Ft.)
Regional Center and Employment Center (combined)**	7,500-9,000**	9,000,000 – 10,000,000
Resort Development	2,500 – 3,500	400,000 – 500,000
Village Center	2,000 – 3,000	700,000 – 850,000
Residential Neighborhood	9,000 – 11,000	150,000 – 200,000

** Total residential units and non-residential square footage shall not exceed the committed development program of 24,000 residential units and 11,000,000 square feet of non-residential uses*

*** Residential Uses in the Employment Center land use subcategory shall not exceed 1,500 units*

Policy FL.13.13

Silvicultural and Agricultural Activities

The size and scope of the ENCPA contemplates a long range planning horizon and the desire to allow for continued silvicultural and agricultural activities until parcels are otherwise developed. Silvicultural and agricultural activities, which include residential uses at a density not to exceed one dwelling unit per 20 acres, shall be allowed within planned development parcels of the ENCPA until such time as building permits are issued for a development parcel. Thereafter, such activities shall be limited to the range of allowable uses for the applicable land use sub-category, unless silvicultural and agricultural uses are otherwise provided for by the development order applicable to such parcel.

Policy FL.13.14

Master Land Use Plan

The East Nassau Community Planning Area (ENCPA) Master Land Use Plan, illustrated at a measurable scale on Map FLUMS-6, is adopted as part of the Future Land Use Map series. It is a guide for the development pattern within the ENCPA and depicts the general location of land use sub-categories required to support the ENCPA development principles and policies. The character of each land use sub-category is further defined by residential density, range of permitted uses and non-residential intensities. The Master Land Use Plan may be modified in conjunction with a Preliminary Development Plan without a Comprehensive Plan amendment, provided that:

A) **The modification does not increase or decrease the ENCPA boundary; and**

B) **The modification does not increase the overall development program as identified in Policy FL.13.10; and**

C) **The modification is found consistent with the development principles and respective ENCPA FLUE policies; and**

D) **The modification is approved in conjunction a development order, resolution or ordinance adopted by the Board of County Commissioners pursuant to public notice and public hearing; and**

E) **Modifications to the Conservation Habitat Network (CHN) boundaries shall follow the general guidelines and standards set forth in Policy FL.13.07(A)(1).**

Policy FL.13.15

Common Open Space

In addition to water bodies, wetlands, greenways and conservation areas which appear on the ENCPA Master Land Use Plan (Map FLUMS-6), the ENCPA land use sub-categories shall include areas designated as common open space. Common open space shall be in the form of neighborhood parks, squares, mews, greens, recreational trails and/or multi-use paths and shall be distributed throughout each respective Preliminary Development Plan. Stormwater facilities that are designed as a visual project amenity may also be counted towards this requirement.

Policy FL.13.16

Public Water and Wastewater Utilities

All development within the ENCPA shall be served by central water and wastewater service.

Policy FL.13.17

New Interstate 95 Interchange

The new Interstate 95 interchange depicted on the East Nassau Community Planning Area (ENCPA) Master Land Use Plan (MLUP) serving the regional center is conceptual in nature. Illustration of the interchange has been provided as an aid for understanding the components of the County's long range transportation network and its location does not bind any public or private entity for its future construction. A final decision on the planning design and construction of an interchange in this general location shall be subject to federal and state requirements for interchange justification.

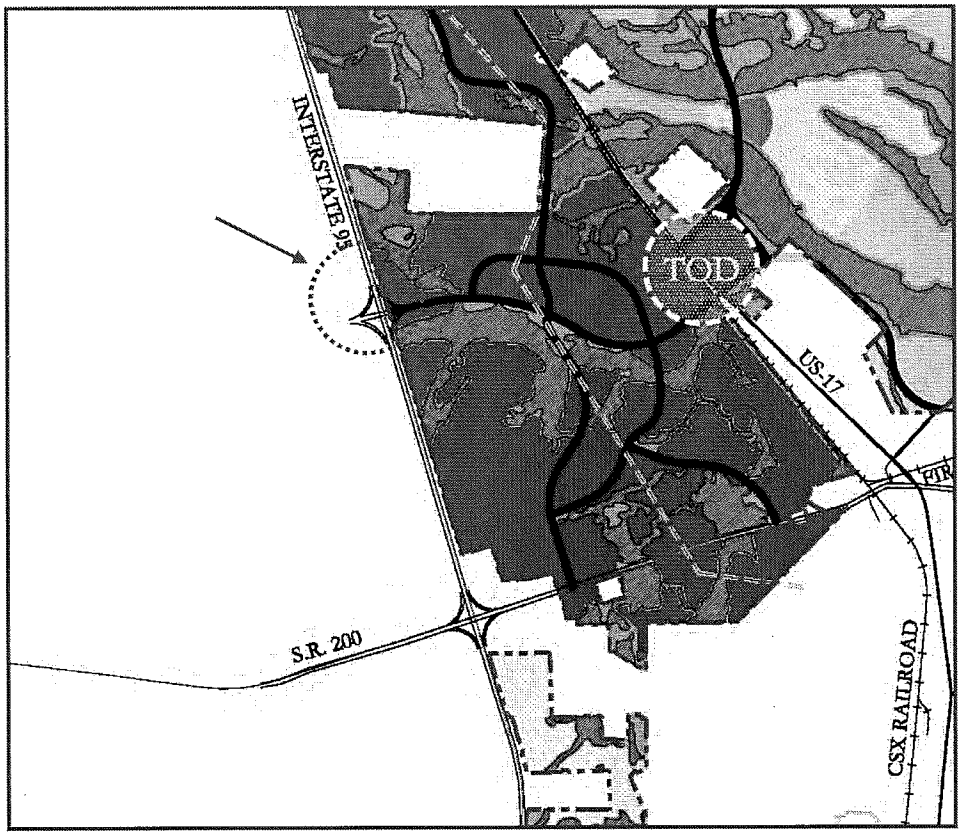


EXHIBIT 2

Nassau County 2030 Comprehensive Plan
Capital Improvements Element (CI)
Goals, Objectives and Policies

Goal

Based on the premise that existing taxpayers should not have to bear the financial burden of growth-related infrastructure needs, Ensure the orderly and efficient provision of infrastructure necessary to serve existing and future population and development in a manner that creates a fiscally sustainable community.

OBJECTIVE CI.01

Capital improvements shall be provided to: correct existing deficiencies, accommodate desired future growth and replace worn-out or obsolete facilities as indicated in the Schedule of Capital Improvements.

Policy CI.01.01

Capital improvements, in the context of the Comprehensive Plan, shall include improvements necessary to achieve and maintain adopted level-of-service (LOS) standards for the transportation system, potable water, sewage, solid waste disposal, stormwater management, and recreation and open space facilities. Capital improvements shall be defined as those improvements which are limited to a one time minimum expenditure of $50,000 including land, buildings, design and permitting and do not include expenditures for equipment, operations and maintenance costs.

Policy CI.01.02

The County shall maintain a minimum five (5)-year Schedule of Capital Improvements (SCI) which will include any publicly funded projects of federal, state, or local government, as well as privately funded projects necessary to ensure that any adopted level-of-service standards are achieved and maintained for the 5-year period. Projects must be identified as either funded or unfunded and given a level of priority for funding.

Policy CI.01.03

The Schedule of Capital Improvements shall include all projects identified as necessary to achieve and maintain adopted level-of-service standards within Nassau County including, but not limited to, projects identified in the following:

A) The County's Capital Improvement Plan(CIP)
B) The FDOT District 2 Five-Year Work Program
C) The Nassau County School District Five-Year Facilities Work Program
D) The JEA Annual Water Resource Master Plan
E) Projects identified as part of a Proportionate Fair Share or Development Agreement.

Policy CI.01.04

The County shall review and monitor outstanding development orders and agreements to ensure that public facility obligations are being met and appropriately incorporated into the five (5)-year Schedule of Capital Improvements.

Policy CI.01.05

The County shall review all proposed new capital facilities against the criteria contained in the various Comprehensive Plan Elements to ensure that the proposed facilities are in conformance with the planned goals and objectives.

Policy CI.01.06

The County shall consider creation of an expanded 10 to 15 year Schedule of Capital Improvements in the Comprehensive Plan for the purpose of projecting future infrastructure needs, estimating future costs and revenue, guiding future growth to appropriate areas, and use as a criterion for review of FLUM amendments.

OBJECTIVE CI.02

The County shall adopt Level of Service (LOS) standards against which the adequacy and deficiencies of facilities may be measured.

Policy CI.02.01

Nassau County adopts the Level of Service (LOS) standards for public facilities and services as shown below. The County may not issue a development order or permit that results in a reduction in the level of service (LOS) for the affected public facilities below the minimum level of services established in this plan. Public facilities and services must meet or exceed the level of service standards established in this plan and must be available when needed for the development as specified in this plan.

A) Transportation

Road Classification	Minimum LOS		
	Rural	Transitioning to Urban	Urbanized
Limited Access (Freeways)			
4-lane	D	D	D
6-lane	D	D	D
8-lane	D	D	D
Principal Arterials			
2-lane	D	D	D
4-lane	D	D	D
6-lane	D	D	D
Minor Arterials			
2-lane	D	D	D
4-lane	D	D	D
6-lane	D	D	D
Collectors			
Major	D	D	D
Minor	D	D	D

Notes:
1. Level of service letter designations are defined in the FDOT 2013 Quality/Level of Service Handbook.
2. It is recognized that certain roadways (i.e., constrained roadways) will not be expanded by the addition of through lanes

B) Public School Facilities

1. LOS for Elementary Schools: 95% of permanent FISH capacity

2. LOS for Middle and High Schools: 100% of permanent FISH capacity

3. LOS for Combination Schools (Grades K-8 or 6-12, for example): 100% of permanent FISH capacity

C) Recreation and Open Space

Type	Service Radius	Minimum Size	Area /1000 Residents	Other Requirements
Community Parks	1- 5 miles	10 Acres	3.35 Acres	
Regional Parks- General	County -wide	30 Acres	10 Acres	
Regional Parks- Beach Access	County -wide	Variable	.25 Acre	At .5 mile linear increments with adequate space for parking
Regional Parks- Boat Facility	County -wide	Variable	.40 Acre	1 ramp lane per 5,000 population

D) Potable Water

Provider	LOS gpd per capita	peak factor
JEA	**100.0**	**2.0**
Nassau Amelia Utilities	**81.0**	**1.5**

E) Sanitary Sewer

Provider	LOS gpd per capita	pk
JEA	**85**	**1.2**
Nassau Amelia Utilities	**76.8**	**1.2**

F) Solid Waste Disposal

Measure	LOS
Lbs. per capita/day	**4.91 lbs.**
Tons per capita/year	**.90 ton**
Fill Rate per capita/year (cubic yards)	**1.4 cy**

G) Stormwater Management

1. Projects which discharge or contribute runoff to downstream areas which are not volume sensitive and have adequate capacity to accept and convey stormwater runoff from the project site without increasing flood levels shall limit peak rates of discharge for developed conditions to pre-developed or existing conditions for the 5-year, 10-year, and 25-year design storm event.

2. Projects which discharge or contribute runoff to downstream areas which are volume sensitive and/or do not have adequate capacity to accept and convey stormwater runoff from the project site without increasing flood levels shall provide detention of the 25-year discharge volume for developed conditions such that the volume released from the project during the critical time period is no greater than the volume released under pre-developed or existing conditions during the same time period. For the purposes of this requirement the critical time period shall be the storm duration based on the 24-hour duration rainfall event unless a detailed hydrologic study of the contributing watershed demonstrates otherwise.

3. All projects shall meet state water quality discharge standards as regulated by the St. Johns River Water Management District pursuant to Rule 40C-42 F.A.C., and must submit of a copy of a valid St. Johns River Water Management District permit as part of the development review process.

Policy CI.02.02

The County shall continually review the established level of service (LOS) standards on the basis of consistency with the Schedule of Capital Improvements, local comprehensive planning activities, cost feasibility and effectiveness, relative magnitude and term of need, the ability to use other jurisdictional capital improvements through interlocal agreements, and overall budget impacts.

Policy CI.02.03

The applicable Mobility Fees for new development must be paid in accordance with the County' s adopted Mobility Fee ordinance prior to a development order or permit being issued for the project.

Policy CI.02.04

The land, or equivalent funds, for parks and recreation facilities required to maintain LOS for new development must be dedicated to, or acquired by, the County prior to the issuance of a residential certificate of occupancy.

Policy CI.02.05

Potable water, sewer, solid waste and stormwater management facilities required to maintain LOS for new development must be in place and available for use prior to the issuance of certificates of occupancy.

OBJECTIVE CI.03

The County shall establish a system for prioritizing the scheduling of County-funded capital improvements to mitigate existing or projected deficiencies and to accommodate new growth at the adopted LOS.

Policy CI.03.01

The County shall, in accordance with its adopted Financial Policies, evaluate and prioritize its capital improvement projects based upon the following criteria:

A) Preservation of the health and safety of the public
B) Compliance with all mandates and prior commitments
C) Elimination of existing deficiencies
D) Maintenance of adopted level of service standards
E) Protection of existing capital investments
F) Consistency with the Comprehensive Plan and plans of other agencies
G) Eligibility for grants
H) A demonstrated relationship between projected growth and capital project
I) Impact on operating costs
J) Utilization of economies of scale and timing of other projects
K) Adjustment for unseen opportunities, situations, and disasters
L) Funding sources

Policy CI.03.02

Nassau County shall continually review its established capital improvement prioritizing criteria on the basis of: the maintenance of LOS standards, County comprehensive planning activities, cost feasibility and effectiveness, relative magnitude and term of need, intergovernmental agreements to use other jurisdictional capital improvements and overall budget impacts.

OBJECTIVE CI.04

The County shall continue to limit the expenditure of public funds in Coastal High Hazard Areas (CHHA) as defined in the Florida Statutes.

Policy CI.04.01

The County shall, where feasible, limit public expenditures that subsidize development within the Coastal High Hazard Area (CHHA), as defined, to those which are deemed necessary to:

A) maintain existing level-of-service standards;

B) maintain the health, safety and welfare of the residents of these areas, and;

C) facilitate public access to natural open space and recreation areas.

OBJECTIVE CI.05

The County shall continue to coordinate development or redevelopment proposal approvals consistent with existing services availability, or time development impacts to be concurrent with the programmed provision of required infrastructure in the Schedule of Capital Improvements so as to maintain the adopted Level of Service.

Policy CI.05.01

The County shall utilize existing and improved development permitting procedures to review development proposals for compliance with the County's adopted LOS, and where appropriate, the time frame for implementation of additional facility improvements shall be determined.

Policy CI.05.02

To the extent practicable, the County shall channel development into area where services are, or will be made, available at the adopted LOS.

Policy CI.05.03

County approval of proposed development or redevelopment projects shall be based on the condition that project related infrastructure is, or will be available at the adopted level of service standards.

Policy CI.05.04

Land use decisions and timing shall be reviewed against existing and future facilities as proposed in the adopted Schedule of Capital Improvements for maintenance of the adopted Level of Service.

OBJECTIVE CI.06

The County shall continue to enforce the Land Development Code to ensure that new development pays its share of costs necessary to maintain the level of service standards adopted herein.

Policy CI.06.01

The County shall require the construction and/or posting of financial surety of project related infrastructure improvements necessary to accommodate the development of vacant parcels or substantial redevelopment of existing properties.

Policy CI.06.02

Credit for shall be granted against required mobility fees for the construction of off-site road improvements and/or dedications of right-of-way to mitigate the transportation impacts of new development.

Policy CI.06.03

Nassau County may collect impact fees for transportation(i.e. mobility fees), parks and recreation, fire-rescue, law enforcement and administrative capital facilities. The amount of the impact fee cannot exceed the cost per unit of demand needed to accommodate new development at the adopted LOS standard less the value of future non-impact fee revenues that will also be used to pay for the needed capital facility expansion.

Policy CI.06.04

Cooperate with the Nassau County School Board to collect education impact fees for the capital improvements to public school facilities necessary to serve new residential developments.

OBJECTIVE CI.07

The County shall identify dedicated funding sources, non-ad valorem revenue streams, developer contributions, impact fees, grants and other possible fiscal resources to ensure the provision of needed capital improvements

Policy CI.07.01

The County shall consider project cost projections based on inflation and contingency costs.

Policy CI.07.02

Nassau County's adopted Schedule of Capital Improvements shall incorporate specific funding sources for identified projects.

Policy CI.07.03

The Budget Officer shall prepare annual estimates of available capital funding sources.

Policy CI.07.04

The County shall annually review its Schedule of Capital Improvements in accordance with Sec. 163.3177, F.S. and the goals, objectives and policies of this Comprehensive Plan.

OBJECTIVE CI.08

The County shall continue to coordinate with the Florida Department of Transportation and the North Florida Transportation Planning Organization to advocate the inclusion and funding of certain long-range transportation improvements which are necessary to support development and maintain level of service standards within Nassau County.

Policy CI.08.01

The transportation improvements identified in the Mobility Plan for the ENCPA and its adopted Detailed Specific Area Plans (DSAPs) shall be included as long term (unfunded) needs on the Future Transportation Map Series (Map FTMS-) and shall be considered by the County when it reviews and updates the adopted Mobility Plan and the Schedule of Capital Improvements.

Policy CI.08.02

The County will participate with the North Florida TPO in the update of the TPO's Long Range Transportation Plan and the Transportation Improvement Program (TIP).

Policy CI.08.03

The County will coordinate the updating of the Schedule of Capital Improvements with the North Florida TPO's Transportation Improvement Program, FDOT's Five-Year Work Program, and the County's adopted Mobility Plan.

OBJECTIVE CI.09

The County shall manage the timing of residential growth to ensure adequate school capacity is available consistent with adopted level of service standards for public school concurrency.

Policy CI.09.01

The uniform, district-wide level-of service standards for public school facilities shall be based upon the Florida Inventory of School Houses (FISH) maintained by the Department of Education (DOE). These standards shall be consistent with the Inter-local Agreement agreed upon by the School District, and the local governments within Nassau County.

Policy CI.09.02

The County hereby incorporates by reference the Nassau County School District's Five-Year Facilities Work Program for fiscal years 2015-2016 through 2019-2020 adopted September 14, 2015, that includes improvements to school capacity sufficient to meet anticipated student demands projected by the County and its municipalities, in consultation with the School Board's projections of student enrollment, and based on the adopted level of service standards for public schools.

Policy CI.09.03

The County, in coordination with the School Board, shall annually update the Capital Improvements Element by adopting an ordinance that incorporates by reference the School District's Five-Year Facilities Work Program to ensure that level of service standards will continue to be achieved and maintained during the five-year planning period.

Policy CI.09.04

The County shall ensure that future development pays a proportionate share of the capital costs of public school facilities needed to accommodate new development and maintain adopted level of service standards .

Policy CI.09.05

The County shall include public school facilities as part of the development approval process by conditioning development orders upon the availability of public school facilities at the adopted Level of Service.

EXHIBIT 3

Nassau County 2030 Comprehensive Plan
Recreation and Open Space Element (ROS)
Goals, Objectives and Policies

Goal

Provide and maintain sufficient public parks, recreation facilities, and open space to meet the recreational needs of County residents and visitors.

OBJECTIVE ROS.01

The County shall acquire, develop and efficiently maintain adequate community and regional recreation facilities to achieve and maintain the adopted Level of Service (LOS) in order to meet projected recreational needs through the year 2030.

Policy ROS.01.01

The County shall prepare and maintain a Parks and Recreation Master Plan in cooperation with appropriate agencies to guide the development and maintenance of County parks and recreation facilities. The Plan should accomplish the following:

A) Inventory the County parks system;

B) Recommend guidelines for the size, timing and phasing of parks in the County by using population trends and projections;

C) Establish criteria for, and priority ranking of, lands for acquisition and development;

D) Consider existing and potential funding sources as well as programs for implementation and a long-range capital improvements plan for future parks and recreation facilities.

Policy ROS.01.02

The County should select and assemble an advisory committee representing both the public and private sector to guide the development of the Parks & Recreation Master Plan. Extensive public involvement including surveys, public workshops, and extensive discussions with community organizations should be required in order to develop a plan that reflects the needs and values of the County.

Policy ROS.01.03

Parks shall be defined in this Plan as follows:

A) "Neighborhood Park" shall mean a local park, which is typically less than 10 acres in size and may include landscaping and recreational improvements such as sandboxes, play sculpture, playground equipment, benches, shelters, trees and fencing. These parks are used by the residents of one or more nearby neighborhoods, typically those within a half-mile radius of the park.

B) "Community Park" shall mean a park, which is designed to serve the recreation needs of several communities in the unincorporated areas of the County generally within a 1-5 mile service radius. They may include restrooms, onsite parking, large landscaped areas, community centers, lighted sports fields, athletic complexes, large swimming pools, and other specialized recreational facilities. These parks are generally at least 10 acres in size.

C) "Regional Park" shall mean either water-based recreation sites or a large, resource-based park of at least 30 acres or more in size and intended to serve residents of the entire unincorporated area, as well as residents of the municipalities. These parks contain recreation uses, such as water-based recreation, beach access sites, boating facilities, camping, fishing, trails and nature study, but may also provide specialized recreational facilities, such as a sports complex.

Policy ROS.01.04

The County shall acquire, maintain, or manage through agreement, community and regional park facilities to achieve and maintain the adopted levels of service (LOS) shown below.

Type	Service Radius	Minimum Size	Area /1000 Residents	Other Requirements
Community Parks	1- 5 miles	10 Acres	3.35 Acres	
Regional Parks- General	County -wide	30 Acres	10 Acres	
Regional Parks- Beach Access	County -wide	Variable	.25 Acre	At .5 mile linear increments with adequate space for parking
Regional Parks- Boat Facility	County -wide	Variable	.40 Acre	1 ramp lane per 5,000 population

Policy ROS.01.05

In general, the County shall not seek to acquire neighborhood park facilities. Land and improvements for neighborhood parks shall be provided by new development through the site plan review process. Criteria for the location and design of such facilities shall be included in the Land Development Code (LDC), Planned Unit Development (PUD) or Development of Regional Impact (DRI) development order.

Policy ROS.01.06

In order to address existing deficiencies and future needs in a fiscally responsible manner, the County should consider the development of a 10 year + long range capital improvements plan for parks and recreation facilities to achieve and maintain the adopted level of service (LOS).

Policy ROS.01.07

The County shall plan recreation facilities based on the following planning guidelines from the State Comprehensive Recreation Program (2000). These guidelines are for planning purposes only and may be used to help determine how grant funds and county funds could be used to improve county recreation facilities. Upon adoption of the Parks & Recreation Master Plan as described in Policy ROS.01.01, these guidelines may be updated to reflect the needs of county residents.

Resource/Facility	Population per Unit (Median)
Baseball/Softball field	2,500
Basketball Court	5,000
Football/Soccer Field	6,000
Equipped play area	10,000
Exercise/Parcours Trails	15,000
Aquatic Center	25,000
Tennis Court	5,000

Policy ROS.01.08

Recreation impact fees may be implemented and updated as necessary as a funding source for new parks and recreation facilities.

Policy ROS.01.09

The County should investigate flexible administration of impact fees and land dedication to help accomplish the County's parks and recreation goals. This may include payment in lieu of land or purchase of credits from the County.

Policy ROS.01.10

The County shall seek interlocal agreements for the collection and disbursement of recreation impact fees with the municipalities within the County.

Policy ROS.01.11

The County shall cooperate with public agencies and private landowners to continue to provide public access for hunting and fishing.

Policy ROS.01.12

The County shall encourage and create incentives such as cluster development standards, density bonuses, mixed use development etc., for the dedication of recreational land.

Policy ROS.01.13

The County shall pursue available grant sources for the acquisition and development of park and recreation areas, including but not limited to Federal and State funding.

Policy ROS.01.14

The County shall maintain and develop existing parks to their optimal level with consideration given to the needs of the community served and the functional capacity of the parks.

Policy ROS.01.15

The County shall review each new development as to the need for public parks and recreation facilities that are necessary to maintain adopted levels of service. Required park land should be identified for dedication during the review process for a subdivision, Planned Unit Development (PUD), or Development of Regional Impact (DRI) and a schedule should be established for construction of facilities. The County may consider funds to be donated in lieu of land in cases where the required aggregate land dedication is less than the minimum standard of useable acres established in Policy ROS.01.03.

Policy ROS.01.16

To increase efficiency and convenience in the recreation system, the County will coordinate through interlocal agreements with other public agencies which have recreation areas in the County.

Policy ROS.01.17

Whenever possible, recreation sites should be established with multi-use purposes to provide both recreation facilities and to ensure preservation or conservation of environmentally sensitive lands.

OBJECTIVE ROS.02

The County shall assure appropriate multi-modal access to all public recreation areas maintained by the County, including beach and waterfront facilities. Recreational facilities required for new development shall be constructed to maximize appropriate multi-modal access.

Policy ROS.02.01

The County will provide for adequate vehicular parking and bicycle racks at all new County recreation areas and will ensure the installation of such facilities at the time of the reconstruction or additions to existing County recreation areas.

Policy ROS.02.02

Sidewalks, bicycle paths and multipurpose trails shall be provided at the time of construction or reconstruction as defined in the County Land Development Code along public roads which provide access from neighborhoods to County parks.

Policy ROS.02.03

The County will provide accessible parking and barrier-free access to all types of County recreational facilities.

Policy ROS.02.04

The County shall require as a condition of site plan approval, that easements for public beach access be provided by a developer of beachfront property, at an average of one-half mile intervals.

Policy ROS.02.05

As a condition of development approval, all developers constructing recreational facilities shall be required to provide adequate access of all kinds to recreational facilities and public water bodies to meet Objective ROS.02.

Policy ROS.02.06

The County shall provide in the Land Development Code a requirement that any access to public beaches and shorelines or other recreational sites required as a condition of concurrency or development approval, shall be of sufficient size to accommodate adequate vehicular parking and bicycle racks within the access easement.

Policy ROS.02.07

The County shall require developments with significant frontage along navigable waterways to provide, at a minimum, easements for, or the construction of, boat ramps and/or parking facilities for public use. Such easements may be calculated as part of the development's open space requirements. Criteria for developments subject to this requirement are to be specified in the Land Development Code (LDC).

Policy ROS.02.08

The County shall consider greenways to link existing and proposed nature reserves, parks, cultural and historic sites with each other. Greenways may include pedestrian and/or bike trails.

OBJECTIVE ROS.03

The County shall ensure the provision of open space as required in the County's Comprehensive Plan.

Policy ROS.03.01

The County shall adopt ,in the Land Development Code, specific standards for the provision and protection of open space.

Policy ROS.03.02

The County shall regularly review the Land Development Code to maximize the preservation of open space consistent with the goals ,objectives, and policies of this element and the future recommendations of the Parks and Recreation Master Plan.

Policy ROS.03.03

PUD and other mixed use developments shall be encouraged to provide large areas of open space and to provide recreation facilities beyond those necessary to be concurrent with the additional community needs they create.

Policy ROS.03.04

Conservation areas, including wetlands shall be reviewed for inclusion in a greenway system if they would provide a link to nature reserves, parks, cultural or historic sites or extensive floodplains, wetlands, lakes or waterways. Any area designated as a greenway shall count towards the development's open space requirement.

OBJECTIVE ROS.04

The County shall support and encourage appropriate and effective participation and partnership with non-governmental organizations in meeting Level of Service for parks and recreational facilities

Policy ROS.04.01

The county shall maintain partnerships with organizations such as Florida Communities Trust, the Trust for Public Land (TPL), The Nature Conservancy, The North Florida Land Trust, and other organizations to assist in providing the necessary funds to implement a long-range, financially feasible plan for the identification and acquisition of environmental resources, including lands for parks and recreation facilities of all types.

Policy ROS.04.02

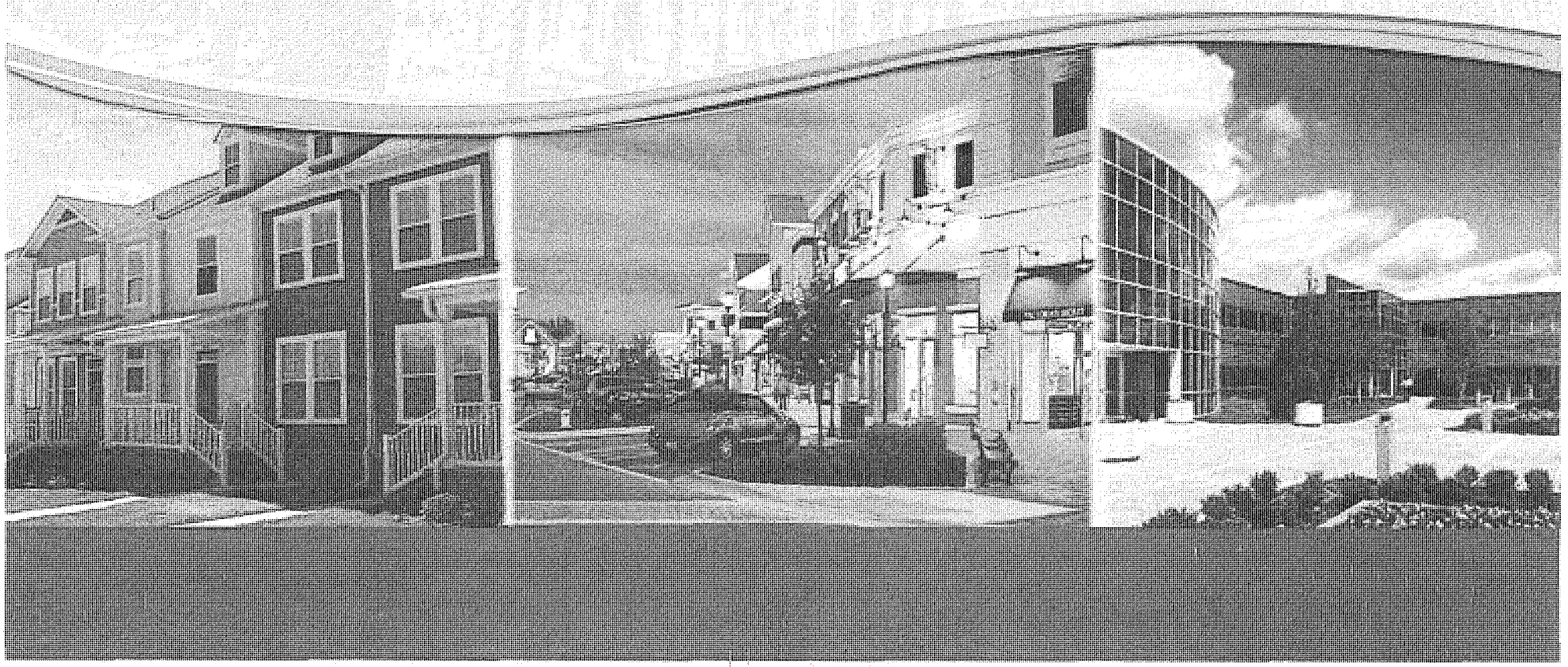
The County shall encourage the creation of appropriate public-private partnerships as a model for structuring, funding and operating certain parks and recreation facilities, when it is beneficial to the citizens of the County.

EXHIBIT 4

East Nassau Community Planning Area

Detailed Specific Area Plan: East Nassau Employment Center

North, Central & Southern Planning Areas



Owner(s)

TERRAPOINTE LLC

RAYONIER EAST NASSAU TIMBER PROPERTIES I, LLC,

RAYONIER EAST NASSAU TIMBER PROPERTIES II, LLC,

RAYONIER EAST NASSAU TIMBER PROPERTIES III, LLC,

RAYONIER EAST NASSAU TIMBER PROPERTIES IV, LLC,

RAYONIER EAST NASSAU TIMBER PROPERTIES V, LLC,

RAYONIER EAST NASSAU TIMBER PROPERTIES VI, LLC,

RAYONIER EAST NASSAU TIMBER PROPERTIES VII, LLC,

and wholly owned subsidiaries

P.O. Box 723

Fernandina Beach, Florida 32034

Consultants:

Legal

Rogers Towers, P.A.

960185 Gateway Blvd., Suite 203

Amelia Island, Florida 32034

Contact: Michael Mullin, Esquire

Community Planning, Transportation Planning and Civil Engineering

VHB MillerSellen

225 E Robinson St., Suite 300

Orlando, Florida 32801

Contact: James A Sellen, Principal

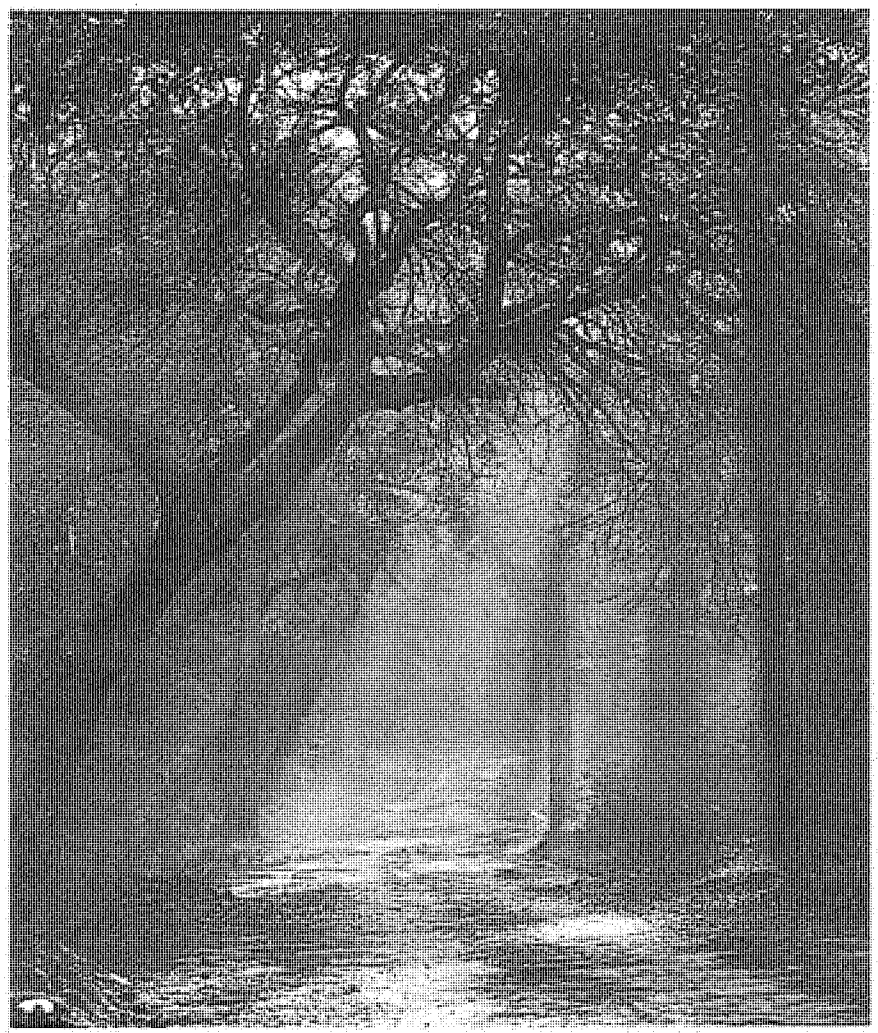
Environmental

Breedlove Dennis Associates, Inc.

330 W Canton Ave.

Winter Park, Florida 32789

Contact: Michael Dennis, President



Detailed Specific Area Plan: East Nassau Employment Center

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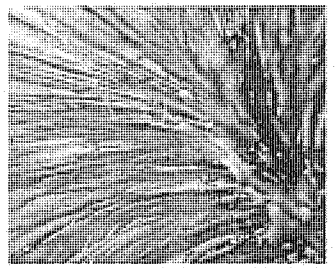

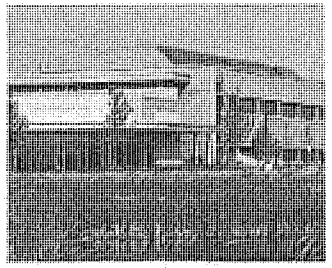

Introduction

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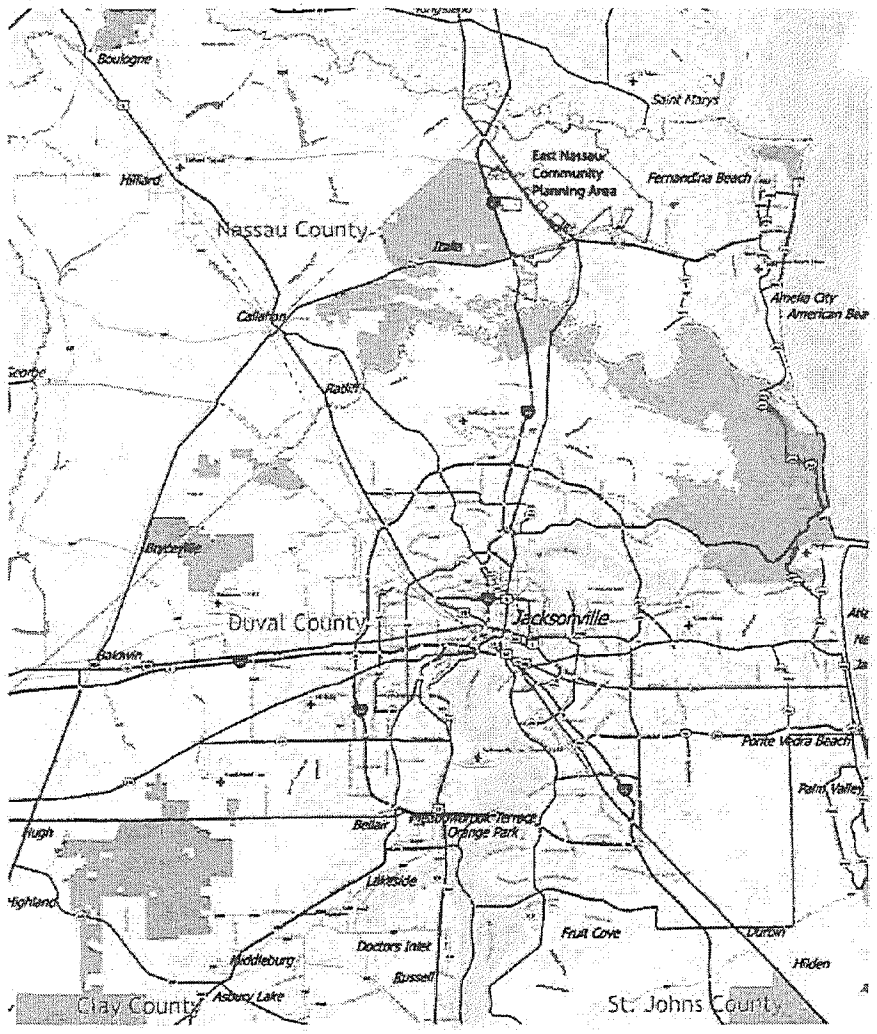

Detailed Specific Area Plan: East Nassau Employment Center

Introduction

Located in Florida's northeastern corner and bisected by Interstate 95, Nassau County serves as a key gateway to the Sunshine State. Sandy beaches, scenic rivers and abundant resources have long attracted residents to the area. From early European settlers to modern working families, the County has and continues to represent hope for a more prosperous future.

Historically, tree farming and pulp production have characterized a large portion of the local economy; however, the County's abundant land assets and proximity to the Jacksonville metropolitan area make it a prime location for accommodating a wide variety of economic development opportunities. Recognizing these opportunities, Nassau County has partnered with Rayonier, the County's largest land owner, to target areas appropriate for future economic growth and prepare long-term, financially responsible plans for those areas.

The Detailed Specific Area Plan (DSAP) is a component of this larger planning effort. It implements the goals, objectives and policies of the East Nassau Community Planning Area (ENCPA), a 24,000 acre, state approved Sector Plan intended to recognize the benefits of long-range planning for specific areas and support innovative and flexible planning and development strategies.

The DSAP is the second step in the Sector Planning process and follows the preparation of the aforementioned ECNPA master plan. Among other things, it provides detailed plans regarding the protection of natural resources, provision of adequate public facilities, and interrelationship of land uses. The East Nassau Employment Center DSAP has been organized in a manner that walks the reader logically through the master planning process. Beginning with an analysis of natural resources, it moves cumulatively into the identification of areas for conservation, the establishment of a multi-modal transportation network and the designation of complementary land uses. These components combine to form a unified "master plan" exhibit and a series of principles and guidelines which address urban form, environmental protection, mobility and economic development.

This document is intended to guide a broad array of individuals in their decision making. Its graphic nature and compact arrangement provide quick, easy reference for everyone from local officials, to future residents and business owners. Several of the more technical aspects of the plan have been placed in a separate appendices document for ease of reference.

ENCPA

Overview

In 2007, Nassau County began working with TerraPointe Services, Rayonier's real estate services company, to prepare a master plan for 24,000 acres of company owned timberland located within the eastern half of the County. Roughly bounded by the St. Mary's River to the north, S.R. 200 (A1A) to the south, Chester Road to the east and Interstate 95 to the west, this area would become known as the East Nassau Community Planning Area (ENCPA). The objective of the ENCPA was to comprehensively plan for the future growth of Nassau County in a manner which recognizes the integral relationships between economic development, transportation, land use and urban design.

The ENCPA master plan was formed over the course of several years and was the direct result of Nassau County's Vision 2032 Plan. Once complete, the plan was included in the County's regular comprehensive plan update, formally known as the Evaluation and Appraisal Report (EAR) amendment. The amended comprehensive plan, including the ENCPA master plan, was subjected to rigorous review by state and regional regulatory agencies and ultimately adopted by Nassau County in 2011.

Later that same year, significant changes were made to State legislation allowing the ENCPA master plan to be converted to a state approved Sector Plan. This conversion occurred in 2011 and was intended to take advantage of the unique benefits of sector planning. More specifically, it allowed for a higher level of detail in planning for the area; therefore, providing greater certainty to both the property owner (TerraPointe) and Nassau County.

Long-Term Master Plan

State statutes outlines a two-step sector planning process. This process includes the adoption of a long-term master plan for the entirety of the planning area and the subsequent preparation of detailed specific area plans (DSAP) for subsections of this area. The adopted ENCPA master plan fulfills the former requirement. It is comprised of both a framework map and policies intended to guide development of the area.

The framework map or "Master Land Use Plan" (Figure 1.1) is a graphic exhibit intended to identify regionally significant natural resources, guide the placement and sizing of public facilities and direct the location of land uses.

Accompanying the Master Land Use Plan are a single objective and seventeen (17) policies addressing such topics as green development practices, multi-modal transportation district design, transit oriented development (TOD) and the preservation of natural resources. Also included within the policies are specific land use sub-categories and their respective descriptions and general development guidelines.

Detailed Specific Area Plan

In late 2011, TerraPointe Services engaged VHB MillerSellen (VHB-MS) to initiate the second step in the sector planning process, the preparation of a Detailed Specific Area Plan (DSAP). The purpose of the DSAP is to provide detailed planning information for a specific portion of the 24,000 acre ENCPA; thereby, allowing property within that area to advance towards preservation or development.

The project team identified approximately 4,202 acres of land to be included within the first DSAP. This acreage is divided into three (3) planning areas (see Figure 1.1). Herein referred to as the Northern, Southern and Central Planning Areas. They were specifically selected for their unique economic development potential and their context within ENCPA when viewed in totality. The land uses included in this initial DSAP are primarily focused on job creation and the diversification of the local economy. While some areas are dedicated primarily to employment generating uses, others are predominantly residential and/or retail in nature and intended to provide the support services necessary to ensure the overall success of the larger Employment Center.

Table 1.1 outlines the maximum development program for each of the DSAP Planning Areas. This development program is an essential element of the DSAP document and guides the preparation of many of its components. This program is weighted heavily towards non-residential development, anticipating that the East Nassau Employment Center DSAP will provide the majority of employment for the remainder of the ENCPA; therefore, future DSAPs will be predominantly residential in nature and serve to balance the sector plan's jobs-to-housing ratio.

Table 1.1 East Nassau Employment Center DSAP Development Program

PLANNING AREA	ACRES	RESIDENTIAL UNITS	NON-RESIDENTIAL SQUARE FOOTAGE
Northern	665	769	75,000
Central	2,938	2,500	7,000,000
Southern	599	769	25,000
TOTAL	4,202	4,038	7,100,000

The following sections outline the sequential planning process used to develop the East Nassau Employment Center DSAP. They contain detailed information regarding natural resources, public facilities and land use/urban design culminating in both a master plan exhibit and a series of principles and guidelines intended to guide the development of the DSAP. Each of the sections begins with a brief description of the ENCPA as it pertains to the respective topic. This is intended to reinforce the relationship of the DSAP to the overall master plan and ensure consistency between the two plans.

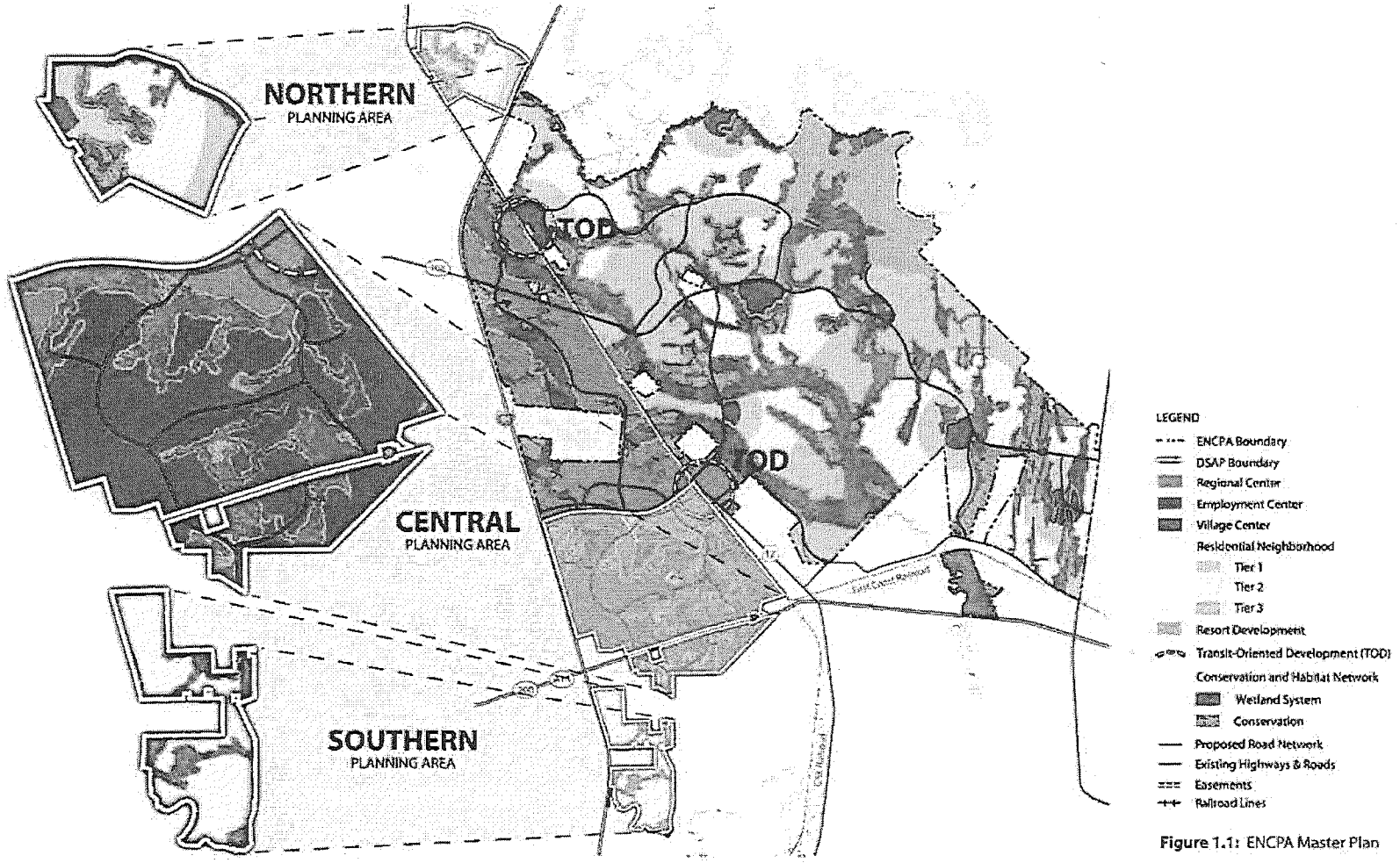

Figure 1.1: ENCPA Master Plan

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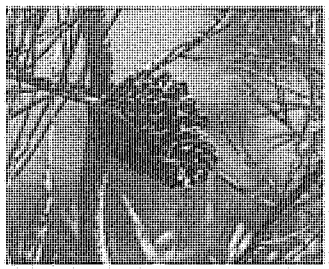
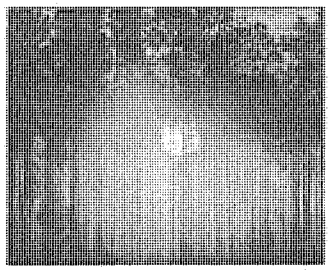




Environmental Conditions

Environmental Conditions

ENCPA Environmental Summary

Consistent with state statutes regarding the preparation of a Sector Plan, regionally significant natural resources within the ENCPA planning areas were identified and designated as part of a Conservation Habitat Network (CHN). The CHN was included as a land use sub-category contained within the ENCPA policies and depicted on the Master Land Use Plan (see Figure 2.1). It was designed to include a mosaic of wetlands, surface waters and uplands to provide for landscape connectivity and protection of significant natural resources within the 24,000 acre planning area. Preserving this mix of wetland and uplands within the proposed CHN will ensure the protection of a variety of wildlife habitats, retain corridors that connect major habitats allowing indigenous wildlife to move across the property and contribute to the long-term sustainability of the natural communities. It also ensures that conserved wetlands and contiguous uplands are protected.

Per Nassau County Comprehensive Plan Policy FL.13.07(A)(1), the CHN is to be subject to the following general guidelines and standards:

a) *Prior to development of portions of the ENCPA that abut boundaries of the CHN which preserve wildlife habitat, a management plan shall be developed that promotes maintenance of native species diversity in such areas and which may include provision for controlled burns.*

b) *New roadway crossings of wildlife corridors within the CHN for development activity shall be permitted in conjunction with the design of the internal road network, but shall be minimized to the greatest extent practical.*

c) *Road crossings within the CHN will be sized appropriately and incorporate fencing or other design features as may be necessary to direct species to the crossing and enhance effectiveness of such crossings.*

d) *Prior to commencement of development within the ENCPA, an environmental education program shall be developed for the CHN and implemented in conjunction with a property owners association, environmental group or other community association or governmental agency so as to encourage protection of the wildlife and natural habitats incorporated within the CHN.*

e) *The boundaries of the CHN are identified on Map FLUMS-6. The boundaries of the CHN shall be formally established as conservation tracts or placed under conservation easements when an abutting development parcel to portions of the CHN undergoes development permitting in accordance with the requirements of the St. John's River Water Management District (SJRWMD) and pursuant to the following criteria:*

i. *As to wetland edges forming the CHN boundary, the final boundary shall be consistent with the limits of the jurisdictional wetlands and associated buffers as established in the applicable SJRWMD permit;*

ii. *As to upland edges forming the CHN boundary, the final boundary shall be established generally consistent with Map FLUMS-6, recognizing that minor adjustments may be warranted based on more or refined data and any boundary adjustments in the upland area shall (i) continue to provide for an appropriate width given the functions of the CHN in that particular location (i.e., wetlands species or habitat protection), the specific site conditions along such boundary and the wildlife uses to be protected and (ii) ensure that the integrity of the CHN as a wildlife corridor and wetland and species habitat protection area is not materially and adversely affected by alteration of such boundary; and*

iii. *Boundary modifications meeting all of the criteria described in this Policy sub section shall be incorporated into the Conservation and Habitat Network and the ENCPA Master Land Use Plan upon issuance of the applicable SJRWMD permits and shall be effective without the requirement for an amendment to the Nassau County Future Land Use Map, ENCPA Future Land Use Element Policies or any other Nassau County Comprehensive Plan Elements defined in Chapter 163, F.S.*

f) *Silvicultural and agricultural activities allowed in the Agricultural classification of the Future Land Use Element of the Nassau County Comprehensive Plan, excluding residential land uses, shall continue to be allowed within the CHN. When the final boundaries of any portion of the CHN are established as described above, a silvicultural management plan will be developed in accordance with best management practices to protect the overall conservation objective of such portion of the CHN.*

As part of the DSAP process, a full natural resource analysis was completed by Breedlove, Dennis & Associates (BDA). This analysis is included as Appendix A of this document and contains specific information regarding ecological communities and protected species relative to the DSAP planning area. The findings of this analysis have been incorporated into the design of the DSAP and, consistent with Policy FL.13.07(A)(1)(e), have guided the refinement of the CHN boundaries.

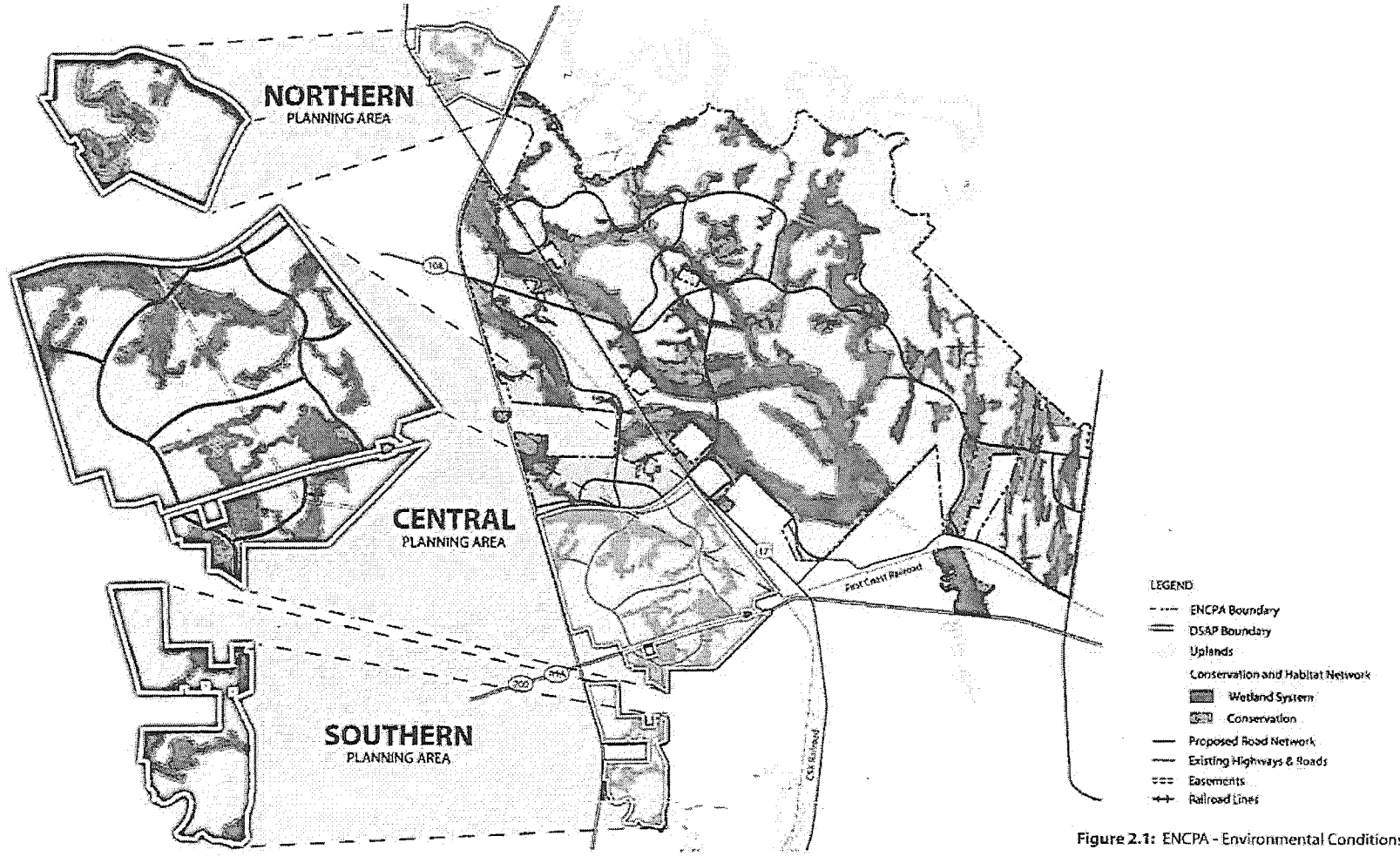
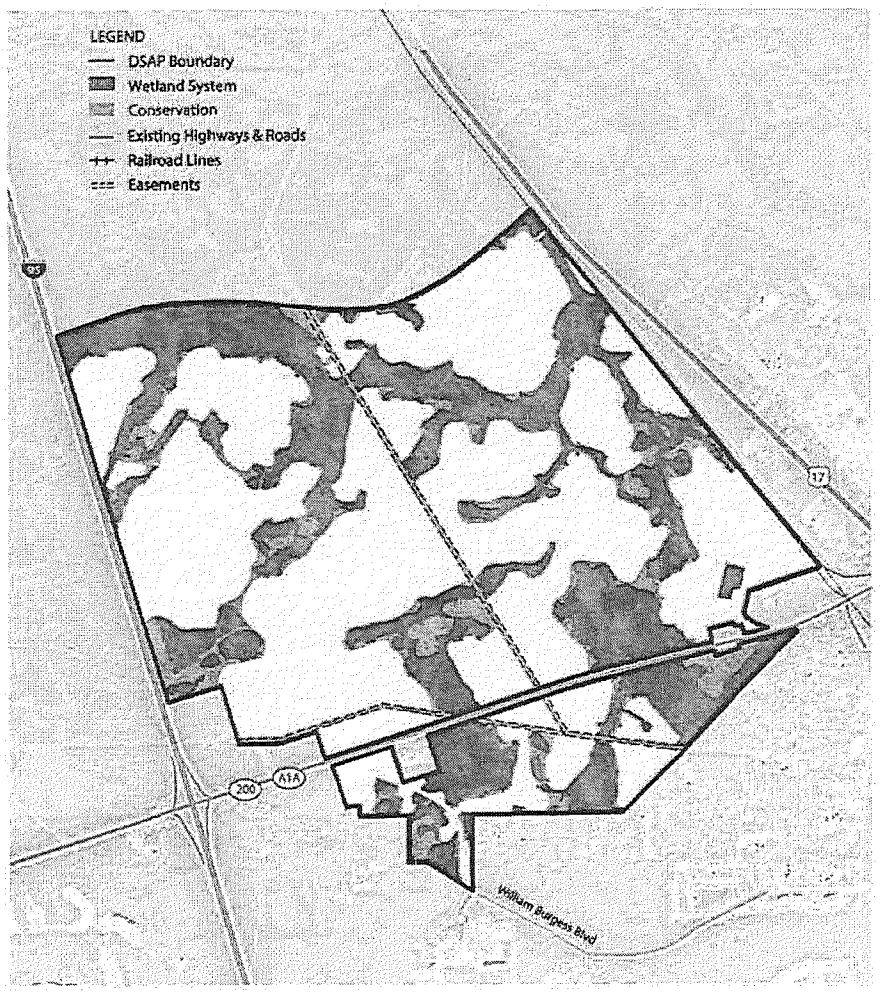


Figure 2.1: ENCPA - Environmental Conditions

Figure 2.2: Central Planning Area Refined Conservation Habitat Network



Central Planning Area

Wetlands

The East Nassau Employment Center DSAP's Central Planning Area is approximately 2,938 acres in size and consists primarily of upland coniferous plantation. In addition to these uplands, the area also contains an estimated 1,188 acres of surface waters and wetlands. The approximate extent of these wetlands and surface waters has been determined through photo interpretation and selective groundtruthing.

Surface waters within the Central Planning Area are limited (<10 acres) and generally associated with man-made drainage structures, borrow areas and reservoirs. Site wetlands total approximately 1,179 acres and consist of a variety of ecological communities. The most prevalent wetland communities found on the site are mixed forested wetlands (~867 acres), wet coniferous plantation (~100 acres) and hydric pine flatwoods (~75 acres).

Uplands

As previously mentioned, the Central Planning Area is dominated by coniferous plantations which represent approximately 97% of total upland acreage. These are actively managed silvicultural areas comprised primarily of planted slash pine. Given the predominance of planted pine within the site, there are few distinctive upland ecological communities towards which to direct conservation efforts; therefore, the site's upland conservation areas are primarily intended to protect and enhance the preserved wetlands through buffering and provide interconnectivity between systems.

Refined Conservation Habitat Network

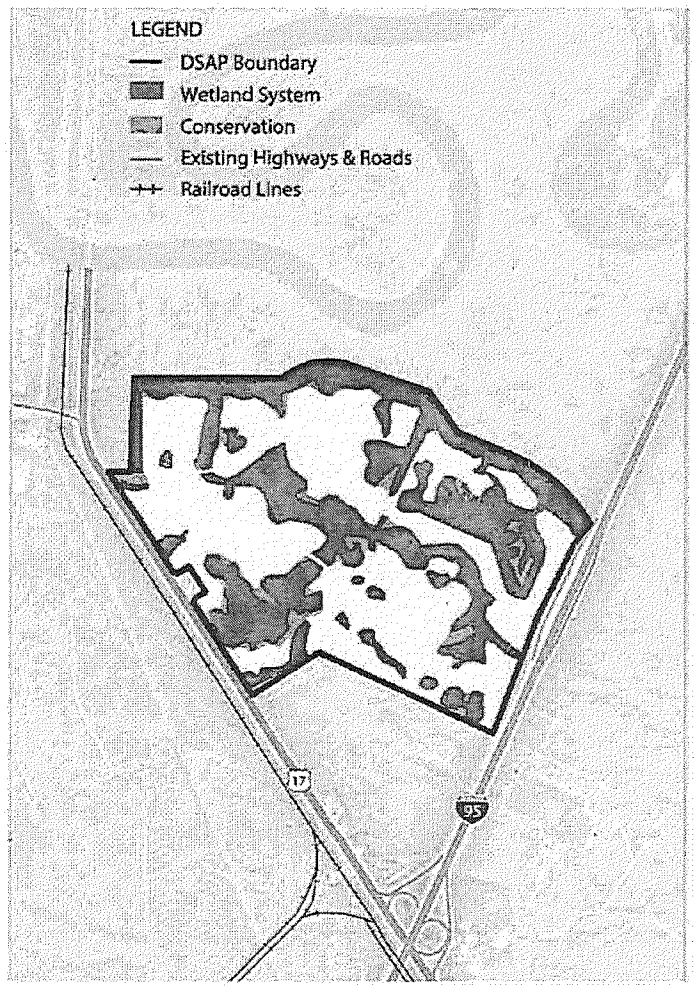
ENCPA Policy FL.13.07(A)(1)(e) requires the adjustment of CHN boundaries as more accurate information becomes available. During the development of the DSAP, additional analysis of the Central Planning Area's wetlands was conducted via photo interpretation and selective groundtruthing. This information was used to guide both the creation of the DSAP master plan and adjust the CHN boundaries consistent with the aforementioned policy. The proposed revisions to the CHN result in the conservation of approximately 120 additional acres of environmentally significant land in the CHN then shown on the ENCPA Master Plan (see Table 2.D).

Table 2.A: Central Planning Area Environmental Site Data

GROSS AREA (ac)	WETLANDS (ac)	UPLANDS (ac)	CHN TOTAL AREA (ac)	CHN WETLANDS (ac)	CHN UPLANDS (ac)
2,938	1,188	1,750	1,116	833	233

All acreage are estimated based on photo interpretation.

Figure 2.3: Northern Planning Area Refined Conservation Habitat Network



Northern Planning Area

Wetlands

The East Nassau Employment Center DSAP's Northern Planning Area is approximately 665 acres in size and, like the Central Planning Area, primarily consists of upland coniferous plantation. The approximate extent of wetlands and surface waters was determined through photo interpretation and selective groundtruthing. Little, if any, surfaces waters exist within the Northern Planning Area. Site wetlands were determined to total approximately 257 acres and consist primarily of mixed forested wetlands (~176 acres), emergent aquatic vegetation (~25 acres) and wet coniferous plantation (~20 acres).

Uplands

Like the Central Planning Area, the Northern Planning Area is dominated by coniferous plantations which represent approximately 98% of total upland acreage. These are actively managed silvicultural areas comprised primarily of planted slash pine. Given the predominance of planted pine within the site, there are few distinctive upland ecological communities towards which to direct conservation efforts; therefore, the site's upland conservation areas are primarily intended to protect and enhance the preserved wetlands through buffering and provide interconnectivity between systems.

Refined Conservation Habitat Network

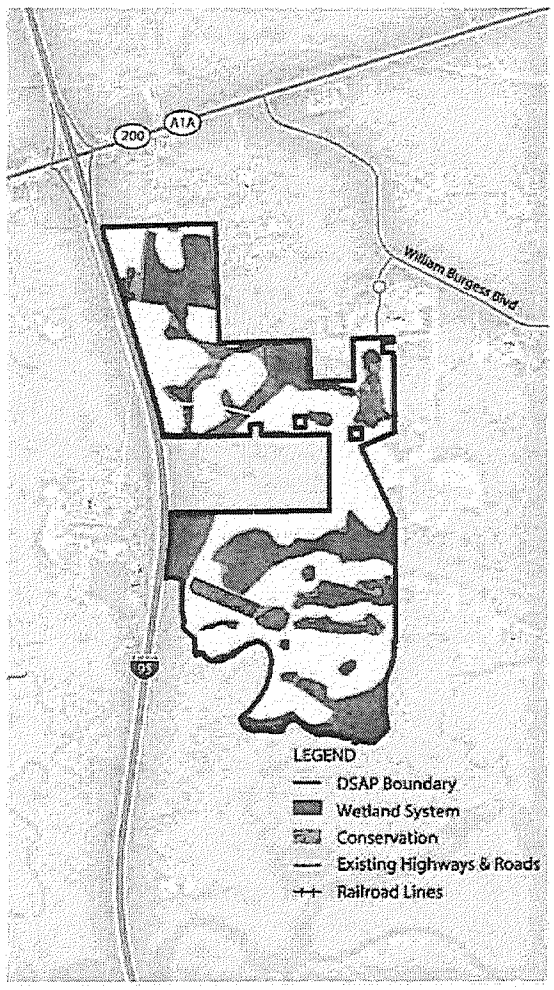
As with the Central Planning Area, the Northern Planning Area's CHN boundaries have been adjusted per ENCPA Policy FL.13.07(A)(1)(e). Additional analysis of the Northern Planning Area's wetlands was conducted via photo interpretation and selective groundtruthing. The proposed revisions to the CHN result in the conservation of approximately 45 additional acres of environmentally significant lands in the CHN then shown on the ENCPA Master Plan (see Table 2.D).

Table 2.B: Northern Planning Area Environmental Site Data

GROSS AREA	WETLANDS	UPLAND	CHN TOTAL AREA	CHN WETLANDS	CHN UPLAND
665	257	408	312	251	61

All acreage are estimated based on photo interpretation.

Figure 2.4: Southern Planning Area Revised Conservation Habitat Network



Southern Planning Area

Wetlands

The East Nassau Employment Center DSAP's Southern Planning Area is approximately 599 acres in size and, like the DSAP's other Planning Areas, primarily consists of upland coniferous plantation. The approximate extent of wetlands and surface waters was determined through photo interpretation and selective groundtruthing. Surface waters within the Planning Area are total less than 2 acres. Site wetlands were determined to total approximately 216 acres and consist primarily of mixed forested wetlands (~146 acres), freshwater marsh (~31 acres) and wet coniferous plantation (~17 acres).

Uplands

Like the DSAP's other Planning Areas, the Southern Planning Area is dominated by coniferous plantations which represent approximately 98% of total upland acreage. These are actively managed silvicultural areas comprised primarily of planted slash pine. Given the predominance of planted pine within the site, there are few distinctive upland ecological communities towards which to direct conservation efforts; therefore, the site's upland conservation areas are primarily intended to protect and enhance the preserved wetlands through buffering and provide interconnectivity between systems.

Refined Conservation Habitat Network

As with the other Planning Areas, the Southern Planning Area's CHN boundaries have been adjusted per ENCPA Policy FL.13.07(A)(1)(e). Additional analysis of the Southern Planning Area's wetlands was conducted via photo interpretation and selective groundtruthing. The proposed revisions to the CHN result in the conservation of approximately 85 additional acres of environmentally significant land in the CHN then shown on the ENCPA Master Plan (see Table 2.D).

Table 2.C: Southern Planning Area Environmental Site Data

GROSS AREA (ac.)	WETLANDS (ac.)	UPLAND (ac.)	CHN TOTAL AREA (ac.)	CHN WETLANDS (ac.)	CHN UPLANDS (ac.)
599	216	383	266	216	50

All acreage are estimated based on photo interpretation.

Summary

In conclusion, the CHN boundary for each of the DSAP's Planning Areas has been refined consistent with ENCPA Policy FL.13.07(A)(1)(e). These refinements were based upon more detailed analysis of the respective Planning Area's natural resources and included photo interpretation and selective groundtruthing of ecological communities. A full description of the DSAP's environmental opportunities and constraints are contained in Appendix A: Natural Resource Analysis.

The refined CHN is consistent with the ENCPA Master Plan's primary goal of promoting sustainable and efficient regional land use. As with the original ENCPA CHN, the DSAP CHN conserves regionally significant natural resources and includes a mosaic of wetlands, surface waters and uplands which will provide long-term benefits to aquatic, wetland dependent and terrestrial wildlife that currently utilize these habitats and contribute to the long-term sustainability of these wildlife communities. It ensures that the DSAP's largest and highest quality wetland strands are protected in perpetuity and preserves natural drainage systems.

Table 2.D summarizes the impacts of the proposed refinements to each of the DSAP's Planning Areas. Overall, the refinements to the CHN boundary are anticipated to result in a net increase of approximately 250 acres of conserved lands. Per ENCPA Policy FL.13.07(A)(1)(e), this acreage may be refined further during the Preliminary Development Plan and Site Planning process as better information becomes available.

Table 2.D: CHN Refinement Summary (acres)

PLANNING AREA	ENCPA	DSAP	APPROXIMATE NET CHANGE
Central	996	1,116	120
Northern	267	312	45
Southern	181	266	85
TOTAL	1,444	1,694	250

It is important to note that wetland protection within the Property is regulated by the SJRWMD, the Department of the Army, Corps of Engineers (ACOE), and Nassau County. Prior to development, the extent of state jurisdictional wetlands and surface waters will be determined based on the Florida unified wetland delineation methodology (Chapter 62-340, Florida Administrative Code [F.A.C.]). Dredge and fill activities and mitigation for these activities, are regulated by the state through the Environmental Resource Permit (ERP) program, and implemented jointly by the Florida Department of Environmental Protection (FDEP) and the five water management districts.

In addition to state and federal regulations, wetland protection within the DSAP is also regulated by Nassau County. Per the County's comprehensive plan, proposed development must be directed away from wetlands "...by clustering the development to maintain the largest contiguous wetland area practicable and to preserve the pre-development wetland conditions". As previously described, provisions for wetland protection are also included within the Conservation Habitat Network (CHN) guidelines and standards outlined in ENCPA Policy FL.13.07.

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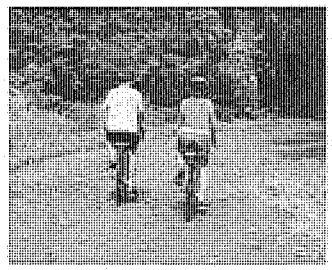

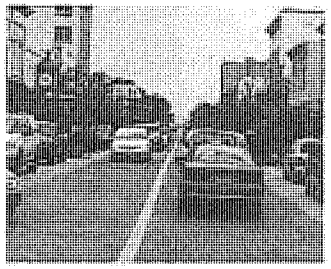

Mobility

Mobility

Nassau County Transportation Mobility Approach

The continued escalation of housing and transportation costs in Northeast Florida is unsustainable and fostered by sprawling development patterns, separation of uses and a single focus on the use and movement of the automobile. In fact, Nassau County households spend over 45% of the median income on costs related to housing and transportation. The solution to this problem is the integration of land use and transportation programs, strategies and policies through the development of a mobility plan. A mobility plan is a long range plan promoting development that integrates land uses, maximizes mobility choices (bike, pedestrian, transit and auto/truck), fosters healthy sustainable communities and funds a range of improvements for all modes of transportation.

The unsustainable pattern of development in Northeast Florida, and for that matter Florida in general, was further encouraged in response to provisions of Florida's Growth Management Act adopted by the state legislature in 1985. Specifically, the most problematic provisions required comprehensive plans include a concurrency management system, that required transportation capacity be available concurrent with the impacts of development. While philosophically sound, the concurrency requirement carried unintended consequences that in the real world caused the further sprawl of development and forced new development to pay for the transportation problems created by past development practices that had already completed the entitlement process. Sole reliance on the expansion of roadway capacity and the lack of public and private investment in alternative modes of transportation have discouraged urban infill and redevelopment and contributed to the proliferation of urban sprawl.

In recognition of the land use and development pattern issues caused by applying the concept of transportation concurrency in Nassau County, the Nassau County Board of County Commissioners amended Article 2 of the Nassau County Land Development Code eliminating the requirements for transportation concurrency and proportionate fair share. In its place, the Board created an interim Adequate Public Facilities System. Further the Board of County Commissioners appointed a task force to look into the options for replacing concurrency with mobility, or some other more holistic approach to planning and funding a multi-modal transportation network to serve the future needs of Nassau County.

Sector Planning and Mobility

As part of the latest update of the Nassau County Comprehensive Plan, the County adopted a Sector Plan for the ENCPA. The Sector Plan adopted in conjunction with the provisions of Chapter 163.3245 Florida Statutes provides for a long-term plan intended to "promote and encourage long-term planning for conservation, development, and agriculture on a landscape scale; to further the intent of Section 163.3177(11), which supports innovative and flexible planning and development strategies."

The Sector Plan encompasses two levels: a long-term master plan for the entire planning area as part of the Nassau County Comprehensive Plan and adoption by local development order of two or more detailed specific area plans (DSAP's) that implement the long-term master plan. The long-term master plan for the ENCPA Sector is required to provide a general identification of the transportation facilities to serve the future land uses in the long-term master plan, including guidelines to be used to establish each modal component intended to optimize mobility. The detailed specific area plan (DSAP) is required to provide detailed identification of the transportation facilities to serve the future land uses in the DSAP. The legislation also requires that the DSAP identify public facilities necessary to serve the DSAP, including developer contributions in a 5 year capital improvement schedule of the affected local government as well as principles and guidelines addressing... "quality communities of a design that promotes travel by multiple transportation modes."

One of the unique aspects of the Sector Plan legislation is the requirement, per 163.3245 (4) (a), that upon effect:

i. (4)(a) "Any long-range transportation plan developed by a metropolitan planning organization pursuant to s.339.175(7) must be consistent, to the maximum extent feasible, with the long-term master plan, including, but not limited to, the projected population, and the approved uses and densities and intensities of use and their distribution within the planning area. The transportation facilities identified in adopted plans pursuant to subparagraphs (3)(a) 3 and (b) 4 must be developed in coordination with the adopted MPO long-range transportation plan.

In summary the Sector Plan encourages and authorizes an approach for the ENCPA that is "intended to optimize mobility" for each modal component. As a result of these improvements, the average vehicle miles traveled (VMT) within the ENCPA Sector is lower than Nassau County as a whole.

ENCPA Transportation Mobility Approach

The ENCPA Sector Plan provides an approach that will replace transportation concurrency requirements with a Mobility Plan. The purpose of the ENCPA Sector Mobility Plan is to provide incentives for the development of projects that, consistent with the long-term Sector Master Plan, will use alternative modes of transportation and locate in more concentrated, mixed use locations to reduce vehicle miles traveled (VMT) and greenhouse gas emissions. The Mobility Plan has been developed in conjunction with the Regional Transportation Plan prepared by the Metropolitan Planning Organization (MPO), as well as the recent update of the County's Comprehensive Plan. The horizon year for the Mobility Plan is 2035 and the modes addressed include car/truck, transit, bicycle and pedestrian facilities.

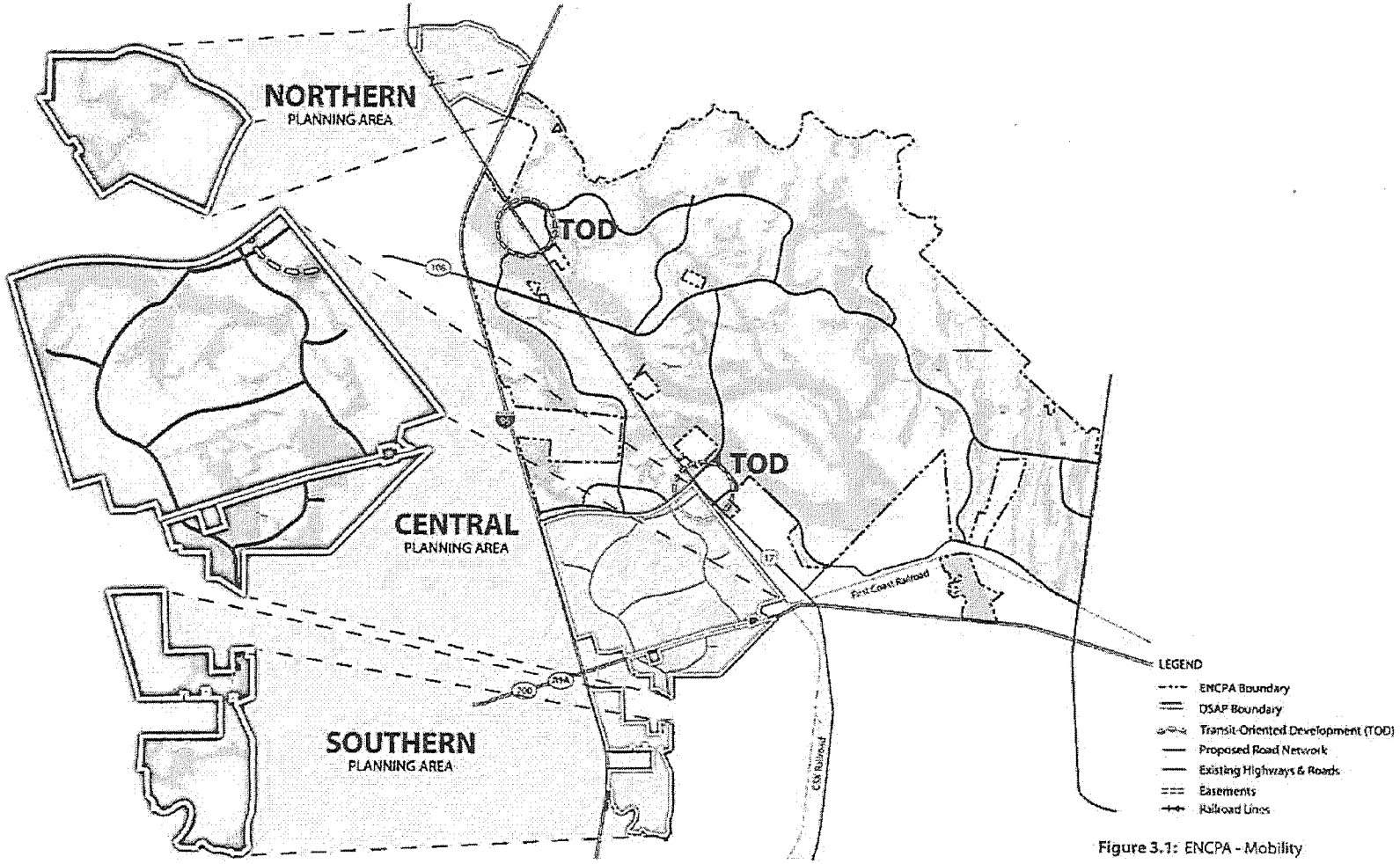

Figure 3.1: ENCPA - Mobility

The goals of the Mobility Plan are to establish a multi-modal transportation system for the ENCPA Sector; reduce vehicle miles traveled; and, to promote compact, interconnected and mixed-use land development patterns to improve the health, quality of life and sustainability of the residents of the ENCPA Sector and Nassau County.

A key component of the plan is the creation of a mobility fee, based on the total cost for recommended improvements divided by the total daily trip generation for the ENCPA Sector. The mobility fee system is designed to incentivize quality growth by allowing a proposed development to qualify for trip generation reductions, and therefore lower fees, based on adherence to site design performance standards or the construction of improvements that will result in the reductions to vehicle trips.

The Mobility Plan and related DSAP development order will require every new development or redevelopment within the ENCPA Sector, that is not otherwise vested or exempt, to be assessed a mobility fee prior to approval of final building permits. This system is intended to eliminate inequities in the former transportation concurrency system whereby all new development or redevelopment pays regardless of available capacity, or lack thereof, within the ENCPA transportation network. Applicants will still be subject to concurrency as applied in the Nassau County Adequate Public Facilities System for public schools, water, wastewater, solid waste, drainage and recreation prior to issuance of a final development permit or order.

To establish background roadway volumes in the study area, the Northeast Florida Regional Planning Model (NERPM) was run for baseline conditions without the ENCPA development. The NERPM is the adopted MPO model and is recommended by both FDOT and the Northeast Florida Regional Planning Council. This analysis shows the following roadways are projected to operate over capacity without ENCPA development:

- Interstate 95 from Duval County Line to SR 200/A1A – over capacity as a 6-lane road
- SR 200/A1A from US 17 to Chester Road – over capacity as a 6-lane road
- US 17 from Duval County Line to Harts Road – over capacity as a 2-lane road

These volumes and deficiencies are used as a starting point for identifying transportation improvements associated with the ENCPA and DSAP. Per HB 7207, development cannot be held responsible for addressing existing backlogs. Since these roadway segments are projected to operate over capacity based on other development approved within Nassau County (prior to approval of the ENCPA development program), improvements to these segments are not included as part of the Mobility Network of funded improvements.

The Mobility Network is based on the transportation demand for the approved total development program of 24,000 residential units and 11 million square feet of non-residential uses (retail, office and industrial). Based on trip generation calculations using ITE rates, this development program is expected to generate 379,721 daily trips, as detailed in Appendix B.

The estimated ENCPA cost for infrastructure improvements in the Mobility Network is $124.1 million in Year 2012 dollars, consisting of the following components:

1. CR 108 Extension
2. New I-95 Interchange
3. Interchange Road
4. US 17 widening
5. Employment Center north-south road
6. Employment Center collector roads
7. Traffic signals at major intersections
8. Internal trails

Next Steps

The Development Order for the Detailed Specific Area Plan will address the methodology for computing the mobility fee, the criteria for receiving credits, the review process, the time table, application fee and method for paying mobility fees.

The Mobility Plan for the ENCPA should be updated with the processing of each Detailed Specific Area Plan and changes to the mobility fee made accordingly.

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Mobility Plan Overview

This section summarizes the transportation mobility recommendations for the DSAP. The transportation analysis and recommendations were developed based on the approved development program and transportation network for the overall ENCPA Sector Plan. From there, the pieces of the transportation network needed to support the DSAP were then identified. The costs associated with needed improvements are also addressed through this analysis.

Complete documentation of the transportation analysis assumptions and results is provided in Appendix B, Transportation Analysis.

The mobility approach used to identify infrastructure improvements represents the coordination between land use patterns and transportation infrastructure. The benefits of this approach are a more efficient transportation system with reduced infrastructure needs. In addition, the mobility approach promotes the use of transportation options such as walking, bicycling and transit, and employs land use design standards to ensure that these options are viable. The transportation mobility approach accounts for the following elements:

- Balance of housing and employment – Per the approved ENCPA Sector Plan, the overall development program levels were identified to maintain a balance between housing units and employment square footage. In addition to strengthening the employment base for Nassau County, this balance maximizes the number of trips that stay internal to the ENCPA and reduces impacts on surrounding roadways.
- Mix of residential and non-residential land uses – Each of the residential neighborhoods contains non-residential land uses such as small-scale retail, office, and schools. These uses are located within and adjacent to residential areas, allowing many of these trips to occur by walking or bicycling. The Employment Center and Regional Center areas contain similar requirements for maintaining a mix of uses and incorporating residential and civic uses.
- Interconnected network of local streets – The Sector Plan also provides guidelines for local streets to ensure that they form a connected system between and within neighborhoods. This reduces the need for internal traffic to use the primary street network.
- Internal trails network – The ENCPA is proposed to contain approximately 100 miles of multi-use trails that can accommodate pedestrians, bicyclists and golf carts. Within the DSAP area, 20 miles of trails are planned.
- Transit-Oriented Development (TOD) – As part of long-range plans for the First Coast region, commuter rail connecting Nassau County and downtown Jacksonville has been identified for the CSX and First Coast Railroad corridors. The ENCPA plan incorporates opportunities for TOD along the First Coast Railroad located next to US 17.

A transportation mobility approach has been developed and adopted in other communities in Florida, including Pasco County, Alachua County, and Duval County.

Figure 3.1 shows the transportation network included in the previously adopted ENCPA Sector Plan

Figure 3.2 shows the recommended Mobility Network to support the overall ENCPA. In comparison to Figure 3.1, this network reflects modifications and refinements to the roadway alignments as a result of further detailed planning and analysis, but maintains the intent of the approved ENCPA transportation system. As the distribution of land uses within each DSAP is defined, TerraPointe may work with Nassau County to refine the mobility improvements associated with each phase of development.

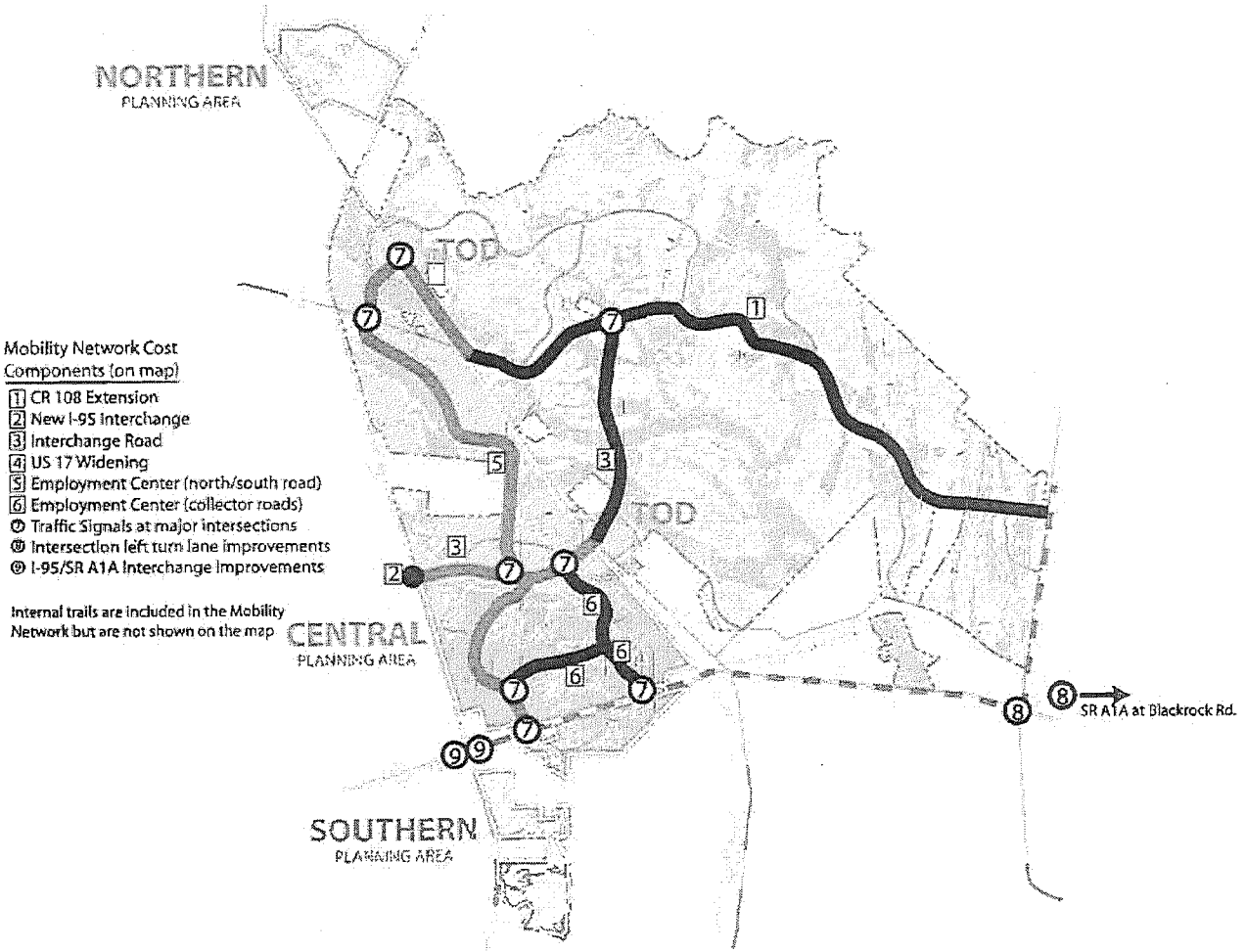
The estimated ENCPA cost for the Mobility Network is $124.1 million in Year 2012 dollars, consisting of the following components as shown on Figure 3.2:

1. CR 108 Extension
2. New I-95 Interchange
3. Interchange Road
4. Employment Center north-south road
5. Employment Center collector roads
6. Traffic signals at major intersections
7. Internal trails (not shown on exhibit)

These improvements will be funded and implemented over time based on the construction of development within the ENCPA and the trips generated by this development.

As noted on Figure 3.2, improvements to both SR A1A and Chester Road are funded through construction as part of the adopted FDOT Five-Year Work Program. Consequently, these projects were not included in the calculation of total costs. With the inclusion of these improvements in the Work Program, they will be constructed sooner than if tied to development activity within the ENCPA as part of the Mobility Network. The inclusion of the two items in the Work Program also allows mobility fee funds received in the short term to go towards other improvements.

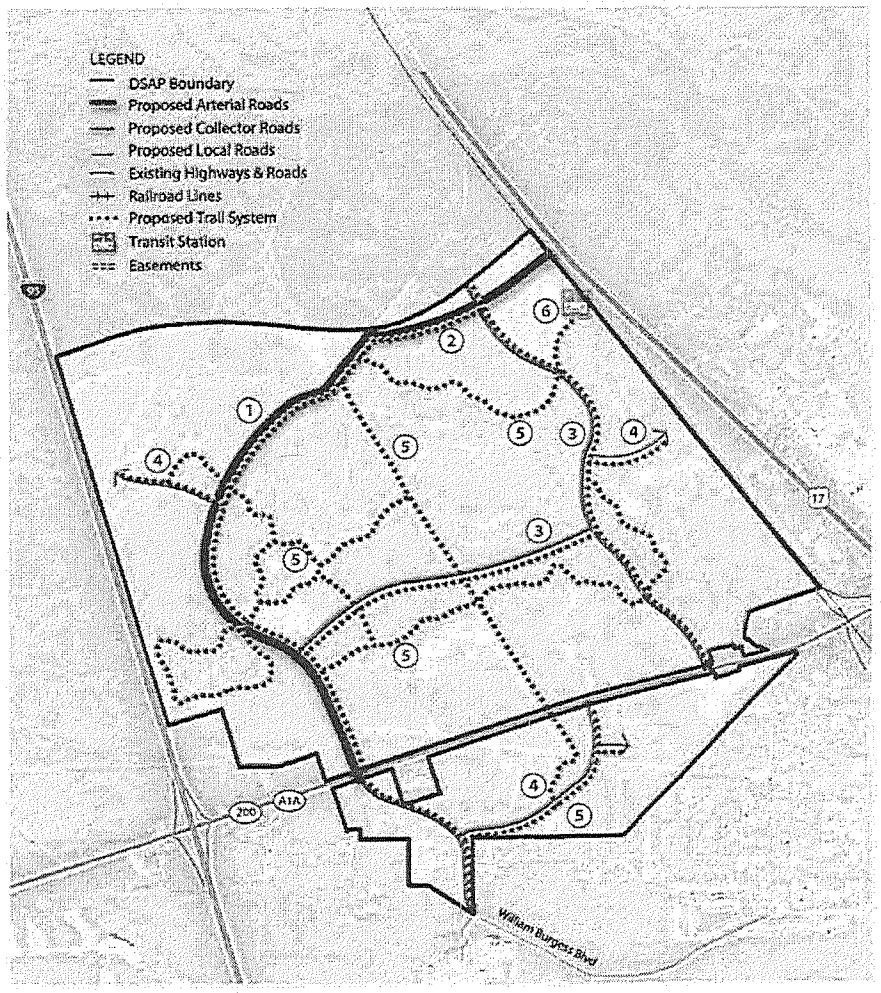
Figure 3.2: Recommended ENCPA Mobility Network



Notes

1. All 4-lane roadways are assumed to be implemented in phases, with 2 lanes constructed internally.
2. The cross-sections for all the Mobility Network roadways also include 12' multi-use trails.
3. In addition to the roadways shown, the Mobility Network includes 25 miles of separate multi-use trails.
4. Roadways shown in dashed lines have committed funding through FDOT for additional lanes. These roadways are not included in the costs for the recommended mobility plan.

Figure 3.3: ENCPA DSAP Central Planning Area Mobility Plan



DSAP Master Mobility Network

This section summarizes the Mobility Network improvements associated with the buildout of the DSAP. As stated earlier, these improvements were identified based on the components needed to support development of this portion of the ENCPA. The improvements are discussed for each of the three Planning Areas (Central, Northern and Southern) associated with the DSAP.

Central Planning Area

Figure 3-3 summarizes the mobility improvements associated with the Central Planning Area. These improvements were identified based on the development program of 2,500 multi-family residential units and 7,000,000 square feet of non-residential uses (retail, office and industrial). This program for the Central Planning Area generates an estimated 91,480 daily trips at buildout. The development program and its assumptions are summarized in Appendix B and in the Land Use section of this document.

Within the Central Planning Area, the following transportation improvements have been identified:

1. **North – South Arterial Road (4 lanes, initially constructed as 2 lanes)** – This roadway will extend through the Central Planning Area (the Employment Center) and continue north through the Regional Center and connect to US 17. This roadway will serve as the spine of the ENCPA for areas between US 17 and Interstate 95. A traffic signal is assumed at the intersection of this roadway and SR A1A.

2. **East – West Interchange Road (4 lanes, initially constructed as 2 lanes)** – This roadway will provide access to the Central Planning Area from US 17. An interchange with Interstate 95 is assumed at the buildout of the Central Planning Area. As areas of the ENCPA east of US 17 are developed, the Interchange Road will be extended to the east.

3. **Collector Roadways (2 lanes with turn lanes)** – The collector roadways for the Central Planning Area provide a second access point to and from SR A1A, as well as connections to the TOD area near US 17.

4. **Local Roadways (2 lanes)** – In addition to the arterial and collector roadways included in the Mobility Network, a supporting network of local streets will be completed to provide access to parcels within the Central Planning Area. Connectivity standards for the network of arterial, collector and local streets are defined as part of the ENCPA Sector Plan.

5. **Trail System** – A system of multi-use trails is planned to provide non-auto travel choices within the Central Planning Area. The trail system will accommodate

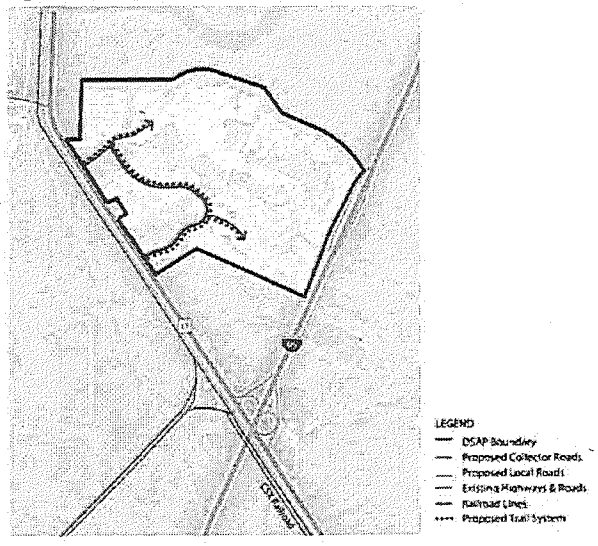
pedestrians, bicyclists and golf carts. Approximately 20 miles of trails are included as part of the Mobility Network for this area.

6. **Transit Oriented Development** – The Central Planning Area provides opportunities for TOD around any future stations developed as part of an envisioned commuter rail system between within the Central Planning Area.

For short-term (five-year) conditions, the total development program for the Central Planning Area consists of 250 multi-family residential units and 400,000 square feet of office. This development is expected to occur around along the north-south arterial road near SR A1A. Based on ITE trip generation calculations, this development program generates a total of 6,216 daily trips.

For short-term conditions, all access will be via SR A1A. As discussed earlier, SR A1A through the Central Planning Area is funded for widening to six lanes as part of FDOT's adopted Five Year Work Program. This improvement provides the additional capacity necessary to accommodate short-term development; therefore, no additional short-term regional improvements are necessary. In terms of internal Mobility Network needs, the short-term improvements are limited to roadway segments to provide access to development parcels. A signal at SR A1A and the North-South Arterial Road may be needed and should be evaluated as development occurs. This intersection aligns with the existing intersection of SR A1A and William Burgess Boulevard, where the County desires to add a traffic signal. Any consideration of the need for a traffic signal should also address traffic volumes from this southern leg.

Figure 3.4: ENCPA DSAP Northern Planning Area Mobility Plan



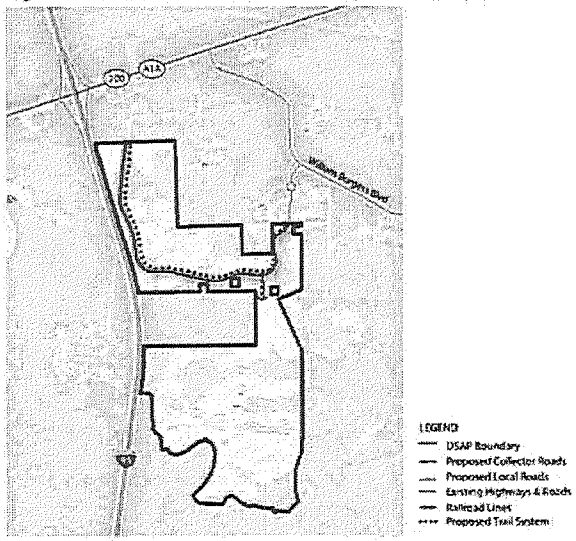
Northern Planning Area

The transportation network to support the Northern Planning Area consists of local streets and internal trails as shown on Figure 3.4.

The total development program for the Northern Planning Area consists of 769 single-family residential units and 75,000 square feet of retail; this program produces an estimated 12,425 daily trips. (The development program is discussed in more detail in Appendix B and in the Land Use chapter). Access to the Northern Planning Area is limited to a single roadway, US 17, with two access points recommended. Environmental constraints to the north and Interstate 95 to the east restrict the opportunity for additional connectivity.

For short-term (five-year) conditions, no development is projected within the Northern Planning Area. Therefore, no short-term transportation improvements have been identified for this area.

Figure 3.5: ENCPA DSAP Southern Planning Area Mobility Plan



Southern Planning Area

The transportation network to support the Southern Planning Area consists of local streets and internal trails as shown on Figure 3.5.

The total development program for the Southern Planning Area consists of 769 single-family residential units and 25,000 square feet of retail; this program produces an estimated 9,550 daily trips. (The development program is discussed in more detail in Appendix B and in the Land Use chapter). Existing access to the Southern Planning Area is limited to a single roadway, William Burgess Boulevard, to the northeast. Additional connections to the north to SR A1A have been identified as possible, but are not required to support development of this area. Environmental constraints to the south and Interstate 95 to the west restrict the opportunity for additional connectivity.

For short-term (five-year) conditions, a development program of 100 single family units is identified for the Southern Planning Area. This development program generates approximately 957 daily trips. Based on this low development intensity and the available capacity on William Burgess Boulevard, no short-term transportation improvements have been identified for this area. The analysis results are discussed in further detail in Appendix B.

Recommended Typical Cross-Sections

Figure 3-6 shows recommended cross sections for streets within the Employment Center DSAP. These sections may be modified in coordination with Nassau County. The intent of the cross sections is to provide the basis for the final design included in the Planned Development document for the Employment Center. These cross sections illustrate how mobility planning principles will be integrated into the design of Complete Streets that provide safe and comfortable accommodations for pedestrians, bicyclists and motorists. The final design may be varied based on natural features or other operational considerations.

Residential Neighborhood Local Road Cross-Section

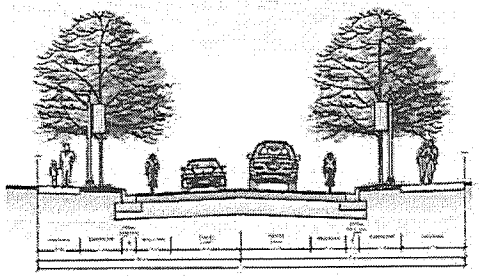
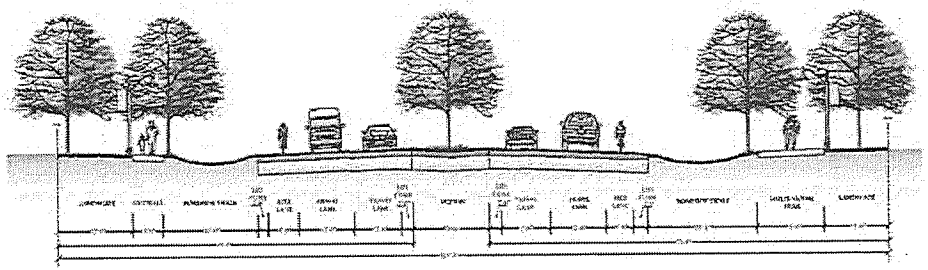
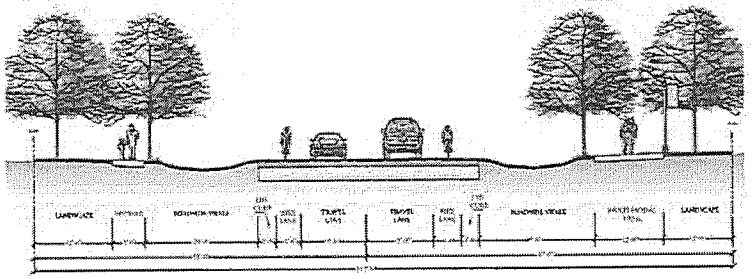


Figure 3.6: Recommended Cross-Sections

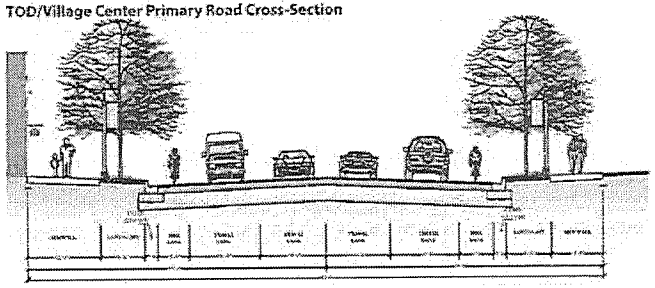
Employment Center Primary Road Cross-Section



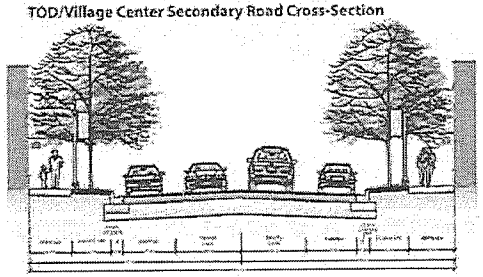
Employment Center Secondary Road Cross-Section



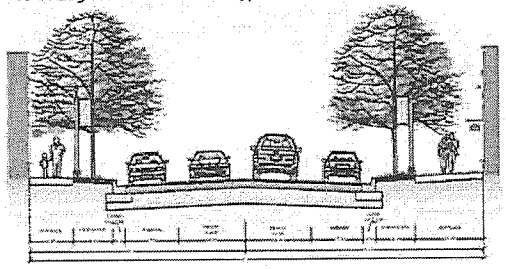
TOD/Village Center Primary Road Cross-Section



TOD/Village Center Secondary Road Cross-Section



TOD /Village CEnter Alternative Typical Cross-Section



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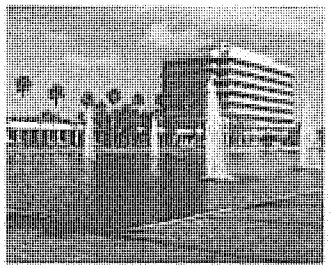


Land Use

Land Use

ENCPA Land Use Summary

The ENCPA Master Plan includes specific land use sub-categories and their respective general development guidelines. Combined, these sub-categories comprise a full mixture of uses including industrial, commercial, residential, civic and conservation. This functional mix of land uses has been allocated in a manner which supports a long-term jobs-to-housing balance for both the ENCPA and the County as a whole (see Figure 4.1). A brief description of each land use sub-category is contained below.

Conservation Habitat Network (CHN)

As previously described in the environmental conditions section, the Conservation Habitat Network (CHN) land use sub-category is intended to identify regionally significant natural resources to be conserved during and after development of the ENCPA. The CHN consists of surface waters, wetlands, buffers and other uplands designated for conservation.

Regional Center (RC)

The Regional Center (RC) land use sub-category identifies areas suitable for the location of a broad mix of uses including, high density residential, high way commercial/interchange-related uses, regional scale retail, commercial, hotel, office, business/research parks and light industrial. Included within the RC sub-category are areas designated for Transit Oriented Development (TOD) districts.

Transit Oriented Development (TOD)

Transit Oriented Development (TOD) areas are designated on the ENCPA Master Plan along U.S. 17 and adjacent to the CSX rail line. The TOD designation is intended to identify areas appropriate for the development of multi-modal transportation centers. These areas are approximately 50 acres in size and are to be designed to accommodate a full range of uses (residential, retail, office and civic) and organized in a manner that encourages walking as the primary form of transportation.

Employment Center (EC)

The Employment Center (EC) land use sub-category identifies areas suitable for the location of employment generating uses intended to serve both Nassau County and the region. These may include industrial (manufacturing, warehousing and distribution), office, research/technology and business service related uses. In addition, secondary supporting uses such as multi-family residential, retail, lodging and civic/public facilities may be permitted.

Village Center (VC)

The purpose of the Village Center (VC) land use sub-category is to identify areas which may serve as higher density/intensity, mixed-use centers for surrounding residential neighborhoods. The range of permitted uses includes residential, commercial, office and civic.

Residential Neighborhood (RN)

The purpose of the Residential Neighborhood (RN) land use sub-category is to create a hierarchical pattern of residential neighborhoods radiating outward from Village Centers. The RN land use sub-category is divided into three "Tiers". Tier 1 neighborhoods are mid-density, residential areas adjacent to Village Centers. Tier 2 neighborhoods are lower density in character and generally located ½ to 1 mile from Village Centers. Tier 3 represents the lowest density neighborhoods generally located beyond 1 mile from a designated Village Center. In addition, small, mixed-use Neighborhood Centers are also permitted within the RN. These centers may serve as a focal point for a neighborhood and provide limited, neighborhood-serving uses.

Resort Development (RD)

The Resort Development (RD) land use sub-category is intended for a mixture of seasonal and year-round housing types in a neighborhood-like setting. Non-residential uses such as hotels, restaurants and resort-serving commercial, retail and service uses shall be permitted in the Resort Development land use sub-category. It should be noted that no RD is proposed as part of the East Nassau Employment Center DSAP.

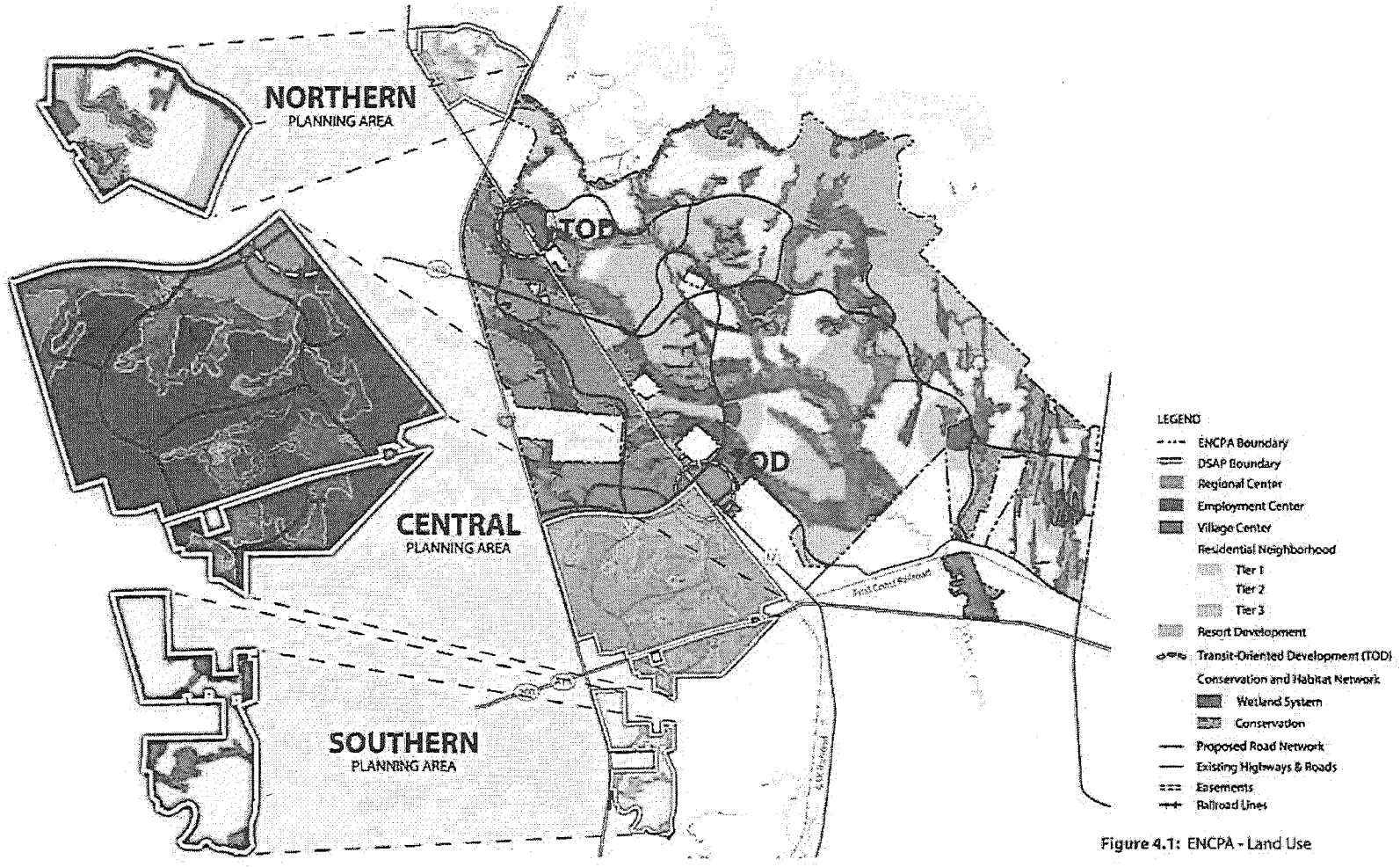


Figure 4.1: ENCPA - Land Use

Master Planning Principles
(Central, Northern and Southern Planning Areas)

Consistent with the ENCPA master plan, the East Nassau Employment Center DSAP contains a broad mixture of land uses connected by a multi-modal transportation system. It preserves large areas of regionally significant natural resources and organizes development in a compact and fiscally efficient manner. A summary of the specific aspects of each of the DSAP's planning areas is contained below.

Central Planning Area

The primary component of the Central Planning Area master plan is a +1,000 acre Conservation Habitat Network (CHN) comprised of regionally significant ecological communities and other open space. This mosaic of surface water, wetlands and upland buffers arranges development within the planning area into compact nodes while preserving critical wildlife habitat and natural drainage systems. It is critical to both the environmental sustainability of the site as well as the organization of the built environment.

Developable land within the Central Planning Area has been connected both internally and externally through a multi-modal transportation network. This network incorporates pedestrian, bicycle, transit and automobile facilities to form a functionally and fiscally efficient transportation system focused on accessibility as well as mobility. Key components of this system include an extensive multi-use path system providing safe and attractive pedestrian and bicycle access throughout the Planning Area and a Transit Oriented Development (TOD) district intended to accommodate future transit service.

The DSAP development program calls for 2,500 dwelling units and 7,000,000 square feet of non-residential development within the Central Planning Area. Two land use districts serve to organize this program in a compatible and sustainable manner. The ~1,441 acre Employment Center (EC) district is specifically intended to encourage economic development and allows such uses as manufacturing, warehousing and distribution, technological and medical research, and business services. Secondary supportive uses, including retail, lodging and multi-family residential, are also permitted. The development standards for this district are broad and intended to allow for significant flexibility; thereby, further encouraging job-creating development.

Also include within the Central Planning area is a ~300 Regional Center (RC) district and associated Transit Oriented Development (TOD) area. While the Regional Center allows for many of the same employment generating uses as the Employment Center, it is primarily intended to accommodate large-scale retail and residential uses. Approximately 50 acres of the district has been designated for Transit Oriented Development or "TOD". This TOD sub-area contains specific design principles intended to guide the development of the area in a compact, mixed-use and walkable manner. This development pattern both accommodates and encourages future transit service to the area.

Figure 4.8: DSAP Central Planning Area Overall Land Map

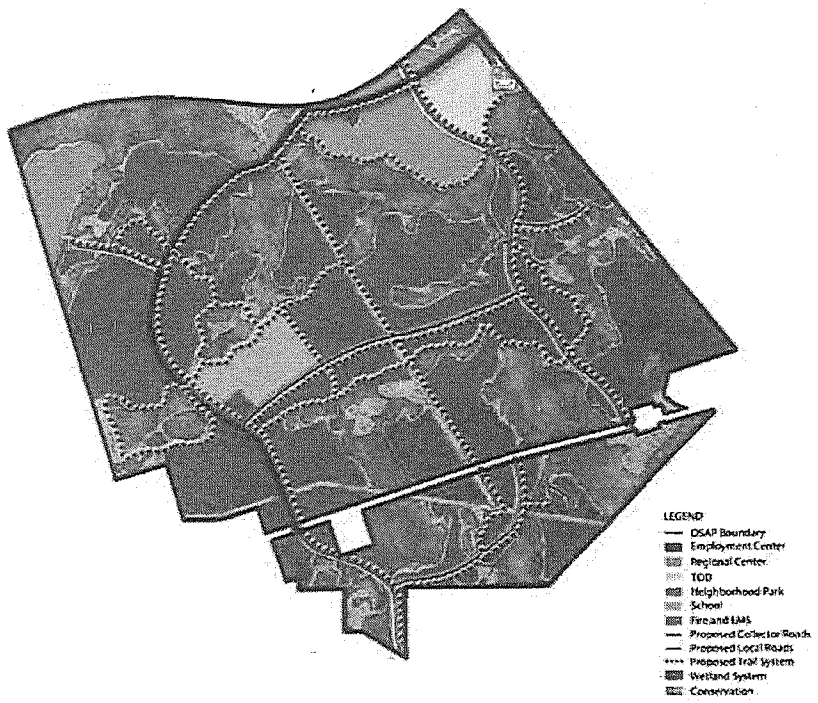


Table 4.A: Central Planning Area Development Program

GROSS AREA (ACRES)	CHN (ACRES)	DEVELOPABLE LAND (ACRES)	RESIDENTIAL (UNITS)	NON-RESIDENTIAL USES (SQUARE FEET)
2938	1,116	1,822	2,500	7,000,000

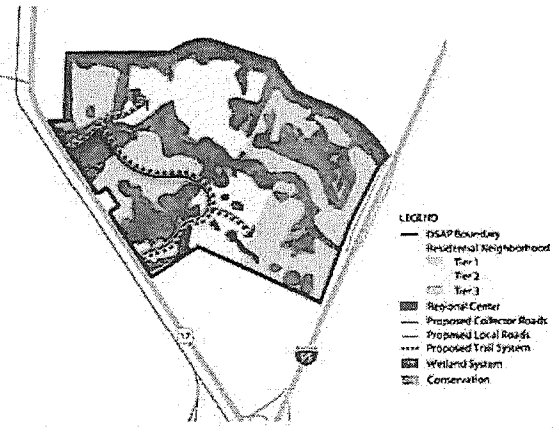


Figure 4.9: DSAP Northern Planning Area Overall Land Map

Northern Planning Area

As with the Central Planning Area, the primary component of the Northern Planning Area master plan is a Conservation Habitat Network (CHN). Comprised of regionally significant ecological communities and other open space, this network encompasses approximately 312 acres of the 665 acre Planning Area and arranges development within the planning area into compact nodes while preserving critical wildlife habitat and natural drainage systems.

The ENCPA's multi-modal transportation theme carries through to the Northern Planning Area. The Planning Area's developable lands have been connected both internally and externally with a multi-modal transportation network incorporating pedestrian, bicycle, and automobile facilities.

The DSAP development program calls for 769 dwelling units and 75 ,000 square feet of non-residential development within the Northern Planning Area. Two primary land use districts guide future development of this Area: Village Center and Residential Neighborhood. A ~26 acre Village Center (VC) district serves as a major organizing element and provides retail and service opportunities within close proximity to the Planning Area's residential neighborhoods. The Area's Residential Neighborhood (RN) district is divided into three tiers to ensure an appropriate transition of densities. Small, mixed-use Neighborhood Centers are also permitted within the Residential Neighborhood district and are intended to serve as focal points for the neighborhoods and provide limited, neighborhood-serving retail and service uses.

Table 4.B: Northern Planning Area Development Program

GROSS AREA (acres)	CHN (acres)	UPLAND (acres)	RESIDENTIAL (DU)	NON-RESIDENTIAL USES (square feet)
665	312	353	769	75,000

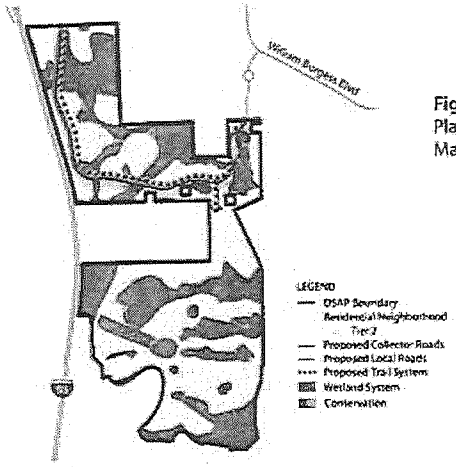


Figure 4.10: DSAP Southern Planning Area Overall Land Map

Southern Planning Area

As with the other Planning Areas, the primary component of the Southern Planning Area master plan is a Conservation Habitat Network (CHN) comprised of regionally significant ecological communities and other open space. This network encompasses approximately 266 acres of the 599 acre Planning Area and arranges development within the planning area into compact nodes while preserving critical wildlife habitat and natural drainage systems.

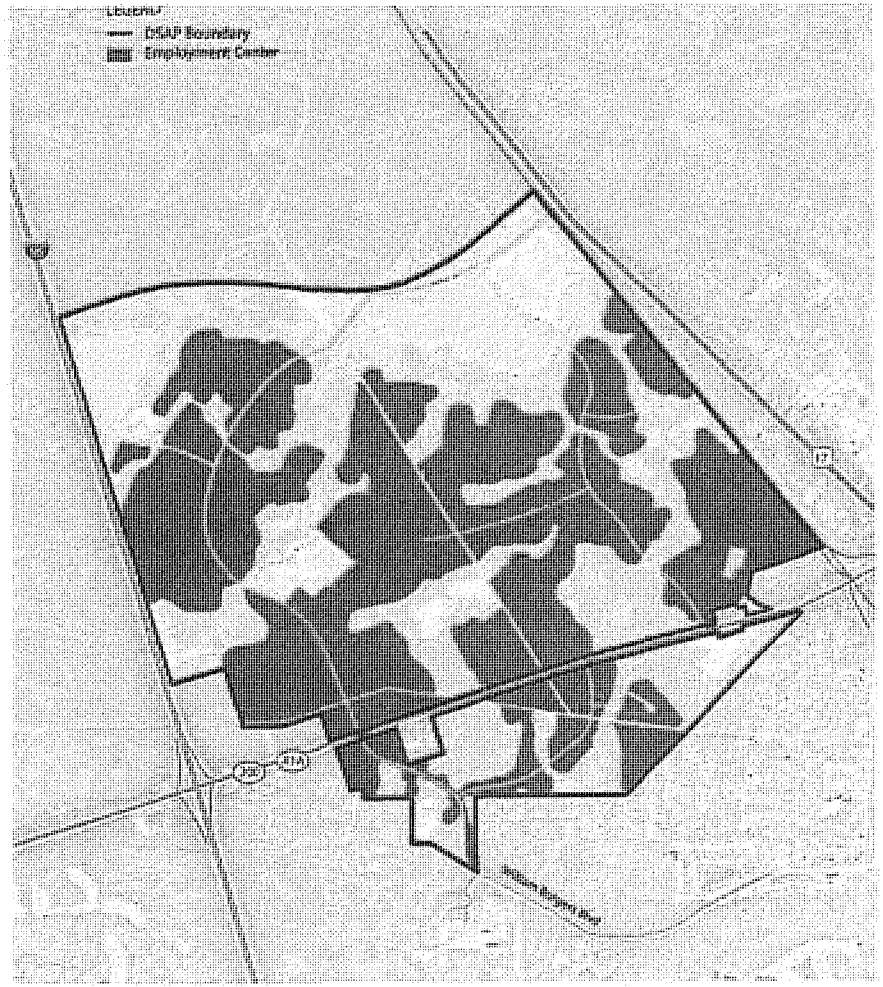
Once again, the ENCPA's multi-modal transportation theme carries through to the Southern Planning Area. The Planning Area's developable lands have been connected both internally and externally with a multi-modal transportation network incorporating pedestrian, bicycle, and automobile facilities.

The DSAP development program calls for 769 dwelling units and 25,000 square feet of non-residential development within the Southern Planning Area. This entire Planning Area is comprised of a single primary land use district: Residential Neighborhood (RN) – Tier 2. The Residential Neighborhood – Tier 2 classification allows for residential development at a minimum average net density of 2.5 dwelling units per acre. As with the Northern Planning Area, small, mixed-use Neighborhood Centers are also permitted within the Residential Neighborhood district and are intended to serve as focal points for the neighborhoods and provide limited, neighborhood-serving retail and service uses.

Table 4.C: Southern Planning Area Development Program

GROSS AREA (acres)	CHN (acres)	UPLAND (acres)	RESIDENTIAL (DU)	NON-RESIDENTIAL USES (square feet)
599	266	333	769	25,000

Figure 4.2: Central Planning Area DSAP Employment Center



DSAP Land Uses

There are five proposed land use districts within the East Nassau Employment Center DSAP: Employment Center (EC), Regional Center (RC), Transit Oriented Development (TOD), Village Center (VC), and Residential Neighborhood (RN). Principles and guidelines for each of the land use districts are contained in the following sections.

Employment Center (EC) (Central Planning Area)

The Central Planning Area's primary land use is a 1,441 acre Employment Center (EC). This EC is intended to provide significant economic development opportunities and improve the overall jobs-to-housing ratio within Nassau County. The EC has immediate access to higher level transportation facilities (I-95, US 17, SR 200 and the CSX rail corridor) and is to be comprised primarily of office/research,light industrial and commercial uses. A variety of secondary uses are also permitted and are intended to augment and support the Employment Center's primary uses.

Permitted Uses

Multi-family residential dwellings (whether free standing or part of a mixed use structure), office, personal services, research park, high technology, high value business industry and service uses, manufacturing, warehousing distribution, commercial, hotel and civic uses, public facilities, transit stations and other land uses that are similar and compatible. Employment Center's primary uses.

DSAP Development Standards: Employment Center

Non-Residential Standards

Minimum Lot Requirements:

- Minimum lot width: 60 feet
- Minimum lot area: 7,500 square feet
- For government uses, minimum lot area shall be consistent with the type of activity conducted on the site

- Minimum Yard Requirements:
  - Front yard: 20 feet
  - Side yard: 10 feet
  - Rear yard: 10 feet
  - No minimum lot requirements for public and/or private recreation or open space uses
- Building Restrictions:
  - Maximum Building Height: 5 stories

- Minimum FAR: None
- Maximum FAR: 1.00

- The minimum landscape area shall not be less than ten (10) percent of the total lot area and shall be in conformance with the standards in article 37.

Residential Standards

- Minimum Lot Requirements:

  Townhouses

  Minimum lot width:

  Interior lot: 20 feet

  Exterior lot: 30 feet

  Minimum lot area:

  Interior lot: 2,000 square feet

  Exterior lot: 3,000 square feet

  Multiple-family dwellings and other permitted structures:

  Minimum lot width: 100 feet

  - Minimum lot area: 10,000 square feet

- Minimum Yard Requirements:

  - Townhouses

  Front yard: 10 feet

  Rear yard: 10 feet

  Side yard:

  Interior units: 0 feet

  Exterior units: 10 feet

  - Multiple-family dwellings and other permitted structures:

  Front yard: 20 feet

  Rear yard: 20 feet

  - Side yard: 20 feet

- Building Restrictions:

  Maximum building height:

  Duplexes and townhouses: 3 stories

  - Multiple-family dwellings: 5 stories

Minimum Average Net Density: 5 du/ac

Maximum Average Net Density: 20 du/ac

Policy FL.13.07(C)(1)specifies the following general design guidelines for the Employment Center sub-category.

a) *Development in the Employment Center land use sub-category shall be subject to the following land use mix percentage requirements (% max is based on developable land area - Gross acreage less CHN, wetlands, waterbodies, wetland buffers and public utility easements):*
   i. Office, research park and business service - 15% to 90%;
   ii. Industrial (manufacturing and warehousing distribution) - 0% to 60%;
   iii. Support retail, hotel and services - 0% to 10%;
   iv. Civic, public facilities and transit stations - 10% minimum; and
   v. Residential - 0% to 10%
b) *Shared parking areas and garages shall be permitted for all Employment Center uses, including any civic and public facilities.*
c) *Development shall be designed to incorporate landscaping and pedestrian amenities such as benches and bicycle parking along sidewalks and multi-use paths and streets.*
d) *Development shall be designed to accommodate feeder bus, bus rapid transit and other transit stops.*

This policy are hereby incorporated into the DSAP and shall apply to all future development within the EC district.

Employment Center (EC) Guidelines

A Preliminary Development Plan (PDP) shall be submitted for individual development parcels within the Employment Center of this DSAP. The PDP shall include design and architectural standards as required for a Planned Development for East Nassau Community Planning Area (PD-ENCPA). Each PDP within the Employment Center shall be consistent with the applicable policies, development principles, general guidelines and standards stipulated in Future Land Use Objective FL.13 of the Nassau County 2030 Comprehensive plan and the Employment Center development standards and guidelines of this DSAP. The PDP shall show how compatibility between land uses within the Employment Center will be achieved including, but not limited to building massing, scale fenestration, landscape, hardscape, use of the CHN, recreation areas and open spaces to define land use areas and provide buffers. Where conflicts exist between DSAP standards ant the Nassau County Land Development code, the DSAP shall control. All PDPs shall be subject to the SR200/A1A overlay regarding signage and landscape buffers adjacent to SR200. Multimodal pathway standards within this district shall be described in the PDP and shall include golf cart use.

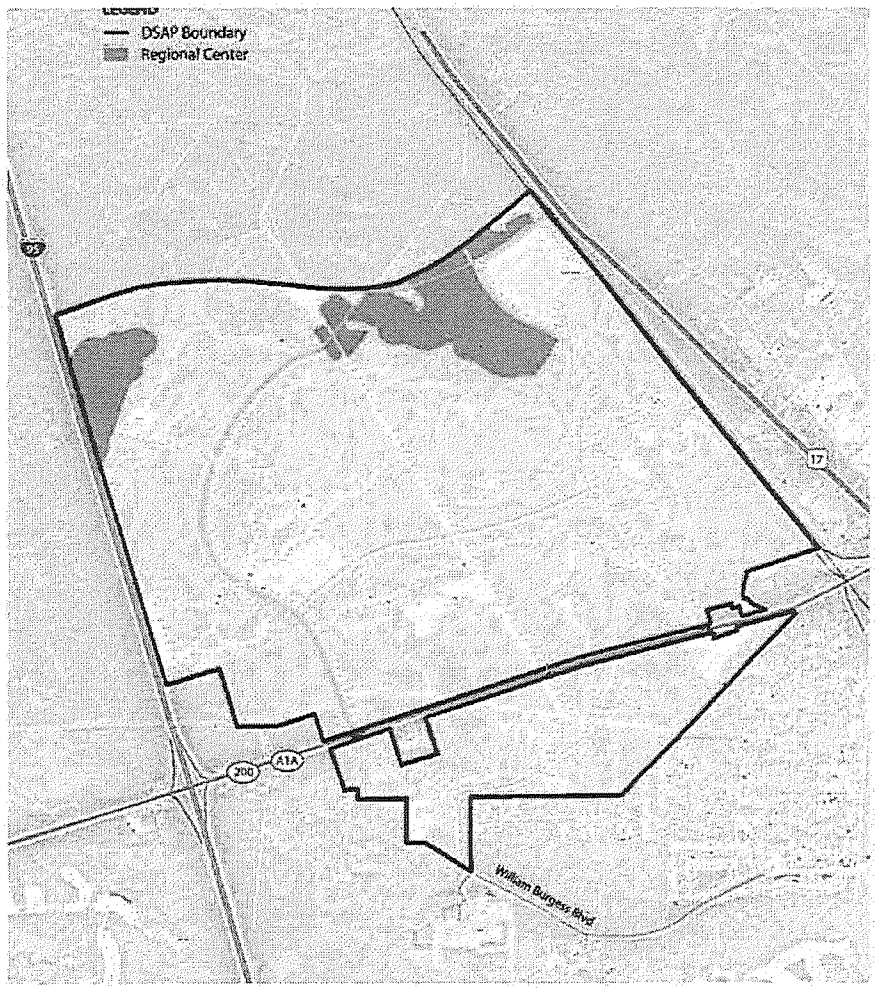
Employment Center Non Residential Guidelines

a) *Buildings should be designed to support their primary uses and incorporate design elements of scale and massing to create an attractive frontage to the primary public roadway network.*
b) *To the extent possible, the primary employee and customer entrances shall be clearly articulated in the building design and face the primary street.*
c) *A pedestrian sidewalk or passage way should connect employee and customer entrances to the primary street.*
d) *Where truck service areas and parking are located between buildings and the primary street frontage, landscaping for screening purposes should be placed between the primary frontage and the service/ parking areas.*
e) *Site and landscape design should provide for safe pedestrian access through parking areas to a public right of way.*
f) *Non- Residential development within the employment center should be designed to permit connections of the CHN and open space networks.*

Employment Center Residential Guidelines

a) *Residential areas should be buffered from manufacturing and industrial areas to the extent practical by the CHN or office, institutional, open space or recreational uses.*
b) *Residential areas may be gated when pathway access is provided and the project does not prevent connectivity of the multi use pathway and open space networks.*
c) *Residential development within the employment center should encourage connections to the CHN, open space and trail networks.*
d) *Site and landscape design should provide for safe pedestrian access through parking areas to a public right of way and a transit stop as applicable.*
e) *Multifamily residential developments within the Employment Center should be connected where feasible by both vehicular and non vehicular travel modes to retail or office uses.*
f) *Residential projects may incorporate retail and office as supporting uses and amenities in free standing or vertically integrated buildings.*

Figure 4.3: Central Planning Area DSAP Regional Center



Regional Center (RC) (Central Planning Area)

In addition to the Employment Center (EC), the Central Planning Area also contains a 254 acre Regional Center (RC). The Regional Center is intended to identify areas suitable for locating a broad mix of uses including, residential, high way commercial/interchange-related uses, regional scale retail, commercial, hotel, office, business/research parks and light industrial. Like the Employment Center, the Regional Center has immediate access to higher level transportation facilities including, US 17 and the CSX rail corridor. To capitalize on the Center's proximity to the existing rail corridor and the potential for future passenger rail transit, a portion of the area has been designated as a Transit Oriented Development (TOD) district. Specifics regarding the TOD district are contained in a subsequent section.

Permitted Uses

Residential, retail (including highway-oriented, regional malls), vehicle sales, restaurants, big box retailers, hotels/motels, office, research parks, personal services, business service and light industrial, parks/plazas and other civic uses, public facilities, transit stations and other land uses that are similar and compatible.

DSAP Development Standards: Regional Center

Non-Residential Standards

- Minimum Lot Requirements:
  - Minimum lot width: 60 feet
  - Minimum lot area: 7,500 square feet
  - For government uses, minimum lot area shall be consistent with the type of activity conducted on the site
  - No minimum lot requirements for public and/or private recreation or open space uses
- Minimum Yard Requirements:
  - Front yard: 20 feet
  - Side yard: 10 feet
  - Rear yard: 10 feet
- Building Restrictions:
  - Maximum Building Height: 5 stories
  - Minimum FAR: 0.25
  - Maximum FAR: 0.50
  - The minimum landscape area shall not be less than ten (10) percent of the total lot area and shall be in conformance with the standards in article 37.

Residential Standards

- Minimum Lot Requirements:
  - Single-family dwellings and duplexes
    - Minimum lot width: 30 feet
    - Minimum lot area: 3,800 square feet
  - Townhouses
    - Minimum lot width:
      - Interior lot: 20 feet
      - Exterior lot: 30 feet
    - Minimum lot area:
      - Interior lot: 2,000 square feet
      - Exterior lot: 3,000 square feet
    - Multiple-family dwellings and other permitted structures:
      - Minimum lot width: 100 feet
      - Minimum lot area: 10,000 square feet
- Minimum Yard Requirements:
  - Single-family dwellings and duplexes
    - Front yard: 10 feet
    - Rear yard: 10 feet
    - Side yard: 5 feet
  - Townhouses
    - Front yard: 10 feet
    - Rear yard: 10 feet
    - Side yard:
      - Interior units: 0 feet
      - Exterior units: 10 feet
  - Multiple-family dwellings and other permitted structures:
    - Front yard: 10 feet
    - Rear yard: 10 feet
    - Side yard: 5 feet
- Building Restrictions:
  - Maximum building height:
    - SFR, duplexes, townhouses: 3 stories
    - Multiple-family dwellings: 5 stories
  - Minimum Average Net Density: 7 du/ac
  - Maximum Average Net Density: 20 du/ac

Policy FL.13.07(B)(1)specifies the following general design guidelines for the Regional Center sub-category.

a) *The Regional Center shall be designed to incorporate the key elements of a Multi-Modal Transportation District, pursuant to Policy FL.13.05.*
b) *Residential development shall be permitted as detached single family units, attached townhomes, multi-family units; and live-work units; residential units may be located above ground floor commercial and professional office. Residential development within the Regional Center is not subject to density bonuses found elsewhere in the Comprehensive Plan.*
c) *Subject to a binding agreement, shared parking areas shall be permitted for all Regional Center uses, including any public and civic land uses. The County's land development regulations may provide reduced minimum parking ratios for development located with a 15-minute walk of a rail transit stop or within a 5-minute walk of a feeder transit line.*
d) *Development shall be designed to incorporate landscaping and pedestrian amenities such as benches and bicycle parking along neighborhood sidewalks and multi-use paths.*
e) *Development shall be designed to incorporate high quality plazas and parks that serve residents, employees and visitors of the Regional Center.*
f) *Development shall be designed to accommodate feeder bus/ transit stops.*

These policies are hereby incorporated into the DSAP and shall apply to all future development within the RC district.

Regional Center (RC) Guidelines

A Preliminary Development Plan (PDP) shall be submitted for individual development parcels within the Regional Center of this DSAP. The PDP shall include design and architectural standards as required for a Planned Development for East Nassau Community Planning Area (PD-ENCPA). Each PDP within the Regional Center shall be consistent with the applicable policies, development principles and general guidelines and standards stipulated in Future Land Use Objective FL .13 of the Nassau County 2030 Comprehensive plan and the Regional Center development standards and guidelines of this DSAP. The PDP shall show how compatibility between land uses within the Regional Center will be achieved including, but not limited to building massing, scale fenestration, landscape, hardscape and use of the CHN, recreation areas and open spaces to define land use areas and provide buffers. Where conflicts exist between DSAP standards and the Nassau County Land Development code, the DSAP shall control. Multimodal pathway standards within this district shall be described in the PDP and shall include golf cart use.

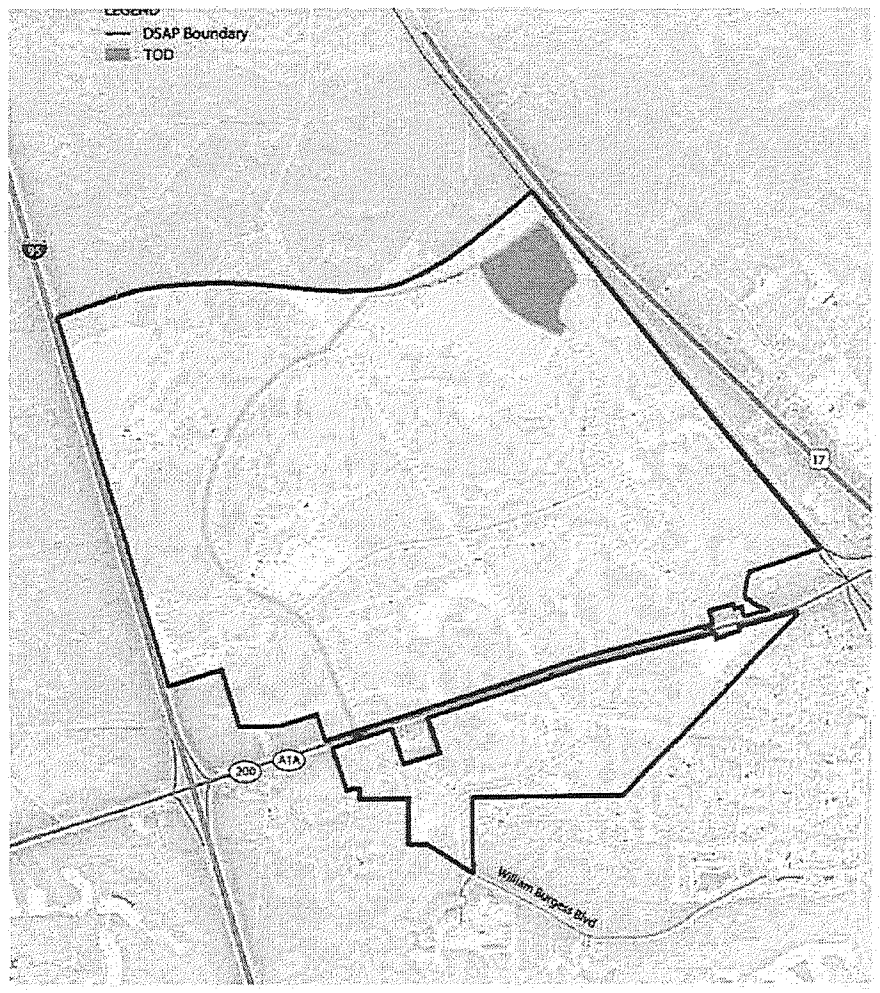
Regional Center Non Residential Guidelines

a) *Buildings should be designed to support their primary uses and incorporate design elements of scale and massing scale, massing and fenestration with surrounding development, adaptive resuse and to create an attractive frontage to the primary public roadway network.*
b) *To the extent possible, the primary employee and customer entrances should be clearly articulated in the building design and face the primary street.*
c) *A pedestrian sidewalk or passage way should connect employee and customer entrances to the primary street.*
d) *Where parking and service areas are located between buildings and the primary street frontage landscaping for screening purposes should be placed between the primary frontage and the parking/service areas.*
e) *Site and landscape design should provide for safe pedestrian access through parking areas to a public right of way.*
f) *The primary facades and entrances for buildings should be oriented to primary street frontages.*
g) *Loading and service areas should be screened and located at the rear or side of buildings away from the main building entrance.*
h) *Trash and recycling storage, mechanical equipment, transformers and similar above ground utilities where practical should be screened and located away from the primary building and street frontages.*
i) *Permanent outside storage areas should be screened and integrated within the overall building design. This should not preclude outside display of goods for marketing purposes such as associated with garden centers, farmers markets etc.*

Regional Center Residential Guidelines

a) *Residential areas should be buffered from highway oriented and big box retail to the extent practical by the CHN, office, institutional or recreational uses.*
b) *Residential areas may be gated when access is provided to the multi use pathway and open space networks.*
c) *Development should encourage connections of the CHN and open space networks.*
d) *Site and landscape design should provide for safe pedestrian access through parking areas.*
e) *Multifamily residential developments should be connected by both vehicular and non vehicular travel modes to retail or office uses where practical.*
f) *Residential projects may incorporate retail and office as supporting uses and amenities in free standing or vertically integrated buildings.*

Figure 4.5: Central Planning Area DSAP TOD



Transit Oriented Development TOD (Central Planning Area)

Approximately 50 acres of the Regional Center (RC) has been designated as a Transit Oriented Development (TOD) District. This area was chosen due to its proximity to the CSX rail corridor and the potential for future commuter rail service. The TOD district is intended to be developed as a multi-modal transportation center accommodating a full range of uses (residential, retail, office and civic) and organized in a manner that encourages walking as the primary form of transportation.

As a component of the Regional Center (RC), the general guidelines contained in ENCPA Policy FL.13.07(B)(1) apply to the TOD district. In addition, the following guidelines contained in ENCPA Policy FL.13.06 apply as well.

Permitted Uses

Residential, retail, office, restaurants, hotels/motels, personal services and business services, parks/plazas and other civic uses, public facilities, transit stations and other land uses that are similar and compatible.

DSAP Development Standards: Transit Oriented Development

- Minimum Lot Requirements:
  - Minimum lot width: None
  - Minimum lot area: None
- Minimum Yard Requirements:
  - Front yard: 0 feet, 15 ft maximum
  - Side yard: 0 feet
  - Rear yard: 5 feet
- Building Restrictions:
  - Maximum Building Height: 6 stories

The TOD (district) shall be characterized by the following:

a) Compact building and site design;
b) A walking and biking environment;
c) A mix of transit-supportive uses;
d) Attention to pedestrian access;
e) Highest concentration of population and employment will be located closest to transit stations;
f) Transit-supportive parking;
g) Development within an area designated as TOD shall contain the following percentage of block types.
  1) Mixed Use Blocks - 15% to 80%
  2) Retail Blocks - 0% to 50%

3) *Office Blocks - 0% to 60%*
4) *Residential Blocks - 15% to 60%*
5) *Civic Blocks - 5% to 30%; and*

h) *On-site parking for commercial and office land uses shall be located behind or beside buildings fronting on primary streets (excluding internal access lanes).*

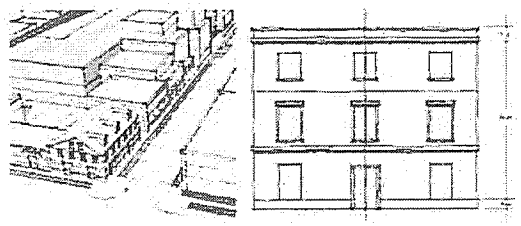
These policies are hereby incorporated into the DSAP and shall apply to all future development within the TOD district.

Transit Oriented Guidelines

A Preliminary Development Plan (PDP) shall be submitted for individual development parcels within the TOD areas of this DSAP. The PDP shall include design and architectural standards as required for a Planned Development for East Nassau Community Planning Area (PD-ENCPA). Each PDP within the TOD area shall be consistent with the applicable policies, development principles and general guidelines and standards stipulated in Future Land Use Objective FL .13 of the Nassau County 2030 Comprehensive plan and the TOD area development standards and guidelines of this DSAP. Where conflicts exist between DSAP standards ant the Nassau County Land Development code, the DSAP shall control. Multimodal pathway standards within this district shall be described in the PDP and shall include golf cart use.

Building Design Guidelines

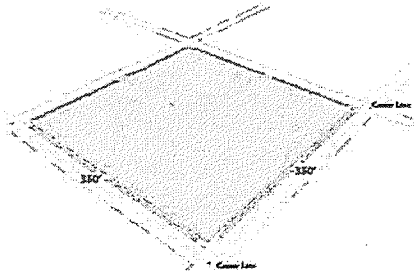
- Buildings within the TOD sub-district should be oriented to street rights-of-way and have minimal building setbacks.
- Covered walkways, terraces, balconies, awnings and street trees should be utilized to provide shaded walkways for pedestrians.



- Doorways and windows should be oriented toward a street or other public space to provide visual interest an increased security.
- All trash collection should be located to the rear of buildings or within parking areas.

Block and Street Design Guidelines

- The TOD sub-district should be designed around a connected grid or curvilinear grid street network with a typical block length of three hundred and fifty feet (350'). Block length is be measured from intersection centerline to intersection centerline.



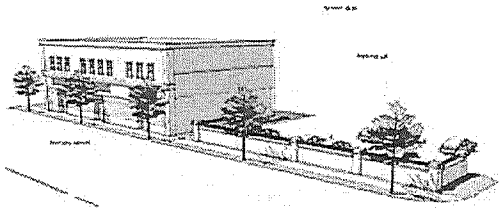
- Traffic calming measures should be incorporated into street design. These measures may include bulb-outs, raised crosswalks, textured paving materials, chicanes and round-a-bouts. Speed bumps shall not be permitted.
- On-street parking should be utilized throughout the sub-district to both minimize off-street parking needs and provide a buffer between travel lanes and sidewalks.

Pedestrian and Bicycle Facilities Design Guidelines

- All streets should be designed with an emphasis on pedestrian and cyclist circulation and safety
- Crosswalks should be clearly defined through the use of distinct paving materials or techniques.
- All streets should incorporate pedestrian level lighting and street furniture such as planters, seating and trash receptacles.
- The TOD sub-district should contain a complete and continuous bicycle facility network which may be comprised of designated shared lane facilities, bike lanes and multi-use paths.
- Bicycle parking should be provided at a ratio of one (1) space per 3,000 square feet of retail or office use. Bicycle parking facilities should be provided at all transit stops.

Off-street Parking and Circulation Design Guidelines

- Off-street parking should be minimized, located at the rear or sides of buildings and visually screened in order to promote a walkable, pedestrian friendly environment.



- Cross access connections should be provided between adjacent parcels and parking areas.
- Parking structures fronting roadways should include ground floor retail or service uses with street access.
- Pedestrian paths through parking facilities should be clearly delineated.

Civic, Recreation and Open Space Design Guidelines

- The TOD sub-district should be organized around a centrally located public park, plaza or civic facility.
- Civic buildings should be located at a roadway intersection or the termini of roads to provide a focal point or landmark.

Signage

- Poles signs are prohibited within the TOD sub-district.

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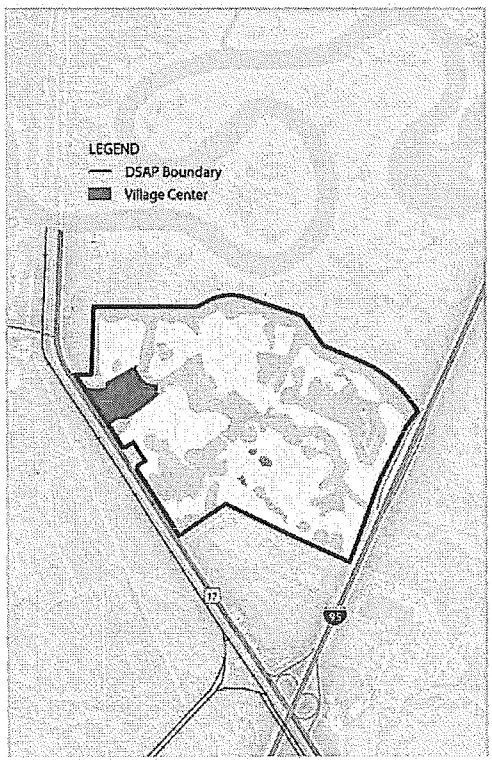
Figure 4.4: Northern Planning Area DSAP Village Center



Village Center (VC) (Northern Planning Area)

Approximately 26 acres of the Northern Planning Area has been designated as a Village Center (VC). The Village Center (VC) land use sub-category is intended to identify areas which may serve as higher density/intensity, mixed-use centers for surrounding residential neighborhoods. The range of permitted uses includes residential, commercial, office and civic.

Permitted Uses

Single-family, two-family, ancillary (accessory) dwelling units, multi-family residential (either free standing or in mixed-use structures), retail sales, personal services, business and professional offices, recreation and commercial working waterfront uses, parks/plazas, recreation and open space, governments, other public uses and land uses that are similar and compatible.

DSAP Development Standards; Village Center

Non-residential Standards

- Minimum Lot Requirements:
  - Minimum lot width: 60 feet
  - Minimum lot area: 7,500 square feet
  - For government uses, minimum lot area shall be consistent with the type of activity conducted on the site
- Minimum Yard Requirements:
  - Front yard: 20 feet
  - Side yard: 10 feet
  - Rear yard: 10 feet. No side yard shall be required where two (2) or more buildings adjoin side by side.
- Building Restrictions:
  - Maximum Building Height: 5 stories
  - Minimum FAR: 0.20
  - Maximum FAR: 1.00
  - The minimum landscape area shall not be less than ten (10) percent of the total lot area and shall be in conformance with the standards in article 37 (Ordinance 2009-01).

Residential Standards

- Minimum Lot Requirements:
  - Single-family dwellings and duplexes
    - Minimum lot width: 30 feet
    - Minimum lot area: 3,800 square feet
  - Townhouses
    - Minimum lot width:
      - Interior lot: 20 feet
      - Exterior lot: 30 feet
    - Minimum lot area:
      - Interior lot: 2,000 square feet
      - Exterior lot: 3,000 square feet
  - Multiple-family dwellings and other permitted structures:
    - Minimum lot width: 100 feet
    - Minimum lot area: 10,000 square feet
- Minimum Yard Requirements:
  - Single-family dwellings and duplexes
    - Front yard: 10 feet
    - Rear yard: 10 feet
    - Side yard: 5 feet
  - Townhouses
    - Front yard: 10 feet
    - Rear yard: 10 feet
    - Side yard:
      - Interior units: 0 feet
      - Exterior units: 10 feet
  - Multiple-family dwellings and other permitted structures:
    - Front yard: 10 feet
    - Rear yard: 10 feet
    - Side yard: 5 feet
- Building Restrictions:
  - Maximum building height:
    - SFR, duplexes, townhouses: 3 stories
    - Multiple-family dwellings: 5 stories
  - Minimum Average Net Density: 7 du/ac
  - Maximum Average Net Density: 20 du/ac

Policy FL 13.07(D)(1)specifies the following general design guidelines for the Village Center sub-category.

a) *Residential development shall be permitted as single family, multi-family or attached live-work units and shall be permitted above ground floor commercial and professional office.*
b) *On-site parking for commercial and office land uses shall be located behind or beside buildings fronting on primary streets.*
c) *Shared parking areas shall be encouraged for all Village Center uses, including any public and civic land uses.*
d) *Sites shall be designed to incorporate landscaping and pedestrian amenities such as benches and bicycle parking along neighborhood sidewalks and multi-use paths.*
e) *Sites shall be designed to incorporate plazas and parks that serve the Village Center and surrounding neighborhoods. Sites shall be designed to accommodate existing or future feeder bus/transit stops.*

These policies are hereby incorporated into the DSAP and shall apply to all future development within the VC district.

Village Center (VC) Guidelines

A Preliminary Development Plan (PDP) shall be submitted for individual development parcels within the Village Center of this DSAP. The PDP shall include design and architectural standards as required for a Planned Development for East Nassau Community Planning Area (PD-ENCPA). Each PDP within the Village Center shall be consistent with the applicable policies, development principles and general guidelines and standards stipulated in Future Land Use Objective FL .13 of the Nassau County 2030 Comprehensive plan and the Village Center development standards and guidelines of this DSAP. Where conflicts exist between DSAP standards ant the Nassau County Land Development code, the DSAP shall control. Multimodal pathway standards within this district shall be described in the PDP and shall include golf cart use.

Building Design Guidelines

a) *Buildings should be designed to support mixed uses and incorporate design elements of scale, massing and fenestration to create an attractive frontage to the primary public roadway*
b) *The primary facades and entrances for buildings should be oriented to primary street frontages.*
c) *Loading and service areas should be screened and located at the rear or side of buildings away from the main building entrance.*
d) *Trash and recycling storage, mechanical equipment, transformers and similar above ground utilities where practical should be screened and located away from the primary building and street frontages.*
e) *Permanent outside storage areas should be screened and integrated within the overall building design. This should not preclude outside display of goods for marketing purposes such as associated with garden centers, farmers markets etc.*

Block & Street Design Guidelines

a) *Street and block patterns should promote an interconnected multi modal street network which provides for safe and comfortable pathways.*
b) *Sidewalks or pathways should be located on both sides of streets where practical and include street trees.*

Pedestrian and Bicycle Circulation

a) *To the extent practical, pedestrian walkways should be located between non residential building frontages and vehicular use areas. A pedestrian network connecting public right of ways with private non residential building frontages should be encouraged*
b) *Bicycle parking should be provided adjacent to retail and office uses as well as bus/transit stops.*

Parking & Circulation Design Guidelines

a) *Cross access should be provided between adjacent non residential parcels and parking areas.*
b) *Open space requirements may be achieved in the form of parks, squares or greens located to serve as focal points for community events and active or passive recreational activities.*
c) *Civic buildings, such as a community center, when located in a village center and where feasible should be located adjacent to a park, square or green park, accessible to a transit stop.*

Figure 4.6: Northern Planning Area DSAP Residential Neighborhood

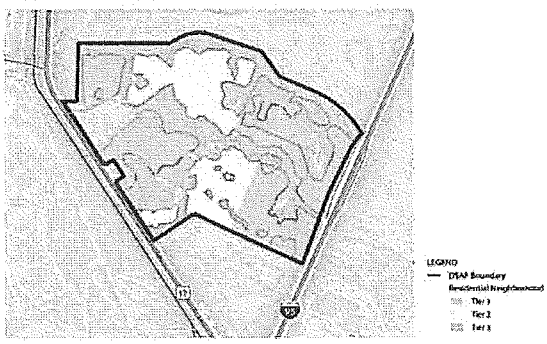
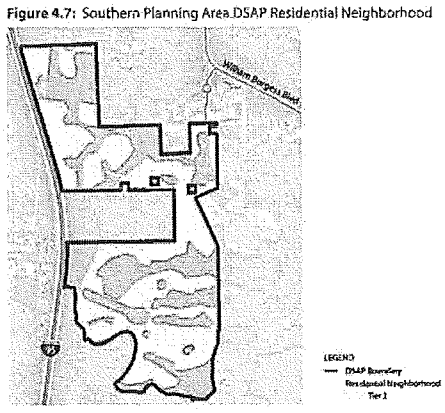


Figure 4.7: Southern Planning Area DSAP Residential Neighborhood



Residential Neighborhood (RN) (Northern and Southern Planning Areas)

A majority of the Northern Planning Area and the entirety of the Southern Planning Area have been designated as Residential Neighborhood (RN). The Residential Neighborhood (RN) land use sub-category is intended is to create a hierarchical pattern of residential neighborhoods radiating outward from Village Centers. The sub-category is divided into three "Tiers". Tier 1 neighborhoods are mid-density, residential areas adjacent to Village Centers. Tier 2 neighborhoods are lower density in character and generally located ½ to 1 mile from Village Centers. Tier 3 represents the lowest density neighborhoods generally located beyond 1 mile from a designated Village Center. In addition, small, mixed-use Neighborhood Centers (NC) are also permitted within the RN. These centers can serve as a focal point for a neighborhood and provide limited, neighborhood-serving uses.

Permitted Uses

Residential Neighborhoods

Single-family detached, two-family, townhomes and multi-family residential, ancillary (accessory) dwelling units, clustered residential lots (in Tier 3), parks, schools and daycare centers, other public/civic facilities, and other land uses that are similar and compatible.

Neighborhood Centers

General retail, personal services, offices, attached residential and civic uses (including religious institutions), daycare facilities, parks/plazas, other neighborhood-serving uses, and other land uses that are similar and compatible.

DSAP Development Standards: Residential Neighborhood

Non-Residential Standards

- Minimum Lot Requirements:
  - Minimum lot width: 60 feet
  - Minimum lot area: 7,500 square feet
  - For government uses, minimum lot area shall be consistent with the type of activity conducted on the site
- Minimum Yard Requirements:
  - Front yard: 20 feet
  - Side yard: 10 feet
  - Rear yard: 10 feet, No side yard shall be required where two (2) or more buildings
- Building Restrictions:
  - Maximum Building Height: 3 stories

- Maximum Lot Coverage:

  Lot coverage by all buildings, including, accessory buildings and structures shall be not more than sixty-five (65) percent of the lot.

  Impervious surface land coverage of recreational and open space uses should not exceed fifty (50) percent for activity based recreational development and ten (10) percent for resource based recreational development.

  The minimum landscape area shall not be less than ten (10) percent of the total lot area and shall be in conformance with the standards in article 37.

Residential Standards

- Minimum Lot Requirements:
  - Single-family dwellings and duplexes
    - Minimum lot width: 30 feet
    - Minimum lot area: 3,800 square feet
  - Townhouses
    - Minimum lot width:
      - Interior lot: 20 feet
      - Exterior lot: 30 feet
    - Minimum lot area:
      - Interior lot: 2,000 square feet
      - Exterior lot: 3,000 square feet
    - Multiple-family dwellings and other permitted structures:
      - Minimum lot width: 125 feet
      - Minimum lot area: 15,000 square feet
- Minimum Yard Requirements:
  - Single-family dwellings and duplexes
    - Front yard: 10 feet
    - Rear yard: 10 feet
    - Side yard: 5 feet
  - Townhouses
    - Front yard: 10 ft
    - Rear yard: 10 ft
    - Side yard:
      - Front yard: 10 feet
      - Rear yard: 10 feet
      - Side yard: 5 feet
  - Townhouses
    - Front yard: 10 ft
    - Rear yard: 10 ft
    - Side yard:
      - Interior units: 0 feet
      - Exterior units: 10 feet
  - Multiple-family dwellings and other permitted structures:
    - Front yard: 20 feet
    - Rear yard: 20 feet
    - Side yard: 20 feet
- Building Restrictions:
  - Maximum building height:
    - SFR, duplexes, townhouses: 3 stories
    - Multiple-family dwellings: 4 stories
  - Maximum lot coverage:
    - SFR, duplexes, townhouses: 35%
    - Multiple-family dwellings: 25%
  - Minimum Average Net Density:
    - Tier 1: 5 du/ac
    - Tier 2: 2.5 du/ac
    - Tier 3: N/A
  - Maximum Average Net Density:
    - Tier 1: N/A
    - Tier 2: N/A
    - Tier 3: .50 du/ac clustered, .20 du/ac un-clustered

Policy FL.13.07(E)(1)specifies the following general design guidelines for Tiers 1 and 2 of the Residential Neighborhood (RN) sub-category.

a) Private neighborhood parks, plazas and civic areas shall provide an identity for individual neighborhoods.
b) Community or regional parks and community facilities shall be located near or adjacent to planned and existing public school facilities. Joint-use recreational facilities with a public school facility shall be encouraged.
c) Private neighborhood parks are improved areas and shall provide recreational space and may include such amenities as informal play fields, play equipment, seating areas and other such improvements.
d) Private neighborhood parks shall be generally a minimum of ¼ acre in size and publicly accessible.
e) Public schools shall be located in accordance with Objective 10.3 of the Public Schools Facilities Element.
f) Stormwater management areas shall be designed as a visual amenity and may count towards the minimum park and common open space requirements when publicly accessible.
g) Transit stops, where public transit is available, should be incorporated as a focal point and designed as a civic feature in a visible and secure setting of the neighborhood.

Policy FL.13.07(E)(2)specifies the following general design guidelines for Tier 3 of the Residential Neighborhood (RN) sub-category.

a) Development shall not exceed an average maximum density of one (1) dwelling unit per ten (10) gross acres. However, where development is clustered to preserve open space, the County shall permit densities up to an average maximum net density of one (1) dwelling unit per two (2) acres.
b) Clustered development areas shall contain a minimum of eight (8) lots and a maximum of thirty (30) lots, with a maximum front lot width of 150 feet.

Policy FL.13.07(E)(3)specifies the following general design guidelines for Neighborhood Centers within the Residential Neighborhood (RN) subcategory.

a) The gross land area for Neighborhood Centers shall include a maximum of twelve (12) acres and shall include a park square or green of at least one (1) acre in area.
b) Residential development shall be permitted as attached live-work units or located above ground floor commercial and professional office.
c) Shared parking areas shall be permitted for all neighborhood center uses, including any public and civic land uses.

These policies are hereby incorporated into the DSAP and shall apply to all future development within the RN district and NC sub-district.

Residential Neighborhood (RN) Guideline

A Preliminary Development Plan (PDP) shall be submitted for individual development parcels within the Residential Districts Tiers 1, 2 &3 of this DSAP. The PDP shall include detailed design and architectural standards as required as a Planned Development for East Nassau Community Planning Area (PD-ENCPA). Each PDP for a Residential Neighborhood development shall be consistent with the applicable policies, development principles and general guidelines and standards stipulated in Future Land Use Objective FL .13 of the Nassau County 2030 Comprehensive plan and the RN development standards and guidelines of this DSAP. Where conflicts exist between DSAP standards ant the Nassau County Land Development code, the DSAP shall control. Multimodal pathway standards within this district shall be described in the PDP and shall include golf cart use.

RN Tier 1 Guidelines:

a) *Primary entrances for single family and multifamily residential structures should be visible from the public right of way.*
b) *To the extent feasible front loaded garages for detached, single-family units should be recessed from the primary facade of the primary structure.*
c) *Garages for detached or attached housing, on lots less than 40 feet wide, should generally be accessed by alley or side yard driveway.*
d) *Lot sizes should be varied within neighborhoods to encourage a variety of housing sizes and types.*
e) *Parks and open space should generally be distributed throughout a neighborhood within short walking distances for the majority of residential units. Parks and open spaces should serve as organizing design elements and focal points for neighborhood activities.*
f) *Residential streets, where feasible, should be connected to form a pattern of residential blocks that support a variety of housing types. The typical street pattern may generally be a grid however curvilinear street and cul-de-sacs may be used to accommodate environmental and unique topographic conditions.*
g) *Roadway connections or stub-outs should be encouraged between adjacent parcels to enhance connectivity between neighborhoods.*
h) *Street trees should be planted where practical and spaced generally fifty (50) feet on center.*
i) *Stormwater management areas should be designed as amenities where practical and in accord with engineering best practices.*

RN Tier 2 Guidelines:

a) *Tier 2 neighborhoods are intended to provide a range of housing types. Housing types are typically single-family dwellings.*
b) *Primary entrances for residential structures should be visible from the public street right of way.*
c) *To the extent feasible front loaded garages should be recessed from the primary facade of the primary structure.*
d) *Garages for houses on lots less than 40 feet wide should generally be accessed by alley or side yard driveway.*
e) *Parks and open space should generally be distributed throughout a neighborhood within short walking distances for the majority of residential units. Parks and open spaces should serve as organizing design elements and focal points for neighborhood activities.*
f) *Residential blocks may be formed by a connected network of curvilinear streets and cul-de-sacs. Cul-de-sacs should be used to accommodate environmental and unique topographic conditions.*
g) *Roadway connections or stub-outs should be encouraged between adjacent parcels to enhance connectivity between neighborhoods.*
h) *Street trees should be planted where practical and spaced generally fifty (50) feet.*
i) *Stormwater management areas should be designed where practical as amenities in accord with engineering best practices.*

RN Tier 3 Guidelines:

a) *Tier 3 neighborhoods are intended to provide for single-family dwellings in a rural setting. They may be clustered or in located in individual acreages typically associated with rural development patterns.*
b) *Roadway connections or stub-outs should be encouraged between adjacent neighborhoods to promote a connected public road network.*

Figure 4.5: Typical Rural Development Pattern

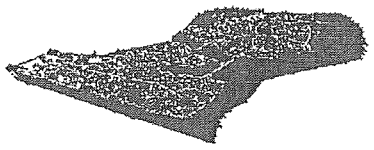
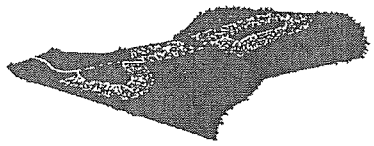


Figure 4.6: Rural Cluster Development



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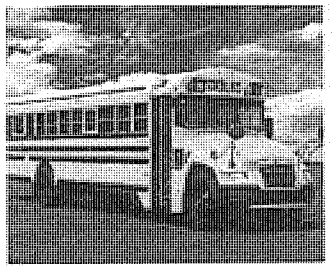

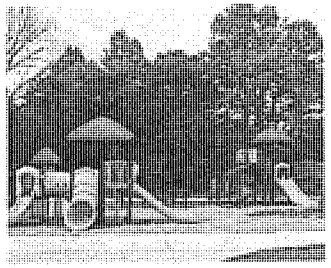

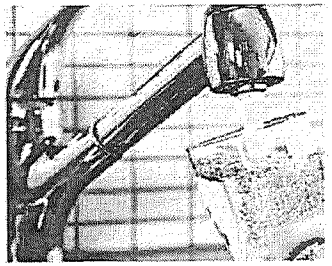

Public Facilities Summary

Public Facilities Summary

A detailed analysis of public facilities has been conducted utilizing the DSAP land use plan and associated development program, consistent with the requirements of 163.3245(3)(b)(5) F.S. Potential impacts were analyzed for both short-term (5-yr) and long-term (build-out) conditions. The complete details of this analysis are contained in Appendix C. Findings have been summarized below.

Potable Water

Nassau County is located within the St Johns River Water Management District (SJRWMD). Per the District's 2003 Water Supply Assessment, existing water supply sources and water supply development plans are considered reasonably adequate to meet Nassau County's projected needs.

Jacksonville Electric Authority (JEA), provides potable water service to most of Nassau County. The East Nassau Employment Center DSAP is located within JEA's District 7 – Nassau County Water Service Area. Potable Water demands for the proposed development program were analyzed at both the 5-yr and build-out milestones. It was determined that adequate capacity exists to accommodate potential impacts under both scenarios (see Table 5.A).

Table 5.A: Potable Water Analysis (MGD)

	AVAILABLE CAPACITY	PROJECTED USAGE	DSAP DEMAND	REMAINING CAPACITY
5-year	6.40	2.00	0.12	4.28
Build-out	10.20	5.00	1.65	3.55

Wastewater

The East Nassau Employment Center DSAP is located within JEA's District 7 – Nassau County Sewer Service Area. Wastewater treatment demands for the proposed development program were analyzed at both the 5-yr and build-out milestones. It was determined that adequate capacity exists to accommodate potential impacts under the projected 5-yr development program (see Table 5.B). It appears that additional treatment capacity would be needed to accommodate demand by the 20 year build-out. The developer will work with JEA to identify locations and land area reservations needed to support water and wastewater facilities beyond the first five (5) years. The County will be able to evaluate these reservations and capacity in their review of each PDP within this DSAP.

Table 5.B: Wastewater Analysis (MGD)

	AVAILABLE CAPACITY	PROJECTED USAGE	DSAP DEMAND	REMAINING CAPACITY
5-year	2.00	0.66	0.12	1.02
Build-out	2.00	1.50	1.65	-1.15

Solid Waste

Solid waste service is provided to the East Nassau Employment Center DSAP by Nassau County. Available facilities have a combined lifespan of 39 years. It was determined that no improvements to solid waste facilities would to be necessary to accommodate the proposed DSAP development program at either the 5-yr or build-out milestones.

Stormwater

Stormwater impacts and necessary improvements will be determined and permitted in accordance with the St. Johns River Water Management District (SJRWMD) discharge design criteria.

Schools

The East Nassau Employment Center DSAP is located within the Nassau County School District. The School District and Nassau County have entered into an interlocal agreement (ILA) regarding the location and adequate capacity of public schools. Utilizing methodologies outlined by both the School District and Nassau County, DSAP school demand and potential impacts were projected for both the 5-yr and build-out development program scenarios.

It was determined that adequate capacity exists within the current system to accommodate potential impacts under the projected 5-yr development program. Additional school capacity at the elementary, middle and high school levels will be needed to accommodate the projected DSAP demand at build-out. At this time, two new elementary schools are programmed within the District's 10-yr work program. Another elementary school and a new middle school are programmed within the District's 20-yr work program. If constructed, these facilities would be adequate to address projected needs at the elementary and middle school levels. Development of the DSAP beyond the 5-yr milestone should be monitored to determine if the inclusion of new high school facilities within future School District work plans would be needed.

Recreation and Open Space

Currently, Nassau County is deficient in all types of recreation and open space facilities. The proposed DSAP 5-yr and build-out programs are estimated to increase demand by approximately 12 acres and 141 acres, respectively. This demand is being met within the DSAP through the provision of significant open space and an extensive multi-use trail system.

The proposed DSAP land use plan includes approximately 1,700 acres of open space in the form of interconnected wetlands, surface waters and upland preserves forming a

Conservation Habitat Network (CHN). Approximately 344 acres of uplands are included within the DSAP CHN. This open space system exceeds the demand created by the DSAP. This will serve both the residents and employees of the East Nassau Employment Center DSAP and the County. The significant open space system provided by the DSAP is capable of not only accommodating DSAP impacts but helping the County address the County wide deficiency in regional parks through 2030.

At build-out, the East Nassau Employment Center DSAP will contain over 20 miles of multi-use trails. Assuming an average width of twelve feet, this trail system would provide over 30 acres of recreational facilities and connect neighborhoods and employment centers to the extensive open space network.

In addition to both the CHN and multi-use trail system, ENCPA policies require the inclusion of neighborhood parks, plazas and playfields. At build-out, these facilities are anticipated to exceed the projected demand created by the DSAP development program and assist significantly in addressing the County's overall deficiency in recreation and open space acreage.

5yr Capital Improvement Schedule

Chapter 163.3245 requires public facilities necessary to serve the development in the DSAP identify any developer contributions to be included in the 5 year capital improvement schedule of the affected local government.

The proposed development program of the East Nassau Employment Center DSAP includes a mix of land uses projected to provide a fiscal surplus to Nassau County. This projection is based on the ratio of nonresidential to residential development that is higher for the County as a whole.

The evaluation of the 5-year projections of development for the East Nassau Employment Center Detailed Specific Area Plan indicate the following impacts to public facilities:

Roads

- 5-year transportation impacts do not adversely impact existing State or County roads to a level requiring widening or other improvements that are otherwise provided for in conjunction with the Mobility Plan and related Development Order for this DSAP. However intersection improvements on SR 200/A1A with connecting road(s) within the DSAP are anticipated within the first five (5) years. The intersection improvements are estimated to be $700,000 which will be developer funded.

Utilities

Based on the availability response letter from JEA sufficient water, wastewater(sewer) and reclaimed water service and capacity is available for the first five years of the DSAP's projected development program. System connections will be developer improvements in accordance with JEA's policies and procedures. Extension of water, wastewater to serve the first five (5) years of development will be developer funded and the estimate cost will be addressed at the first PDP submittal.

Schools

Computations based on the Nassau County School Board (NCSB) 2012-2013 Work Plan, the Amended Inter-local Agreement for Public School Facility Planning and the Nassau County 2030 Comprehensive Plan Public Schools Facilities Element indicate there currently exists sufficient capacity or it is already programmed in capacity improvements during first five years of the DSAP. Based on the DSAP and the NCSB School Impact fee Study (dated November 7, 2011), the developer will enter into a separate agreement with the NCSB to address impact fee credits for reservation of approximately 28 acres of usable land to facilitate construction of an elementary school site within the Central Planning Area.

Parks

Computations based on the Nassau County 2030 Comprehensive Plan recreation and open space level of service standards show residential units proposed to be built within DSAP during first five years create demand for 12.25 acres of land for community and regional park lands. The DSAP has planned over 340 acres of uplands in the CHN that may be used to meet the recreation land requirement. Subject to an agreement between the Developer and Nassau County addressing timing and other conditions for reservation. The Developer will reserve up to thirty four (34) usable acres of land for a regional recreation facility in an area as generally depicted on the Central Planning Area Overall Land Use Map. Any reservation will be consistent with the DSAP Development Order..

Fire & Police Stations

The County has requested approximately four (4) acres within the DSAP be set aside for a Fire/EMS site to serve the overall Yulee area. Subject to an agreement between the Developer and Nassau County. The Developer will reserve approximately four (4) acres for the Fire/EMS facility in an area generally depicted on the Central Planning Area Overall Land Use Map. Any reservation will be consistent with the DSAP Development Order.

The potential location for the elementary school, park and fire/EMS facility reservations are depicted on the DSAP Central Planning Area Overall Land Uses Map (Figure 4.8)

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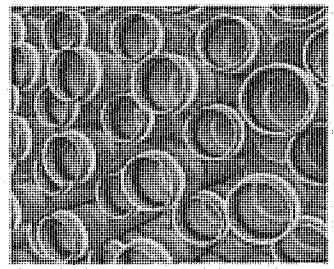

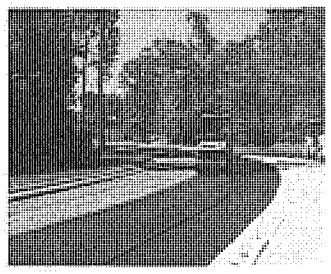

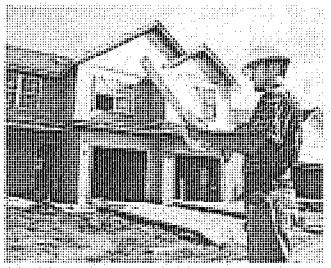

6 Implementation

Implementation Strategies

Several mechanisms have been created to assist with the implementation of the East Nassau Employment Center Detailed Specific Area Plan (DSAP). These include a Planned Development ordinance intended to streamline the future entitlement process for the ENCPA as a whole and a Mobility Ordinance which implements the mobility fee system as outlined in Chapter 3 of this document. A more detailed description of each of the items is contained below. Also included is a discussion regarding potential funding mechanisms intended to address the financial feasibility of the plan.

Planned Development Ordinance

To provide consistency in the preparation and adoption of DSAPs within the ENCPA, an overall Planned Development rezoning ordinance has been prepared. The intent of this ordinance is to effectively rezone the entirety of the ENCPA; thereby, codifying specific submittal and processing procedures for both the East Nassau Employment Center DSAP and all future DSAPs. Included within the ordinance are sections addressing the intent and purpose of the PD-ENCPA zoning district and procedures for the approval and adjustment of DSAPs, Preliminary Development Plans and Final Development Plans. The adoption of this ordinance and its respective sections both clarifies and streamlines development review processes within the ENCPA and ensures compliance with the ENCPA Master Plan.

Mobility Plan

In 2011, in response to concerns regarding the unintended negative effects of Florida's concurrency management system, the legislature repealed state mandated transportation concurrency requirements. Later that same year, the Nassau County Board of County Commissioners followed suit by amending Article 2 of the Nassau County Land Development Code to eliminate the requirements for transportation concurrency at the local level. While the repeal of concurrency management addressed the ill effects of that system, it also left a void in regards to transportation planning for the County.

The East Nassau Employment Center DSAP addresses the need for a sustainable, financially feasible approach to transportation planning through the implementation of a "Mobility Plan". The Mobility Plan provides a system which encourages compact, mixed-use and multi-modal development while greatly simplifying the funding mechanisms needed to ensure adequate public facilities. Chapter 3 of this document outlines both the methodology used to development the Mobility Plan as well as a recommended plan for implementation.

The Development Order Conditions for this DSAP shall require every new development or redevelopment that occurs in the ENCPA Sector to be assessed a mobility fee prior to approval of final construction and/or engineering plans or building permits. This system is intended to eliminate inequities in the former transportation concurrency system in that all new development will pay the fee regardless of available capacity, or lack thereof, within the ENCPA Mobility Network established for the ENCPA Sector. This Mobility Fee approach shall, at a minimum, provide for: mobility fee calculation; mobility fee payment; and, mobility fee credits. The establishment of the mobility fee will not preclude the use of other potential mechanisms to fund the ENCPA Mobility Network including but not limited to tax increment financing, special assessment districts, or cost recoupment arrangements that may be approved by Nassau County or the use of incentive mechanisms for community redevelopment or economic development.

Financial Feasibility

During the course of preparing the Mobility Plan and related mobility fee system, it was determined that the proposed fee for non-residential development was exceptionally high in comparison to surrounding counties and cities and would likely inhibit rather than encourage economic development within the ENCPA. This anomalous result was attributed to the fact that previous transportation facility funding mechanisms (such as impact fees and proportionate share payments) inherently subsidized non-residential development. Similar results have been found by other counties seeking to implement a mobility fee system, namely Pasco County.

Non-residential development is often subsidized for several reasons. First, non-residential development such as office and industrial uses provide significant economic development potential. They create employment opportunities, generating jobs for both current and future Nassau County residents. They also have the ability to attract outside investment; thereby, increasing jobs, earnings and output for the respective county.

To address this issue and ensure the success of the East Nassau Employment District, alternative funding mechanisms will need to be employed to subsidize costs associated with development impacts. One such mechanism is Tax Increment Financing (TIF). Although typically associated with Community Redevelopment Areas (CRA), TIF funding may also be applied to address backlogged public facilities (see Section 163.3182, Florida Statutes) or subsidize job-creating "favored" land uses by paying all or a portion of that uses mobility fee. In the case of Pasco County, one-third of the ad valorem tax revenues resulting from the increase in the County-wide property tax yield (TIF) were used to fund the gap between discounted and standard mobility fees for the favored land uses.

Alternative funding mechanisms, such as TIF, special assessment districts, or cost recoupment arrangements, have the potential to not only subsidize transportation improvements within the ENCPA, but also other public facility improvements needed to encourage economic development within the Sector and incentivize sustainable development patterns.

Statute Compliance Matrix

Ch.163.3245(3)(b)(1), F.S. Development or conservation of an area of at least 1,000 acres consistent with the long-term master plan. The local government may approve detailed specific area plans of less than 1,000 acres based on local circumstances if it is determined that the detailed specific area plan furthers the purposes of this part and part I of chapter 380	See Chapter 1 - Introduction.
Ch. 163.3245(3)(b)(2), F.S. Detailed identification and analysis of the maximum and minimum densities and intensities of use and the distribution, extent, and location of future land uses.	See Chapter 4 - Land Use.
Ch. 163.3245(3)(b)(3), F.S. Detailed identification of water resource development and water supply development projects and related infrastructure and water conservation measures to address water needs of development in the detailed specific area plan.	See Appendices, Section C - Public Facilities.
Ch. 163.3245(3)(b)(4), F.S. Detailed identification of the transportation facilities to serve the future land uses in the detailed specific area plan.	See Chapter 3 - Mobility and Appendices, Section B - Transportation Analysis.
Ch. 163.3245(3)(b)(5), F.S. Detailed identification of other regionally significant public facilities, including public facilities outside the jurisdiction of the host local government, impacts of future land uses on those facilities, and required improvements consistent with the long-term master plan.	See Appendices, Section C - Public Facilities.
Ch. 163.3245(3)(b)(6), F.S. Public facilities necessary to serve development in the detailed specific area plan, including developer contributions in a 5-year capital improvement schedule of the affected local government.	See Chapter 5 - Public Facilities and Chapter 6 - Implementation.
Ch. 163.3245(3)(b)(7), F.S. Detailed analysis and identification of specific measures to ensure the protection and, as appropriate, restoration and management of lands within the boundary of the detailed specific area plan identified for permanent preservation through recordation of conservation easements consistent with s. 704.06, which easements shall be effective before or concurrent with the effective date of the detailed specific area plan and other important resources both within and outside the host jurisdiction.	See Chapter 2 - Environmental Conditions and Appendices, Section A - Natural and Archeological Resources and Analysis.
Ch. 163.3245(3)(b)(8), F.S. Detailed principles and guidelines addressing the urban form and the interrelationships of future land uses; achieving a more clean, healthy environment; limiting urban sprawl; providing a range of housing types; protecting wildlife and natural areas; advancing the efficient use of land and other resources; creating quality communities of a design that promotes travel by multiple transportation modes; and enhancing the prospects for the creation of jobs.	See Chapter 4 - Land Use.
Ch. 163.3245(3)(b)(9), F.S. Identification of specific procedures to facilitate intergovernmental coordination to address extra-jurisdictional impacts from the detailed specific area plan.	See Chapter 6 - Implementation and Appendices, Section D - Intergovernmental Conditions.

The data analysis supporting this DSAP has been included in a separate appendix document and submitted to Nassau County for their regulatory review of this DSAP.

EXHIBIT "D"

VHB Planning | Transportation | Land Development | Environmental

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Memorandum

To: Nick Gillette, Gillette and Associates, Inc.

Date: March 19, 2013

Project No.: 61636.00

From: Laurence Lewis

Re: REVISED SR A1A Interchange Analysis
ENCPA DSAP Employment Center

Summary

This technical memorandum summarizes the analysis of the I-95/SR A1A interchange and the potential impacts associated with the development of the Employment Center DSAP within the East Nassau Community Planning Area (ENCPA). The purpose of the analysis is to estimate short-term and mid-term impacts of the DSAP on the interchange, assuming that the new ENCPA interchange to the north is not in place.

The following are the primary conclusions of the analysis:

- For existing conditions, both intersections at the I-95/SR A1A interchange operate at Level of Service C or better for both the AM and PM peak. For the worst case movement (AM peak at the southbound ramps, westbound left turn), approximately 88 percent of the capacity is currently being used.
- With buildout of the Employment Center (2,500 residential units and 7 million sf non-residential) but without the new interchange, both intersections at the SR A1A interchange are projected to operate at LOS F if no improvements are made.
- Assuming the six-lane widening of SR A1A but no improvements to the existing turn lanes or ramps at the existing interchange, approximately 16 percent of the DSAP Employment Center can be developed before the interchange reaches capacity for worst case conditions. This equates to 14,834 daily trips.
- The five-year development program for the DSAP Employment Center equates to 6,822 daily trips. Therefore, no short-term improvements to the existing interchange are needed within the next five years.
- The proposed ENCPA Mobility Plan includes $700,000 for mid-term improvements at the I-95/ SR A1A interchange. Potential improvements include dual left turn and right turn lanes to increase the intersection capacity. With these improvements, approximately 75 percent of the DSAP Employment Center can be developed before any portion of the interchange reaches capacity for worst case conditions. This equates to 68,610 daily trips.
- The long-term strategy for the ENCPA Mobility Plan is to invest in a new interchange rather than pursue a long-term reconstruction of the A1A interchange. A new interchange will provide more capacity and will also shift traffic away from SR A1A. The new interchange is

consistent with the planning goals for the ENCPA, and is included in both the approved Sector Plan and the County Comprehensive Plan.

- Approval of a new interchange will occur through the Interchange Justification Report (IJR) process, which requires approval from both FDOT and FHWA. To meet the federal IJR requirements, the existing interchange will have to meet failure to demonstrate a need for the new interchange.

Existing Conditions Analysis

The interchange analysis includes the two intersections of SR A1A and the I-95 ramps:

- I-95 NB ramps at SR A1A (east intersection)
- I-95 SB ramps at SB A1A (west intersection)

Traffic counts at the two intersections were collected on Wednesday January 23, 2013 for the AM Peak (7-9 AM) and PM Peak (4-6 PM) periods. Copies of the traffic counts are included as Attachment A.

Both intersections were analyzed using Synchro 7. The Synchro model was constructed to match existing conditions at the interchange in terms of lane geometry and signal phasing. Table 1 summarizes the results of the existing conditions Synchro analysis. Copies of the Synchro analysis reports are included as Attachment B.

Table 1 – Existing Conditions Summary

Intersection Analysis Results	I-95 NB ramps and SR A1A		I-95 SB ramps and SR A1A	
	AM Peak	PM Peak	AM Peak	PM Peak
Overall Level of Service	B	B	C	B
Failing Movements?	No	No	No	No

Source: VHB 3/6/13

The Volume to Capacity ratio was used as an estimate of the capacity used for each movement. For existing conditions, the worst case scenarios exist during the AM peak at the SB ramp intersection and the PM peak at the NB ramp intersection. Table 2 below summarizes the results of the two worst case scenarios, the westbound left movement during the AM peak and the northbound right during the PM peak.

Table 2 – Existing Conditions Summary for Worst Case Scenarios

Intersection Analysis Results, Worst Case Scenarios	I-95 SB ramps and SR A1A AM Peak Westbound Left	I-95 NB ramps and SR A1A PM Peak Northbound Right
Level of Service	B	C
Failing Movement?	No	No
Volume to Capacity Ratio	0.88	0.82

Source: VHB 3/6/13

DSAP Employment Center Trip Generation

As documented in earlier submittals for the ENCPA DSAP, the development program for the DSAP Employment Center consists of 2,500 residential units and 7 million square feet of nonresidential uses, as follows:

- 2,500 apartments
- 700,000 sf retail
- 1,890,00 sf office park
- 4,410,000 sf industrial

Table 3 summarizes the gross trip generation for the DSAP Employment Center. For the AM Peak Hour, the Employment Center is estimated to generate 8,178 trips. For the PM Peak Hour, the Employment Center is estimated to generate 10,088 trips.

Table 3 – DSAP Employment Center Trip Generation Summary

Land Use	ITE Category	Intensity	Daily Trips	AM Peak Trips			PM Peak Trips		
				Total	In	Out	Total	In	Out
Apartment	220	2,500 du	16,625	1,275	255	1,020	1,550	1,008	542
Retail	820	700,000 sf	24,058	485	296	189	2,343	1,148	1,195
Office Park	750	1,890,000 sf	20,103	2,714	2,415	299	2,402	336	2,066
ndustrial Park	130	4,410,000 sf	30,694	3,704	3,037	667	3,793	797	2,996
Gross Total			91,480	8,178	6,003	2,175	10,088	3,289	6,799

Trip Distribution and Trip Assignment

The trip distribution for the DSAP Employment Center is assumed to be the same as the overall directional distribution for the ENCPA. (This distribution was documented in Table B-6 of the DSAP Transportation Appendix B.) Table 4 summarizes the distribution for the Employment Center traffic using the SR A1A Interchange (in the absence of a new interchange to the north):

Table 4 – DSAP Employment Center Traffic Distribution

Direction (to/from)	Distribution
South via I-95	27.14%
North via I-95	1.95%
West via SR A1A	5.92%
Total through SR A1A Interchange	35.01%

Without a new I-95 interchange, 35% of the Employment Center traffic will travel through the existing SR A1A Interchange. The remaining trips are to/from the east, or remain internal to the Employment Center.

Future Conditions Analysis

Based on the trip generation and distribution for the DSAP Employment Center, future conditions were analyzed at the two interchange intersections using Synchro. For each scenario (AM Peak and

PM Peak at each intersection), the Employment Center project traffic was added to the existing traffic volumes. Sketches of the traffic volume calculations are included as Attachment C. The following assumptions were used to develop these volumes:

- No growth in background traffic is assumed. This was done to isolate the impacts of ENCPA development and remove traffic growth from approved but unbuilt development along SR A1A.
- The widening of SR A1A to six lanes is assumed through the interchange, as the widening of SR A1A from I-95 east is funded through FDOT's Five Year Work Program. No improvements to turn lanes or ramps are assumed at the interchange. (However, if FDOT or others fund turn lane or ramp improvements, this could increase the capacity available for the ENCPA or for other development.)

Table 5 summarizes the Synchro intersection analysis assuming buildout of the DSAP Employment Center but no new I-95 interchange. This analysis shows that with buildout of the Employment Center, both worst case movements, the westbound left (WBL) during the AM peak and the northbound right (NBR) movement during the PM peak, would operate at LOS F for future conditions. Copies of the Synchro reports are included as Attachment D.

Table 5 -- Future Conditions Summary for Worst Case Scenarios -- DSAP Employment Center Buildout, No New I-95 Interchange

Intersection Analysis Results, Worst Case Scenarios	I-95 SB ramps and SR A1A AM Peak Westbound Left	I-95 NB ramps and SR A1A PM Peak Northbound Right
Level of Service	F	F
Failing Movement?	Yes	Yes
Volume to Capacity Ratio	1.43	1.93

Source: VHB 3/6/13

Interchange Capacity Threshold

Based on the analysis results for existing conditions and for buildout of the Employment Center, a straight line estimate (interpolation) was used to identify when either of the interchange intersections would reach 100% capacity. Table 6 summarizes this capacity calculation. As shown in the table, just over 16 percent of the DSAP Employment Center can be developed before either the westbound left in the AM peak or northbound right in the PM peak at the SR A1A interchange would reach capacity. Of the two movements, the northbound right movement will reach capacity before the westbound right movement. Therefore, the northbound right movement during the PM peak will be used for the analysis. In terms of daily trips, the percentage associated with the northbound right equates to 14,834 daily trips. Table 7 summarizes the equivalent development program associated with this threshold. Assuming an even mix of uses based on the approved Employment Center program (Scenario 1), the threshold equates to 405 residential units and approximately 1.1 million square feet of non-residential uses. Assuming that non-residential uses are developed first (Scenario 2), the threshold equates to zero residential units and approximately 1.4 million square feet of non-residential uses.

Table 6 – Summary of Interchange Capacity Threshold

	DSAP Daily Trips		Interchange Movement Capacity Used		Employment Center Buildout	
	AM WBL	PM NBR	AM WBL	PM NBR	AM WBL	PM NBR
Existing Conditions	0	0	88%	70%	0%	0%
DSAP Employment Center Buildout	91,480	91,480	143%	192%	100%	100%
Interchange Capacity (with no improvements)	19,959	14,834	100%	100%	21.8%	16.2%

Note: Interchange capacity based on worst case conditions as shown in Table 1 and Table 4.

Table 7 – Development Program Threshold for Existing Interchange Capacity (Based on Northbound Right Movement During the PM Peak Hour)

Land Use	Scenario 1 All Land Uses		Scenario 2 Non-Residential Only	
	Intensity	Percentage of Total	Intensity	Percentage of Total
Apartment	405 units	16.2%	0 units	0%
Retail	113,514 sf	16.2%	138,724 sf	19.8%
Office	306,487 sf	16.2%	374,556 sf	19.8%
Industrial	715,135 sf	16.2%	873,964 sf	19.8%
Total	405 residential units, 1,135,135 sf non-residential		0 residential units, 1,387,244 sf non-residential	

The five-year development program for the Employment Center DSAP consists of 350 apartments and 400,000 sf office. (This program is documented in Table B-10 of DSAP Transportation Appendix B.) The five-year development program generates 6,822 daily trips, less than the 14,834 trip threshold for the existing interchange capacity. Therefore, no short-term improvements to the existing interchange are needed within the next five years to accommodate DSAP development.

ENCPA Mobility Plan Improvements

A key component of the ENCPA Mobility Plan is the creation of alternate routes as a way to provide long-term transportation capacity. Similar to the investment in CR 108 as a parallel route to SR A1A, the Mobility Plan includes costs for a new interchange instead of costs for the long-term reconstruction of the SR A1A interchange. A new interchange (with connecting roadway network) will provide more capacity and will also shift traffic away from SR A1A.

For the I-95/SR A1A interchange, the ENCPA Mobility Plan includes $700,000 for intersection improvements. This funding is in addition to the costs for a new I-95 interchange to the north. Potential improvements include dual left turn and right turn lanes, in particular for the movements to and from Duval County. As stated above, no interchange improvements are needed to accommodate the DSAP five-year development program, so the turn lane improvements would address mid-term impacts.

Using the Florida Department of Transportation (FDOT) Generic Cost Per Mile Models, the following improvements, as summarized in Table 8, can be made to the I-95/ SR A1A Interchange using the $700,000 included in the ENCPA Mobility Plan.

Table 8 – Estimated Costs for I-95/ SR A1A Interchange Improvements

Improvement	Description	Length (mi.)	FDOT Cost Model	Cost per Mile (both directions)	Cost per Mile (one direction only)	Improvement Cost
Add second lane to I-95 southbound on-ramp	Convert one westbound through lane on SR A1A to second left turn lane; Add second receiving lane to I-95/A1A southbound ramp	0.25	Rural Widen Existing 2 Lane Arterial to 4 Lanes Undivided; Add 1 Lane to Each Side; 5' Paved Shoulders	$2,042,737	$1,021,369	$255,342
Add second right turn lane to I-95 northbound off-ramp	Add northbound right turn lane at I-95/A1A northbound ramp	0.25	Rural Widen Existing 2 Lane Arterial to 4 Lanes Undivided; Add 1 Lane to Each Side; 5' Paved Shoulders	$2,042,737	$1,021,369	$255,342
	Add signal head and retime signal for protected northbound right movement at I-95/A1A northbound ramp	-	-	-	-	$25,000
Add second left turn lane to I-95 southbound off-ramp	Add southbound left turn lane at	0.1	Rural Widen Existing 2 Lane Arterial to 4 Lanes Undivided; Add 1 Lane to Each Side; 5' Paved Shoulders	$2,042,737	$1,021,369	$102,137
	Total					$637,821

Source: FDOT Generic Cost per Mile Models, Updated as of 2/20/2013 3/6/13

As listed in Table 8, at the I-95/SR A1A southbound ramps intersection, the conversion of one of the westbound through lanes to a westbound left turn lane is proposed, with the addition of a receiving lane on the on-ramp. Also proposed at this intersection is the addition of a second southbound left turn lane at the southbound off-ramp. For the intersection of SR A1A and the I-95 northbound ramps, the addition of a second northbound right turn lane is proposed. Table 9 below summarizes the results of the Synchro 7 analysis of the interchange with the modified geometry. Copies of the Synchro analysis reports are included as Attachment E.

Table 9 – Future Conditions Summary for Worst Case Scenarios – DSAP Employment Center Buildout, Modified Intersection Geometry, No New I-95 Interchange

Intersection Analysis Results, Worst Case Scenarios	I-95 SB ramps and SR A1A Westbound Left	I-95 NB ramps and SR A1A Northbound Right
Level of Service	D	B
Failing Movement?	No	No
Volume to Capacity Ratio	1.04	0.81

The results shown are for the PM Peak period, since this represents worst case conditions at both locations.

Source: VHB 3/6/13

With the proposed geometric modifications to the I-95/SR A1A interchange, the two worst case movements, the westbound left movement and the northbound right movement, are not projected to have failing levels of service even with the full buildout of the DSAP employment center. However, the westbound left turn is projected to remain over capacity (with a volume to capacity ratio greater than 1.0). Table 10 shows the capacity threshold for the interchange with the addition of the recommended improvements. As shown in the table, approximately 75 percent of the DSAP Employment Center can be developed with the addition of these improvements. This equates to approximately 68,610 daily trips.

Table 10 – Summary of Interchange Capacity Thresholds, After $700,000 in ENCPA Mobility Network Improvements

	DSAP Daily Trips	Employment Center Buildout	Interchange Capacity Used
Existing Conditions	0	0%	88%
DSAP Employment Center Buildout	91,480	100%	104%
Interchange Capacity Threshold (with Improvements)	**68,610**	**75%**	**100%**

Source: VHB 3/9/13

Table 11 summarizes the equivalent development program associated with this threshold. Assuming an even mix of uses based on the approved Employment Center program, the threshold equates to 1,875 residential units and approximately 5.25 million square feet of non-residential uses.

Table 11 – Development Program Threshold for Interchange Capacity, After Improvements (Based on Westbound Left Movement During the PM Peak Hour)

Land Use	Intensity	Percentage of Total
Apartment	1,875 units	75%
Retail	525,000 sf	75%
Office	1,417,500 sf	75%
Industrial	3,307,500 sf	75%
Total	1,875 residential units, 5,250,000 sf non-residential	

The approval of the new interchange requires approval of an Interchange Justification Report (IJR) by the Federal Highway Administration (FHWA). The FHWA specifies eight required criteria for a new interchange, all of which must be met. One of the criteria is to demonstrate that the capacity need cannot be met at existing interchanges. To satisfy this standard, it will be necessary to achieve failing conditions at the existing interchange (for temporary conditions only).

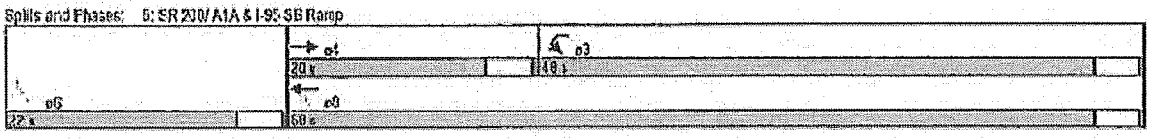
Unlike other ENCPA conditions that only involve one government entity (Nassau County), the approval of the IJR involves regional, state and national agencies. For example, the IJR must be submitted by FDOT to the Federal Highway Administration (FHWA). As a result, FDOT approval is required (both by District 2 and by Central Office) before it is formally submitted. Additionally, final approval requires the support of the First Coast TPO and the addition of the project in the region's adopted Long Range Transportation Plan.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations		↑↑	↱	↰	↑↑		↰		↱		
Volume (vph)	0	421	177	695	226	0	43	0	54	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0		0	80	0	0
Storage Lanes	0		1	1		0		1	1	0	0
Taper Length (ft)	25		25	25		25		25	25	25	25
Right Turn on Red			Yes			Yes			Yes		
Link Speed (mph)		45			45			30		30	
Link Distance (ft)		1872			664			812		870	
Travel Time (s)		28.4			9.9			18.5		19.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	453	192	875	246	0	47	0	59	0	0
Turn Type			Perm	prot			custom		custom		
Protected Phases		4		3	8						
Permitted Phases			4	8			8		8		
Minimum Split (s)		20.0	20.0	8.0	20.0		20.0		20.0		
Total Split (s)	0.0	20.0	20.0	48.0	68.0	0.0	22.0	0.0	22.0	0.0	0.0
Total Split (%)	0.0%	22.2%	22.2%	53.3%	75.6%	0.0%	24.4%	0.0%	24.4%	0.0%	0.0%
Yellow Time (s)		3.5	3.5	3.5	3.5		3.5		3.5		
All-Red Time (s)		0.5	0.5	0.5	0.5		0.5		0.5		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag		Lead	Lead	Lag							
Lead-Lag Optimize?		Yes	Yes	Yes							
v/c Ratio		0.73	0.44	0.98	0.10		0.13		0.07		
Control Delay		42.6	8.5	72.0	0.4		30.0		0.1		
Queue Delay		0.0	0.0	3.4	0.0		0.0		0.0		
Total Delay		42.6	8.5	26.4	0.4		30.0		0.1		
Queue Length 50th (ft)		131	0	476	2		22		0		
Queue Length 95th (ft)		184	50	#694	3		62		0		
Internal Link Dist (ft)		1792			574			732		790	
Turn Bay Length (ft)			150						80		
Base Capacity (vph)		629	439	892	2517		354		878		
Starvation Cap Reductn		0	0	61	0		0		0		
Spillback Cap Reductn		0	0	0	0		0		0		
Storage Cap Reductn		0	0	0	0		0		0		
Reduced v/c Ratio		0.73	0.44	0.84	0.10		0.13		0.07		

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 12 (13%), Referenced to phase 2: and 6:EBL, Start of Green
Natural Cycle: 90
Control Type: Pretimed
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: SR 200/ A1A & I-95 SB Ramp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations		↑↑	↱	↰	↑↑		↰		↱		
Volume (vph)	0	421	177	605	229	0	43	0	54	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0		4.0		
Lane Util. Factor		0.95	1.00	1.00	0.95		1.00		1.00		
Frt		1.00	0.85	1.00	1.00		1.00		0.85		
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00		
Satd. Flow (prot)		3539	1583	1770	3539		1770		1583		
Flt Permitted		1.00	1.00	0.31	1.00		0.95		1.00		
Satd. Flow (perm)		3539	1583	571	3539		1770		1583		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	458	192	675	249	0	47	0	59	0	0
RTOR Reduction (vph)	0	0	158	0	0	0	0	0	47	0	0
Lane Group Flow (vph)	0	458	34	675	249	0	47	0	12	0	0
Turn Type			Perm	pm+pt			custom		custom		
Protected Phases		4		3	8						
Permitted Phases			4	8			6		6		
Actuated Green, G (s)		18.0	18.0	64.0	64.0		18.0		18.0		
Effective Green, g (s)		18.0	18.0	64.0	64.0		18.0		18.0		
Actuated g/C Ratio		0.18	0.18	0.71	0.71		0.20		0.20		
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0		4.0		
Lane Grp Cap (vph)		629	281	902	2517		354		317		
v/s Ratio Prot		0.13		c0.43	0.07						
v/s Ratio Perm			0.02	c0.20			c0.03		0.01		
v/c Ratio		0.73	0.12	0.88	0.10		0.13		0.04		
Uniform Delay, d1		34.9	31.1	14.5	4.0		29.8		29.0		
Progression Factor		1.00	1.00	0.63	0.09		1.00		1.00		
Incremental Delay, d2		7.2	0.8	10.4	0.1		0.8		0.2		
Delay (s)		42.2	32.0	19.4	0.4		30.4		29.2		
Level of Service		D	C	B	A		C		C		
Approach Delay (s)		39.2			15.2			29.7		0.0	
Approach LOS		D			B			C		A	

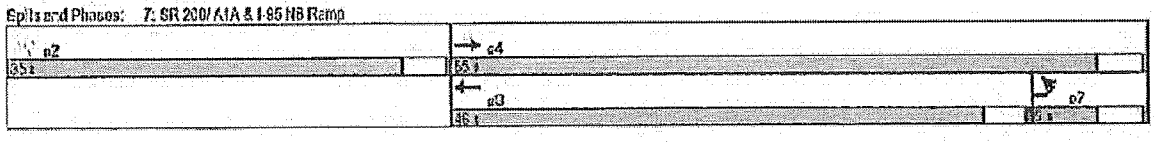
Intersection Summary			
HCM Average Control Delay	24.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER
Lane Configurations											
Volume (vph)	65	398	0	0	999	69	35	0	383	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	352		0	120		185		0	225	0	0
Storage Lanes	1		0	1		1		1	1	0	0
Taper Length (ft)	25		25	25		25		25	25	25	25
Right Turn on Red			Yes			Yes			Yes		
Link Speed (mph)		45			45			30		30	
Link Distance (ft)		954			1693			933		930	
Travel Time (s)		9.9			28.7			21.2		21.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)											
Lane Group Flow (vph)	71	433	0	0	1086	64	38	0	416	0	0
Turn Type	pm+pt					Perm	custom		custom		
Protected Phases	7	4			8						
Permitted Phases	4					8	2		2		
Minimum Split (s)	6.0	20.0			20.0	20.0	20.0		20.0		
Total Split (s)	9.0	55.0	0.0	0.0	46.0	46.0	35.0	0.0	35.0	0.0	0.0
Total Split (%)	10.0%	61.1%	0.0%	0.0%	51.1%	51.1%	38.9%	0.0%	38.9%	0.0%	0.0%
Yellow Time (s)	3.5	3.5			3.5	3.5	3.5		3.5		
All-Red Time (s)	0.5	0.5			0.5	0.5	0.5		0.5		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag				Lead	Lead					
Lead-Lag Optimize?	Yes				Yes	Yes					
v/c Ratio	0.25	0.22			0.49	0.08	0.06		0.51		
Control Delay	8.8	1.8			17.1	5.0	20.2		5.1		
Queue Delay	0.0	0.0			0.0	0.0	0.0		0.0		
Total Delay	8.8	1.8			17.1	5.0	20.2		5.1		
Queue Length 50th (ft)	6	13			147	0	14		3		
Queue Length 95th (ft)	m14	17			183	21	36		65		
Internal Link Dist (ft)		874			1613			853		850	
Turn Bay Length (ft)	352					185			225		
Base Capacity (vph)	287	2005			2373	773	610		812		
Starvation Cap Reductn	0	0			0	0	0		0		
Spillback Cap Reductn	0	0			92	0	0		0		
Storage Cap Reductn	0	0			0	0	0		0		
Reduced v/c Ratio	0.25	0.22			0.48	0.08	0.06		0.51		

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 8 (9%), Referenced to phase 2:NBL and 6:, Start of Green
Natural Cycle: 60
Control Type: Pretimed
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: SR 200/ A1A & I-95 NB Ramp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER
Lane Configurations											
Volume (vph)	66	398	0	0	999	59	35	0	393	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0		4.0		
Lane Util. Factor	1.00	0.95			0.91	1.00	1.00		1.00		
Frt	1.00	1.00			1.00	0.85	1.00		0.85		
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00		
Satd. Flow (prot)	1770	3539			5085	1583	1770		1583		
Flt Permitted	0.29	1.00			1.00	1.00	0.95		1.00		
Satd. Flow (perm)	370	3539			5085	1583	1770		1583		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	71	433	0	0	1086	64	38	0	416	0	0
RTOR Reduction (vph)	0	0	0	0	0	34	0	0	267	0	0
Lane Group Flow (vph)	71	433	0	0	1086	30	38	0	149	0	0
Turn Type	pm+pt					Perm	custom		custom		
Protected Phases	7	4			8						
Permitted Phases	4					8	2		2		
Actuated Green, G (s)	51.0	51.0			42.0	42.0	31.0		31.0		
Effective Green, g (s)	51.0	51.0			42.0	42.0	31.0		31.0		
Actuated g/C Ratio	0.57	0.57			0.47	0.47	0.34		0.34		
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0		4.0		
Lane Grp Cap (vph)	287	2005			2378	739	610		545		
v/s Ratio Prot	0.01	c0.12			c0.21						
v/s Ratio Perm	0.13					0.02	0.02		c0.09		
v/c Ratio	0.25	0.22			0.46	0.04	0.06		0.27		
Uniform Delay, d1	15.6	9.6			16.3	13.0	19.8		21.4		
Progression Factor	0.66	0.17			1.00	1.00	1.00		1.00		
Incremental Delay, d2	1.5	0.2			0.6	0.1	0.2		1.2		
Delay (s)	10.8	1.8			16.9	13.1	20.0		22.6		
Level of Service	B	A			B	B	B		C		
Approach Delay (s)		3.1			16.7			22.4		0.0	
Approach LOS		A			B			C		A	

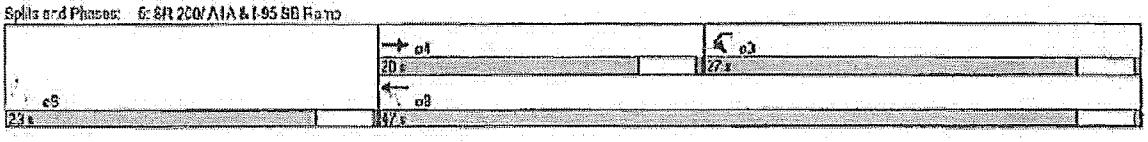
Intersection Summary			
HCM Average Control Delay	14.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations		↑↑	↱	↰	↑↑		↰		↱		
Volume (vph)	0	289	76	447	604	0	93	0	105	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	0		0		0	80	0	0
Storage Lanes	0		1	1		0		1	1	0	0
Taper Length (ft)	25		25	25		25		25	25	25	25
Right Turn on Red			Yes			Yes			Yes		
Link Speed (mph)		45			45			30		30	
Link Distance (ft)		1872			654			812		867	
Travel Time (s)		28.4			8.9			18.5		19.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	314	83	486	646	0	98	0	112	0	0
Turn Type			Perm	pm+pt			custom		custom		
Protected Phases		4		3	8						
Permitted Phases			4	8			6		6		
Minimum Split (s)		20.0	20.0	8.0	20.0		20.0		20.0		
Total Split (s)	0.0	20.0	20.0	27.0	47.0	0.0	23.0	0.0	23.0	0.0	0.0
Total Split (%)	0.0%	28.6%	28.6%	38.6%	67.1%	0.0%	32.9%	0.0%	32.9%	0.0%	0.0%
Yellow Time (s)		3.5	3.5	3.5	3.5		3.5		3.5		
All-Red Time (s)		0.5	0.5	0.5	0.5		0.5		0.5		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag		Lead	Lead	Lag							
Lead-Lag Optimize?		Yes	Yes	Yes							
v/c Ratio		0.39	0.19	0.67	0.25		0.14		0.16		
Control Delay		24.6	7.2	9.1	1.4		20.4		0.5		
Queue Delay		0.0	0.0	0.0	0.0		0.0		0.0		
Total Delay		24.6	7.2	9.1	1.4		20.4		0.5		
Queue Length 50th (ft)		60	0	103	6		22		0		
Queue Length 95th (ft)		95	31	177	15		61		0		
Internal Link Dist (ft)		1792			574			732		787	
Turn Bay Length (ft)			100						80		
Base Capacity (vph)		809	426	958	2171		460		680		
Starvation Cap Reductn		0	0	0	0		0		0		
Spillback Cap Reductn		0	0	0	0		0		0		
Storage Cap Reductn		0	0	0	0		0		0		
Reduced v/c Ratio		0.39	0.19	0.67	0.25		0.14		0.16		

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 4 (6%), Referenced to phase 2: and 6:SBL, Start of Green
Natural Cycle: 65
Control Type: Pretimed

Splits and Phases: 5: SR 200/ A1A & I-95 SB Ramp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations		↑↑	↱	↰	↑↑		↰		↱		
Volume (vph)	0	289	70	447	601	0	63	0	103	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0		4.0		
Lane Util. Factor		0.95	1.00	1.00	0.95		1.00		1.00		
Frt		1.00	0.85	1.00	1.00		1.00		0.85		
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00		
Satd. Flow (prot)		3539	1583	1770	3539		1770		1583		
Flt Permitted		1.00	1.00	0.62	1.00		0.55		1.00		
Satd. Flow (perm)		3539	1583	969	3539		1770		1583		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	314	83	486	548	0	68	0	112	0	0
RTOR Reduction (vph)	0	0	61	0	0	0	0	0	82	0	0
Lane Group Flow (vph)	0	314	19	486	648	0	68	0	30	0	0
Turn Type			Perm	pm+pt			custom		custom		
Protected Phases		4		3	8						
Permitted Phases			4	8			6		6		
Actuated Green, G (s)		16.0	16.0	43.0	43.0		19.0		19.0		
Effective Green, g (s)		16.0	16.0	43.0	43.0		19.0		19.0		
Actuated g/C Ratio		0.23	0.23	0.61	0.61		0.27		0.27		
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0		4.0		
Lane Grp Cap (vph)		809	362	850	2174		480		430		
v/s Ratio Prot		0.09		c0.19	0.15						
v/s Ratio Perm			0.01	c0.16			c0.04		0.02		
v/c Ratio		0.39	0.05	0.57	0.25		0.14		0.07		
Uniform Delay, d1		22.9	21.1	9.8	6.2		19.3		18.9		
Progression Factor		1.00	1.00	0.63	0.18		1.00		1.00		
Incremental Delay, d2		1.4	0.3	2.3	0.2		0.6		0.3		
Delay (s)		24.3	21.4	8.5	1.4		19.9		19.3		
Level of Service		C	C	A	A		B		B		
Approach Delay (s)		23.7			4.7			19.5		0.0	
Approach LOS		C			A			B		A	

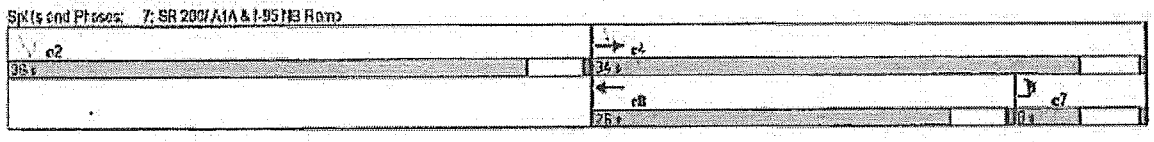
Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SBL	SBR
Lane Configurations											
Volume (vph)	80	273	0	0	852	52	150	0	765	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	352		0	120		185		0	225	0	0
Storage Lanes	1		0	1		1		1	1	0	0
Taper Length (ft)	25		25	25		25		25	25	25	25
Right Turn on Red			Yes			Yes			Yes		
Link Speed (mph)		45			45			30		30	
Link Distance (ft)		654			1682			933		930	
Travel Time (s)		9.9			25.7			21.2		21.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)											
Lane Group Flow (vph)	87	297	0	0	927	57	163	0	833	0	0
Turn Type	pm+pt					Perm	custom		custom		
Protected Phases	7	4			8						
Permitted Phases	4					8	2		2		
Minimum Split (s)	8.0	20.0			20.0	20.0	20.0		20.0		
Total Split (s)	8.0	36.0	0.0	0.0	26.0	26.0	36.0	0.0	36.0	0.0	0.0
Total Split (%)	11.4%	45.6%	0.0%	0.0%	37.1%	37.1%	51.4%	0.0%	51.4%	0.0%	0.0%
Yellow Time (s)	3.5	3.5			3.5	3.5	3.5		3.5		
All-Red Time (s)	0.5	0.5			0.5	0.5	0.5		0.5		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag				Lead	Lead					
Lead-Lag Optimize?	Yes				Yes	Yes					
v/c Ratio	0.35	0.20			0.55	0.11	0.20		0.86		
Control Delay	8.1	1.9			21.0	6.0	12.2		19.2		
Queue Delay	0.0	0.0			0.0	0.0	0.0		0.0		
Total Delay	8.1	1.9			21.0	6.0	12.2		19.2		
Queue Length 50th (ft)	6	11			121	0	40		142		
Queue Length 95th (ft)	19	12			160	23	76		#410		
Internal Link Dist (ft)		574			1618			853		850	
Turn Bay Length (ft)	352					185			225		
Base Capacity (vph)	249	1517			1598	537	809		966		
Starvation Cap Reductn	0	0			0	0	0		0		
Spillback Cap Reductn	0	0			0	0	0		0		
Storage Cap Reductn	0	0			0	0	0		0		
Reduced v/c Ratio	0.35	0.20			0.58	0.11	0.20		0.86		

Intersection Summary

Area Type: Other
Cycle Length: 70
Actuated Cycle Length: 70
Offset: 66 (94%), Referenced to phase 2:NBL and 6:, Start of Green
Natural Cycle: 65
Control Type: Pretimed
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 7: SR 200/A1A & I-95 NB Ramp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NB 2	NBL	NBR	SEL	SER
Lane Configurations											
Volume (vph)	80	273	0	0	853	52	150	0	766	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	4.0	4.0			4.0	4.0	4.0		4.0		
Lane Util. Factor	1.00	0.95			0.91	1.00	1.00		1.00		
Frt	1.00	1.00			1.00	0.85	1.00		0.85		
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00		
Satd. Flow (prot)	1770	3539			6085	1583	1770		1583		
Flt Permitted	0.21	1.00			1.00	1.00	0.95		1.00		
Satd. Flow (perm)	399	3539			6085	1583	1770		1583		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	87	297	0	0	927	57	163	0	833	0	0
RTOR Reduction (vph)	0	0	0	0	0	39	0	0	243	0	0
Lane Group Flow (vph)	87	297	0	0	927	18	163	0	590	0	0
Turn Type	pm+pt					Perm	custom		custom		
Protected Phases	7	4			8						
Permitted Phases	4					8	2		2		
Actuated Green, G (s)	32.0	32.0			22.0	22.0	32.0		32.0		
Effective Green, g (s)	32.0	32.0			22.0	22.0	32.0		32.0		
Actuated g/C Ratio	0.43	0.43			0.31	0.31	0.46		0.46		
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0		4.0		
Lane Grp Cap (vph)	249	1517			1898	488	809		724		
v/s Ratio Prot	c0.02	0.08			c0.15						
v/s Ratio Perm	0.13					0.01	0.09		c0.37		
v/c Ratio	0.35	0.20			0.56	0.04	0.20		0.82		
Uniform Delay, d1	16.9	12.6			20.1	16.6	11.4		16.4		
Progression Factor	0.26	0.13			1.00	1.00	1.00		1.00		
Incremental Delay, d2	3.7	0.3			1.5	0.1	0.6		9.8		
Delay (s)	8.6	1.9			21.7	16.8	11.9		26.3		
Level of Service	A	A			C	B	B		C		
Approach Delay (s)		3.4			21.4			23.9		0.0	
Approach LOS		A			C			C		A	

Intersection Summary			
HCM Average Control Delay	19.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

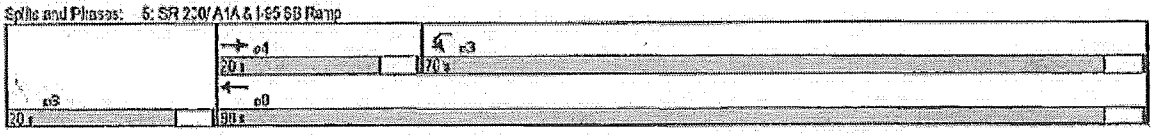
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations		↑↑↑		↰	↑↑↑		↰		↱		
Volume (vph)	0	776	177	1395	357	0	160	0	64	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	0		0		0	80	0	0
Storage Lanes	0		1	1		0		1	1	0	0
Taper Length (ft)	25		25	25		25		25	25	25	25
Right Turn on Red			Yes			Yes			Yes		
Link Speed (mph)		45			45			30		30	
Link Distance (ft)		1672			654			812		870	
Travel Time (s)		25.4			9.9			18.5		19.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	843	192	1516	388	0	174	0	69	0	0
Turn Type			Perm	Prot			custom		custom		
Protected Phases		4		3	8						
Permitted Phases			4				8		8		
Minimum Split (s)		20.0	20.0	8.0	20.0		20.0		20.0		
Total Split (s)	0.0	20.0	20.0	70.0	90.0	0.0	20.0	0.0	20.0	0.0	0.0
Total Split (%)	0.0%	18.2%	18.2%	63.6%	81.8%	0.0%	18.2%	0.0%	18.2%	0.0%	0.0%
Yellow Time (s)		3.5	3.5	3.5	3.5		3.5		3.5		
All-Red Time (s)		0.5	0.5	0.5	0.5		0.5		0.5		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag		Lead	Lead	Lag							
Lead-Lag Optimize?		Yes	Yes	Yes							
v/c Ratio		1.14	0.49	1.43	0.10		0.68		0.08		
Control Delay		121.3	10.7	230.3	2.0		58.8		0.2		
Queue Delay		0.0	0.0	1.8	0.0		0.0		0.0		
Total Delay		121.3	10.7	232.1	2.0		58.8		0.2		
Queue Length 50th (ft)		~255	0	~1245	9		110		0		
Queue Length 95th (ft)		#342	61	m#611	m7		#205		0		
Internal Link Dist (ft)		1792			574			732		790	
Turn Bay Length (ft)			100						80		
Base Capacity (vph)		740	391	1062	5970		257		724		
Starvation Cap Reductn		0	0	3	0		0		0		
Spillback Cap Reductn		0	0	0	0		0		0		
Storage Cap Reductn		0	0	0	0		0		0		
Reduced v/c Ratio		1.14	0.49	1.43	0.10		0.68		0.08		

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (7%), Referenced to phase 2: and 6:SBL, Start of Green
Natural Cycle: 150
Control Type: Pretimed

- Volume exceeds capacity, queue is theoretically infinite.
  Queue shown is maximum after two cycles.
\# 95th percentile volume exceeds capacity, queue may be longer.
  Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: SR 200/ A1A & I-95 SB Ramp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations		↑↑↑	↱	↰	↑↑↑		↰		↱		
Volume (vph)	0	776	177	1395	357	0	160	0	84	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0		4.0		
Lane Util. Factor		0.91	1.00	1.00	0.91		1.00		1.00		
Frt		1.00	0.85	1.00	1.00		1.00		0.85		
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00		
Satd. Flow (prot)		5085	1583	1770	5085		1770		1583		
Flt Permitted		1.00	1.00	0.05	1.00		0.95		1.00		
Satd. Flow (perm)		5085	1583	1770	5085		1770		1583		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	843	192	1516	388	0	174	0	91	0	0
RTOR Reduction (vph)	0	0	164	0	0	0	0	0	82	0	0
Lane Group Flow (vph)	0	843	28	1516	388	0	174	0	9	0	0
Turn Type			Perm	Prot			custom		custom		
Protected Phases		4		3	8						
Permitted Phases			4				8		8		
Actuated Green, G (s)		16.0	16.0	63.0	63.0		16.0		16.0		
Effective Green, g (s)		16.0	16.0	63.0	63.0		16.0		16.0		
Actuated g/C Ratio		0.15	0.15	0.60	0.78		0.15		0.15		
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0		4.0		
Lane Grp Cap (vph)		740	230	1062	3976		267		239		
v/s Ratio Prot		c0.17		c0.86	0.08						
v/s Ratio Perm			0.02				c0.10		0.01		
v/c Ratio		1.14	0.12	1.43	0.10		0.65		0.04		
Uniform Delay, d1		47.0	40.0	22.0	2.8		44.6		40.4		
Progression Factor		1.00	1.00	2.30	0.72		1.00		1.00		
Incremental Delay, d2		78.6	1.1	192.9	0.0		13.4		0.3		
Delay (s)		125.6	42.0	243.5	2.0		58.0		40.7		
Level of Service		F	D	F	A		E		D		
Approach Delay (s)		110.0			194.3			53.6		0.0	
Approach LOS		F			F			D		A	

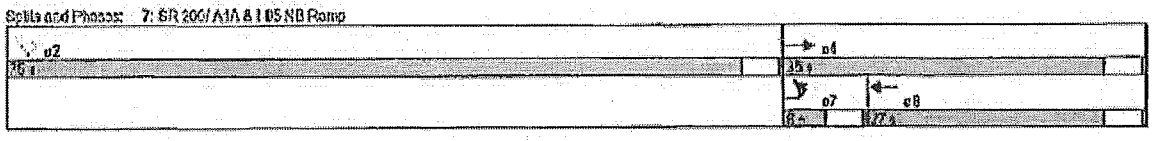
Intersection Summary			
HCM Average Control Delay	159.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	148.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER
Lane Configurations											
Volume (vph)	65	870	0	0	1710	101	35	0	2012	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	352		0	120		165		0	225	0	0
Storage Lanes	1		0	1		1		1	1	0	0
Taper Length (ft)	25		25	25		25		25	25	25	25
Right Turn on Red			Yes			Yes			Yes		
Link Speed (mph)		45			45			30		30	
Link Distance (ft)		654			1695			933		930	
Travel Time (s)		9.9			25.7			21.2		21.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)											
Lane Group Flow (vph)	71	946	0	0	1967	110	38	0	2187	0	0
Turn Type	Prot					Perm	custom		custom		
Protected Phases	7	4			8						
Permitted Phases						8	2		2		
Minimum Split (s)	8.0	20.0			20.0	20.0	20.0		20.0		
Total Split (s)	8.0	35.0	0.0	0.0	27.0	27.0	75.0	0.0	75.0	0.0	0.0
Total Split (%)	7.3%	31.8%	0.0%	0.0%	24.5%	24.5%	68.2%	0.0%	68.2%	0.0%	0.0%
Yellow Time (s)	3.5	3.5			3.5	3.5	3.5		3.5		
All-Red Time (s)	0.5	0.5			0.5	0.5	0.5		0.5		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead				Lag	Lag					
Lead-Lag Optimize?	Yes				Yes	Yes					
v/c Ratio	1.11	0.68			1.39	0.28	0.03		2.13		
Control Delay	106.1	43.7			216.2	17.6	7.2		531.7		
Queue Delay	0.0	0.0			55.4	0.0	0.0		0.0		
Total Delay	106.1	43.7			271.6	17.6	7.2		531.7		
Queue Length 50th (ft)	~59	264			~512	23	9		~2495		
Queue Length 95th (ft)	m#50	m245			#539	72	21		#2760		
Internal Link Dist (ft)		574			1616			853		850	
Turn Bay Length (ft)	352					165			225		
Base Capacity (vph)	64	1433			1340	390	1142		1026		
Starvation Cap Reductn	0	0			0	0	0		0		
Spillback Cap Reductn	0	0			109	0	295		0		
Storage Cap Reductn	0	0			0	0	0		0		
Reduced v/c Ratio	1.11	0.66			1.52	0.28	0.04		2.13		

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 2:NBL and 6:, Start of Green
Natural Cycle: 150
Control Type: Pretimed
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: SR 200/ A1A & I-95 NB Ramp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER
Lane Configurations											
Volume (vph)	65	870	0	0	1718	101	35	0	2012	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0		4.0		
Lane Util. Factor	1.00	0.91			0.86	1.00	1.00		1.00		
Frt	1.00	1.00			1.00	0.85	1.00		0.85		
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00		
Satd. Flow (prot)	1770	5035			6408	1583	1770		1583		
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00		
Satd. Flow (perm)	1770	5035			6408	1583	1770		1583		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	71	946	0	0	1867	110	38	0	2187	0	0
RTOR Reduction (vph)	0	0	0	0	0	55	0	0	4	0	0
Lane Group Flow (vph)	71	946	0	0	1867	55	38	0	2183	0	0
Turn Type	Prot					Perm	custom		custom		
Protected Phases	7	4			6						
Permitted Phases						6	2		2		
Actuated Green, G (s)	4.0	31.0			23.0	23.0	71.0		71.0		
Effective Green, g (s)	4.0	31.0			23.0	23.0	71.0		71.0		
Actuated g/C Ratio	0.04	0.28			0.21	0.21	0.65		0.65		
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0		4.0		
Lane Grp Cap (vph)	64	1433			1340	331	1142		1022		
v/s Ratio Prot	c0.04	0.19			c0.29						
v/s Ratio Perm						0.03	0.02		c1.38		
v/c Ratio	1.11	0.66			1.39	0.17	0.03		2.14		
Uniform Delay, d1	53.0	34.9			43.5	35.6	7.1		19.5		
Progression Factor	0.66	1.24			1.00	1.00	1.00		1.00		
Incremental Delay, d2	67.0	0.2			181.6	1.1	0.1		614.6		
Delay (s)	102.7	43.4			225.1	36.7	7.1		634.0		
Level of Service	F	D			F	D	A		F		
Approach Delay (s)		47.6			214.6			626.0		0.0	
Approach LOS		D			F			F		A	

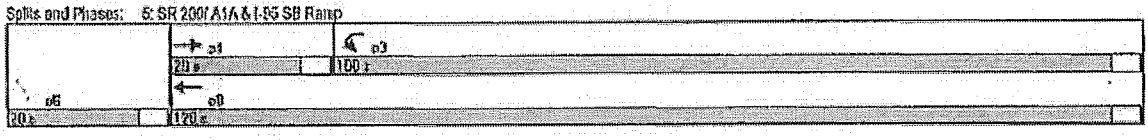
Intersection Summary			
HCM Average Control Delay	314.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.92		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	140.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations		↑↑↑	↱	↰	↑↑↑		↰		↱		
Volume (vph)	0	484	76	2292	897	0	127	0	103	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	0		0		0	0	0	0
Storage Lanes	0		1	1		0		1	1	0	0
Taper Length (ft)	25		25	25		25		25	25	25	25
Right Turn on Red			Yes			Yes			Yes		
Link Speed (mph)		45			45			30		30	
Link Distance (ft)		1672			654			612		867	
Travel Time (s)		28.4			9.9			10.5		19.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	526	83	2491	960	0	138	0	112	0	0
Turn Type			Perm	Prot			custom		custom		
Protected Phases		4		3	8						
Permitted Phases			4				6		8		
Minimum Split (s)		20.0	20.0	8.0	20.0		20.0		20.0		
Total Split (s)	0.0	20.0	20.0	100.0	120.0	0.0	20.0	0.0	20.0	0.0	0.0
Total Split (%)	0.0%	14.3%	14.3%	71.4%	85.7%	0.0%	14.3%	0.0%	14.3%	0.0%	0.0%
Yellow Time (s)		3.5	3.5	3.5	3.5		3.5		3.5		
All-Red Time (s)		0.5	0.5	0.5	0.5		0.5		0.5		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag		Lead	Lead	Lag							
Lead-Lag Optimize?		Yes	Yes	Yes							
v/c Ratio		0.91	0.33	2.05	0.23		0.68		0.29		
Control Delay		81.2	14.8	492.3	0.3		77.3		1.9		
Queue Delay		0.0	0.0	78.4	0.0		0.0		0.0		
Total Delay		81.2	14.8	677.7	0.3		77.3		1.9		
Queue Length 50th (ft)		176	0	~3630	9		123		0		
Queue Length 95th (ft)		#245	51	m#1225	m3		#210		0		
Internal Link Dist (ft)		1792			574			732		787	
Turn Bay Length (ft)			100						80		
Base Capacity (vph)		581	254	1214	4213		202		383		
Starvation Cap Reductn		0	0	85	0		0		0		
Spillback Cap Reductn		0	0	0	0		0		0		
Storage Cap Reductn		0	0	0	0		0		0		
Reduced v/c Ratio		0.91	0.33	2.23	0.23		0.68		0.29		

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 18 (13%), Referenced to phase 2: and 6:SBL, Start of Green
Natural Cycle: 150
Control Type: Pretimed
- Volume exceeds capacity, queue is theoretically infinite.
  Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
  Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: SR 200/ A1A & I-95 SB Ramp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations		↑↑↑	↱	↰	↑↑↑		↰		↱		
Volume (vph)	0	484	76	2292	907	0	127	0	103	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0		4.0		
Lane Util. Factor		0.91	1.00	1.00	0.91		1.00		1.00		
Frt		1.00	0.85	1.00	1.00		1.00		0.85		
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00		
Satd. Flow (prot)		5085	1583	1770	5085		1770		1583		
Flt Permitted		1.00	1.00	0.95	1.00		0.95		1.00		
Satd. Flow (perm)		5085	1583	1770	5085		1770		1583		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	526	83	2491	986	0	138	0	112	0	0
RTOR Reduction (vph)	0	0	74	0	0	0	0	0	99	0	0
Lane Group Flow (vph)	0	526	9	2491	986	0	138	0	13	0	0
Turn Type			Perm	Prot			custom		custom		
Protected Phases		4		3	8						
Permitted Phases			4				8		8		
Actuated Green, G (s)		16.0	16.0	96.0	116.0		16.0		16.0		
Effective Green, g (s)		16.0	16.0	96.0	116.0		16.0		16.0		
Actuated g/C Ratio		0.11	0.11	0.69	0.83		0.11		0.11		
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0		4.0		
Lane Grp Cap (vph)		591	181	1214	4213		202		181		
v/s Ratio Prot		c0.10		c1.41	0.19						
v/s Ratio Perm			0.01				c0.08		0.01		
v/c Ratio		0.91	0.05	2.05	0.23		0.68		0.07		
Uniform Delay, d1		61.3	55.2	22.0	2.6		59.6		55.4		
Progression Factor		1.00	1.00	2.04	0.09		1.00		1.00		
Incremental Delay, d2		20.1	0.5	478.0	0.0		17.2		0.8		
Delay (s)		81.4	55.8	516.4	0.2		76.7		56.1		
Level of Service		F	E	F	A		E		E		
Approach Delay (s)		77.9			371.5			67.5		0.0	
Approach LOS		E			F			E		A	

Intersection Summary			
HCM Average Control Delay	312.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.74		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	143.0%	ICU Level of Service	H
Analysis Period (min)	15		

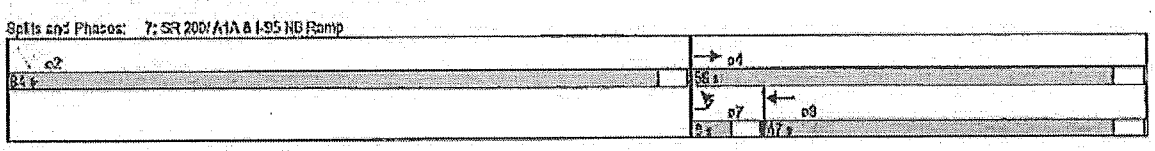
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER
Lane Configurations											
Volume (vph)	60	532	0	0	3101	185	150	0	1650	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	352		0	120		185		0	225	0	0
Storage Lanes	1		0	1		1		1	1	0	0
Taper Length (ft)	25		25	25		25		25	25	25	25
Right Turn on Red			Yes			Yes			Yes		
Link Speed (mph)		45			45			30		30	
Link Distance (ft)		554			1898			933		930	
Travel Time (s)		8.9			28.7			21.2		21.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)											
Lane Group Flow (vph)	97	578	0	0	3371	201	163	0	1808	0	0
Turn Type	Prot					Perm	custom		custom		
Protected Phases	7	4			8						
Permitted Phases						8	2		2		
Minimum Split (s)	8.0	20.0			20.0	20.0	20.0		20.0		
Total Split (s)	9.0	56.0	0.0	0.0	47.0	47.0	84.0	0.0	84.0	0.0	0.0
Total Split (%)	6.4%	40.0%	0.0%	0.0%	33.6%	33.6%	60.0%	0.0%	60.0%	0.0%	0.0%
Yellow Time (s)	3.5	3.5			3.5	3.5	3.5		3.5		
All-Red Time (s)	0.5	0.5			0.5	0.5	0.5		0.5		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead				Lag	Lag					
Lead-Lag Optimize?	Yes				Yes	Yes					
v/c Ratio	1.36	0.31			1.71	0.38	0.16		1.87		
Control Delay	244.2	48.8			354.1	27.8	14.7		417.0		
Queue Delay	0.0	0.0			123.6	0.0	0.1		0.0		
Total Delay	244.2	48.8			477.7	27.8	14.8		417.0		
Queue Length 50th (ft)	~107	205			~1311	98	67		~2460		
Queue Length 95th (ft)	m#137	m231			#1365	165	105		#2725		
Internal Link Dist (ft)		574			1818			853		850	
Turn Bay Length (ft)	352					185			225		
Base Capacity (vph)	69	1939			1968	531	1011		965		
Starvation Cap Reductn	0	0			0	0	0		0		
Spillback Cap Reductn	0	0			272	0	253		0		
Storage Cap Reductn	0	0			0	0	0		0		
Reduced v/c Ratio	1.36	0.31			1.99	0.38	0.22		1.87		

Intersection Summary

Area Type: Other
Cycle Length: 140
Actuated Cycle Length: 140
Offset: 0 (0%), Referenced to phase 2:NBL and 6:, Start of Green
Natural Cycle: 150
Control Type: Pretimed
- Volume exceeds capacity, queue is theoretically infinite.
  Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
  Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: SR 200/ A1A & I-95 NB Ramp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER
Lane Configurations											
Volume (vph)	80	532	0	0	3101	185	150	0	1659	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0		4.0		
Lane Util. Factor	1.00	0.91			0.86	1.00	1.00		1.00		
Frt	1.00	1.00			1.00	0.85	1.00		0.85		
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00		
Satd. Flow (prot)	1770	5085			6403	1583	1770		1583		
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00		
Satd. Flow (perm)	1770	5085			6403	1583	1770		1583		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	87	578	0	0	3371	201	163	0	1803	0	0
RTOR Reduction (vph)	0	0	0	0	0	44	0	0	60	0	0
Lane Group Flow (vph)	87	578	0	0	3371	157	163	0	1743	0	0
Turn Type	Prot					Perm	custom		custom		
Protected Phases	7	4			8						
Permitted Phases						8	2		2		
Actuated Green, G (s)	5.0	62.0			43.0	43.0	60.0		60.0		
Effective Green, g (s)	5.0	62.0			43.0	43.0	60.0		60.0		
Actuated g/C Ratio	0.04	0.37			0.31	0.31	0.57		0.57		
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0		4.0		
Lane Grp Cap (vph)	63	1899			1969	489	1011		905		
v/s Ratio Prot	c0.05	0.11			c0.53						
v/s Ratio Perm						0.10	0.09		c1.10		
v/c Ratio	1.38	0.31			1.71	0.32	0.16		1.93		
Uniform Delay, d1	57.6	31.2			48.5	37.3	14.2		30.0		
Progression Factor	0.53	1.33			1.00	1.00	1.00		1.00		
Incremental Delay, d2	212.0	0.2			323.0	1.8	0.3		420.0		
Delay (s)	247.7	41.8			371.5	39.0	14.5		450.0		
Level of Service	F	D			F	D	B		F		
Approach Delay (s)		63.5			352.8			414.6		0.0	
Approach LOS		E			F			F		A	

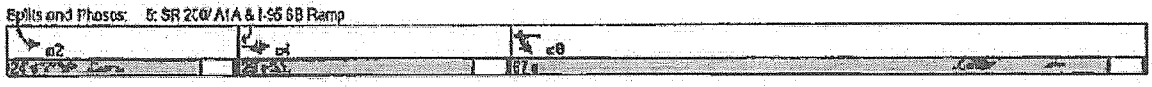
Intersection Summary			
HCM Average Control Delay	341.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.83		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	143.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations		↑↑↑	↱	↰↑	↑↑		↰		↱		
Volume (vph)	0	776	177	1385	857	0	160	0	54	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	0		0		0	00	0	0
Storage Lanes	0		1	2		0		1	1	0	0
Taper Length (ft)	25		25	25		25		25	25	25	25
Right Turn on Red			Yes			Yes			Yes		
Link Speed (mph)		45			45			30		30	
Link Distance (ft)		1872			654			312		870	
Travel Time (s)		28.4			9.0			18.5		19.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)											
Lane Group Flow (vph)	0	843	192	1510	389	0	174	0	59	0	0
Turn Type			Prot	Split			Prot		custom		
Protected Phases		4	4	8	8		2		4		
Permitted Phases									2		
Minimum Split (s)		20.0	20.0	20.0	20.0		8.0		20.0		
Total Split (s)	0.0	29.0	29.0	67.0	67.0	0.0	24.0	0.0	29.0	0.0	0.0
Total Split (%)	0.0%	24.2%	24.2%	55.8%	55.8%	0.0%	20.0%	0.0%	24.2%	0.0%	0.0%
Yellow Time (s)		3.5	3.5	3.5	3.5		3.5		3.5		
All-Red Time (s)		0.5	0.5	0.5	0.5		0.5		0.5		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag											
Lead-Lag Optimize?											
v/c Ratio		0.80	0.40	0.64	0.21		0.59		0.07		
Control Delay		51.6	0.1	10.0	0.7		55.3		0.1		
Queue Delay		0.0	0.0	0.0	0.0		0.0		0.0		
Total Delay		51.6	0.1	10.0	0.7		55.3		0.1		
Queue Length 50th (ft)		229	0	164	31		123		0		
Queue Length 95th (ft)		280	61	188	49		203		0		
Internal Link Dist (ft)		1792			574			232		790	
Turn Bay Length (ft)			150						60		
Base Capacity (vph)		1059	492	1802	1856		295		895		
Starvation Cap Reductn		0	0	0	0		0		0		
Spillback Cap Reductn		0	0	0	0		0		0		
Storage Cap Reductn		0	0	0	0		0		0		
Reduced v/c Ratio		0.80	0.40	0.84	0.21		0.59		0.07		

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 110 (92%), Referenced to phase 2:SBL and 6:, Start of Green
Natural Cycle: 70
Control Type: Pretimed

Splits and Phases: 5: SR 200/ A1A & I-95 SB Ramp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL2	SBL	SBR	NWL	NWR
Lane Configurations		↑↑↑	↱	↰↑	↑↑		↰		↱		
Volume (vph)	0	776	177	1395	357	0	160	0	54	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0		4.0		
Lane Util. Factor		0.91	1.00	0.97	0.95		1.00		1.00		
Fit		1.00	0.85	1.00	1.00		1.00		0.85		
Flt Protected		1.00	1.00	0.95	1.00		0.95		1.00		
Satd. Flow (prot)		5085	1583	3433	3539		1770		1583		
Flt Permitted		1.00	1.00	0.95	1.00		0.95		1.00		
Satd. Flow (perm)		5085	1583	3433	3539		1770		1583		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	843	192	1516	388	0	174	0	59	0	0
RTOR Reduction (vph)	0	0	152	0	0	0	0	0	37	0	0
Lane Group Flow (vph)	0	843	40	1516	388	0	174	0	22	0	0
Turn Type			Prot	Split			Prot		custom		
Protected Phases		4	4	8	8		2		4		
Permitted Phases									2		
Actuated Green, G (s)		25.0	25.0	63.0	63.0		20.0		45.0		
Effective Green, g (s)		25.0	25.0	63.0	63.0		20.0		45.0		
Actuated g/C Ratio		0.21	0.21	0.52	0.52		0.17		0.38		
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0		4.0		
Lane Grp Cap (vph)		1059	330	1802	1858		295		640		
v/s Ratio Prot		c0.17	0.03	c0.44	0.11		c0.10		0.01		
v/s Ratio Perm									0.01		
v/c Ratio		0.80	0.12	0.84	0.21		0.59		0.03		
Uniform Delay, d1		45.1	39.5	24.2	15.2		49.2		23.7		
Progression Factor		1.00	1.00	0.66	0.65		1.00		1.00		
Incremental Delay, d2		6.2	0.0	4.4	0.2		8.4		0.1		
Delay (s)		51.3	39.3	17.7	9.6		57.6		23.8		
Level of Service		D	D	B	A		E		C		
Approach Delay (s)		49.1			15.9			45.8		0.0	
Approach LOS		D			B			D		A	

Intersection Summary			
HCM Average Control Delay	29.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.0%	ICU Level of Service	F
Analysis Period (min)	15		

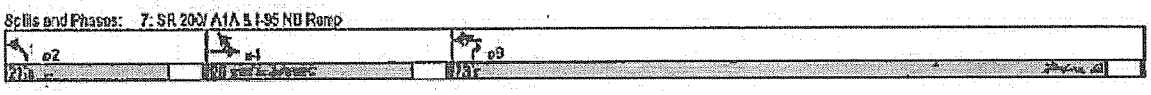
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER
Lane Configurations											
Volume (vph)	65	870	0	0	1710	101	35	0	2012	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	352		0	120		185		0	225	0	0
Storage Lanes	1		0	1		1		1	1	0	0
Taper Length (ft)	25		25	25		25		25	25	25	25
Right Turn on Red			Yes			Yes			Yes		
Link Speed (mph)		45			45			30		30	
Link Distance (ft)		654			1636			933		830	
Travel Time (s)		9.9			24.7			21.2		21.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)											
Lane Group Flow (vph)	71	946	0	0	1697	110	38	0	2187	0	0
Turn Type	Split					Prot	Prot		custom		
Protected Phases	4	4			8	8	2		8		
Permitted Phases									2		
Minimum Split (s)	20.0	20.0			20.0	20.0	20.0		20.0		
Total Split (s)	26.0	26.0	0.0	0.0	73.0	73.0	21.0	0.0	73.0	0.0	0.0
Total Split (%)	21.7%	21.7%	0.0%	0.0%	60.8%	60.8%	17.5%	0.0%	60.8%	0.0%	0.0%
Yellow Time (s)	3.5	3.5			3.5	3.5	3.5		3.5		
All-Red Time (s)	0.5	0.5			0.5	0.5	0.5		0.5		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag											
Lead-Lag Optimize?											
v/c Ratio	0.22	1.02			0.51	0.11	0.15		1.05		
Control Delay	14.2	42.7			16.9	2.4	47.0		49.6		
Queue Delay	0.0	0.0			0.0	0.0	0.0		0.0		
Total Delay	14.2	42.7			16.9	2.4	47.0		49.6		
Queue Length 50th (ft)	12	~65			239	0	26		~1047		
Queue Length 95th (ft)	m28	#343			270	24	60		#1199		
Internal Link Dist (ft)		574			1816			853		830	
Turn Bay Length (ft)	352					185			225		
Base Capacity (vph)	325	932			3605	557	251		2091		
Starvation Cap Reductn	0	0			0	0	0		0		
Spillback Cap Reductn	0	0			0	0	0		0		
Storage Cap Reductn	0	0			0	0	0		0		
Reduced v/c Ratio	0.22	1.02			0.51	0.11	0.15		1.05		

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBL and 6:, Start of Green
Natural Cycle: 130
Control Type: Pretimed
- Volume exceeds capacity, queue is theoretically infinite.
  Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
  Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: SR 200/ A1A & I-95 NB Ramp



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER
Lane Configurations											
Volume (vph)	66	870	0	0	1710	101	35	0	2012	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	4.0	4.0			4.0	4.0	4.0		4.0		
Lane Util. Factor	1.00	0.91			0.86	1.00	1.00		0.88		
Frt	1.00	1.00			1.00	0.85	1.00		0.85		
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00		
Satd. Flow (prot)	1770	5085			6400	1583	1770		2787		
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00		
Satd. Flow (perm)	1770	5085			6400	1583	1770		2787		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	71	946	0	0	1857	110	38	0	2187	0	0
RTOR Reduction (vph)	0	0	0	0	0	47	0	0	0	0	0
Lane Group Flow (vph)	71	946	0	0	1857	63	38	0	2187	0	0
Turn Type	Split					Prot	Prot		custom		
Protected Phases	4	4			8	8	2		8		
Permitted Phases									2		
Actuated Green, G (s)	22.0	22.0			69.0	69.0	17.0		86.0		
Effective Green, g (s)	22.0	22.0			69.0	69.0	17.0		86.0		
Actuated g/C Ratio	0.18	0.18			0.58	0.58	0.14		0.72		
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0		4.0		
Lane Grp Cap (vph)	326	932			3685	910	251		2090		
v/s Ratio Prot	0.04	c0.19			0.29	0.04	0.02		c0.60		
v/s Ratio Perm									0.10		
v/c Ratio	0.22	1.02			0.51	0.07	0.15		1.05		
Uniform Delay, d1	41.7	49.0			15.3	11.3	45.2		17.0		
Progression Factor	0.31	0.25			1.00	1.00	1.00		1.00		
Incremental Delay, d2	1.0	27.1			0.5	0.1	1.3		33.1		
Delay (s)	14.1	39.6			15.8	11.4	46.4		50.1		
Level of Service	B	D			B	B	D		D		
Approach Delay (s)		37.0			15.6			50.0		0.0	
Approach LOS		D			B			D		A	

Intersection Summary			
HCM Average Control Delay	34.6	HCM Level of Service	C
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	93.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱	↰↰	↑↑					↰↰		↱
Volume (vph)	0	484	76	2292	907	0	0	0	0	127	0	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		190	0		0	0		0	0		80
Storage Lanes	0		1	2		0	0		0	2		1
Taper Length (ft)	25		25	25		25	25		25	25		25
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		1872			654			864			812	
Travel Time (s)		28.4			9.9			19.6			18.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	526	83	2491	985	0	0	0	0	138	0	112
Turn Type			Prot	Split						Prot		custom
Protected Phases		4	4	8	8					2		4
Permitted Phases												2
Minimum Split (s)		20.0	20.0	20.0	20.0					20.0		20.0
Total Split (s)	0.0	27.0	27.0	123.0	123.0	0.0	0.0	0.0	0.0	20.0	0.0	27.0
Total Split (%)	0.0%	15.9%	15.9%	72.4%	72.4%	0.0%	0.0%	0.0%	0.0%	11.8%	0.0%	15.9%
Yellow Time (s)		3.5	3.5	3.5	3.5					3.5		3.5
All-Red Time (s)		0.5	0.5	0.5	0.5					0.5		0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
v/c Ratio		0.76	0.29	1.04	0.40					0.43		0.23
Control Delay		79.1	14.5	40.2	2.1					77.1		8.8
Queue Delay		0.0	0.0	0.3	0.3					0.0		0.0
Total Delay		79.1	14.5	40.5	2.3					77.1		8.8
Queue Length 50th (ft)		210	0	~656	28					76		0
Queue Length 95th (ft)		257	55	#560	31					114		53
Internal Link Dist (ft)		1792			574			784			732	
Turn Bay Length (ft)			190									80
Base Capacity (vph)		696	286	2403	2477					323		484
Starvation Cap Reductn		0	0	2	745					0		0
Spillback Cap Reductn		0	0	0	0					0		0
Storage Cap Reductn		0	0	0	0					0		0
Reduced v/c Ratio		0.76	0.29	1.04	0.57					0.43		0.23

Intersection Summary

Area Type: Other
Cycle Length: 170
Actuated Cycle Length: 170
Offset: 8 (5%), Referenced to phase 2:SBL and 6:, Start of Green
Natural Cycle: 150
Control Type: Pretimed
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 5: SR 200/ A1A & I-95 SB Ramp

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱	↰↰	↑↑					↰↰		↱
Volume (vph)	0	484	76	2292	907	0	0	0	0	127	0	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0		4.0
Lane Util. Factor		0.91	1.00	0.97	0.95					0.97		1.00
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		5085	1583	3433	3539					3433		1583
Flt Permitted		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (perm)		5085	1583	3433	3539					3433		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	526	83	2491	986	0	0	0	0	138	0	112
RTOR Reduction (vph)	0	0	72	0	0	0	0	0	0	0	0	86
Lane Group Flow (vph)	0	526	11	2491	986	0	0	0	0	138	0	26
Turn Type			Prot	Split						Prot		custom
Protected Phases		4	4	8	8					2		4
Permitted Phases												2
Actuated Green, G (s)		23.0	23.0	119.0	119.0					16.0		39.0
Effective Green, g (s)		23.0	23.0	119.0	119.0					16.0		39.0
Actuated g/C Ratio		0.14	0.14	0.70	0.70					0.09		0.23
Clearance Time (s)		4.0	4.0	4.0	4.0					4.0		4.0
Lane Grp Cap (vph)		688	214	2403	2477					323		400
v/s Ratio Prot		c0.10	0.01	c0.73	0.28					c0.04		0.01
v/s Ratio Perm												0.01
v/c Ratio		0.76	0.05	1.04	0.40					0.43		0.06
Uniform Delay, d1		70.9	64.0	25.5	10.6					72.7		51.2
Progression Factor		1.00	1.00	0.59	0.17					1.00		1.00
Incremental Delay, d2		7.9	0.5	23.9	0.2					4.1		0.3
Delay (s)		78.8	64.5	39.8	2.0					76.8		51.5
Level of Service		E	E	D	A					E		D
Approach Delay (s)		76.8			28.4			0.0			65.5	
Approach LOS		E			C			A			E	

Intersection Summary			
HCM Average Control Delay	37.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	170.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	532	0	0	3101	185	150	0	1659	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	352		0	120		185	0		225	0		0
Storage Lanes	1		0	1		1	1		1	0		0
Taper Length (ft)	25		25	25		25	25		25	25		25
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		654			1896			942			928	
Travel Time (s)		9.9			28.7			21.4			21.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	87	578	0	0	3371	201	163	0	1803	0	0	0
Turn Type	Split					Prot	Prot		custom			
Protected Phases	4	4			8	8	2		8			
Permitted Phases									2			
Minimum Split (s)	20.0	20.0			20.0	20.0	20.0		20.0			
Total Split (s)	30.0	30.0	0.0	0.0	108.0	108.0	32.0	0.0	108.0	0.0	0.0	0.0
Total Split (%)	17.6%	17.6%	0.0%	0.0%	63.5%	63.5%	18.8%	0.0%	63.5%	0.0%	0.0%	0.0%
Yellow Time (s)	3.5	3.5			3.5	3.5	3.5		3.5			
All-Red Time (s)	0.5	0.5			0.5	0.5	0.5		0.5			
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
v/c Ratio	0.32	0.74			0.86	0.20	0.56		0.81			
Control Delay	14.1	15.5			30.0	8.0	73.5		13.3			
Queue Delay	0.0	0.0			0.0	0.0	1.4		0.0			
Total Delay	14.1	15.5			30.0	8.0	74.9		13.3			
Queue Length 50th (ft)	23	56			861	48	170		560			
Queue Length 95th (ft)	m48	102			895	68	255		668			
Internal Link Dist (ft)		574			1816			862			848	
Turn Bay Length (ft)	352					185			225			
Base Capacity (vph)	271	778			3920	1005	292		2232			
Starvation Cap Reductn	0	0			0	0	0		0			
Spillback Cap Reductn	0	0			0	0	37		0			
Storage Cap Reductn	0	0			0	0	0		0			
Reduced v/c Ratio	0.32	0.74			0.86	0.20	0.64		0.81			

Intersection Summary

Area Type: Other
Cycle Length: 170
Actuated Cycle Length: 170
Offset: 168 (99%), Referenced to phase 2:NBL and 6:, Start of Green
Natural Cycle: 90
Control Type: Pretimed
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: SR 200/ A1A & I-95 NB Ramp

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	532	0	0	3101	165	150	0	1659	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Lane Util. Factor	1.00	0.91			0.86	1.00	1.00		0.88			
Frt	1.00	1.00			1.00	0.85	1.00		0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)	1770	5085			6408	1583	1770		2787			
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	1770	5085			6408	1583	1770		2787			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	87	578	0	0	3371	201	163	0	1803	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	36	0	0	2	0	0	0
Lane Group Flow (vph)	87	578	0	0	3371	165	163	0	1801	0	0	0
Turn Type	Split					Prot	Prot		custom			
Protected Phases	4	4			8	8	2		8			
Permitted Phases									2			
Actuated Green, G (s)	26.0	26.0			104.0	104.0	26.0		132.0			
Effective Green, g (s)	26.0	26.0			104.0	104.0	26.0		132.0			
Actuated g/C Ratio	0.15	0.15			0.61	0.61	0.16		0.78			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Lane Grp Cap (vph)	271	778			3920	968	292		2230			
v/s Ratio Prot	0.05	c0.11			c0.53	0.10	0.09		c0.49			
v/s Ratio Perm									0.15			
v/c Ratio	0.32	0.74			0.86	0.17	0.56		0.81			
Uniform Delay, d1	64.1	68.8			27.0	14.3	65.3		11.4			
Progression Factor	0.16	0.16			1.00	1.00	1.00		1.00			
Incremental Delay, d2	2.2	4.6			2.7	0.4	7.5		3.3			
Delay (s)	14.0	15.6			29.7	14.7	72.8		14.7			
Level of Service	B	B			C	B	E		B			
Approach Delay (s)		15.3			28.9			19.5			0.0	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM Average Control Delay	24.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	170.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Exhibit "E"

Transportation Impact Analysis (TIA) Methodology

The following Exhibit summarizes the recommended methodology for completing Transportation Impact Analyses (TIAs) associated with Preliminary Development Plans (PDPs). The purpose of the TIA is to identify the short-term impacts associated with the incremental development of the East Nassau Community Planning Area (ENCPA) and the associated DSAPs. The results of the TIA are intended to identify needed transportation improvements and prioritize the use of mobility fee funds toward those improvements, consistent with the provisions of the applicable DSAP Development Order.

Analysis Area

The analysis area is defined as follows:

- For PDPs generating fewer than 500 daily trips – adjacent access points and nearest intersection included in the Mobility Network
- For PDPs generating between 500 and 1,000 daily trips – ½ mile radius from the project site
- For PDPs generating more than 1,000 daily trips – one mile radius from the project site

Within the ENCPA, the analysis includes all roadway segments included as part of the Mobility Network as well as major intersections. Site access points are also included in the analysis. Outside the ENCPA, the analysis should include all arterial and collector roadways within the required radius. Roadway segments and intersections outside the ENCPA are included in the analysis to identify potential mitigating improvements included in the ENCPA Mobility Network – for example, parallel roadway corridors or internal roadway connections. The list of ENCPA Mobility Network improvements is included at the end of this document.

Analysis Timeframe

An existing conditions analysis should be performed using the most recent available roadway counts. If no roadway counts are available from the past twelve (12) months, then the latest available roadway counts should be used and adjusted to the existing year using the model growth rates in this methodology document.

The analysis year shall be defined as the buildout year for the proposed PDP. The buildout year consistent with that used in the Future Conditions Analysis and should be reasonably achievable.

For roadway segments, the analysis should address daily conditions. For intersections, the analysis should address AM peak and PM peak conditions. Intersections should be analyzed using either the latest version of Highway Capacity Software (HCS) or Synchro.

Trip Generation

Trip generation calculations should use rates and equations from the current edition of the Institute of Transportation Engineers' Trip Generation. For land uses where ITE data may not represent local conditions, a trip generation study may replace published rates. The methodology for trip generation studies should follow the ITE Trip Generation Handbook, and a minimum of three sites should be surveyed. Reductions for internal capture or transit should not be applied to the trip generation for individual PDPs, as these reductions have already been factored into the overall calculation of transportation impacts and fees for the ENCPA. However, reductions for pass-by trips for retail uses may be applied.

Trip Distribution

The distribution of trips associated with the PDP should be estimated using the most current adopted version of the Northeast Florida Regional Planning Model (NERPM). For smaller PDPs generating fewer than 1,000 daily trips, the traffic distribution may be estimated based on existing traffic patterns. The model should be updated to reflect the transportation network and land use assumptions as follows:

- Transportation Network Assumptions – The transportation network should include existing arterial and collector roadways. Future facilities to be included in the analysis should be limited to roadway segments with committed construction funding within the next five (5) years. For analysis purposes, roadway segments with existing backlogs (based on actual traffic levels) shall be assumed to include necessary improvements to address the backlog.

- Land Use Assumptions – The land use data for the NERPM model should be developed through interpolation between the base and forecast years. Within the ENCPA, background development should be limited to the existing development at the time of the application, plus any other parcels with approved TIAs.

Trips from Other Approved ENCPA Development

Project trips from nearby approved PDPs within the analysis area should be added to the future background traffic volumes in determining the total build condition traffic volumes. The trips associated with these PDPs should be obtained from the associated TIA.

Future Conditions Analysis

The future conditions analysis should address operating conditions for roadway segments and intersections within the analysis area for the PDP. The future conditions analysis year shall be the proposed buildout year for the PDP. The analysis should identify whether roadway segments and intersections will operate at the County's adopted Level of Service standard with the addition of traffic from the PDP. For intersections, the Level of Service standard shall be assumed to be the same as that of the adjacent roadway segments. Annual growth rates to be used for area roadway segment volumes and intersection volumes are found in the table on the following page. The values are based on the ENCPA Mobility Analysis included with the Employment Center DSAP application. For any roadways not in the table, the growth rate for the nearest similar facility should be applied.

Summary of Annual Background Growth Rates

Roadway	From/To	Growth Rate
I-95	Duval County Line to SR 200/A1A	2.94%
	SR 200/A1A to E-W Interchange Rd.	3.12%
	E-W Interchange Rd. to US 17	3.12%
	US 17 to GA State Line	2.39%
SR 200/A1A	Griffen Rd. to I-95	6.39%
	I-95 to Old Yulee Rd.	4.25%
	Old Yulee Rd. to US 17	4.09%
	US 17 to Chester Rd.	2.00%
	Chester Rd. to Blackrock Rd.	2.00%
	Old Nassauville Rd. to Amelia Island Parkway	2.00%
CR 200A/Pages Dairy Rd.	US 17 to Chester Rd.	4.78%
CR 107N/Blackrock Rd.	Chester Rd. to SR 200/A1A	2.00%
CR 107S/Old Nassauville Rd.	SR 200/A1A to Amelia Concourse	2.00%
	Amelia Concourse to Santa Juana Rd.	2.00%
Chester Rd.	SR 200/A1A to Pages Dairy Rd.	2.00%
	Pages Dairy Rd. to CR 108 Extension	2.00%
	CR 108 Extension to Blackrock Rd.	2.00%
US 17	Duval County Line to Harts Rd.	3.67%
	Sowell Rd. to SR 200/A1A	2.00%
	SR 200/A1A to Pages Dairy Rd.	2.00%
	Pages Dairy Rd. to Interchange Rd.	2.00%
	Interchange Rd. to CR 108	2.00%
	CR 108 to I-95	2.00%
	I-95 to GA State Line	3.36%
I-95/SR A1A Interchange	NB I-95 to SR A1A Off-ramp	5.44%
	SR A1A to NB I-95 On-ramp	6.62%
	SB I-95 to SR A1A Off-ramp	7.79%
	SR A1A to SB I-95 On-ramp	5.42%
I-95/US 17 Interchange	NB I-95 to US 17 Off-ramp	7.74%
	US 17 to NB I-95 On-ramp	2.00%
	SB I-95 to US 17 Off-ramp	2.00%
	US 17 to SB I-95 On-ramp	7.91%

Access Points

An intersection analysis shall be completed for all site access points (roadways or driveways) to adjacent roadways. An intersection analysis should also be completed for the nearest intersection where the site access connects to the ENCPA Mobility Network.

Recommended Improvements

The results of the TIA will be used to identify transportation improvements necessary to serve development in the associated PDP, consistent with the provisions of the applicable DSAP Development Order. Transportation improvements required in this process will be limited to roadway segments and intersections included in the ENCPA Mobility Network and applicable DSAP but may include improvements outside the analysis area. A PDP applicant may propose in its TIA to address transportation impacts by means of transportation or mobility improvements other than those in the ENCPA Mobility Network. Improvements identified or proposed in the TIA may be completed in phases—for example, the first two lanes of a four-lane roadway, or a portion of a roadway segment needed to provide site access. Also, such phasing may be tied to monitoring and/or development levels. Practical transportation improvements are encouraged, so as to maximize the efficiency of available infrastructure and minimize upfront infrastructure costs ahead of actual demand.

Attachment __

Transportation Improvements Included in ENCPA Mobility Network

Roadway/Segment	Improvement
CR 108 Extension	
US 17 to Interchange Rd	New 2-lane road
Interchange Rd to Resort Area	New 2-lane road
Resort Area to Chester Rd	New 2-lane road
Interchange Road	
Interstate 95 to N-S Regional Center Arterial	New 4-lane road
East Frontage Rd to US 17	New 4-lane road
US 17 to CR 108	New 4-lane road
Interchange Road at I-95	New interchange
Employment Center Collector Roads	New 2-lane road
N-S Regional Center Arterial	
US 17 to CR 108	New 4-lane road
CR 108 to Interchange Road	New 4-lane road
Interchange Road to SR 200/A1A	New 4-lane road
US 17	
N-S Regional Center Arterial to I-95	Widen to 4 lanes
Traffic Signals (at 8 new major intersections)	Install new signal
SR A1A / I-95 Interchange Improvements	
Dual westbound left turn lanes onto southbound ramp	New turn lane
Dual southbound left turn lanes off southbound ramp	New turn lane
Dual northbound right turn lanes off northbound ramp	New turn lane
SR A1A Intersection Improvements	
Dual left turn lanes at SR A1A/Chester Rd	New turn lane
Dual left turn lanes at SR A1A/Blackrock Rd	New turn lane

Internal multi-use trail system (off-street)	

Appendix A
Natural Resource Analysis

A.1 Natural Resource Protection

A.1.1 Sector Plan Requirements: F.S. § 163.3245

Pursuant to F.S. § 163.3245, a sector plan must include the adoption of a long-term master plan (LTMP) and two or more detailed specific area plans (DSAP) whose purpose is implementation of the LTMP. According to the following sections of the rule, an approved LTMP must include the following components for the purposes of natural resource identification and protection: 163.3245(3)(a)(1) *"a framework map that, at a minimum, generally depicts areas of urban, agricultural, rural and conservation land use"*; 163.3245(3)(a)(5) *"a general identification of regionally significant natural resources within the planning area based on the best available data and policies setting forth the procedures for protection or conservation of specific resources consistent with the overall conservation and development strategy for the planning area"*; and 163.3245(3)(a)(6) *"general principles and guidelines addressing...the protection and, as appropriate, restoration and management of lands identified for permanent preservation through recordation of conservation easements...which shall be phased or staged in coordination with detailed specific area plans to reflect phased or staged development with the planning area...[and] general principles and guidelines addressing [the protection of] wildlife and natural areas."*

Pursuant to F.S. § 163.3245, a DSAP must be consistent with the adopted long-term master plan and must include conditions and commitments that provide for natural resource protection, including: 163.3245(3)(b)(7) *"detailed analysis and identification of specific measures to ensure the protection and, as appropriate, restoration and management of lands within the boundary of the DSAP identified for permanent preservation through recordation of conservation easements consistent with s. 704.06, which easements shall be effective before or concurrent with the effective date of the DSAP and other important resources both within and outside the host jurisdiction."*; and 163.3245(3)(b)(8) *"detailed principles and guidelines...[for the purpose of] protecting wildlife and natural areas..."*

A.1.2 Nassau County Comprehensive Plan: East Nassau Community Planning Area (ENCPA)

The ENCPA Master Land Use Plan (Master Plan) was adopted as an amendment to the Nassau County (County) Comprehensive Plan (Comp Plan) on October 18, 2010. The ENCPA Master Plan meets the requirements for, and was adopted as a LTMP, pursuant to the Florida sector plan statute (F.S. 163.3245).

The primary goal of the ENCPA Master Plan is to promote sustainable and efficient regional land use. One of the guiding principles includes the protection of natural resources through the establishment of the Conservation Habitat Network (CHN). The CHN was designed to include a mosaic of wetlands, surface waters and uplands to provide for landscape connectivity and protection of significant natural resources within the 24,000 (±) acre ENCPA. The CHN within the overall ENCPA contains the majority (~80%) of large connected wetland strands and a majority (~80%) of the mapped 100 year floodplain. The protection of large wetland strands and contiguous upland areas within the CHN will provide long-term benefits for the aquatic, wetland dependent, and terrestrial wildlife that currently utilize these habitats. This will also ensure that conserved wetlands and contiguous uplands will be protected in perpetuity. Preserving this mix of wetland and uplands within the proposed CHN conservation corridors will provide a variety of habitats needed by listed wildlife, provide corridors that connect major habitats allowing indigenous wildlife to move across the property without interference from proposed development, and contribute to the long-term sustainability of the wildlife communities.

Consistent with F.S. 163.3245(3)(a)(1), the adopted Comp Plan Future Land Use Map (FLUM) includes the ENCPA boundary which *"generally depicts areas of urban, agricultural, rural and conservation land us."*. Consistent with F.S. 163.3245(3)(a)(5), the FLUM depicts the adopted CHN which *"[identifies] regionally significant natural resources within the planning area..."*. Consistent with F.S. 163.3245(3)(a)(6), and 163.3245(3)(b)(7) and (8), all lands within the CHN must comply with the following guidelines and standards adopted in the Comp Plan Future Land Use Element (FLUE; Policy FL. 13.07):

- Prior to development of portions of the ENCPA that abut boundaries of the CHN which preserve wildlife habitat, a management plan shall be developed that promotes maintenance of native species diversity in such areas and which may include provision for controlled burns.

- New roadway crossings of wildlife corridors within the CHN for development activity shall be permitted in conjunction with the design of the internal road network, but shall be minimized to the greatest extent practical.

- Road crossings within the CHN will be sized appropriately and incorporate fencing or other design features as may be necessary to direct species to the crossing and enhance effectiveness of such crossings.

- Prior to commencement of development within the ENCPA, an environmental education program shall be developed for the CHN and implemented in conjunction with a property owners association, environmental group or other community association or governmental agency so as to encourage protection of the wildlife and natural habitats incorporated within the CHN.

- The boundaries of the CHN are identified on the County FLUM. The boundaries of the CHN shall be formally established as conservation tracts or placed under conservation easements when an abutting development parcel to portions of the CHN undergoes development permitting in accordance with the requirements of the St. John's River Water Management District (SJRWMD) and pursuant to the following criteria:

    - the final boundary of wetland edges forming the CHN boundary shall be consistent with the limits of the jurisdictional wetlands and associated buffers as established in the applicable SJRWMD permit;

    - the final boundary of upland edges forming the CHN boundary shall be established generally consistent with the FLUM, recognizing that minor adjustments may be warranted based on more or refined data and any boundary adjustments in the upland area shall 1) continue to provide for an appropriate width given the functions of the CHN in that particular location (i.e., wetlands species or habitat protection), the specific site conditions along such boundary and the wildlife uses to be protected and 2) ensure that the integrity of the CHN as a wildlife corridor and wetland and species habitat protection area is not materially and adversely affected by alteration of such boundary; and

    - boundary modifications meeting all of the criteria described in this policy shall be incorporated into the CHN and the ENCPA Master Plan upon issuance of the applicable SJRWMD permits and shall be effective without the requirement for an amendment to the FLUM, ENCPA FLUE policies or any other Comp Plan Elements defined in Chapter 163, F.S.

- Silvicultural and agricultural activities allowed in the Agricultural classification of the FLUE of the Comp Plan, excluding residential land uses, shall continue to be allowed within the CHN. When the final boundaries of any portion of the CHN are established as described above, a silvicultural management plan

will be developed in accordance with best management practices to protect the overall conservation objective of such portion of the CHN.

In addition to compliance with the guidelines listed above, all development within the ENCPA must also comply with all goals, objectives and policies within the Comp Plan Conservation Element (CS).

A.1.3 Local, State and Federal Natural Resource Regulations

A.1.3.1 Wetlands and Surface Waters

The approximate extent of wetlands and surface waters within the DSAP 1 Area (Property) was determined through photointerpretation and selective groundtruthing, during preliminary field studies. The Property includes approximately 1,653 acres of wetlands and approximately 11.3 acres of surface waters (Figure A1.1). Wetlands have not been flagged, mapped using a Global Positioning System (GPS) unit, surveyed or agency verified at this time.

Wetland protection within the Property is regulated by the SJRWMD, the Department of the Army, Corps of Engineers (ACOE), and Nassau County. Prior to development, the extent of state jurisdictional wetlands and surface waters will be determined based on the Florida unified wetland delineation methodology (Chapter 62-340, Florida Administrative Code [F.A.C.]). Dredge and fill activities, and mitigation for these activities, are regulated by the state through the Environmental Resource Permit (ERP) program, and implemented jointly by the Florida Department of Environmental Protection (FDEP) and the five water management districts. The ACOE regulates the depositing of dredged or fill material within "waters of the United States, including wetlands" through the Clean Water Act § 404 permitting process. The ACOE will require that jurisdictional wetlands be determined pursuant to the 1987 Wetland Delineation Manual and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Atlantic and Gulf Coastal Plain Region:* (November 2010), and through application of the "*Rapanos Guidance*" of June 5, 2007. Further, issuance of an environmental resource permit from the Florida Department of Environmental Protection (FDEP) will serve as state water quality certification required under § 401 of the Clean Water Act.

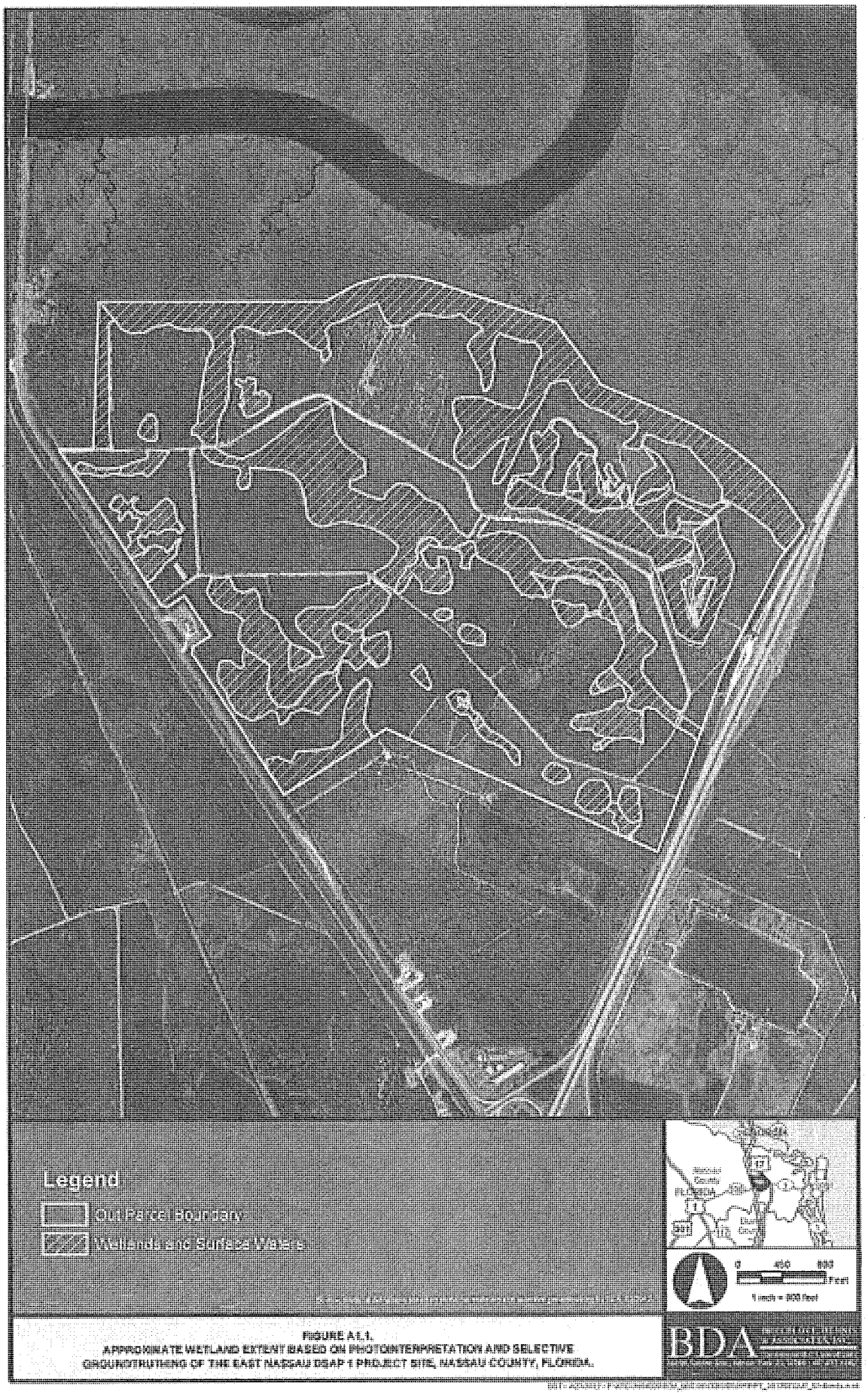


FIGURE A1.1.
APPROXIMATE WETLAND EXTENT BASED ON PHOTOINTERPRETATION AND SELECTIVE GROUNDTRUTHING OF THE EAST NASSAU DSAP 1 PROJECT SITE, NASSAU COUNTY, FLORIDA.


BDA
Legend
DSAP Area 1
Surveyed Wetlands
Wetlands and Surface Waters

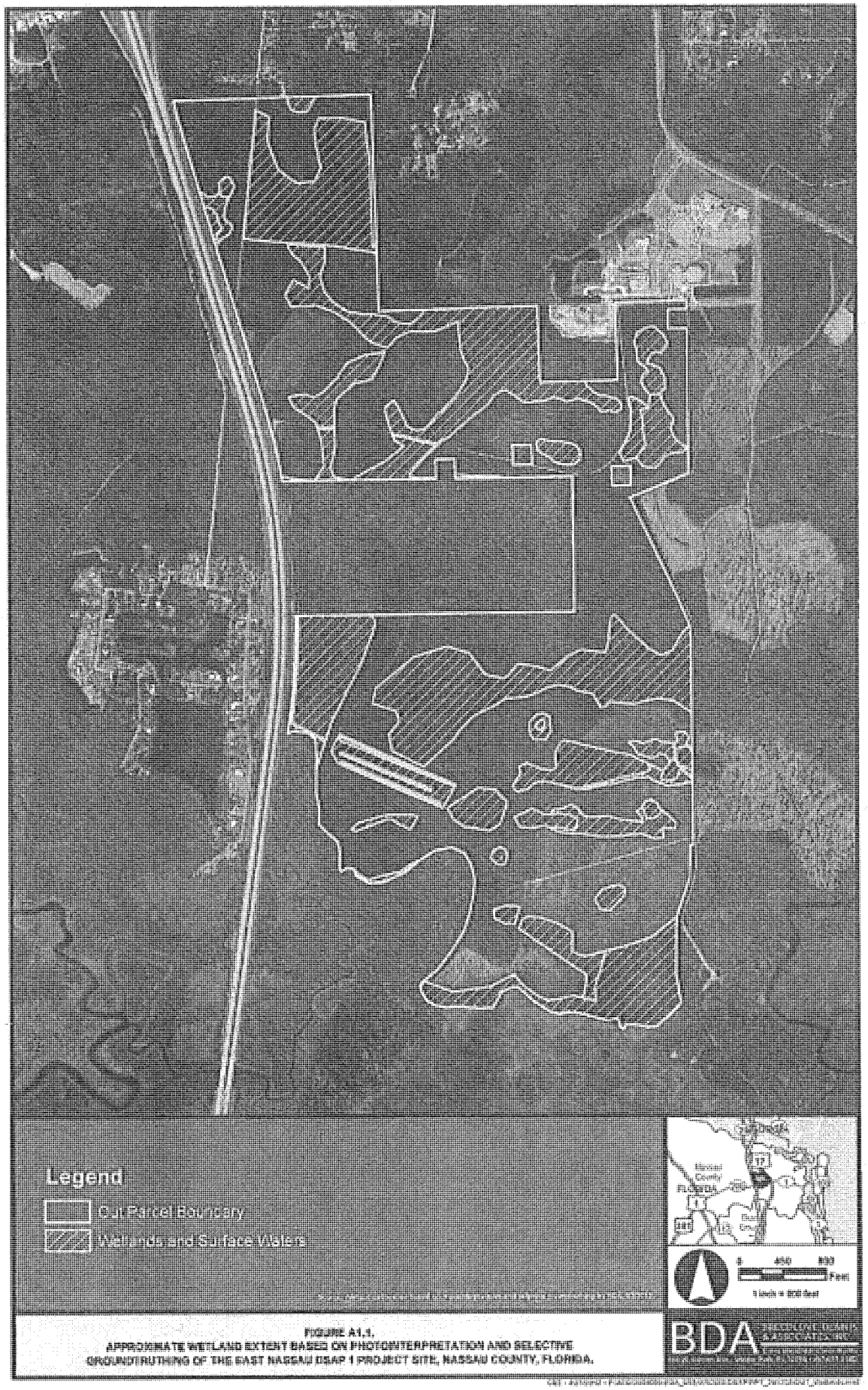


FIGURE A1.1.
APPROXIMATE WETLAND EXTENT BASED ON PHOTOINTERPRETATION AND SELECTIVE GROUNDTRUTHING OF THE EAST NASSAU ESAP 1 PROJECT SITE, NASSAU COUNTY, FLORIDA.

In addition to state and federal regulations, wetland protection within the Property is also regulated by Nassau County. Field-verified jurisdictional wetlands are designated as Conservation I on the County FLUM. Proposed development must be directed away from wetlands *"...by clustering the development to maintain the largest contiguous wetland area practicable and to preserve the pre-development wetland conditions"* in accordance with the Comp Plan. As described above, provisions for wetland protection are also included within the Conservation Habitat Network (CHN) guidelines and standards described in Policy FL.13.07 of the Comp Plan. The CHN not only includes wetlands and surface waters but also a network of adjacent uplands depicted as Conservation on the ENCPA Master Plan. Uplands designated as Conservation areas in the CHN will serve as a buffer between jurisdictional wetlands and developable tracts. The final boundaries of wetlands and upland buffers will be formally determined when an abutting development parcel undergoes permitting in accordance with requirements of the SJRWMD. As described in Policy FL.13.07, any modifications to the CHN boundary as depicted on the ENCPA Master Plan which result in a reduction in the upland Conservation area shall provide for an appropriate width, given the functions of the CHN in that particular location (i.e. wetland species or habitat protection), the specific site conditions along such boundary and the wildlife uses to be protected. This compensation will ensure that the integrity of the CHN as a wildlife corridor and habitat protection area is not materially or adversely affected by the alteration of the CHN boundary.

Impacts to jurisdictional wetlands and conservation areas will be purposely avoided, except in cases where no other feasible or practical alternatives exist that will permit a reasonable use of the land or where there is an overriding public benefit. In such cases, final determination of impacts due to wetland encroachment, alteration, or removal will be coordinated, mitigated, and permitted through completion of state and federal regulatory authority approvals and permitting. Mitigation requirements for unavoidable impacts to wetlands must be determined using the UMAM functional analysis. Stormwater runoff generated on the Property will be treated by an extensive Surface Water Management System that will incorporate retention and detention ponds. Final impact and mitigation boundaries and acreages will be determined through state and federal permitting processes, and will be consistent with County goals, objectives and policies.

A.1.3.2 Listed Species

Based on preliminary field studies, a moderate to high likelihood of occurrence exists for several listed bird species due to the presence of potentially suitable nesting and/or foraging habitat within the Property (*see section A.4.1.2 for details*). Freshwater marsh and emergent vegetation associated with former borrow areas on the western side of the central parcel of the Property may provide potentially suitable foraging habitat for protected wading bird species such as wood stork. These borrow area marshes may also provide potentially suitable nesting habitat for Florida

sandhill cranes. Further, forested wetlands and marshes on the Property also have the potential to provide suitable habitat for limpkins. The likelihood of occurrence for the southeastern American kestrel is moderate due to the presence of potentially suitable foraging habitat in the form of open herbaceous cover within onsite utility easements. The wooden utility poles within the easements also potentially provide for suitable nesting sites. Although, no eagle nests have been documented by the FWC, or observed during preliminary field studies, the likelihood of an eagle nest occurring within the Property is moderate. This is due to the presence of large pine trees suitable for nesting, the presence of potential foraging habitat, and the proximity of the Property to potentially suitable off-site foraging habitat. The potential for occurrence of Worthington's marsh wren is considered high due to the presence of salt marsh habitat adjacent to the northern-most and southern-most parcels of the Property.

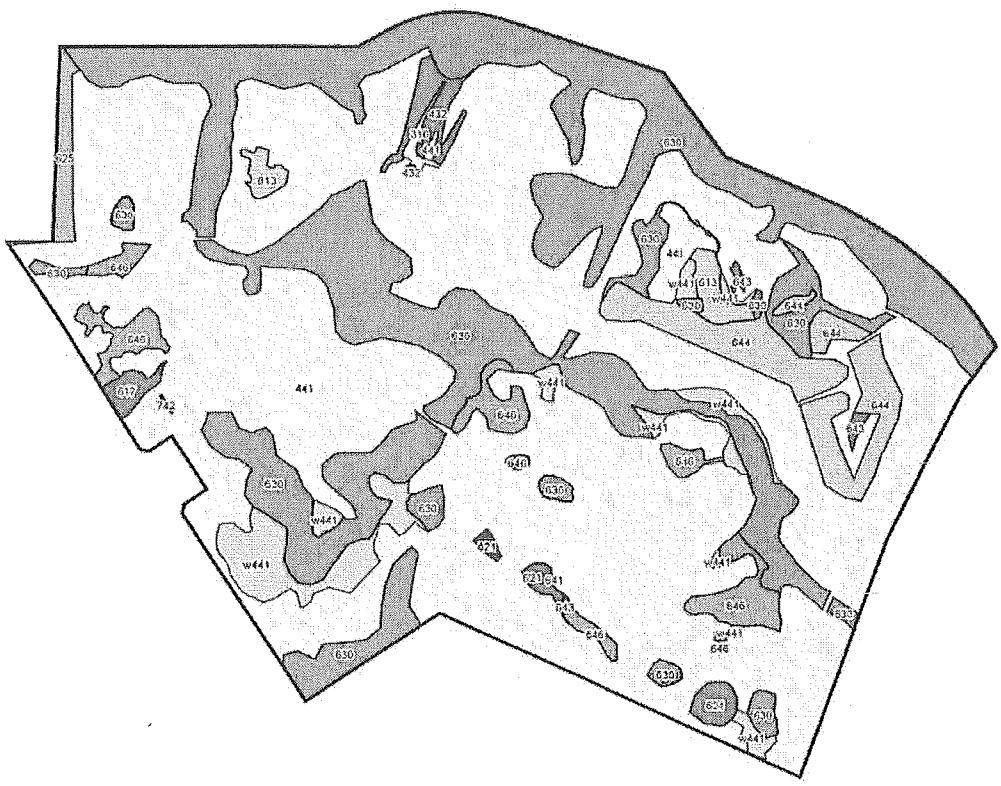
Coordination will be initiated with the USFWS and/or FWC for guidance prior to undertaking any activity that may result in the disturbance of a listed species. We will comply with all appropriate state and federal wildlife regulations and guidelines to ensure that development activities within the Property do not jeopardize any listed species.

A.1.3.3 Natural Resource Management

F.S. 163.3245(3)(b)(7) requires the *"identification of measures to ensure the protection, and as appropriate restoration and management of lands"* within the DSAP. Consistent with this requirement, areas designated as conservation (CHN) within the approved LTMP will be included in a detailed conservation and land management plan that is developed specifically for the DSAP area. This DSAP-specific conservation and management plan will take into consideration the type, location and ecological condition of wetlands and other vegetative communities, as well as the needs of any listed species that occur on the Property. In accordance with F.S. 163.3245 and Comp Plan Policy FL. 13.07, wetlands within the Property that are located within the approved CHN will be placed under conservation easements or formally established as conservation tracts as adjacent areas within the DSAP are developed.

A.2 Ecological Communities

Land use and vegetative cover types within the Property were classified based on FLUCFCS data obtained from the SJRWMD Geographic Information System (GIS) database, along with selective photointerpretation and groundtruthing (Figure A2.1). Botanical nomenclature is per Wunderlin and Hansen (Wunderlin, Richard P. and Bruce F. Hansen. 2003. *Guide to the Vascular Plants of Florida*, second edition. University Press of Florida. 787 pp.).



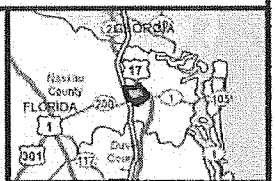
Legend

- Out Parcel Boundary

FLUCFCS

- 310 - Herbaceous (Dry Prairie)
- 432 - Sand Live Oak
- 441 - Coniferous Plantations
- 613 - Gum Swamps
- 617 - Mixed Wetland Hardwoods
- 621 - Cypress
- 625 - Hydric Pine Flatwoods
- 630 - Wetland Forested Mixed
- 641 - Freshwater Marshes
- 643 - Wet Prairies
- 644 - Emergent Aquatic Vegetation
- 646 - Treeless Hydric Savanna
- 742 - Borrow Areas
- w441 - Wet Coniferous Plantations

Source: Vegetative delineation based on photointerpretation and selective groundtruthing by BDA, 02/2012. land use/cover categories derived from FLUCFCS Handbook, FDOT 1999.



0 450 900 Feet

1 inch = 800 feet

FIGURE A2.1.
FLORIDA LAND USE, COVER, AND FORMS CLASSIFICATION SYSTEM MAP OF THE EAST NASSAU DSAP 1 PROJECT SITE, NASSAU COUNTY, FLORIDA

BDA BREEDLOVE, DENNIS & ASSOCIATES, INC. Environmental Consultants
330 W. Canton Ave., Winter Park, FL 32789 • 407.677.1822

DAT • 4/27/2012 • P:\PROJ\2004\0060\DOX_USE\ARCGIS\DSAP\RPT_2012\03\A1_FLUCFCS.mxd

FIGURE A2.1.

FLORIDA LAND USE, COVER, AND FORMS CLASSIFICATION SYSTEM MAP OF THE EAST NASSAU DSAP 1 PROJECT SITE, NASSAU COUNTY, FLORIDA

Legend

Out Parcel Boundary

FLUCFCS

- 441 - Coniferous Plantations
- 500 - Water
- 617 - Mixed Wetland Hardwoods
- 620 - Wetland Coniferous Forests
- 630 - Wetland Forested Mixed
- 641 - Freshwater Marshes
- 646 - Treeless Hydric Savanna
- 740 - Disturbed Land
- 742 - Borrow Areas
- 814 - Roads and Highways
- w441 - Wet Coniferous Plantations

Source: Vegetative delineation based on photointerpretation and selective groundtruthing by BDA, 03/2012. land use/cover categories derived from FLUCFCS Handbook, FDOT 1999.

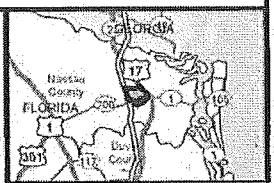


FIGURE A2.1.
FLORIDA LAND USE, COVER, AND FORMS CLASSIFICATION SYSTEM MAP OF THE EAST NASSAU DSAP 1 PROJECT SITE, NASSAU COUNTY, FLORIDA

BDA BREEDLOVE, DENNIS & ASSOCIATES, INC.
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CBT - 4/27/2012 - P:\ATG\2004\2004BDA_GIS\ARCGIS\DSAP\PPT_2012\DSAT_FLUCFCS.mxd

A.2.1 Wetlands and Surface Waters

The Property (northern, central and southern parcels) contains approximately 1,653 acres of wetlands and approximately 11.3 acres of surface waters, based on photointerpretation and selective groundtruthing. Wetland communities are dominated by mixed forested wetlands (approximately 1,190.7 acres), wet planted pine (approximately 138.0 acres) and hydric pine flatwoods (approximately 80.1 acres). Other wetland communities within the Property include cypress swamps, scrub-shrub wetlands, mixed hardwood wetlands, coniferous wetlands, wet prairies, freshwater marsh and areas with emergent aquatic vegetation (Figure A1.1). All wetland acreages are preliminary and are subject to change based on field survey and agency review.

Open Water (500)
The southern parcel of the Property contains approximately 1.9 acres of open water associated with a man-made borrow area.

Swales (510)
Vegetated swales (approximately one acre), that transport flow during storms, generally have planted pine on their perimeter. They also include the following herbaceous groundcover species: velvet witchgrass (*Dichanthelium scoparium*), blackberry, manyflower marshpennywort (*Hydrocotyle umbellata*), sugarcane plumegrass (*Saccharum giganteum*), soft rush (*Juncus effusus*), clustered sedge (*Carex glaucescens*), scattered cypress (*Taxodium* sp.), red maple, and warty panicgrass (*Ponicum verrucosum*).

Ditches (516)
Ditches (approximately 3.2 acres) within the Property include laurel oak, slash pine, red maple, wax myrtle, greenbrier, broomsedge bluestem, cinnamon fern, and Virginia chain fern.

Reservoirs (530)
A 5.2-acre reservoir that was formerly a borrow area is located on the southeastern side of the central parcel of the Property. Littoral vegetation and emergent aquatic vegetation are minimal.

Mixed Wetland Hardwoods (617)
Canopy vegetation within mixed wetland hardwoods (approximately 39.5 acres) is comprised of cypress, slash pine, and red maple. The shrub layer is generally comprised of slash pine, wax myrtle, swamp bay, saw palmetto, and gallberry. Herbaceous groundcover species include velvet witchgrass, chalky bluestem (*Andropogon virginicus* var. *glaucus*), woodoats, sugarcane plumegrass, and Virginia chain fern, among others.

Wetland Coniferous Forests (620)
Approximately 43.8 acres of coniferous wetlands are located within the Property. The canopy stratum is comprised of cypress, slash pine, sweetgum, and swamp tupelo (*Nyssa sylvatica* var. *biflora*). Sub-canopy species include

slash pine, cypress, red maple, swamp tupelo, and swamp bay. The shrub layer is comprised of slash pine, wax myrtle, swamp bay, saw palmetto, gallberry, cypress, and myrtle dahoon (*Ilex cassine* var. *myrtifolia*). The herbaceous groundcover generally includes velvet witchgrass, warty panicgrass, slash pine seedlings, beaksedge (*Rhynchospora* sp.), bog white violet (*Viola lanceolata*), slender flattop goldenrod (*Euthamia caroliniana*), chalky bluestem, woodoats, sugarcane plumegrass, Virginia chain fern, woolly witchgrass (*Dichanthelium scabriusculum*), sandweed (*Hypericum fasciculatum*), gallberry, blackberry, clustered sedge, club-moss (*Lycopadiella* sp.), swamp bay, dogfennel (*Eupatorium capillifolium*), purple bluestem (*Andropogon glomeratus* var. *glaucopsis*), sweetgum, cinnamon fern, sedge (*Carex* sp.), and camphorweed (*Pluchea* sp.).

Cypress (621)

The canopy of cypress swamps (approximately 21.6 acres) is generally comprised of cypress, slash pine, red maple, swamp bay, and swamp tupelo. The sub-canopy includes slash pine, swamp bay, and cypress. The shrub stratum often includes groundsel tree (*Baccharis halimifolia*) and gallberry. Groundcover species often include sugarcane plumegrass, yellow jessamine, purple bluestem, spadeleaf (*Centella asiatica*), and woolly witchgrass, among others.

Hydric Pine Flatwoods (625)

The canopy stratum of hydric pine flatwoods (approximately 80.1 acres) on the Property is generally comprised of slash pine, with scattered cypress, red maple, laurel oak, swamp tupelo, and swamp bay. The sub-canopy often includes slash pine, laurel oak, swamp bay, loblolly bay, red maple, swamp tupelo, sweetgum, and dahoon. The shrub layer is comprised of loblolly bay, slash pine, wax myrtle, swamp bay, saw palmetto, gallberry, and fetterbush (*Lyonia lucida*). Herbaceous groundcover species often include velvet witchgrass, woodoats, maidencane (*Panicum hemitomon*), sugarcane plumegrass, bushy bluestem (*Andropogon glomeratus*), slash pine, purple bluestem, woolly witchgrass, Virginia chain fern, sandweed, blue maidencane (*Amphicarpum muhlenbergianum*), spadeleaf, and laurel greenbrier (*Smilax laurifolia*), among others.

Forested Wetland Mixed (630)

The canopy stratum within mixed forested wetlands (approximately 1,190.7 acres) is comprised of red maple, cypress, sweetgum, laurel oak, swamp tupelo, slash pine, dahoon, and myrtle dahoon. The subcanopy stratum is comprised of cabbage palm, red maple, sweetgum, laurel oak, loblolly bay, myrtle dahoon, slash pine, cypress, and swamp bay. The shrub stratum is comprised of wax myrtle, cabbage palm, saw palmetto, fetterbush, wax myrtle, and dwarf palmetto (*Sabal minor*). Herbaceous groundcover species often include greenbrier, woodoats, roundpod St. John's-wort (*Hypericum cistifolium*), manyflower marshpennywort, cabbage palm, sweetgum, warty panicgrass, soft rush, blackberry, sedge, velvet witchgrass, camphorweed, purple bluestem, Virginia chain fern, netted chain fern (*Woodwardia areolata*), sugarcane plumegrass, sawtooth blackberry (*Rubus argutus*),

swamp bay, Virginia iris (*Iris virginica*), sandweed, blue maidencane, and maidencane.

Freshwater Marshes (641)
Approximately 45.2 acres of freshwater marsh exist on the Property within a series of former borrow areas in the central parcel, and within a large system in the southern parcel. Shrub vegetation on islands within the marshes includes swamp bay, gallberry, myrtle dahoon, red cedar, slash pine, and wax myrtle. Marsh groundcover vegetation includes sand cordgrass (*Spartina bakeri*), grassleaf rush (*Juncus marginatus*), yelloweyed grass (*Xyris* sp.), sandweed, bushy bluestem, fireweed (*Erechtites hieraciifolius*), witchgrass (*Dichanthelium* sp.), slender flattop goldenrod, and lovegrass (*Eragrostis* sp.), among others.

Wet Prairies (643)
Wet prairies (approximately 12.1 acres) within the Property are characterized by maidencane, chalky bluestem, slender flattop goldenrod, velvet witchgrass, soft rush, sawtooth blackberry, bushy bluestem, spadeleaf, turkey tangle fogfruit (*Phyla nodiflora*), and occasional slash pine. Rarely canopy-sized slash pine and shrub-sized groundsel tree are present.

Within the utility easement (832) in the central parcel of the Property, wet prairies are comprised of chalky bluestem, velvet witchgrass, sugarcane plumegrass, sandweed, bushy bluestem, blackberry, slash pine saplings, swamp bay saplings, sweetgum saplings, yelloweyed grass, gallberry, witchgrass, blue maidencane, slender flattop goldenrod, and myrtle dahoon.

Emergent Aquatic Vegetation (644)
Approximately 36.8 acres of emergent aquatic vegetation is located on the west side of the central parcel of the Property within a series of former borrow areas. Vegetation within these areas is primarily comprised of American white waterlily (*Nymphaea odorata*) and bladderwort (*Utricularia* sp.).

Mixed Scrub-Shrub Wetland (646)
The shrub stratum within scrub-shrub wetlands on the Property (approximately 39.7 acres) is generally comprised of fetterbush, slash pine, myrtle dahoon, highbush blueberry (*Vaccinium corymbosum*), Carolina willow (*Salix caroliniana*), groundsel tree, and wax myrtle, among others. Groundcover species generally include woodoats, beaksedge, sedge, redtop panicum (*Panicum rigidulum*), warty panicgrass, thistle (*Cirsium* sp.), purple bluestem, and woolly witchgrass, among others.

Wet Coniferous Plantation (W441)
Wet coniferous plantations (approximately 138.0 acres) are primarily comprised of planted slash pine (various stand ages), with rare occurrences of red maple, loblolly bay, sweetgum, dahoon, cabbage palm, and swamp bay, and very rare occurrences of cypress. The sub-canopy stratum is generally comprised of wax myrtle, swamp bay, groundsel tree, and red

cedar. Herbaceous groundcover vegetation is comprised of a variety of species including soft rush, sugarcane plumegrass, creeping primrosewillow (*Ludwigia repens*), other primrosewillow (*Ludwigia* sp.) species, sedge, Carolina redroot (*Lachnanthes caroliana*), sundew (*Drosera* sp.), camphorweed, spikerush (*Eleocharis* sp.), maidencane, yelloweyed grass, velvet witchgrass, slash pine seedlings, rush (*Juncus* sp.), beaksedge, bushy bluestem, purple bluestem, cudweed (*Pseudognaphalium* sp.), dogfennel, witchgrass, pipewort (*Eriocaulon* sp.), bogbutton (*Lachnocaulon* sp.), bog white violet, blue maidencane, maidencane, and sandweed.

A.2.2 Uplands

The Property contains ~ 2,621.7 acres of upland communities (~ 60.7%), based on preliminary photointerpretation and groundtruthing. Upland communities are dominated by Coniferous Plantations (441), which represent approximately 97.3% (~ 2,549.6 acres) of total upland acreage.

Herbaceous Land (310)
The Property contains ~1.1 acres of open herbaceous land characterized by witchgrass (*Dichanthelium* sp.), chalky bluestem (*Andropogon virginicus* var. *glaucus*), dogfennel (*Eupatorium capillifolium*), blackberry (*Rubus* sp.), scattered sand live oak (*Quercus virginiana*) saplings, laurel oak (*Quercus laurifolia*) saplings, hickory (*Carya* sp.) saplings, everlasting (*Gnaphalium* sp.), pawpaw (*Asimina* sp.), yellow jessamine (*Gelsemium sempervirens*), hairy indigo (*Indigofera hirsute*) and deerberry (*Vaccinium stamineum*).

Live Oak (427)
A small area of live oak (*Quercus virginiana*), (0.2 acres) is located on the western side of the central parcel of the Property. Canopy species are comprised of live oak, laurel oak (*Quercus laurifolia*), water oak (*Quercus nigra*), red cedar (*Juniperus virginiana*), dahoon (*Ilex cassine*), southern magnolia (*Magnolia grandiflora*), and cabbage palm (*Sabal palmetto*). The shrub layer consists of saw palmetto (*Serenoa repens*), wax myrtle (*Myrica cerifera*), and sapling-sized canopy species. The herbaceous groundcover contains woodoats (*Chasmanthium* sp.), woodsgrass (*Oplismenus hirtellus*), crabgrass (*Digitaria* sp.), and panicgrass (*Panicum* sp.).

Sand Live Oak (432)
The Property contains ~5.3 acres of sand live oak. The canopy is dominated by sand live oak, laurel oak, hickory and red cedar. The groundcover is comprised of blackberry, blue huckleberry (*Gaylussacia tomentosa*), grape (*Vitis* sp.) vine, and netted nutrush (*Scleria reticularis*).

Hardwood Conifer Mixed (434)
Approximately 6.7 acres of upland within the Property is characterized as hardwood conifer mixed forest. The canopy stratum is comprised of slash pine (*Pinus elliottii*), sweetgum (*Liquidambar styraciflua*), water oak, and laurel oak. The sub-canopy is comprised of cabbage palm, red cedar,

camphortree (*Cinnamomum camphora*), and sapling-sized canopy species. The groundcover is comprised of greenbrier (*Smilax* sp.), blackberry, cabbage palm seedlings, swamp bay (*Persea palustris*) seedlings, and yellow jessamine (*Gelsemium sempervirens*).

Coniferous Plantation (441)
The Property contains approximately 2,549.6 acres of planted pine (*Pinus* sp.). The canopy stratum within actively managed silvicultural areas is comprised primarily of planted slash pine with limited occurrences of naturally recruited sand live oak (*Quercus geminata*), cabbage palm, laurel oak, sweetgum, and red maple (*Acer rubrum*). Sub-canopy species include loblolly bay (*Gardania lasianthus*), laurel oak, and swamp bay. The shrub layer is generally comprised of saw palmetto, wax myrtle, and gallberry (*Ilex glabra*). The herbaceous groundcover is generally sparse, but where present is comprised of gallberry, Virginia chain fern (*Woodwardia virginica*), and cinnamon fern (*Osmunda cinnamomea*).

Disturbed Lands (740)
The Property contains ~1.5 acres of land cleared for billboards.

Borrow Area (742)
The Property contains ~6.3 acres of man-made borrow areas within the southern parcel. This borrow area contains three deep linear channels with open water and minimal emergent vegetation.

Roads and Highways (814)
Over 9.5 acres of field roads are located throughout the Property.

Electrical Power Transmission Lines (Utility Easement) (832)
Upland vegetative communities within utility easements on the Property (approximately 41.5 acres) are regularly managed, maintaining a shrub layer comprised of live oak, wax myrtle, gallberry, and red cedar. The herbaceous stratum is comprised of gallberry, bracken fern (*Pteridium aquilinum*), blackberry, broomsedge bluestem (*Andropogon virginicus*), and grape (*Vitis* sp.) vine.

A.3 Natural Resources Conservation Service Soils

The U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) Soil Survey Geographic database for Nassau County, Florida, identifies the following soil types within the Property (Figure A3.1): Hurricane-Pottsburg fine sands, 0 to 5 percent slopes (6), Leon fine sand (9), Mandarin fine sand (10), Chaires fine sand (11), Goldhead fine sand (13), Rutledge mucky fine sand, frequently flooded (14), Buccaneer clay, frequently flooded (15), Ellabelle mucky fine sand, frequently flooded (16), Sapelo-Leon fine sand (22), Kingsferry fine sand (24), Aqualfs, loamy (32), Goldhead-

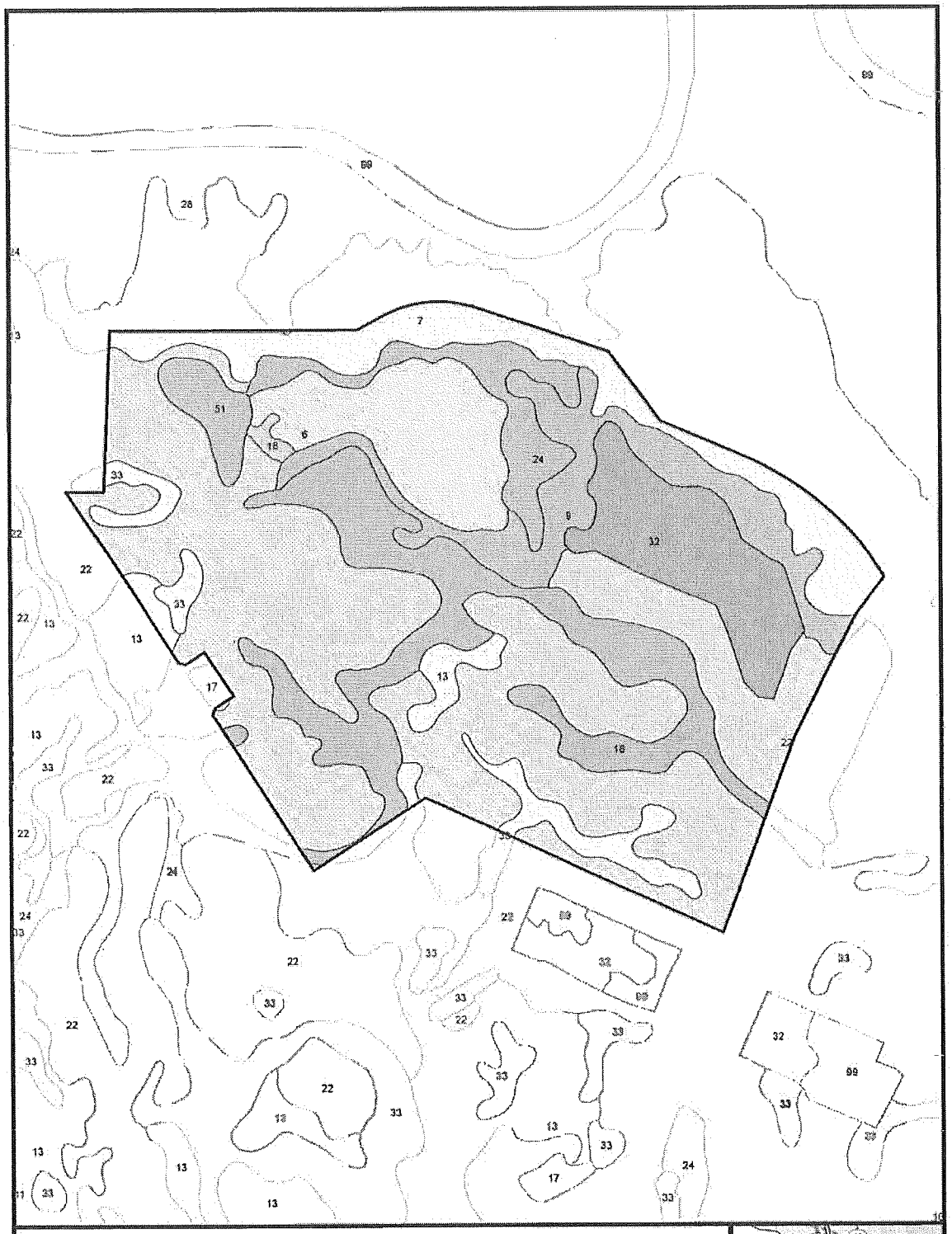

FIGURE A3.1.
NATURAL RESOURCES CONSERVATION SERVICE SOILS MAP OF THE EAST NASSAU DSAP 1 PROJECT SITE, NASSAU COUNTY, FLORIDA

BDA BREEDLOVE, DENNIS & ASSOCIATES, INC.
Environmental Consultants

FIGURE A3.1.

NATURAL RESOURCES CONSERVATION SERVICE SOILS MAP OF THE EAST NASSAU DSAP 1 PROJECT SITE, NASSAU COUNTY, FLORIDA

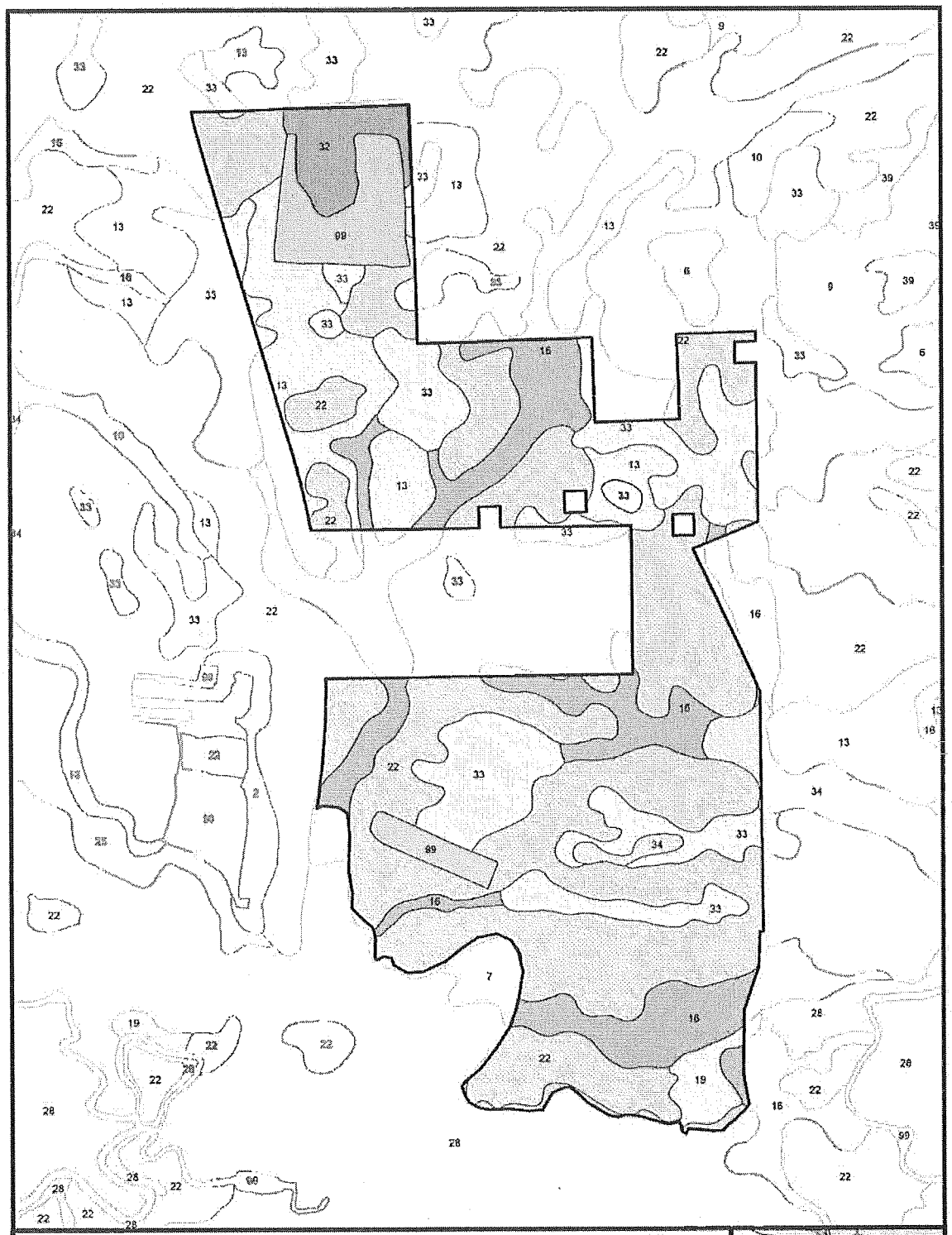

FIGURE A3.1.
NATURAL RESOURCES CONSERVATION SERVICE SOILS MAP OF THE
EAST NASSAU DSAP 1 PROJECT SITE, NASSAU COUNTY, FLORIDA

Meadowbrook fine sands, depressional (33), Boulogne fine sand (36), and Evergreen-Leon mucks, depressional (39).

A.4 Protected Wildlife and Plant Species Potential Occurrence

State and federal databases were reviewed to determine the likelihood of occurrence for protected and wildlife and species that occur or are likely to occur in within the Property and within Nassau County. Statewide GIS databases (CLIP, FNAI, etc.) of known locations and potential habitat models for rare and imperiled species were researched. Upland and wetland communities were also evaluated during field studies in 2012 to determine the occurrence or likelihood of occurrence for protected wildlife and plant species within the Property.

Species of wildlife and plants protected under provisions of the ESA of 1973, 16 United States Code 1531-1544, December 28, 1973, as amended 1976 – 1982, 1984, and 1988 ESA and Florida rule (68A-27.0001- 27.007, F.A.C.) known to occur within the County are represented in Table A4.1. (Note: The FWC adopted new rules for listing imperiled wildlife species effective on November 15, 2010. Species previously classified as Endangered [E] or Threatened [T] were approved for reclassification as T in June 2011. Final reclassifications for SSC to T or removal from the list and for E or T that were recommended for removal from the list are pending development and approval for implementation of management plans for each species.) The likelihood of occurrence, listed within this table, is based on a comparison of known general habitat requirements by these species with the habitats found on or near the Property, the quantity, quality, and adjacency of these habitats, as well as any observations of these species during preliminary field investigations. The likelihood of occurrence for protected species was rated as observed (i.e., species presence documented), high, moderate, low, unlikely, or not applicable based on knowledge of a species' habitat preference and site conditions. A likelihood of occurrence given as "unlikely" indicates that no, or very limited, suitable habitat for this species exists on site, but the site is within the documented range of the species; "not applicable" indicates that the habitat for this species does not exist on or adjacent to the site and/or the site is not within the documented range of the species.

Table A4.1 **Protected Plants and Animals with Potential for Occurrence on the East Nassau DSAP 1 Project Site, Nassau County, Florida.**

Species	Habitat of Occurrence	Likelihood of Occurrence	Designated Status[1]	
			USFWS[2]	FWC[34]
AMPHIBIANS				
Ambystoma cingulatum Frosted flatwoods salamander	Pine flatwoods, cypress swamp	unlikely	FT	ST
Lithobates capito gopher frog	Xeric oak scrub, sand pine scrub, sandhill, upland hardwoods, pine flatwoods, freshwater marsh.	moderate	—	SSC
Notophthalmus perstriatus striped newt	Principally longleaf pine-turkey oak sandhills, but also scrub; occasionally pine flatwoods	unlikely	C	—
REPTILES				
Alligator mississippiensis American alligator	Freshwater marsh, cypress swamp, mixed hardwood swamp, shrub swamp, bottomland hardwoods, lakes, ponds, rivers, streams.	low	FT(S/A)	—
Caretta caretta loggerhead sea turtle	Marine coastal and oceanic waters, beaches.	not applicable	FT	—
Chelonia mydas green sea turtle	Estuarine and marine coastal and oceanic waters, beaches.	not applicable	FE	—
Dermochelys coriacea leatherback sea turtle	Oceanic waters, beaches.	not applicable	FE	—

Table A4.1 Continued.

Species	Habitat of Occurrence	Likelihood of Occurrence	Designated Status[1]	
			USFWS[2]	FWC[3,4]
Drymarchon corais couperi eastern indigo snake	Xeric oak scrub, sand pine scrub, sandhill, pine flatwoods, pine rocklands, tropical hardwood hammock, hydric hammock, wet prairie, mangrove swamp.	low	FT	—
Gopherus polyphemus gopher tortoise	Sandhill, sand pine scrub, xeric oak scrub, coastal strand, xeric hammock, dry prairie, pine flatwoods, mixed hardwood–pine forests, ruderal.	observed	—	ST
Lepidochelys kempii Kemp's ridley sea turtle	Marine coastal waters.	not applicable	FE	—
Pituophis melanoleucus mugitus Florida pine snake	Xeric oak scrub, sand pine scrub, sandhill, scrubby pine flatwoods, old fields on former sandhill and scrub sites.	unlikely	—	SSC
BIRDS				
Aramus guarauna limpkin	Freshwater marsh, mixed hardwood swamp, rivers, streams, spring runs, lake margins, ruderal.	moderate	—	SSC
Charadrius melodus piping plover	Beaches, tidal mud flats.	low	FT	—
Cistothorus palustris griseus Worthington's marsh wren	Salt marsh.	high	—	SSC
Egretta caerulea little blue heron	Freshwater marsh, various types of forested wetlands, lakes, streams, salt marsh, mangrove swamp, tidal mud flats.	high	—	SSC

Table A4.1 Continued.

Species	Habitat of Occurrence	Likelihood of Occurrence	Designated Status[1]	
			USFWS[2]	FWC[3,4]
Egretta thula snowy egret	Freshwater marsh, various types of forested wetlands, streams, lakes, salt marsh, mangrove swamp, tidal mud flats, impoundments, ditches.	high	—	SSC
Egretta tricolor tricolored heron	Salt marsh, mangrove swamp, tidal mud flats, tidal creeks, tidal ditches, freshwater marsh, various types of forested wetlands, lakes and ponds.	moderate	—	SSC
Eudocimus albus white ibis	Freshwater marsh, various types of forested wetlands, salt marsh, mangrove swamp, tidal mud flats, ruderal.	moderate	—	SSC
Falco sparverius paulus southeastern American kestrel	Sandhill, pine flatwoods, dry prairie, pasture, old field.	moderate	—	ST
Haematopus palliatus American oystercatcher	Beaches, sandbars, tidal mud flats, shellfish beds.	low	—	SSC
Mycteria americana wood stork	Freshwater marsh, various types of forested wetlands, ponds, salt marsh, mangrove swamp, tidal mud flats, lagoons, flooded pastures.	high	FE	—
Pelecanus occidentalis brown pelican	Beaches, mangrove swamp, tidal mud flats, estuarine and marine waters.	low	—	SSC
Picoides borealis red-cockaded woodpecker	Sandhill, pine flatwoods.	unlikely	FE	—

Table A4.1 Continued.

Species	Habitat of Occurrence	Likelihood of Occurrence	Designated Status[1]	
			USFWS[2]	FWC[3,4]
Rhynchops niger black skimmer	Beaches, tidal mud flats, sandbars, tidal creeks, estuarine bays and lagoons.	unlikely	—	SSC
Sterna antillarum least tern	Beaches, tidal mud flats, estuarine and marine waters, lakes.	unlikely	—	ST
MAMMALS				
Sciurus niger shermani Sherman's fox squirrel	Sandhill, pine flatwoods, pastures.	unlikely	—	SSC
Trichechus manatus latirostris Florida manatee	Estuarine bays and lagoons, seagrass beds, rivers, spring runs.	not applicable	FE	—
Ursus americanus floridanus Florida black bear	Upland hardwood hammock, mixed hardwood-pine forest, pine flatwoods, cabbage palm-live oak hammock, cypress swamp, bay swamp, shrub swamp, hydric hammock, bottomland hardwoods.	unlikely	—	ST

[1] FE = Federally-designated Endangered; FT = Federally-designated Threatened; FT(S/A) = Federally-designated Threatened Due to Similarity of Appearance; C=Candidate for Listing; ST = State-designated Threatened; SSC = State Species of Special Concern.
[2] U.S. Fish and Wildlife Service.
[3] Florida Fish and Wildlife Conservation Commission.
[4] These state classifications are pending reclassification in accordance with revisions to Rules 68A-27.003, 68A-27.005, 68A-27.0012 and 68A-27.0021, Florida Administrative Code, for managing imperiled species as adopted by the Florida Fish and Wildlife Conservation Commission on September 1, 2010, effective November 15, 2010.

A.4.1 Protected Wildlife Species

A.4.1.1 Amphibians and Reptiles

Gopher Tortoise:

The gopher tortoise *(Gopherus polyphemus)* is listed as T by the FWC but is not listed as a T or E species by the USFWS. However, the USFWS recently determined in their 12-month finding published on July 27, 2011, that listing of the gopher tortoise as a T species in the eastern portion of its range is warranted under the ESA. Gopher tortoises were added to the candidate species list with the publication of the 12-month finding, but, for the time being, the USFWS is precluded from taking further action due to limited resources. Gopher tortoises occur in a variety of natural and disturbed habitats characterized by well-drained loose soils in which to burrow, low-growing herbaceous vegetation used for food, and open sunlit areas for nesting (Diemer 1992, Mushinsky et al. 2006). Gopher tortoises typically inhabit sites with soils that support sandhill, scrub, and pine flatwoods habitats (Enge et al. 2006). Reported annual average home range sizes vary from 1.2 to 4.7 acres for males and from 0.2 to 1.6 acres for females (Enge et al. 2006). Cox et al. (1987) indicate that patches of habitat must be at least 25-50 acres in size to support a minimally viable population of gopher tortoises, but Eubanks et al. (2002) found that 47-101 acres were needed to support populations of this size. Mushinsky et al. (2006) considered 250 acres to be the minimum area necessary to maintain a population of tortoises, and a buffer zone surrounding the 250-acre parcel would provide additional security.

A 100% survey of all areas of suitable gopher tortoise habitat will be required, immediately prior to development, to conclusively determine the population size and distribution of gopher tortoises currently on the Property and evaluate available management options. The presence of gopher tortoises within the Property would generally require development of a management plan to accommodate the species if impacts are anticipated. The plan would then be submitted to the FWC as part of the permit authorization process, prior to development.

The FWC manages and regulates the gopher tortoise under provisions of a *Gopher Tortoise Management Plan* (Management Plan) that includes *Gopher Tortoise Permit Guidelines* (Permit Guidelines) and permit provisions. Permits may be issued when authorization to "take" (i.e. excavate and relocate) gopher tortoises may be necessary. Permit applications may be requested by on-line application. All survey, capture, and relocation activities associated with permits must be conducted by an "Authorized Gopher Tortoise Agent". Land use planning that anticipates the need to accommodate the conservation needs of gopher tortoises should be designed consistent with the Permit Guidelines.

The FWC generally recommends the following options for avoiding, minimizing, and/or compensating the potential for take of gopher tortoises or their burrows to occur on lands that are proposed for development:

1. Avoid developing in the area occupied by gopher tortoises;
2. Develop so as to avoid gopher tortoise burrows by avoiding concentrations of burrows altogether and/or staying at least 25 feet from entrances of individual burrows; or
3. Relocate gopher tortoises that would otherwise be "taken" to an approved recipient site that is either on or off the development site (a 10 or Fewer Burrows Permit or Conservation Permit will be required).

FWC potential habitat models (Cox et al. 1994, McCoy et al. 2002, Endries et al. 2009) indicate that approximately 35 acres of the Property were mapped as potentially suitable gopher tortoise habitat. However, this acreage is spread out between numerous areas (~10 acres in the northern parcel, ~20 acres in the central parcel and ~5 acres in the southern parcel).

FWC *Gopher Tortoise Permitting Guidelines* require that sites that meet the criteria for *Acceptable* long-term relocation sites for gopher tortoises must be >40 acres in size and have an annual minimum depth to water table of >18 inches. The Property contains <12 acres of soils that meet the criteria for depth to water table, indicating that habitats within the Property are of relatively low quality for gopher tortoises. This information indicates that gopher tortoises and its commensals have a low likelihood of occurring within the Property.

Despite the low potential for occurrence, active gopher tortoise burrows were observed within the northern parcel in an open sandy area characterized by sand live oak (*Quercus geminata*) saplings, pawpaw (*Asimina* sp.), and shiny blueberry (*Vaccinium myrsinites*). Burrows were also observed in adjacent areas of pine plantation. Gopher tortoise surveys will be conducted immediately prior to development of specific parcels, in accordance with Permit Guidelines. Gopher tortoises that occur within areas of the Property that are proposed for development will be relocated to approved on-site or off-site recipient areas, prior to development of adjacent parcels, in accordance with Permit Guidelines.

Eastern Indigo Snake:

The eastern indigo snake *(Dyrmarchon couperi)* is listed as a T species by USFWS. The primary reasons for this listing status are over-collection and habitat loss (Moler 1992). Indigo snakes occur in a variety of habitats throughout Florida, including pine flatwoods, scrubby flatwoods, sandhill, dry prairie, tropical hardwood hammocks, edges of freshwater marshes, agricultural fields, coastal dunes, and human-altered habitats (USFWS 2008). Indigo snakes often winter in the burrows of gopher tortoises in northern portions of the range, but they also may take shelter in hollowed root channels, hollow logs, stump holes, trash piles, or the burrows of rodents,

nine-banded armadillos (*Dasypus novemcinctus*), or land crabs (*Cardisoma guanhumi*) in wetter habitats (USFWS 2008, USFWS 2011). Eastern indigo snakes are capable of moving considerable distances in a short period of time as demonstrated by records of movements of 2.2 miles in 42 days and 2.4 miles in 176 days (USFWS 2008). One individual was observed to have moved 13.8 miles over a two-year period in a mark-recapture study in southeastern Georgia (Stevenson and Hyslop 2010). Reported home range sizes of eastern indigo snakes in peninsular Florida range from 4 to 818 acres (USFWS 2011), and mean home range size reported from one Florida study was 292 acres (Dodd and Barichivich 2007). Radio-telemetry studies of indigo snakes in Georgia have revealed home ranges sizes of 87.5 to 8,885 acres for females and 350 to 3,825 acres for males (Hyslop 2007). Indigo snakes apparently need a mosaic of habitats to complete their life cycle, often feeding along wetland edges (Moler 1992). Population viability modeling suggests that indigo snake populations are susceptible to habitat fragmentation resulting from construction of roads and intensive human developments in occupied habitats, and that large areas protected from roads and human developments are needed to maintain viable snake populations (Breininger et al. 2004).

USFWS (2011) requires surveys to determine the presence of indigo snakes on sites in north and central Florida when impacts are projected for more than 25 acres of xeric habitat or for more than 25 active and inactive gopher tortoise burrows. Occurrence databases available from FWC and the FNAI contain no records of eastern indigo snakes within the Property, but the FNAI database contains a 1970 record of an indigo snake located 2.8 miles northeast of the Property. Older FWC habitat models (Cox et al. 1994) indicate that most of the Property was mapped as potentially suitable indigo snake habitat; however, recent FWC models (Endries et al. 2008; Endries and Enge, unpublished data) indicate that none of the Property was mapped as habitat potentially suitable for indigo snakes, although a large patch of potentially suitable habitat is located just to the northeast of the Property. Indigo snakes have the potential to occur based on several old records in the vicinity of the Property, but the likelihood of occurrence is low based on the rarity and large home range requirements of the species, and the relatively fragmented nature of the landscape surrounding the Property. No indigo snakes were observed during preliminary fieldwork within the Property.

Florida Pine Snake:

The Florida pine snake (*Pituophis melanoleucus mugitus*) is listed as a species of special concern by FWC but is not listed as a threatened or endangered species by USFWS. The Property is within the range of the Florida pine snake as mapped by Franz (1992). Florida pine snakes occur in open xeric habitats, including longleaf pine (*Pinus palustris*) – turkey oak (*Quercus laevis*) sandhills, sand pine (*Pinus clausa*) scrub, scrubby pine (*Pinus* spp.) flatwoods, and old fields on former sandhill sites (Franz 1992). Florida pine snakes are extremely fossorial, seeking out the tunnel systems of pocket gophers (*Geomys pinetis*), and, to a lesser extent, gopher tortoise (*Gopherus polyphemus*) burrows. Two radio-tracked females exhibited home ranges of

27.5 and 30 acres, and 3 males used areas 2-8 times larger in size (Franz 1992).

Available occurrence databases contain no records of Florida pine snakes on or near the Property. FWC habitat models (Cox et al. 1994, Endries et al. 2008) indicate that the Property was not mapped as potentially suitable habitat for Florida pine snakes, nor were there areas of potentially suitable habitat in the landscape surrounding the Property. It is unlikely that Florida pine snakes occur on the Property based on the absence of the xeric vegetation types preferred by this species.

Gopher Frog:
The gopher frog (*Rana capito*) is listed as a species of special concern by FWC but is not listed as a threatened or endangered species by USFWS. The Property is within the range of the gopher frog as mapped by Godley (1992). The distribution of gopher frogs seems to be restricted to that of gopher tortoises (*Gopherus polyphemus*) (Godley 1992). Gopher frogs typically occur in native, xeric, upland habitats, particularly longleaf pine (*Pinus palustris*) – turkey oak (*Quercus laevis*) sandhills which often support the densest populations of gopher tortoises. However, gopher frogs are also known from pine (*Pinus* spp.) flatwoods, sand pine (*Pinus clausa*) scrub, xeric hammocks, and the early successional stages of these communities. Preferred breeding habitats include seasonally flooded, grassy ponds and cypress heads that lack fish populations (Godley 1992). Gopher frogs will disperse up to 1.0 mile from breeding ponds to occupy gopher tortoise burrows, but they may also occupy a variety of other retreats including the burrows of rodents and crayfish, stump holes, and other crevices (Godley 1992).

There are no occurrence database records of gopher frogs on the Property, and FWC habitat models (Endries et al. 2008) indicate that it was not mapped as potentially suitable habitat for gopher frogs. However, there is a moderate likelihood that gopher frogs may occur on the Property based the observations of gopher tortoise burrows.

Frosted Flatwoods Salamander:
The frosted flatwoods salamander *(Ambystoma cingulatum)* is listed as a T species by the USFWS. The Property is near the eastern edge of the range of the frosted flatwoods salamander as mapped by Ashton (1992). The frosted flatwoods salamander inhabits fire-maintained, open-canopied longleaf pine (*Pinus palustris*) and slash pine savannas and flatwoods on the southeastern coastal plain (Ashton 1992, Means et al. 1996, Palis 1997). Breeding sites include pine flatwoods depressions such as cypress- or blackgum- (*Nyssa sylvatica* var. *biflora*) dominated swamps, graminoid-dominated depressions, roadside ditches, and borrow pits that are generally devoid of large predatory fishes. Management of ephemeral wetlands for herbaceous cover and an open canopy may improve breeding habitat for flatwoods salamanders (Gormon et al. 2009). Adults migrate to breeding sites between October and December and lay eggs on various substrates prior to wetlands filling with water in response to winter rains (Palis 1997). Breeding ponds

range in size from 0.05 - 23.5 acres and generally are <1.6 feet deep (Palis 1996). Post-larval flatwoods salamanders are fossorial, often occupying crayfish (*Procambarus* spp.) burrows, and inhabit mesic pine-wiregrass (*Aristida stricta*) flatwoods and savannas with little to no midstory and an open overstory in the uplands surrounding breeding ponds. Movements of 1.1 miles have been recorded away from breeding ponds and into surrounding pine flatwoods (Ashton 1992), and movements of 985-1,640 feet away from breeding ponds have also been reported (Means et al. 1996). Home range sizes of 0.37 acre have been reported (Ashton 1992), and approximately 2,500 acres of terrestrial habitat surrounding a breeding site is probably needed to sustain a breeding population (Palis 1997). The principal threats to flatwoods salamander populations are habitat destruction as a result of agricultural and silvicultural practices (e.g., clearcutting, mechanical site preparation including bedding), hydrological alteration, fire suppression, and residential and commercial development (Means et al. 1996, Palis 1997).

Available databases contain no records of frosted flatwoods salamanders occurring on or near the Property, which was not mapped as potentially suitable flatwoods salamander habitat by FWC (Endries et al. 2009). Moreover, the Property is outside the documented range of this species, and intensive silvicultural operations have likely eliminated preferred habitats for this species. Frosted flatwoods salamanders are unlikely to occur on the Property.

Striped Newt:
The striped newt *(Notophthalmus perstriatus)* is not listed as a T or E species or a SSC by either the FWC or USFWS. However, the USFWS recently determined in their 12-month finding published on June 7, 2011, that listing of the striped newt as E or T is warranted under the ESA. Striped newts were added to the candidate species list with the publication of the 12-month finding, but for the time being USFWS is precluded from taking further action due to limited resources. The Property is within the range of the striped newt as mapped by Christman and Means (1992). The preferred habitat of striped newts is longleaf pine – turkey oak (*Quercus laevis*) sandhills with an intact ground cover containing wiregrass, but this species is also found in scrub and scrubby flatwoods habitats (Christman and Means 1992, USFWS 2011). Striped newts have long life spans (approximately 12 - 15 years) and a complex life history. They breed exclusively in small (typically less than 12.4 acres), isolated, ephemeral ponds that lack predaceous fish and are interspersed in and surrounded by xeric upland habitats (USFWS 2011). Maidencane has been found at ephemeral ponds where striped newts have been found, and seems to be a good indicator of previous extent of flooding in ponds (LaClaire and Franz 1990, LaClaire 1995).

Striped newts occupy terrestrial habitats at considerable distances from breeding ponds. Striped newts have been observed to have moved up to 2,330 feet from ponds into surrounding uplands (Dodd and Cade 1998), and Dodd (1996) found that only 28 percent of amphibians were captured >1,300 feet from wetlands. Johnson (2003) recommended a protected area

extending 3,280 feet from breeding sites as upland "core habitat" surrounding breeding ponds. Striped newts form metapopulations that persist in isolated fragments of longleaf pine-wiregrass ecosystems, with ponds functioning as focal points for local breeding populations (Johnson 2001, Johnson 2005). Maintaining connectivity between uplands and breeding ponds of diverse hydroperiods is essential for striped newts to recolonize local breeding ponds and maintain metapopulation viability (Johnson 2005, Dodd and Johnson 2007). The principal threats to striped newts have been identified as conversion of natural habitats to intensively managed pine plantations; loss of habitat to urban development; and degradation of habitat due to fire suppression, off-road vehicle use, and road construction (USFWS 2011).

Available databases contain no records of occurrence of striped newts within the Property, and FWC habitat models (Endries et al. 2009) did not map the property as potentially suitable habitat for striped newts. It is unlikely that striped newts occur within the Property based on the absence of documented occurrences, FWC models that indicate that the Property apparently does not support suitable habitats, and because intensive silvicultural operations have likely eliminated preferred habitats for this species.

A.4.1.2 Birds

Bald Eagle:

The bald eagle *(Haliaeetus leucocephalus)* is protected by the USFWS under provisions of the Bald and Golden Eagle Protection Act (BGEPA) and the Migratory Bird Treaty Act (effective August 9, 2007). Recovery goals have been achieved for this species; therefore, the bald eagle is no longer listed or protected as a T species under the U.S. ESA of 1973, as amended. The USFWS has implemented National Bald Eagle Management Guidelines (National Guidelines) (May 2007) to assist private landowners and others plan land-use activities in proximity to active bald eagle nests by measures that will minimize the likelihood of causing "disturbance" to nesting bald eagles, as defined under the BGEPA. The FWC also removed the bald eagle from classification and protection as a T species under Florida Rule and implemented a Florida Bald Eagle Management Plan (Florida Plan) (effective May 9, 2008). The Florida Plan includes Florida Bald Eagle Management Guidelines (Florida Guidelines) and permit provisions. We will coordinate with both the USFWS and FWC for guidance prior to undertaking any activity that may result in "disturbance" of nesting bald eagles.

The FWC Bald Eagle Nest Database was reviewed to determine the locations of all nests that occur on or in close proximity to the Property. The FWC database contains no records of bald eagle nests on or within 660 feet of the Property. The nearest recorded bald eagle nest is No. NA001, which is located approximately 5.1 miles southeast of the Property, was last surveyed in 2010 and was determined active at that time.

No bald eagle nests were observed during preliminary field studies. However, a juvenile bald eagle was observed near the large borrow area lake within the southeastern portion of the Property. Large pine trees suitable for nesting exist within several large areas of hydric pine flatwoods (625), and large strands of mixed forested wetlands (630). Due to the presence of large pine trees suitable for nesting, the presence of potential foraging habitat (i.e., large borrow area lakes), and the proximity of the Property to a large body of water (approximately2.5 miles from the Nassau River), the likelihood of a nest occurring on the Property is moderate.

Wood Stork:

The wood stork *(Mycteria americana)* is listed as an E species by USFWS. There are no records of a wood stork nesting colony on the Property based on the most recent FWC statewide survey in 1999 and based on data available from USFWS through 2009. Wood storks typically return to the same rookery sites each year to nest (Ogden 1996). Although wood storks in south Florida will travel up to 18.6 miles from rookeries to forage in wetlands and return food to incubating adults and nestlings during the nesting season (Cox et al. 1994), wetlands within 13 miles of known rookeries are considered by USFWS to comprise Core Foraging Areas for nesting wood storks within the area of north Florida where the Property is located.

The UF database of wood stork nesting colonies through 2010 contains records of two colonies in Florida and one colony in southeast Georgia within 13 miles of the Property (Figure A4.1). The Pumpkin Hill colony (number 594105) is located ~ 11.9 miles southeast of the central parcel of the Property. Wetlands in the southern third of the central parcel are within the USFWS-designated Core Foraging Area for this rookery. Numbers of wood stork nests in the Pumpkin Hill colony since 2002 were as follows: 2009 – not active; 2008 – 22 nests; 2007 – not active; 2006 – not active; 2005 – 42 nests; 2004 – not active; 2003 – 120 nests; and 2002 – 45 nests. The following table summarizes nesting records for nesting colonies within 13 miles of the central and southern parcels, for the period from 2006 through 2010:

Rookery							Distance	
Number	Name	2010	2009	2008	2007	2006	Miles	Direction
594105	Pumpkin Hill	0	ND	75	0	0	10.7	SE
-	Jacksonville Zoo	150	88	86	47	ND	12.6	S
SNN 243	Gilman Paper (GA)	310	220	230	80	110	10.7	NE

In addition, the UF database contains records of three colonies in southeast Georgia within 13 miles of the northern parcel of the Property(Figure A4.1). Nesting records in these colonies for the period from 2006 through 2010 are as follows: