

CITY OF GREEN COVE SPRINGS PLANNING & ZONING BOARD MEETING

321 WALNUT STREET, GREEN COVE SPRINGS, FLORIDA
TUESDAY, JUNE 27, 2023 – 5:00 PM



AGENDA

GENERAL INFORMATION

ANYONE WISHING TO ADDRESS THE PLANNING AND ZONING BOARD REGARDING ANY TOPIC ON THIS EVENING'S AGENDA IS REQUESTED TO COMPLETE A CARD AVAILABLE AT THE CLERK'S DESK. SPEAKERS ARE RESPECTFULLY REQUESTED TO LIMIT THEIR COMMENTS TO THREE (3) MINUTES.

THE PLANNING AND ZONING BOARD PROHIBITS THE USE OF CELL PHONES AND PAGERS WHICH EMIT AN AUDIBLE SOUND DURING ALL MEETINGS WITH THE EXCEPTION OF LAW ENFORCEMENT, FIRE AND RESCUE, OR HEALTH CARE PROFESSIONALS ON CALL. PERSONS IN VIOLATION WILL BE REQUESTED TO LEAVE THE MEETING.

THIS WILL BE AN IN-PERSON MEETING. PLEASE FOLLOW SOCIAL DISTANCING PROTOCOLS

ROLL CALL

APPROVAL OF MINUTES

- [1.](#) Approval of Minutes from the June 6, 2023 Meeting

PUBLIC HEARINGS

- [2.](#) Small Scale Future Land Use Amendment and Rezoning Request for property located in the 1300 Block of Energy Cove Court for approximately 3.6 acres.

Future Land Use Amendment: from: Mixed Use

to: Industrial

Zoning Amendment: from: R-3, Residential High Density

to: M-2, Heavy Industrial

- [3.](#) Ordinance O-23-2023 regarding proposed Landscape Ordinance Revisions

ACTION ITEMS

- [4.](#) Review of a Site Development Plan for the Knight Center located at 1201 Orange Avenue

BOARD BUSINESS

BOARD DISCUSSION / COMMENTS

STAFF COMMENTS

ADJOURNMENT**NEXT MEETING:** TUESDAY, JULY 25, 2023 AT 5:00PM

Minutes of the Planning & Zoning Board Meeting can be obtained from the City Clerk's office. The Minutes are recorded, but are not transcribed verbatim.

Persons requiring a verbatim transcript may make arrangements with the City Clerk to duplicate the recordings, or arrange to have a court reporter present at the meeting. The cost of duplication and/or court reporter will be at the expense of the requesting party.

ADA NOTICE

In accordance with Section 286.26, Florida Statutes, persons with disabilities needing special accommodations to participate in this meeting should contact the City Clerk's office no later than 5:00 p.m. on the day prior to the meeting.

EXPARTE COMMUNICATIONS

Oral or written exchanges (sometimes referred to as lobbying or information gathering) between a Planning and Zoning Board member and others, including staff, where there is a substantive discussion regarding a quasi-judicial decision by the Planning and Zoning Board. The exchanges must be disclosed by the Planning and Zoning Board.

CITY OF GREEN COVE SPRINGS PLANNING & ZONING BOARD MEETING

321 WALNUT STREET, GREEN COVE SPRINGS, FLORIDA
TUESDAY, JUNE 06, 2023 – 5:00 PM



MINUTES

GENERAL INFORMATION

Anyone wishing to address the Planning and Zoning Board regarding any topic on this evening's agenda is requested to complete a card available at the Clerk's desk. Speakers are respectfully requested to limit their comments to three (3) minutes.

The Planning and Zoning Board prohibits the use of cell phones and pagers which emit an audible sound during all meetings with the exception of Law Enforcement, Fire and Rescue, or Health Care Professionals on call. Persons in violation will be requested to leave the meeting.

ROLL CALL

BOARD MEMBERS PRESENT

Chairman Brian Cook, Vice Chairman Justin Hall, Board Member Josh Danley, Board Member Henrietta Francis, Board Member Joshua Hobbs

1. Introduction of New Board Member - Joshua Wyatt Hobbs (Seat 2)

New Board Member, Joshua Wyatt Hobbs (Seat 2 - appointed by Matt Johnson), is presented as a new member.

2. Election of Chair and Vice Chair

Motion to elect Justin Hall as Chair.

Motion made by Board Member Francis, Seconded by Board Member Danley

Voting Yea: Chairman Cook, Vice Chairman Hall, Board Member Danley, Board Member Francis, Board Member Hobbs

Motion to elect Joshua Danley as Vice Chair.

Motion made by Board Member Francis, Seconded by Board Member Cook

Voting Yea: Chairman Hall, Board Member Cook, Board Member Danley, Board Member Francis, Board Member Hobbs

APPROVAL OF MINUTES

Review and approval of April 25, 2023 minutes.

Motion to approve the minutes from the April 25, 2023 Planning and Zoning Board meeting.

Motion made by Vice Chairman Danley, Seconded by Board Member Francis.

Voting Yea: Chairman Hall, Vice Chairman Danley, Board Member Cook, Board Member Francis, Board Member Hobbs

PUBLIC HEARINGS

4. Reading of Ordinance O-17-2023 for parcel # 016450-001-01 for approximately 1.33 acres located on the northwest corner of US Highway 17 and SR 16 requesting a Zoning Amendment from: Residential High Density, R-3 to: C-2, General Commercial.

Development Services Director, Michael Daniels presents Ordinance No. O-17-2023.

Board Member Hobbs questions if the agreement of the Palmetto Trail was already made and if the wetlands would be delineated. Mr. Daniels confirms that currently the Palmetto Trail is an easement and that the construction of the Palmetto Trail will be worked out in Site Development. He also confirms that the wetlands would be delineated.

Board Member Francis asks how the "Live Local" legislation would come into play for this project. Mr. Daniels states that if the applicant wanted to build affordable housing, they could do so without a zoning change based on the legislation.

Board Member Cook questions the impact to traffic in the area. Mr. Daniels states that it will depend on end use and that is something that will be looked into further during the Site Development review.

Chairman Hall opens the public hearing.

Mr. Shelton, representative for the applicant, states that they are currently conducting a traffic study and working with FDOT and FDOT is regulating what improvements will need to be complete by the applicant.

In response to the wetlands question, Mr. Shelton stated that there is a current wetlands study being performed and it is the intention of the applicant to minimize impact to the wetlands.

Chairman Hall closes the public hearing.

Motion to recommend approval to City Council of Ordinance No. O-17-2023 regarding the rezoning of parcel # 016450-001-01.

Motion made by: Board Member Cook, Seconded by Board Member Francis

Voting Yea: Chairman Hall, Vice Chairman Danley, Board Member Cook, Board Member Francis, Board Member Hobbs

BOARD BUSINESS

Staff Comments

1. State Legislative Update

Development Services Director, Michael Daniels presents a brief overview of the latest State Legislative updates. City Attorney, Jim Arnold, offers to answer any questions and will send out a more extensive overview of all of the laws implemented to the Board.

2. Upcoming City Budget

Development Services Director, Michael Daniels informs the Board that the City is currently reviewing next year's budget. Some of the higher priority items are reviewed including, the Downtown Master Plan, Form Based Code, Parking, etc.

Assistant City Manager, Mike Null noted that some of the challenges the City faces is the increased cost of work and the lack of bid submissions.

Board Discussion / Comments

Board Member Francis encourages everyone to take a few minutes to enjoy the beautiful artwork currently being displayed in the hallway of City Hall that was created by the art students of the Augusta Savage Arts Program.

ADJOURNMENT

The meeting was adjourned by Chairman Hall at 5:51pm.

NEXT MEETING: TUESDAY, JUNE 27, 2023 AT 5:00PM

CITY OF GREEN COVE SPRINGS, FLORIDA

James Justin Hall, Chairman

Attest:

Lyndie Knowles, Development Services Rep.

BACKGROUND

The applicant has applied for a Future Land Use and Zoning Change for the subject property for the construction of multifamily development.

PROPERTY DESCRIPTION

The property has approximately 150' of frontage on Energy Cove Court. The property is heavily wooded with a mixture of hardwood and pine trees. In addition, there is an existing City water line that runs from Cooks Lane down the west side of the property eventually connecting to the Energy Cove Court cul-de-sac at the western edge of the property and a city easement just north of the northern edge of the property. The existing water line shall either be maintained as a part of future development plans or relocated at the property owner's expense.

Figure 1. Aerial Map



Figure 2. Existing Future Land Use

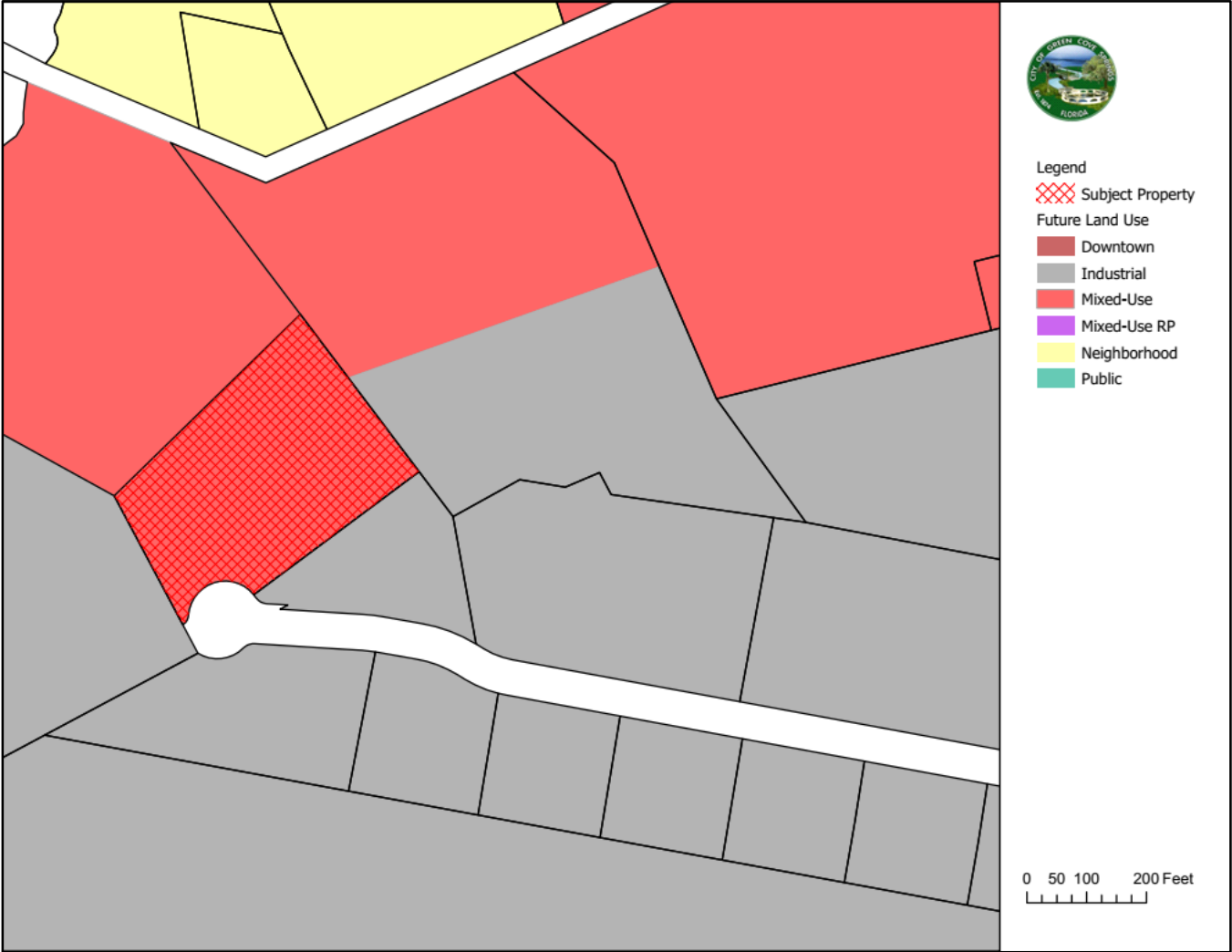


Figure 3. Proposed Future Land Use

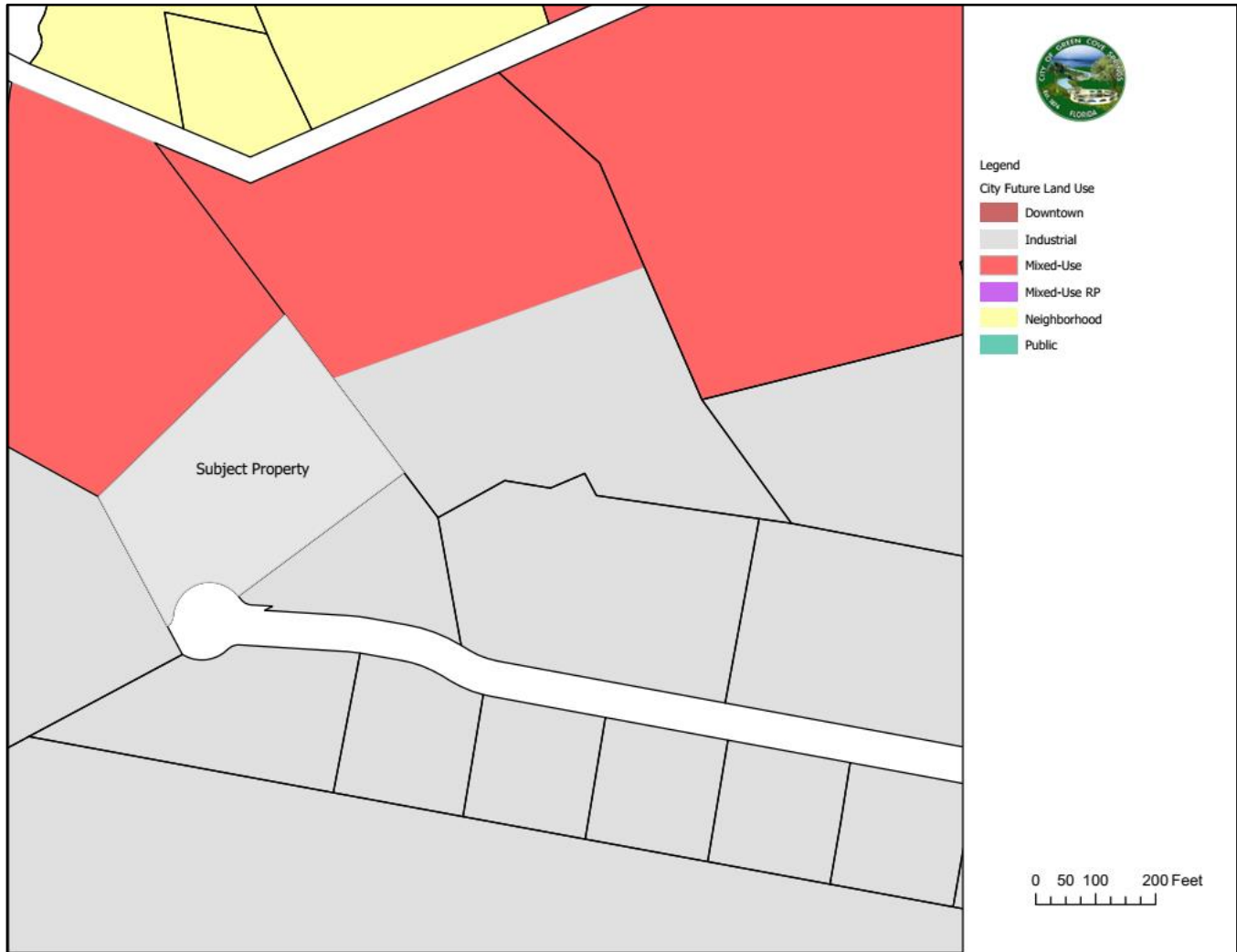


Figure 4. Existing Zoning

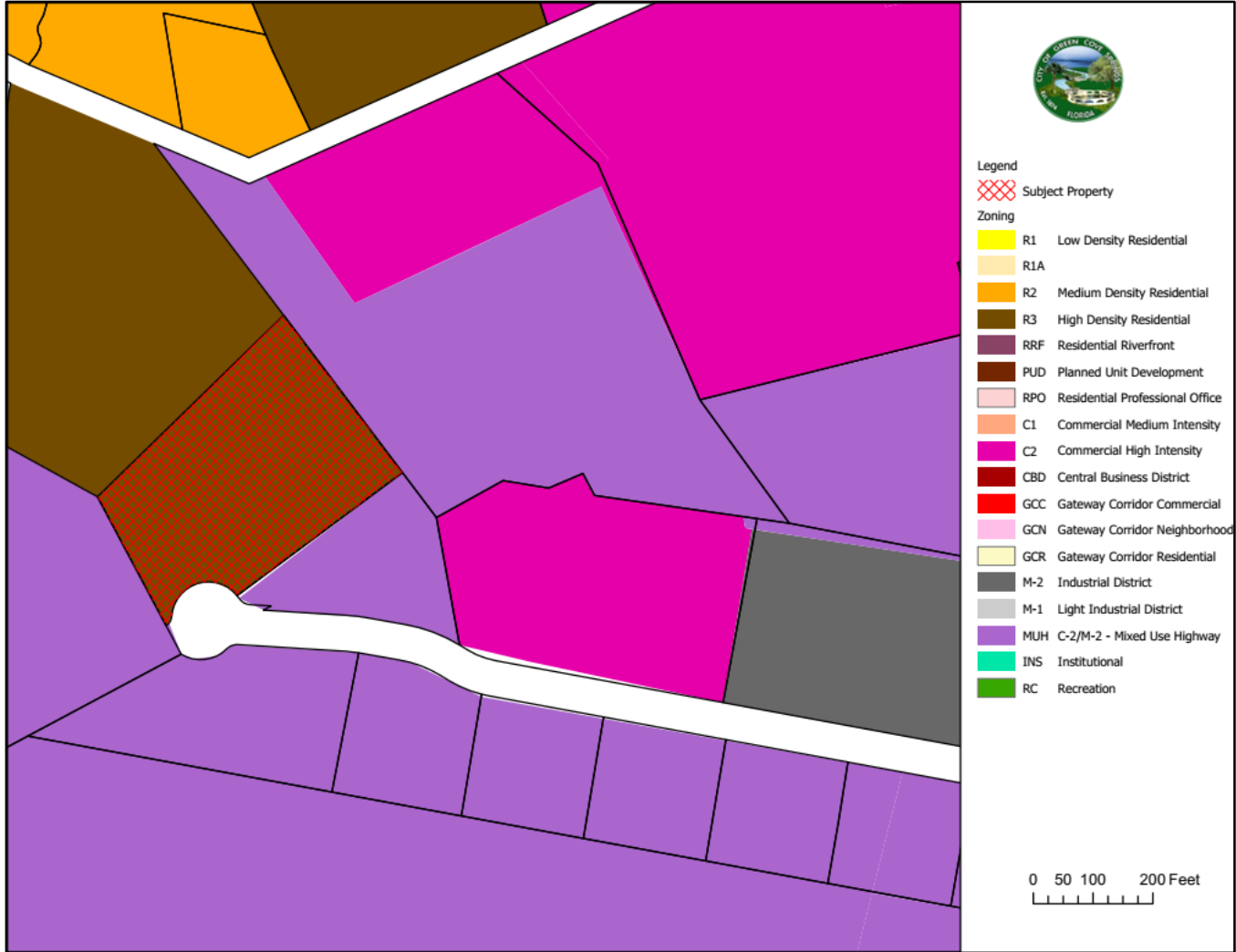
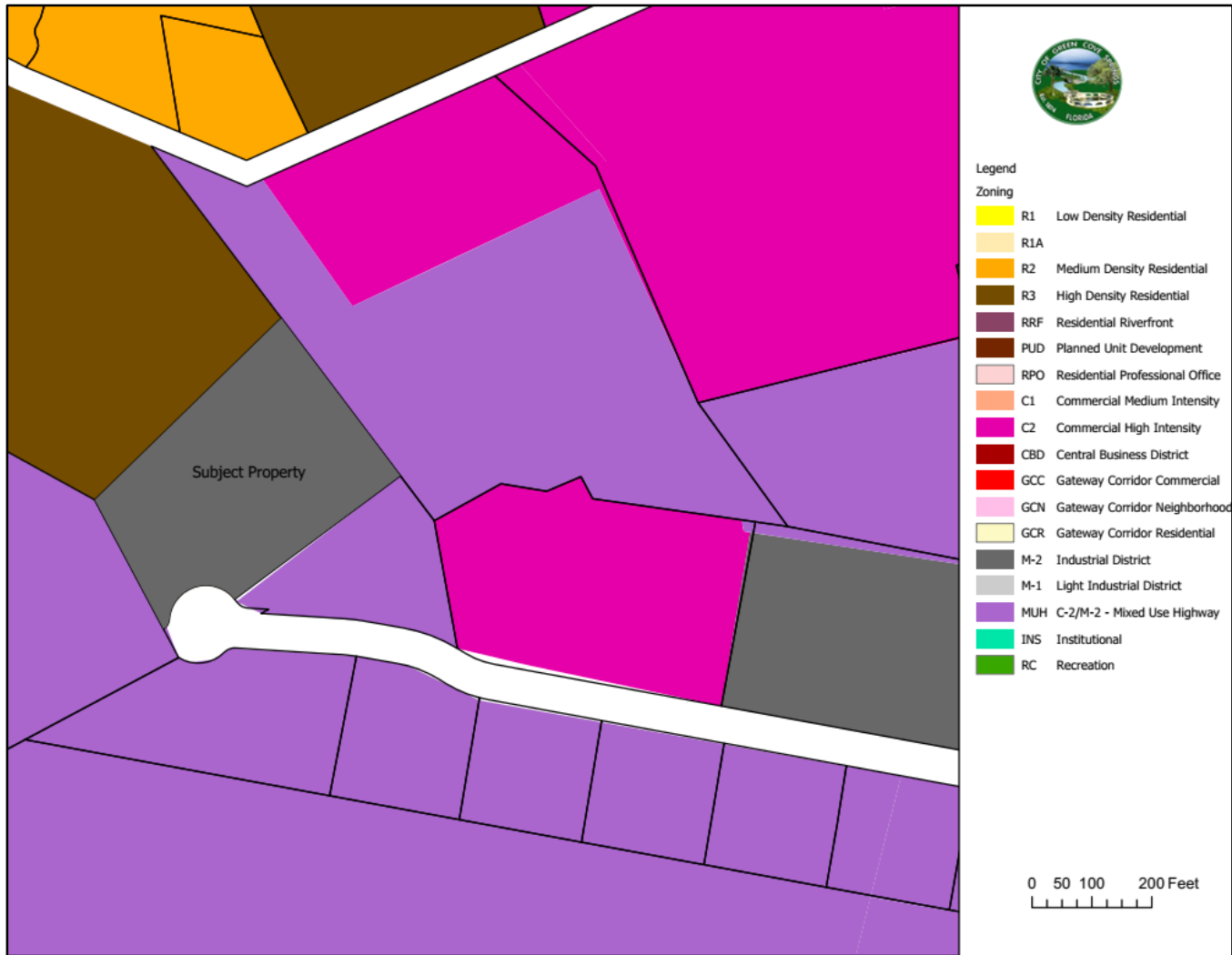


Figure 5. Proposed Zoning



NEEDS ANALYSIS

Per Chapter 163.3177, Florida Statutes, need shall be based upon the amount of land designated for future uses and shall:

- 1) Provide a balance of uses that foster vibrant, viable communities and economic opportunities and address outdated development patterns, such as antiquated subdivisions; and,
- 2) Allow the operation of real estate markets to provide adequate choices for residents and business, with the amount of land designated for future use not limited solely by the projected population. The minimum amount of land use required to accommodate at least a 10-year planning period must be included in the comprehensive plan.

Comment: This request supports the growing demand for industrial uses.

URBAN SPRAWL ANALYSIS

Section 163.3177, Florida Statutes, requires that any amendment to the Future Land Use Element to discourage the proliferation of urban sprawl. Section 163.3177(6)(a)9.a., Florida Statutes, identifies 13 primary urban sprawl indicators and states that, “[t]he evaluation of the presence of these indicators shall consist of an analysis of the plan or plan amendment within the context of features and characteristics unique to each locality...”

An evaluation of each primary indicator is provided below.

(I) Promotes, allows, or designates for development substantial areas of the jurisdiction to develop as low-intensity, low-density, or single-use development or uses.

Evaluation & Findings: This request will allow for industrial development which is compatible with surrounding uses within Energy Cove Court.

(II) Promotes, allows, or designates significant amounts of urban development to occur in rural areas at substantial distances from existing urban areas while not using undeveloped lands that are available and suitable for development.

Evaluation & Findings: The project site is located within the urban core area of Green Cove Springs and adds to the existing development in the area which is suitable for developing thereby reducing development pressure in rural and unincorporated areas.

(III) Promotes, allows, or designates urban development in radial, strip, isolated, or ribbon patterns generally emanating from existing urban developments.

Evaluation & Findings: The proposed Industrial Future Land Use designation is compatible with the surrounding development and is part of the Energy Cove Industrial Park.

(IV) Fails to adequately protect and conserve natural resources, such as wetlands, floodplains, native vegetation, environmentally sensitive areas, natural groundwater aquifer recharge areas, lakes, rivers, shorelines, beaches, bays, estuarine systems, and other significant natural systems.

Evaluation & Findings: This property does not have environmentally sensitive areas, natural groundwater aquifer recharge areas, lakes, shorelines, beaches, bays, estuarine systems, and other significant natural systems.

(V) Fails to adequately protect adjacent agricultural areas and activities, including silviculture, active agricultural and silvicultural activities, passive agricultural activities, and dormant, unique, and prime farmlands and soils.

Evaluation & Findings: The project site is located within an urban area with surrounding commercial development. There are no adjacent agricultural areas and activities.

(VI) Fails to maximize use of existing public facilities and services.

Evaluation & Findings: With the project site being located within an area with existing development, the proposed development will utilize existing public facilities and services.

(VII) Fails to maximize use of future public facilities and services.

Evaluation & Findings: Any future improvements to the City's public facilities and services will be utilized by the project site.

(VIII) Allows for land use patterns or timing which disproportionately increase the cost in time, money, and energy of providing and maintaining facilities and services, including roads, potable water, sanitary sewer, stormwater management, law enforcement, education, health care, fire and emergency response, and general government.

Evaluation & Findings: The project site is located within an existing industrial area with existing public facilities and services. The proposed development will utilize existing public facilities and services and will not increase the time, money, and energy for providing and maintaining these facilities.

(IX) Fails to provide a clear separation between rural and urban uses.

Evaluation & Findings: The site is located within an urban area and is not adjacent to any rural zoned properties.

(X) Discourages or inhibits infill development or the redevelopment of existing neighborhoods and communities.

Evaluation & Findings: The proposed application will allow infill development.

(XI) Fails to encourage a functional mix of uses.

Evaluation & Findings: The project site is located within an existing industrial area and will allow for compatible surrounding uses on Energy Cove Court

(XII) Results in poor accessibility among linked or related land uses.

Evaluation & Findings: The project site shall provide accessibility to to Energy Cove Court.

(XIII) Results in the loss of significant amounts of functional open space.

Evaluation & Findings: This property was guided for commercial uses and open space shall be preserved pursuant to the Site Development Requirements in the Land Development Code.

In addition to the preceding urban sprawl indicators, Florida Statutes Section 163.3177 also establishes eight (8) "Urban Form" criteria. An amendment to the Future Land Use Map is presumed to not be considered urban sprawl if it meets four (4) of the (8) urban form criteria. These urban form criteria, and an evaluation of each as each may relate to this application, are provided below. The applicant has provided an analysis of the application's consistency with Section 163.3177 within the application materials and contends that the proposed amendment will not encourage urban sprawl by showing it meets four of the eight urban form criteria.

1. Directs or locates economic growth and associated land development to geographic areas of the community in a manner that does not have an adverse impact on and protects natural resources and ecosystems.

Evaluation & Findings: The project site is located within an existing industrial development where development will occur in developed areas as opposed to undeveloped areas. The proposed development directs the growth within the urban area.

2. Promotes the efficient and cost-effective provision or extension of public infrastructure and services.

Evaluation & Findings: This application, as well as the companion rezoning application, will utilize existing public infrastructure and existing services.

3. Promotes walkable and connected communities and provides for compact development and a mix of uses at densities and intensities that will support a range of housing choices and a multimodal transportation system, including pedestrian, bicycle, and transit, if available.

Evaluation & Findings: This development is for industrial uses only and will not negatively impact multimodal facilities.

4. Promotes conservation of water and energy.

Evaluation & Findings: The project site is located within an urban area with surrounding commercial development. Development in core urban areas reduces the pressure to develop in areas further outside of the urban areas.

5. Preserves agricultural areas and activities, including silviculture, and dormant, unique, and prime farmlands and soils.

Evaluation & Findings: The project site is located within an urban area with surrounding development. There are no adjacent agricultural areas and activities. Development in core urban areas reduces the pressure to develop in agricultural areas.

6. Preserves open space and natural lands and provides for public open space and recreation needs.

Evaluation & Findings: Open Space shall be provided for as part of the landscape and tree preservation requirements as set forth in the Land Development Regulations.

7. Creates a balance of land uses based upon demands of the residential population for the nonresidential needs of an area.

Evaluation & Findings: The proposed site is adjacent to industrial uses, providing a balance of land uses to the area.

8. Provides uses, densities, and intensities of use and urban form that would remediate an existing or planned development pattern in the vicinity that constitutes sprawl or if it provides for an innovative development pattern such as transit-oriented developments or new towns as defined in s. 163.3164.

Evaluation & Findings: N/A

CONSISTENCY WITH THE COMPREHENSIVE PLAN

The following Goals, Objectives, and Policies (GOPs) support the proposed amendment to the Future Land Use Map of the City of Green Cove Springs Comprehensive Plan:

FUTURE LAND USE ELEMENT

Goal 1: To develop and maintain land use programs and activities to provide for the most appropriate use of the land and direct growth to suitable areas while protecting the public, health, safety and welfare.

Policy 1.1.1 e: Industrial (IND): This Future Land Use Designation is intended to accommodate primarily light and heavy manufacturing, distribution, and storage, in addition to heavy commercial and professional office uses.

- iii. Density: NA
- iv. Maximum Intensity: 0.6 FAR

Policy 1.2.6. The City shall require new development to connect to the City’s centralized potable water and sanitary sewer system.

Policy 1.2.7. The City shall condition development orders upon the provision of essential facilities and services which meet and would not result in the failure of each service’s established level of service (LOS).

TRANSPORTATION ELEMENT

Objective 2.8 Site Development Traffic Circulation: The City shall require that all major developments and planned unit developments provide a circulation system which: provides adequate access to the major roadway network; provides for sound design of local and collector streets within such development....

SANITARY SEWER, SOLID WASTE, DRAINAGE, POTABLE WATER, AND AQUIFER RECHARGE ELEMENT

Objective 4.6: Future development shall be required to connect with central sewer and water systems and provide drainage facilities which maximize the use of existing facilities and discourage urban sprawl.

PUBLIC FACILITIES IMPACT

Traffic Impacts

Land Use ¹ (ITE)	Units	Daily		AM Peak		PM Peak	
		Rate	Trips	Rate	Trips	Rate	Trips
Existing							
Residential Condo/TH (ITE 230)	72	6.65	479	0.62	45	0.62	45

1. Source: Institute of Transportation Engineers: Trip Generation Manual 9th Edition

Land Use ¹ (ITE)	Square Footage/Dwelling Units	Daily		AM Peak		PM Peak	
		Rate	Trips	Rate	Trips	Rate	Trips
Maximum Development Potential Based on Proposed FLU							
Industrial Park (ITE 130)	94,000	6.96	655	.86	81	.86	81

Conclusion: The maximum development of 94,000 square feet would require a traffic study to be reviewed at the time of submittal of the site development plan. The applicant has submitted for site plan review and is proposing a 57,000 square warehouse building, which would generate approximately 23 peak hour trips and would be below the threshold of requiring a traffic study.

Potable Water Impacts

System Category	Gallons Per Day (GPD)
Current Permitted Capacity ¹	4,200,000
Less actual Potable Water Flows ¹	1,013,000
Residual Capacity¹	3,187,000
Projected Potable Water Demand from Proposed Project ²	10,034
Residual Capacity after Proposed Project	3,176,966

1. Source: City of Green Cove Springs Public Works Department

2. Source: City of Green Cove Springs Comprehensive Plan. Formula Used: .11 gallons per 1,000 sq ft.

Sanitary Sewer Impacts – South Plant WWTP

System Category	Gallons Per Day (GPD)
Current Permitted Capacity ¹	350,000
Current Loading ¹	267,000
Committed Loading ¹	37,000
Residual Capacity¹	46,000
Percentage of Permitted Design Capacity Utilized ¹	95%
Projected Sewer Demand from Proposed Project ²	10,034
Residual Capacity after Proposed Project	35,966

1. Source: City of Green Cove Springs Public Works Department

2. Source: City of Green Cove Springs Comprehensive Plan. Formula Used: .11 gallons per 1,000 square feet

Conclusion: The project site is served by the South Plant Wastewater Treatment Plant (WWTP). As shown in the table above, when factoring in the current loading and the committed loading, this WWTP has the capacity to handle the estimated impacts resulting from the proposed application.

Solid Waste Impacts

Conclusion: The City of Green Cove Springs' does not provide solid waste for nonresidential users.

Future Land Use and Zoning District Comparisons

Existing Future Land Use

Mixed Use (MU): This FLUC encompasses lands along major transportation corridors and is intended to accommodate primarily nonresidential uses including light and heavy commercial uses, lodging, and professional offices, interspersed with medium density residential uses and public/semi-public facilities.

- i. Maximum Density: 20 du/ac
- ii. Maximum Intensity: 1.0 FAR

Proposed Future Land Use

Industrial (IND): This Future Land Use Designation is intended to accommodate primarily light and heavy manufacturing, distribution, and storage, in addition to heavy commercial and professional office uses.

- iii. Density: NA
- iv. Maximum Intensity: 0.6 FAR

Existing Zoning District

The residential high density, R-3 zoning category district is intended to provide for multiple-family housing areas with densities of eight to 12 dwelling units per acre. This district should be situated so that it is well served by public services and have direct access to collector street or major thoroughfares.

Careful attention must be given to traffic generation from this district to minimize impact on single-family districts.

Proposed Zoning District

The M-2 industrial district is intended to be for an industrial park. A variety of industrial and supported uses are allowed.

STAFF COMMENTS

This property is part of the Energy Cove Industrial Park. The surrounding uses within the Park are industrial uses. Changing the Future Land Use Designation and the Zoning back to Industrial at this location is compatible with the surrounding uses. The property to the south of the property is to be developed as R-3 multifamily apartments. This land use and zoning change will create a separation of uses by ensuring that the subject property will have access off of Energy Cove Court as is consistent with the adjacent properties and will comply with the buffering requirements to the residential property to the north, which will have access off of Cooks Lane and t

Staff recommends approval of the Future Land Amendment from Residential High Density to Industrial and Rezoning request from R-3 Residential Multifamily to C-2 General Commercial based upon the Urban Sprawl Analysis and Compliance with the Comprehensive Plan and compatibility with the surrounding area.

Attachments include:

- 1. Ordinance O-20-2023
- 2. Ordinance O-21-2023
- 3. FLUM Application
- 4. Rezoning Application
- 5. Utility Easement

STAFF RECOMMENDATION

Staff recommends approval of the future land use amendment and rezoning.

RECOMMENDED MOTIONS:

Future Land Use Amendment

Motion to recommend approval to City Council approval of Ordinance O-20-2023 to amend the Future Land Use of the property described therein from Mixed Use to Industrial.

Rezoning

Motion to recommend approval to City Council approval of Ordinance O-21-2023 to rezone the property described therein from R-3 Multifamily Residential to M-2 Heavy Industrial.

ORDINANCE NO. O-20-2023

AN ORDINANCE OF THE CITY COUNCIL OF GREEN COVE SPRINGS, FLORIDA AMENDING THE FUTURE LAND USE MAP FOR ±3.63 ACRES OF PROPERTY LOCATED AT COOKS LANE, IDENTIFIED AS A PORTION OF TAX ID NUMBER 016562-000-00, MORE PARTICULARLY DESCRIBED BY EXHIBIT “A”, FROM MU, MIXED USE; TO IND, INDUSTRIAL, TO PROVIDING FOR REPEALER, SEVERABILITY AND SETTING AN EFFECTIVE DATE.

RECITALS

WHEREAS, an application for a small-scale comprehensive plan amendment, as described below, to the Comprehensive Plan Future Land Use Map has been filed with the City; and

WHEREAS, a duly advertised public hearing was conducted on the proposed rezoning on June 27, 2023 by the Planning and Zoning Board, sitting as the Local Planning Agency (LPA) and the LPA reviewed and considered comments received during the public hearing concerning the application and made its recommendation for approval to the City Council; and,

WHEREAS, the City Council considered the recommendations of the LPA at a duly advertised public hearing on July 11 and August 1, 2023 and provided for and received public participation; and,

WHEREAS, the City Council has determined and found said application for the amendment, to be consistent with the City of Green Cove Springs Comprehensive Plan and Land Development Regulations; and,

WHEREAS, for reasons set forth in this Ordinance that is hereby adopted and incorporated as findings of fact, that the Green Cove Springs City Council finds and declares that the enactment of this amendment is in the furtherance of the public health, safety, morals, order, comfort, convenience, appearance, prosperity, or general welfare.

NOW, THEREFORE BE IT ENACTED BY THE CITY COUNCIL OF GREEN COVE SPRINGS, FLORIDA AS FOLLOWS:

Section 1. Findings of Fact and Conclusions of Law.

1. The above recitals are true and correct and incorporated herein by reference.
2. The proposed Future Land Use Map amendment is consistent with the Comprehensive Plan.

3. The amendment will not cause a reduction in the adopted level of service standards for transportation, potable water, sanitary sewer, solid waste, stormwater, or recreation.

A portion of Tax Parcel Number 38-06-26-016562-001-01 in accordance with the map found in Exhibit “A” and the legal description found in Exhibit “B” attached hereto.

Section 2. Comprehensive Plan Future Land Use Map Amended. The Comprehensive Plan Future Land Use Map is hereby amended from Mixed Use Highway to Residential High Density on a portion of Tax Parcel Number 38-06-26-016562-000-00 in accordance with the legal description found in Exhibit “A” and map found in Exhibit “B” attached hereto.

Section 3. Ordinance to be Construed Liberally. This ordinance shall be liberally construed in order to effectively carry out the purposes hereof which are deemed to be in the best interest of the public health, safety and welfare of the citizens and residents of Green Cove Springs, Florida.

Section 3. Repealing Clause. All ordinance or parts of ordinances in conflict herewith are, to the extent of the conflict, hereby repealed.

Section 4. Severability. It is the declared intent of the City Council of the City of Green Cove Springs that, if any section, sentence, clause, phrase, or provision of this ordinance is for any reason held or declared to be unconstitutional, void, or inoperative by any court or agency of competent jurisdiction, such holding of invalidity or unconstitutionality shall not affect the remaining provisions of this ordinance, and the remainder of the ordinance after the exclusions of such part or parts shall be deemed to be valid.

Section 5. Effective Date. The effective date of this plan amendment, if the amendment is not timely challenged, shall be 31 days after the state land planning agency notifies the City that the plan amendment package is complete in accordance with Chapter 163.3184 F.S. If timely challenged, this amendment shall become effective on the date the state land planning agency, or the Administrative Council enters a final order determining this adopted amendment to be in compliance in accordance with Chapter 163.3184 F.S. No development orders, development permits, or land uses dependent on this amendment may be issued or commenced before this plan amendment has become effective.

INTRODUCED AND APPROVED AS TO FORM ONLY ON THE FIRST READING BY THE CITY COUNCIL OF THE CITY OF GREEN COVE SPRINGS, FLORIDA, ON THIS 11th DAY OF JULY 2023.

CITY OF GREEN COVE SPRINGS, FLORIDA

Constance W. Butler, Mayor

ATTEST:

Erin West, City Clerk

PASSED ON SECOND AND FINAL READING BY THE CITY COUNCIL OF THE CITY OF GREEN COVE SPRINGS, FLORIDA, THIS 1ST DAY OF AUGUST 2023.

CITY OF GREEN COVE SPRINGS, FLORIDA

Constance W. Butler, Mayor

ATTEST:

Erin West, City Clerk

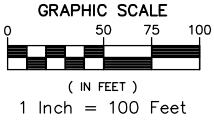
APPROVED AS TO FORM:

L. J. Arnold, III, City Attorney

THIS IS NOT A SURVEY

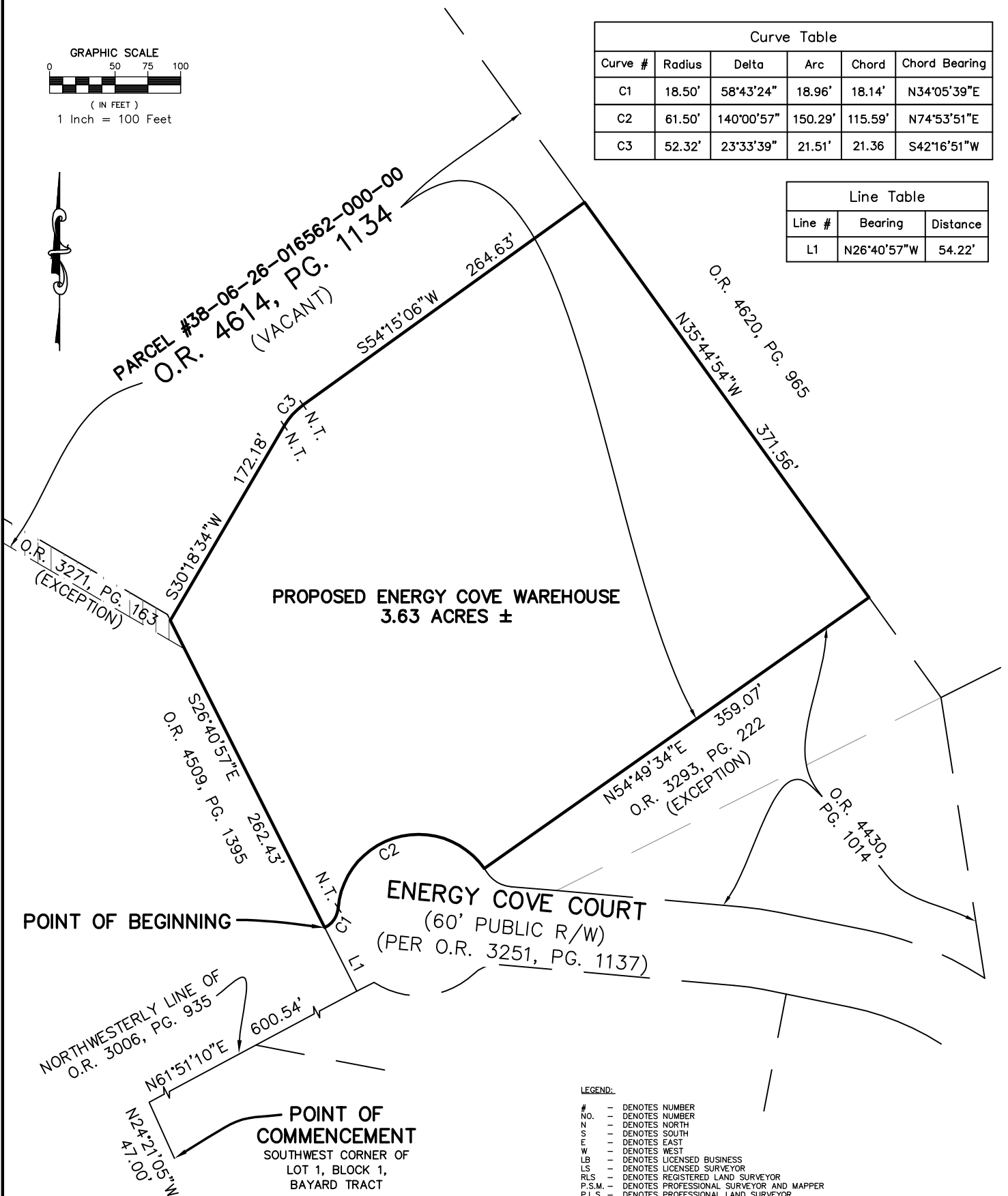
Item # 2.

SKETCH AND LEGAL DESCRIPTION



Curve Table					
Curve #	Radius	Delta	Arc	Chord	Chord Bearing
C1	18.50'	58°43'24"	18.96'	18.14'	N34°05'39"E
C2	61.50'	140°00'57"	150.29'	115.59'	N74°53'51"E
C3	52.32'	23°33'39"	21.51'	21.36'	S42°16'51"W

Line Table		
Line #	Bearing	Distance
L1	N26°40'57"W	54.22'



- LEGEND:**
- # - DENOTES NUMBER
 - No. - DENOTES NUMBER
 - N - DENOTES NORTH
 - S - DENOTES SOUTH
 - E - DENOTES EAST
 - W - DENOTES WEST
 - LB - DENOTES LICENSED BUSINESS
 - LS - DENOTES LICENSED SURVEYOR
 - RLS - DENOTES REGISTERED LAND SURVEYOR
 - P.S.M. - DENOTES PROFESSIONAL SURVEYOR AND MAPPER
 - P.L.S. - DENOTES PROFESSIONAL LAND SURVEYOR
 - LLC - DENOTES LIMITED LIABILITY COMPANY
 - INC. - DENOTES INCORPORATED
 - CORP. - DENOTES CORPORATION
 - OR - DENOTES OFFICIAL RECORDS BOOK
 - PG - DENOTES PAGE
 - MB - DENOTES MAP BOOK
 - FLA - DENOTES FLORIDA
 - R/W - DENOTES RIGHT-OF-WAY
 - N.T. - DENOTES NON TANGENT

NOTE:
THIS SKETCH AND LEGAL DESCRIPTION CONSISTS OF TWO (2) SHEETS AND IS NOT FULL AND/OR COMPLETE WITHOUT ALL BOTH SHEETS.

WIGGINS CONSTRUCTION COMPANY

PROPOSED ENERGY COVE WAREHOUSE

SCALE 1" = 100'	DATE 4/28/23	DRAWN DBG	CALCED DBG	CHECKED TPH
JOB No. 1876-22-001	SECTION 38	TOWNSHIP 6 SOUTH	RANGE 26 EAST	

I hereby certify that this Sketch and Legal Description complies with the latest Standards of Practice as set forth by the Florida Board of Professional Surveyors and Mappers, Chapter 5J-17, Florida Administrative Code and is not valid without the signature and the original raised or digital seal of a Florida licensed Surveyor and Mapper.

BARTRAM TRAIL SURVEYING, INC.

LAND SURVEYORS - PLANNERS - LAND DEVELOPMENT CONSULTANTS
1501 COUNTY ROAD 315, SUITE 106
GREEN COVE SPRINGS, FL 32043
(904) 284-2224 FAX (904) 284-2258
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D R A F T

THOMAS P. HUGHES, JR.
PROFESSIONAL LAND SURVEYOR
STATE OF FLORIDA # L.S. 3507
CERTIFICATE OF AUTHORIZATION No. LB 6991

F:\P22\Wiggins Construction - 1876-22-001 - Cooks Lane\1876-22-001 Cooks Lane - Warehouse S&D.dwg

LEGAL DESCRIPTION: PROPOSED ENERGY COVE WAREHOUSE

A parcel of land being a portion of that certain property as recorded in Official Records Book 4614, page 1134 of the Public Records of Clay County, Florida; being a part of Lot 1, Block 1, Bayard Tract, Clay County, Florida, according to map by Charles F. Smith, recorded in the Public Records of said county in Deed Book "J", pages 273 and 274, said parcel also being a portion of Section 29, Block 1, according to plat of Bayard Tract recorded in Plat Book 1, page 34 of said Public records and lying in Section 38, Township 6 South, Range 26 East, said Clay County, said parcel being more particularly described as follows:

Commence at the southwest corner of said Lot 1, Block 1, Bayard Tract; thence on the west line thereof, N24°21'05"W, 47.00 feet to the northwesterly line of those lands described in Official Records Book 3006, page 935 of said public records; thence on said northwesterly line, and on a northeasterly extension thereof, N61°51'10"E, 600.54 feet; thence N26°40'57"W, 54.22 feet to the most southerly corner of lands described in Official Records 4614, page 1134 of said Public Records said corner being on the northerly right of way line of Energy Cove Court as recorded in Official Records Book 3251, page 1137 of said Public Records and the Point of Beginning of the parcel described herein;

Thence along said northerly right of way line run the following 2 courses: 1) northeasterly, along the arc of a curve concave northwesterly and having a radius of 18.50 feet, said curve subtended by a chord bearing and distance of N34°05'39"E, 18.14 feet, an arc distance of 18.96 feet to a point on a non-tangent reverse curve concave to the South and having a radius of 61.50 feet; 2) thence Easterly along the arc of said curve, subtended by a chord bearing and distance of N74°53'51"E, 115.59 feet, an arc distance of 150.29 feet to the northwesterly line of lands described in Official Records 3293, page 222 of said Public Records; thence along the northwesterly line of said Official Records 3293, page 222 of said Public Records, N54°49'34"E, 359.07 feet to the easterly line of lands described in said Official Records 4614, page 1134; thence along said easterly line, N35°44'54"W, 371.56 feet; thence departing said line S54°15'06"W, 264.63 feet to a point on a non-tangent curve concave to the Southeast and having a radius of 52.32 feet; thence Southwesterly along the arc of said curve, subtended by a chord bearing and distance of S42°16'51"W, 21.36 feet, an arc distance of 21.51 feet; thence S30°18'34"W, 172.18 feet to the westerly line of said lands described in Official Records 4614, PG. 1134; thence along said easterly line S26°40'57"E, 262.43 feet to the POINT OF BEGINNING of the parcel herein described.

Containing 3.63 acres, more or less.

Said lands situated, lying and being in Clay County, Florida.

General Notes:

1. Bearings shown hereon are based upon the westerly line of that parcel of land as described in Official Records Book 4614, page 1134 of the Public Records of Clay County, Florida; having a bearing of N26°40'57"W, as determined by the Global Navigation Satellite System (Florida State Plane – East Zone – NAD 83).
2. Additions, deletions and/or any written information added to this map and/or report is prohibited and is not authorized by the signing surveyor.
3. This map is intended to be viewed at a scale of 1"=100' or smaller.
4. This survey is being provided solely for the use of the current parties and no certification has been created, express or implied to copies of this survey and is not transferable. Any copies of this survey that are used in any subsequent transactions shall be null and void if they do not bear the embossed raised seal of the signing surveyor. The use of such non-embossed documents releases the signing surveyor of any further claims of liability of any subsequent transactions and is only valid up to 60 days after the initial signing date.
5. Dimensions are in feet and decimal parts thereof.
6. No instruments of record reflecting easements, rights-of-way and/or ownership were furnished to or pursued by the undersigned, other than those shown hereon. Easements or restrictions of record other than those shown hereon may exist.
7. This survey is only for the lands as described. it is not a certificate of title, zoning, easements or freedom of encumbrances.
8. This survey is based on information as provided by the client.

NOTE:

THIS SKETCH AND LEGAL DESCRIPTION CONSISTS OF TWO (2) SHEETS AND IS NOT FULL AND/OR COMPLETE WITHOUT BOTH SHEETS.

WIGGINS CONSTRUCTION COMPANY

PROPOSED ENERGY COVE WAREHOUSE

BARTRAM TRAIL SURVEYING, INC.

LAND SURVEYORS - PLANNERS - LAND DEVELOPMENT CONSULTANTS

1501 COUNTY ROAD 315, SUITE 106

GREEN COVE SPRINGS, FL 32043

(904) 284-2224 FAX (904) 284-2258

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ORDINANCE NO. O-21-2023

AN ORDINANCE OF THE CITY COUNCIL OF GREEN COVE SPRINGS, FLORIDA REZONING ±3.63 ACRES OF PROPERTY LOCATED AT COOKS LANE, IDENTIFIED AS A PORTION OF TAX ID NUMBER 016562-000-00, MORE PARTICULARLY DESCRIBED BY EXHIBIT “A”, FROM R-3, RESIDENTIAL HIGH DENSITY, TO M-2, HEAVY INDUSTRIAL; PROVIDING FOR REPEALER, SEVERABILITY AND SETTING AN EFFECTIVE DATE.

RECITALS

WHEREAS, an application for a small-scale comprehensive plan amendment, to amend Comprehensive Plan Future Land Use Map from Mixed Use to Industrial on the subject property, as described below, has been filed with the City; and

WHEREAS, the City approved the Future Land Use Map amendment for the subject property such that it will be designated as Industrial on the Future Land Use Map of the City, and

WHEREAS, the City has received a request to rezone the subject parcel from Residential High Density R-3 to Heavy Industrial M-2; and

WHEREAS, the City has the authority pursuant to its home rule and other statutory powers to rezone properties within the City; and

WHEREAS, a duly advertised public hearing was conducted on the proposed rezoning on June 27, 2023 by the Planning and Zoning Board, sitting as the Local Planning Agency (LPA) and the LPA reviewed and considered comments received during the public hearing concerning the application and made its recommendation for approval to the City Council; and,

WHEREAS, the City Council considered the recommendations of the LPA at a duly advertised public hearing on July 11 and August 1, 2023 and provided for and received public participation; and,

WHEREAS, the City Council has determined and found said application for the amendment, to be consistent with the City of Green Cove Springs Comprehensive Plan and Land Development Regulations; and,

WHEREAS, for reasons set forth in this Ordinance that is hereby adopted and incorporated as findings of fact, that the Green Cove Springs City Council finds and declares that the enactment of this amendment is in the furtherance of the public health, safety, morals, order, comfort, convenience, appearance, prosperity, or general welfare.

NOW, THEREFORE BE IT ENACTED BY THE CITY COUNCIL OF GREEN COVE SPRINGS, FLORIDA AS FOLLOWS:

Section 1. Findings of Fact and Conclusions of Law.

1. The above recitals are true and correct and incorporated herein by reference.
2. The proposed rezoning is consistent with the Comprehensive Plan.
3. The proposed rezoning will not cause a reduction in the adopted level of service standards for transportation, potable water, sanitary sewer, solid waste, stormwater, or recreation.

Section 2. Zoning Map Amended. The Zoning Map is hereby amended for the following property from Residential High Density R-3 to Heavy Industrial M-2:

A portion of Tax Parcel Number 38-06-26-016562-001-01 in accordance with the map found in Exhibit “A” and the legal description found in Exhibit “B” attached hereto.

Section 3. Ordinance to be Construed Liberally. This ordinance shall be liberally construed in order to effectively carry out the purposes hereof which are deemed to be in the best interest of the public health, safety and welfare of the citizens and residents of Green Cove Springs, Florida.

Section 3. Repealing Clause. All ordinance or parts of ordinances in conflict herewith are, to the extent of the conflict, hereby repealed.

Section 4. Severability. It is the declared intent of the City Council of the City of Green Cove Springs that, if any section, sentence, clause, phrase, or provision of this ordinance is for any reason held or declared to be unconstitutional, void, or inoperative by any court or agency of competent jurisdiction, such holding of invalidity or unconstitutionality shall not affect the remaining provisions of this ordinance, and the remainder of the ordinance after the exclusions of such part or parts shall be deemed to be valid.

Section 5. Effective Date. The effective date of this plan amendment, if the amendment is not timely challenged, shall be 31 days after the state land planning agency notifies the City that the plan amendment package is complete in accordance with Chapter 163.3184 F.S. If timely challenged, this amendment shall become effective on the date the state land planning agency, or the Administrative Council enters a final order determining this adopted amendment to be in compliance in accordance with Chapter 163.3184 F.S. No development orders, development permits, or land uses dependent on this amendment may be issued or commenced before this plan amendment has become effective.

INTRODUCED AND APPROVED AS TO FORM ONLY ON THE FIRST READING BY THE CITY COUNCIL OF THE CITY OF GREEN COVE SPRINGS, FLORIDA, ON THIS 11th DAY OF JULY 2023.

CITY OF GREEN COVE SPRINGS, FLORIDA

Constance W. Butler, Mayor

ATTEST:

Erin West, City Clerk

PASSED ON SECOND AND FINAL READING BY THE CITY COUNCIL OF THE CITY OF GREEN COVE SPRINGS, FLORIDA, THIS 1ST DAY OF AUGUST 2023.

CITY OF GREEN COVE SPRINGS, FLORIDA

Constance W. Butler, Mayor

ATTEST:

Erin West, City Clerk

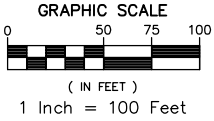
APPROVED AS TO FORM:

L. J. Arnold, III, City Attorney

THIS IS NOT A SURVEY

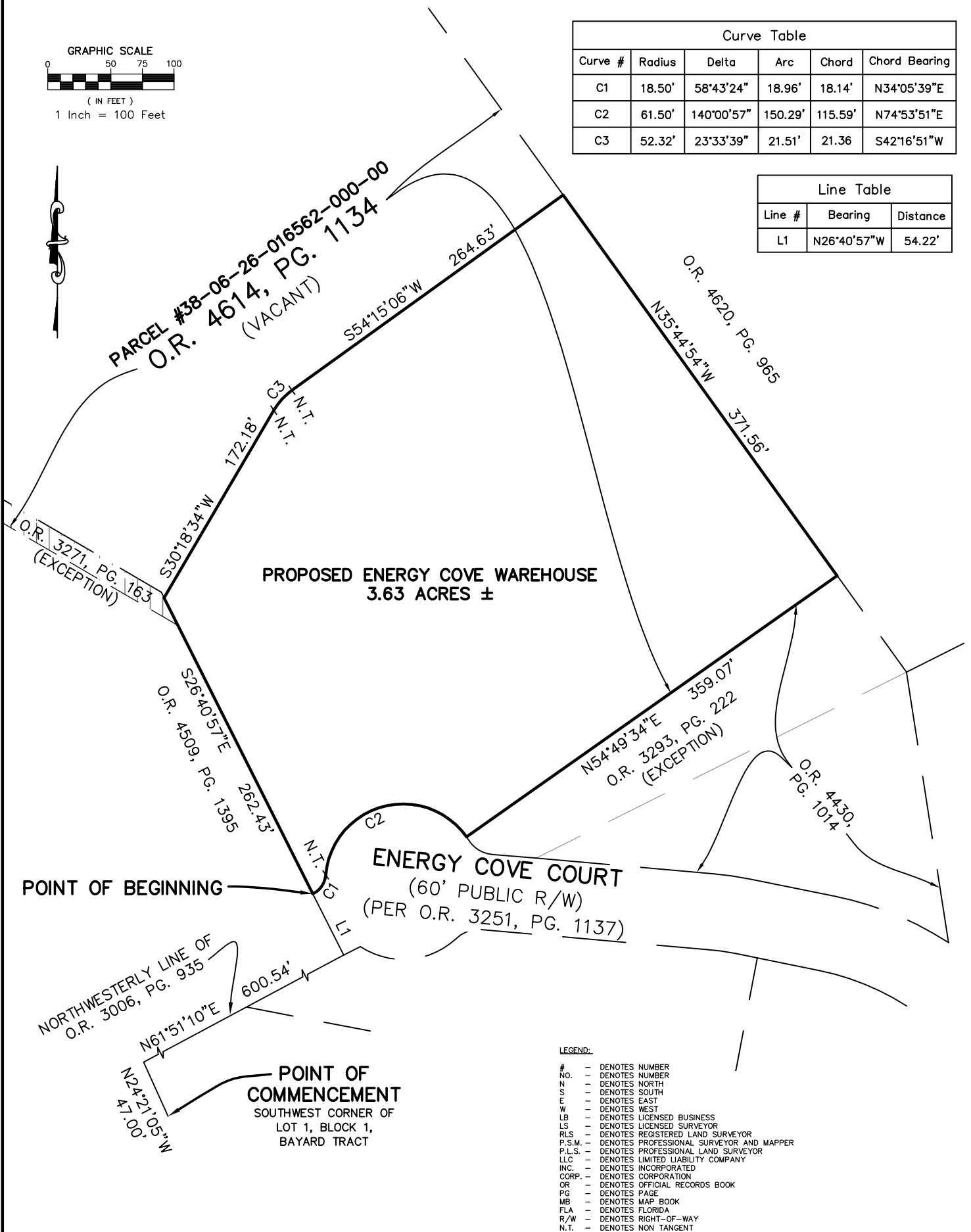
Item # 2.

SKETCH AND LEGAL DESCRIPTION



Curve Table					
Curve #	Radius	Delta	Arc	Chord	Chord Bearing
C1	18.50'	58°43'24"	18.96'	18.14'	N34°05'39"E
C2	61.50'	140°00'57"	150.29'	115.59'	N74°53'51"E
C3	52.32'	23°33'39"	21.51'	21.36'	S42°16'51"W

Line Table		
Line #	Bearing	Distance
L1	N26°40'57"W	54.22'



- LEGEND:**
- # - DENOTES NUMBER
 - No. - DENOTES NUMBER
 - N - DENOTES NORTH
 - S - DENOTES SOUTH
 - E - DENOTES EAST
 - W - DENOTES WEST
 - LB - DENOTES LICENSED BUSINESS
 - LS - DENOTES LICENSED SURVEYOR
 - RLS - DENOTES REGISTERED LAND SURVEYOR
 - P.S.M. - DENOTES PROFESSIONAL SURVEYOR AND MAPPER
 - P.L.S. - DENOTES PROFESSIONAL LAND SURVEYOR
 - LLC - DENOTES LIMITED LIABILITY COMPANY
 - INC. - DENOTES INCORPORATED
 - CORP. - DENOTES CORPORATION
 - OR - DENOTES OFFICIAL RECORDS BOOK
 - PG - DENOTES PAGE
 - MB - DENOTES MAP BOOK
 - FLA - DENOTES FLORIDA
 - R/W - DENOTES RIGHT-OF-WAY
 - N.T. - DENOTES NON TANGENT

NOTE:
THIS SKETCH AND LEGAL DESCRIPTION CONSISTS OF TWO (2) SHEETS AND IS NOT FULL AND/OR COMPLETE WITHOUT ALL BOTH SHEETS.

WIGGINS CONSTRUCTION COMPANY

PROPOSED ENERGY COVE WAREHOUSE

SCALE 1" = 100'	DATE 4/28/23	DRAWN DBG	CALCED DBG	CHECKED TPH
JOB No. 1876-22-001	SECTION 38	TOWNSHIP 6 SOUTH	RANGE 26 EAST	

I hereby certify that this Sketch and Legal Description complies with the latest Standards of Practice as set forth by the Florida Board of Professional Surveyors and Mappers, Chapter 5J-17, Florida Administrative Code and is not valid without the signature and the original raised or digital seal of a Florida licensed Surveyor and Mapper.

BARTRAM TRAIL SURVEYING, INC.

LAND SURVEYORS - PLANNERS - LAND DEVELOPMENT CONSULTANTS
1501 COUNTY ROAD 315, SUITE 106
GREEN COVE SPRINGS, FL 32043
(904) 284-2224 FAX (904) 284-2258
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D R A F T

THOMAS P. HUGHES, JR.
PROFESSIONAL LAND SURVEYOR
STATE OF FLORIDA # L.S. 3507
CERTIFICATE OF AUTHORIZATION No. LB 6991

F:\P22\Wiggins Construction - 1876-22-001 - Cooks Lane\1876-22-001 Cooks Lane - Warehouse S&D.dwg

LEGAL DESCRIPTION: PROPOSED ENERGY COVE WAREHOUSE

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Containing 3.63 acres, more or less.

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2. Additions, deletions and/or any written information added to this map and/or report is prohibited and is not authorized by the signing surveyor.
3. This map is intended to be viewed at a scale of 1"=100' or smaller.
4. This survey is being provided solely for the use of the current parties and no certification has been created, express or implied to copies of this survey and is not transferable. Any copies of this survey that are used in any subsequent transactions shall be null and void if they do not bear the embossed raised seal of the signing surveyor. The use of such non-embossed documents releases the signing surveyor of any further claims of liability of any subsequent transactions and is only valid up to 60 days after the initial signing date.
5. Dimensions are in feet and decimal parts thereof.
6. No instruments of record reflecting easements, rights-of-way and/or ownership were furnished to or pursued by the undersigned, other than those shown hereon. Easements or restrictions of record other than those shown hereon may exist.
7. This survey is only for the lands as described. it is not a certificate of title, zoning, easements or freedom of encumbrances.
8. This survey is based on information as provided by the client.

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WIGGINS CONSTRUCTION COMPANY

PROPOSED ENERGY COVE WAREHOUSE

BARTRAM TRAIL SURVEYING, INC.

LAND SURVEYORS - PLANNERS - LAND DEVELOPMENT CONSULTANTS

1501 COUNTY ROAD 315, SUITE 106

GREEN COVE SPRINGS, FL 32043

(904) 284-2224 FAX (904) 284-2258

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FOR OFFICE USE ONLY

Item # 2.

Received Date _____

Application #: _____

Acceptance Date: _____

Review Date: SRDT _____ P & Z _____ CC _____

Small Scale Future Land Use Map Amendment Application

A. PROJECT

1. Project Name: Energy Cove FLUM
2. Address of Subject Property: Cooks Lane
3. Parcel ID Number(s): Portion of RE# 016562-000-00
4. Existing Use of Property: Vacant
5. Future Land Use Map Designation : Mixed Use
6. Existing Zoning Designation: R-3
7. Proposed Future Land Use Map Designation: Industrial
8. Acreage (must be 50 acres or less): 3.63

B. APPLICANT

1. Applicant's Status Owner (title holder) Agent
2. Name of Applicant(s) or Contact Person(s): Janis K. Fleet, AICP Title: President
 Company (if applicable): Fleet & Associates Architects/Planners, Inc.
 Mailing address: 11557 Hidden Harbor Way
 City: Jacksonville State: Florida ZIP: 32223
 Telephone: (904) 666-7038 e-mail: jfleet@fleetarchitectsplanners.net
3. If the applicant is agent for the property owner*
 Name of Owner (title holder): Wiggins Investments of North Florida
 Mailing address: 90 Branscomb Road, Suite 17
 City: Green Cove Springs State: Florida ZIP: 32043
 Telephone: (904) 334-5517 e-mail: jor@wigginslaw.net

* Must provide executed Property Owner Affidavit authorizing the agent to act on behalf of the property owner.

C. ADDITIONAL INFORMATION

1. Is there any additional contact for sale of, or options to purchase, the subject property?
 Yes No If yes, list names of all parties involved:
 If yes, is the contract/option contingent or absolute?
 Contingent Absolute

D. ATTACHMENTS

1. Statement of proposed change, including a map showing the proposed Future Land Use Map change and Future Land Use Map designations on surrounding properties
2. A map showing the zoning designations on surrounding properties
3. A current aerial map (Maybe obtained from the Clay County Property Appraiser.)
4. Legal description with tax parcel number.
5. Boundary survey
6. Warranty Deed or the other proof of ownership
7. Fee.
 - a. \$750, plus
 - b. All applications are subject 10% administrative fee and must pay the cost of postage, signs, advertisements and the fee for any outside consultants.

No application shall be accepted for processing until the required application fee is paid in full by the applicant. Any fees necessary for technical review or additional reviews of the application by a consultant will be billed to the applicant at the rate of the reviewing entity. The invoice shall be paid in full prior to any action of any kind on the development application.

All attachments are required for a complete application. A completeness review of the application will be conducted within five (5) business days of receipt. If the application is determined to be incomplete, the application will be returned to the applicant.

I/We certify and acknowledge that the information contained herein is true and correct to the best of my/our knowledge:

<p><u><i>[Signature]</i></u> Signature of Applicant</p> <p><u>Janis King Fleet</u> Typed or printed name and title of applicant</p> <p><u>5/25/23</u> Date</p> <p>State of <u>Florida</u> County of <u>Duval</u></p>	<p>_____ Signature of Co-applicant</p> <p>_____ Typed or printed name of co-applicant</p> <p>_____ Date</p>
--	---

The foregoing application is acknowledged before me this 25 day of May, 2023 by Janis King Fleet, who is/are personally known to me, or who has/have produced FL DL as identification.

NOTARY SEAL
Jonah Mykel Reyes Manansala

Signature of Notary Public, State of Florida





Item # 2.
FOR OFFICE USE ONLY
P Z File # _____
Application Fee: _____
Filing Date: _____ Acceptance Date: _____
Review Date: SRDT _____ P & Z _____ CC _____

Rezoning Application

A. PROJECT

- Project Name: Energy Cove Rezoning
- Address of Subject Property: Cooks Lane
- Parcel ID Number(s): Portion of RE#016562-000-00
- Existing Use of Property: Vacant
- Future Land Use Map Designation: Mixed Use
- Existing Zoning Designation: R-3
- Proposed Zoning Designation: ~~M-2~~ M-2 *J/S. 4/1/2023*
- Acreage: 3.63

B. APPLICANT

- Applicant's Status Owner (title holder) Agent
- Name of Applicant(s) or Contact Person(s): Janis K. Fleet, AICP Title: President
 Company (if applicable): Fleet & Associates Architects/Planners, Inc.
 Mailing address: 11557 Hidden Harbor Way
 City: Jacksonville State: Florida ZIP: 32223
 Telephone: () _____ FAX: () _____ e-mail: jfleet@fleetarchitectsplanners.net
- If the applicant is agent for the property owner*
 Name of Owner (titleholder): Wiggins Investments of North Florida
 Mailing address: 91 Branscomb Rd, Ste 17
 City: Green Cove Springs State: Florida ZIP: 32043
 Telephone: () _____ FAX: () _____ e-mail: joe@wigginslaw.net

* Must provide executed Property Owner Affidavit authorizing the agent to act on behalf of the property owner.

C. ADDITIONAL INFORMATION

- Is there any additional contact for sale of, or options to purchase, the subject property?
 Yes No If yes, list names of all parties involved:

 If yes, is the contract/option contingent or absolute?
 Contingent Absolute

D. ATTACHMENTS

1. Statement of proposed change, including a map showing the proposed zoning change and zoning designations on surrounding properties
2. A current aerial map (Maybe obtained from the Clay County Property Appraiser.)
3. Plat of the property (Maybe obtained from the Clay County Property Appraiser.)
4. Legal description with tax parcel number.
5. Boundary survey
6. Warranty Deed or the other proof of ownership
7. Fee.
 - a. \$750 plus \$20 per acre over 5
 - b. All applications are subject 10% administrative fee and must pay the cost of postage, signs, advertisements and the fee for any outside consultants.

No application shall be accepted for processing until the required application fee is paid in full by the applicant. Any fees necessary for technical review or additional reviews of the application by a consultant will be billed to the applicant at the rate of the reviewing entity. The invoice shall be paid in full prior to any action of any kind on the development application.

All 7 attachments are required for a complete application. A completeness review of the application will be conducted within five (5) business days of receipt. If the application is determined to be incomplete, the application will be returned to the applicant.

I/We certify and acknowledge that the information contained herein is true and correct to the best of my/our knowledge:

[Handwritten Signature]

Signature of Applicant

Signature of Co-applicant

Janis King Fleet

Typed or printed name and title of applicant

Typed or printed name of co-applicant

5/25/23

Date

Date

State of Florida County of Duval

The foregoing application is acknowledged before me this 25 day of May, 2023 by Janis

King Fleet, who is/are personally known to me, or who has/have produced FL DL as identification.

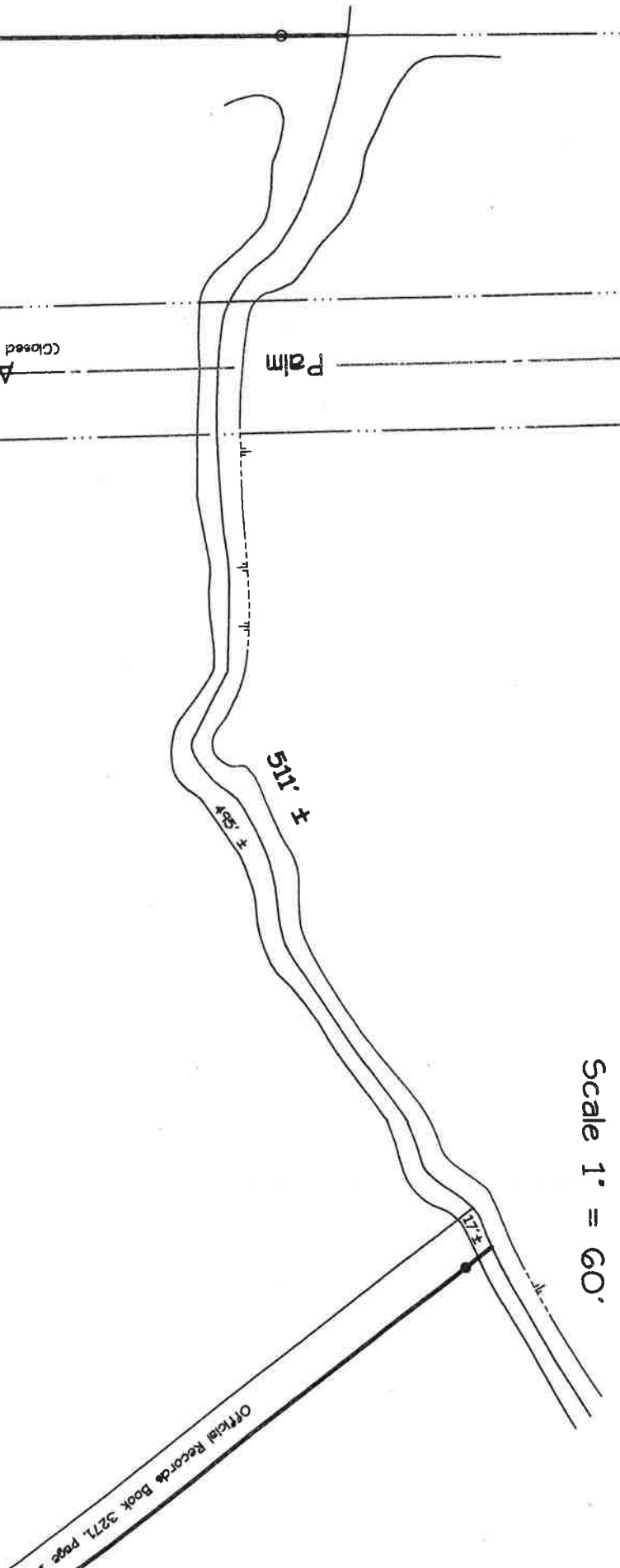
NOTARY SEAL
[Handwritten Signature] Manansala

Signature of Notary Public, State of Florida



For: B+B GCS JK

Scale 1" = 60'



CSX

Transportation

Railroad

Avenue
(Closed as County Commissioners' Minute Book 9, page 3453)

Palm

511 ±

3271

Official Records Book 3271, page 3453

PON
Easement

N 60°08'58" W
15.00'

S 29°51'02" W
8.04'

Official Records Book 3217, page 1662

Easement 'B'

N 61°51'10" E

600.54'

N 24°21'05" W
47.00'

POINT OF COMMENCEMENT
Southwest corner of Lot 1, Block 1 Bayard Tract

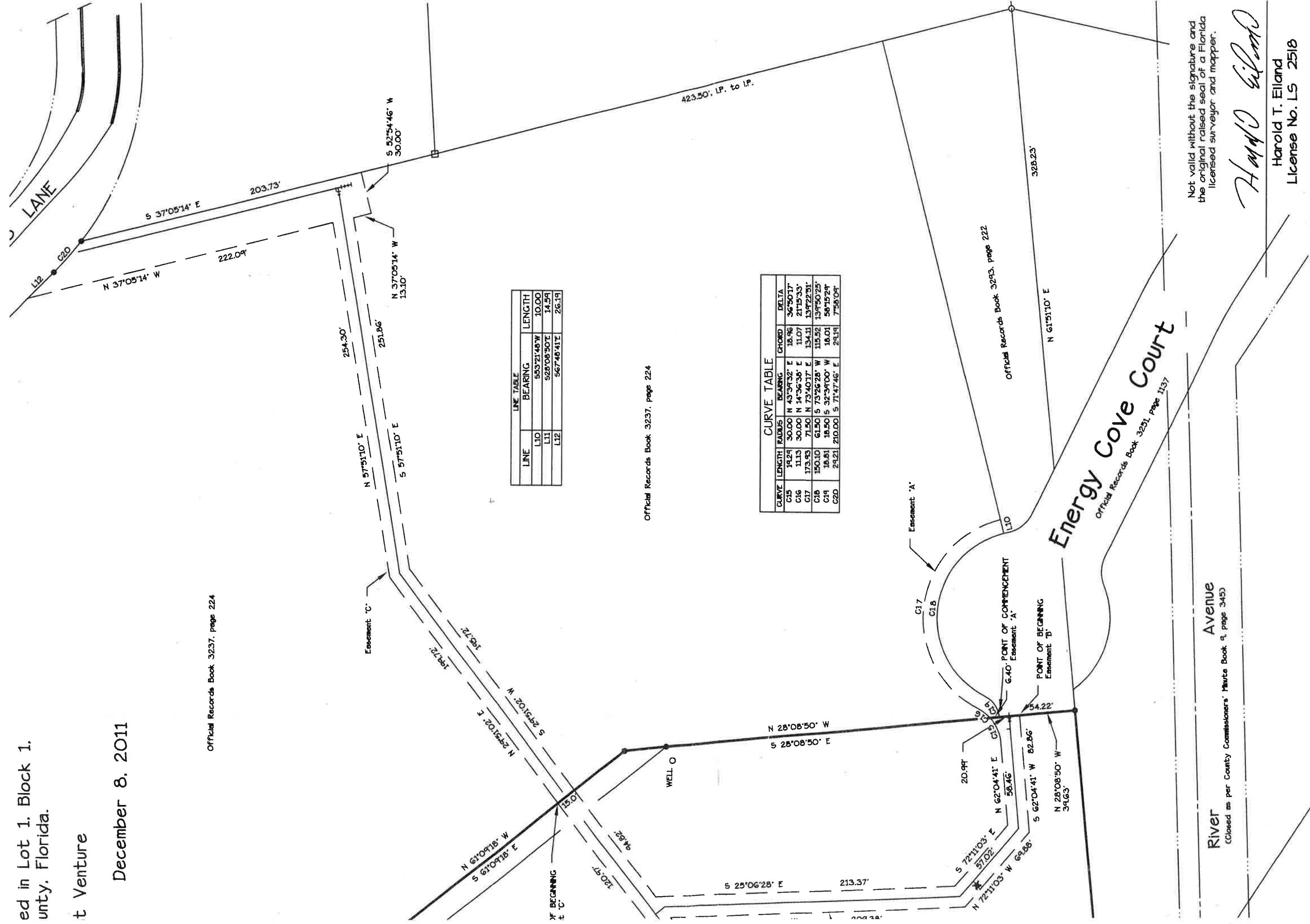
Note:
This map was prepared for descriptiv
only and does not represent an act

ed in Lot 1, Block 1,
nty, Florida.

t Venture

December 8, 2011

Official Records Book 3237, page 224



Not valid without the signature and
the original raised seal of a Florida
licensed surveyor and mapper.

Harold T. Eiland

Harold T. Eiland
License No. LS 2518

Eiland & Associates, Inc.
Professional Surveyors & Mapper
Certificate of Authorization No. LB 1
615 Blanding Boulev
Orange Park, Florida
Telephone 904-272-
65
D



STAFF REPORT

CITY OF GREEN COVE SPRINGS, FLORIDA

TO: Planning and Zoning Commission **MEETING DATE:** June 27, 2023
FROM: Michael Daniels, AICP, Development Services Director
SUBJECT: Ordinance O-23-2023 regarding proposed Landscape Ordinance Revisions

BACKGROUND

The Citizens Advisory Committee, led by Chris Gay have evaluated the City's current Landscape Ordinance and are recommending changes regarding the following areas:

1. Purpose and Intent
2. Definitions
3. Landscape Design and Materials
4. Tree Preservation during development and construction
5. Removal of Tree Requirements
6. Exceptions and Exemptions
7. Conditions for Tree Removal
8. Tree Replacement Requirements
9. List of Recommended Plants

Mr. Gay has made a recommendation to City Council on May 16, 2023, and Council directed to staff to work with Mr. Gay and move forward with proposed revisions.

Included in the packet is:

1. The existing landscape ordinance (pgs 35-46)
2. Mr. Gay's proposed changes to the landscape ordinance (revisions in red, pgs 47-66).
3. Staff comments and proposed amendments to the landscape ordinance (revisions in blue and comments on the right hand side, pgs 67-87).

Due to the size and scope of the proposed changes, staff is recommending that the agenda item be used for discussion purposes and be tabled to the July Planning Commission meeting for official action.

FISCAL IMPACT

N/A

RECOMMENDATION

Motion to table ordinance O-23-2023 to the July 25th Planning Commission meeting.

ARTICLE VI. LANDSCAPING

Sec. 113-242. Purpose and intent.

- (a) Landscape, landscaped areas, buffers and tree protection shall be provided and/or accomplished for all premises in the manner set forth in this article. Required landscaped areas shall be located at or above grade unless otherwise prescribed in these land development regulations. The minimum provision of required landscape, landscaped areas, buffers and trees may be exceeded. Unless otherwise prescribed, the most stringent provision of this schedule shall prevail.
- (b) Landscape, buffer and tree protection requirements serve many purposes in the built-up environment. Landscape provides visual and climatic relief from buildings, structures and broad expanses of pavement; landscape buffers pedestrian and vehicular traffic; and trees provide shade, scenic beauty and natural habitat.
- (c) In general, landscaping and buffers shall be designed to:
 - (1) Enhance the urban development by blending natural and manmade environments.
 - (2) Provide shade for paved surfaces.
 - (3) Separate vehicular and non-vehicular use areas.
 - (4) Define vehicular access ways and access points.
 - (5) Screen vehicular movement, noise and glare.
 - (6) Provide visual and physical separation of potentially incompatible land uses.
 - (7) Incorporate water conservation features such as drought tolerant landscaping and reclaimed water usage as required herein.

(Code 2001, § 98-231; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017 , exh. A(98-231), 1-24-2017)

Sec. 113-243. Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Berm means manmade earth contoured so as to form a mound above the general elevation of the adjacent ground or surface and designed to provide visual interest, screen undesirable view and/or decrease noise.

Buffer means a combination of physical space and vertical elements such as plants, berms, fences, or walls, whose purpose is to separate and screen incompatible land uses from one another.

Caliper means the diameter of a tree measured at breast height (DBH) which is approximately 4½ feet above the ground.

Canopy or shade tree means any tree grown specifically for its shade. The term "canopy or shade tree" usually applies to large trees with spreading canopies. Canopy trees normally grow to a minimum overall height of 30 feet and an average mature crown spread of 25 feet. Oaks, maples, ashes, lindens, and elms are examples canopy/shade trees. Canopy trees shall be a minimum of 2.5 inches caliper DBH.

Clear trunk means the distance between the top of the root ball and the point of the trunk where lateral branching begins.

Commercial means all uses in RPO, CBD, GCN, GCC, C-1, and C-2 zoning districts and commercial development in a PUD zoning district.

Common area means that area which will be maintained by a homeowners association, city service area, or other form of cooperative organization.

Decorative turf means turf used purely for ornamental purposes having no use other than aesthetics.

Drip line means the vertical line running through the outermost portion of the tree crown projected vertically to the ground.

Fully shielded lighting means lighting constructed in such a manner that all light emitted by the fixture, either directly from the lamp or a diffusing element, or indirectly by reflection or refraction from any part of the luminaire, is projected below the horizontal. Such fixtures usually have a flat, horizontally oriented lens and opaque (usually metal) sides. They are often described as shoebox luminaires if the luminaire has a predominantly rectangular form. Fixtures that either have reflecting surfaces or lenses (clear or prismatic) located below the lamp and visible from the side or above and fixtures that can be mounted such that the shielding is ineffective are not considered fully shielded lighting.

Groundcover means a low-growing plant, including turf grass, that, by the nature of its growth characteristics, completely covers the ground and does not usually exceed two feet in height.

Hat racking ortopping means pruning a tree in such a way that the majority of limbs are removed and the tree is left with only a trunk and the stumps of a few primary limbs, with little or no foliage or other trimming or pruning that has the effect of preventing a tree from attaining its natural height and/or shape.

Hedge means a row of evenly spaced shrubs planted to form a continuous unbroken visual screen.

Industrial means all uses in M-1 and M-2 zoning districts and all industrial uses in a PUD zoning district.

Landscape means vegetative and inert materials, including, but not limited to, grass, sod, shrubs, vines, hedges, trees, flowers, berms and complementary structural landscape architectural features such as rocks, fountains, sculpture, decorative walls and tree wells or other hardscape features.

Landscaped area means land area to be provided with landscape.

Landscaped strip orlandscaped island means required landscaped areas containing ground cover, shrubs, trees and/or other landscape used to divide parking areas into individual bays.

Moisture sensingswitch means a device which has the ability to shut off an automatic irrigation controller after receiving a determined amount of rainfall.

Mulch means nonliving organic materials such as wood chips that is customarily placed around the base of trees, shrubs and groundcovers for the purpose of retaining moisture and retarding weed infestation and soil erosion. Also, mulch is used in pathways and play areas.

Native or naturalizing plant species means plant species native to the region or introduced which once established are capable of sustaining growth and reproduction under local climatic conditions, without supplemental watering.

Nonresidential means, pursuant to land use category headings reflected in Schedule B, Permitted Uses, in these land development regulations, all commercial, transient lodging and entertainment, automotive, miscellaneous business and services, industrial and public/semi-public uses.

Parking area means a paved ground surface area used for the temporary parking and maneuvering of vehicles by employees or customers, either for compensation or to provide an accessory service to a commercial, industrial, institutional or residential use.

Paved ground surface area. See section 101-5.

Poodle cut means stripping off the lower branches of a tree and rounding or shearing the ends of the greenery to create an unnatural shape.

Required landscaped area means any landscaped area required in this Code.

Residential means all uses in R-1, R-2, R-3 and PUD zoning districts; one-family, two-family and multiple-family dwellings.

Shrub means a self-supporting woody species of plant characterized by persistent stems and branches springing from the base.

Specimen tree means a particularly fine or unusual example of any tree due to its age, size, rarity, environmental value or exceptional aesthetic quality. A tree may also be designated a specimen due to its association with historic events or persons. A specimen tree cannot be of a species that is unacceptable as referenced in list of exempt trees in this Code.

Tree means a self-supporting woody plant of a species that normally grows to a minimum overall height of 15 feet and has an average mature crown spread greater than 15 feet within the city.

Turf means upper layer of soil bound by grass and plant roots into a thick mat.

Understory, sub-canopy trees means trees which normally grow to a maximum overall height of 15 feet and an average mature crown spread of 15 feet.

Vehicular circulation area means streets, rights-of-way, access ways, parking spaces, parking, loading and unloading and other similar or related functions.

(Code 2001, § 98-232; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017 , exh. A(98-232), 1-24-2017)

Sec. 113-244. Required landscaping.

- (a) Landscape requirements for one-family dwellings and two-family dwellings shall be as follows:
 - (1) At least one canopy tree, 2.5 inches DBH, shall be located in the required front yard of each dwelling unit.
 - (2) The lot shall be sodded, seeded, or appropriate ground cover for erosion control.
- (b) Landscape requirements for nonresidential uses, including multifamily structures with three or more dwelling units, shall be as follows:
 - (1) *Perimeter landscaping.* At a minimum, each site developed for multifamily, institutional, commercial, or industrial uses will contain one shade or canopy tree for each 50 linear feet of the perimeter of the site.
 - (2) *Interior landscaping.* There will be one tree per every 1,500 square feet of the first 10,500 square feet of the project site, then one tree for every 4,000 square feet of the remainder of the project site. The trees shall be an equal proportion of shade (canopy) and understory trees. At a minimum, 15 percent of the site shall be landscaped.
- (c) Landscape adjacent to streets and parcels.
 - (1) A landscaped strip shall be provided along all parcel lines and abutting street right-of-way lines.

- (2) The depth of the required landscaped strip shall be measured and provided parallel to the parcel line or abutting street right-of-way in question.
- (3) Landscaped strips shall be considered to be required landscaped area.
- (4) A landscaped strip may be included in satisfying buffer requirements.
- (d) Landscaped strips shall be provided in the following manner:
- (1) Ten-foot landscaped strip along all rights-of-way.
- (2) Alternative design for properties fronting on all roads classified as arterials, including, but not limited to, U.S. 17 (Orange Avenue), S.R. 16 East (Leonard C. Taylor Parkway) and S.R. 16 West (Ferris Street and Idlewild Avenue), shall comply with the following standards: The developer/property owner shall be responsible for providing a landscape buffer in the area abutting the designated roadway right-of-way lines by meeting one of the following conditions:
- The roadway shall be separated from the back of curb by a six-foot landscaped strip, a six-foot pedestrian walkway, then a six-foot landscaped strip.
 - Building setback shall be calculated from the back of curb or ten-foot landscaped strip along all rights-of-way.
 - Alternative designs. Where natural features or spacing of existing driveways and roadways cause the access requirements of this section affecting placement or planting of landscaped buffers or trees to be physically infeasible, alternate designs may be approved as part of the issuance of the final development order.
- (3) The landscape buffer area shall be planted in the following manner:
- Canopy trees.*
 - One row of canopy trees, 2.5 inches DBH at planting. For 50 percent of the canopy trees, two sub-canopy/understory trees may be substituted for each canopy tree.
 - The trees shall be planted every 50 feet and staggered so as to be midway between each other, and equal distance between each row and right-of-way and/or parcel line. Trees shall be evenly spaced. The tree spacing may be altered with approval of the development services, provided the total number of trees is provided.
 - Sub-canopy/understory trees.* A minimum of four sub-canopy/understory trees per 100 feet of frontage shall be planted in and about each access point and intersection.
 - Hedges.* When off-street parking, loading, unloading and vehicular circulation areas are to be located adjacent to the street right-of-way, a dense hedge of evergreen-type shrubs shall be provided in the following manner:
 - At initial planting and installation, shrubs shall be at least 24 inches in height and shall be planted at least 36 inches or less on center.
 - The hedge shall be planted four feet or more from the tree trunks.
 - Within two years of initial planting and installation, shrubs shall have attained and be maintained at a minimum height of three feet and shall provide an opaque vegetative screen between the street and the use of the premises.
 - In lieu of a vegetative hedge, the use of vegetated berms or other appropriate landscape materials in a manner that results in the visual separation of street right-of-way can be approved by the development services director.

- d. *Shrubs.*
1. Buffer areas, not adjacent to a street right-of-way, shall include nine shrubs for every 100 linear feet of the parcel line
 2. Shrubs shall be at least 24 inches in height at the time of planting.
- (e) Groundcover. The buffer area shall be planted with groundcover minimum of 18 inches on center or solid grass sod, unless natural area to remain.
- (Code 2001, § 98-233; Ord. No. O-01-2000, § 6.06.02, 6-6-2000; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017, exh. A(98-233), 1-24-2017)

Sec. 113-245. Exemptions and exceptions to landscape requirements.

Interior landscaping for parking garages or other vehicle use areas contained entirely with a roofed and walled structure. Landscaping shall be provided around the perimeter of the structures.

(Code 2001, § 98-234; Ord. No. O-01-2000, § 6.06.01, 6-6-2000; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017, exh. A(98-234), 1-24-2017)

Sec. 113-246. Parking area landscaping.

The requirements of this section apply to all development, unless exempted:

- (1) *Internal landscape area.*
- a. Minimum required land area for required landscaped areas not in a parking area. Each required landscaped area shall contain a minimum land area of 200 square feet.
 - b. The minimum required internal landscaped area for parking areas shall cover ten percent of the parking area.
 - c. Required landscaped area for rows of parking spaces.
 1. A landscaped area shall be provided at each end of all rows of parking.
 2. In addition, at least one landscaped area shall be provided between every ten parking spaces.
 3. Each required landscaped area shall be five feet wide inside the curb or paving line running the entire length of the parking space.
 4. At least one canopy tree shall be provided at each island.
 5. A five-foot turning radius shall be accommodated at the end of parking rows.
 - d. Parking space reduction to protect existing trees. The development services director shall have the authority to reduce the required number of off-street parking spaces when such reduction would result in the preservation of existing trees.
 1. Trees to be preserved must be a minimum of 12 inches in diameter measured at breast height above the ground.
 2. The reduction in the number of required parking spaces shall result in a reduction in an amount of required parking of less than five percent of the total number of required off-street parking spaces.

- (2) *Required trees.*
- a. At least one canopy tree shall be provided in each required landscaped area.
 - b. One canopy trees or two sub canopy trees shall be provided for each required landscaped area for the rows of parking. A minimum of 50 percent of the trees used shall be canopy trees.
- (3) *Location of landscaped areas for interior landscaping.*
- a. A landscaped area or buffer shall be provided between all parking areas and principal structures or any sidewalks and street or rights-of-way.
 - b. This landscape area or buffer must contain at least one canopy tree per 50 feet linear perimeter of the parcel.
 - c. Every effort will be made to retain native vegetation and trees.
 - d. Minimum width of the landscape area:
 1. Ten feet when abutting a public right-of-way.
 2. Five feet when abutting alleys or the rear or side property lines.
 - e. Each landscaped area shall have five shrubs per each tree required.
 - f. All landscaped areas shall be covered in groundcover or turf.
- (4) *Maintenance of planted areas.*
- a. Irrigation shall be provided for all new planting. Hose bibs maybe installed as an alternative, one hose bib within 75 feet of all landscaped areas.
 - b. Maintenance shall be the responsibility of the developer and/or landowner.
 - c. Failure to maintain landscaped areas shall be considered a violation of this subpart and subject to code enforcement.
- (5) *Buffer zones for incompatible land uses.*
- a. A buffer zone is a five-foot landscaped strip along parcel boundaries that serves as a buffer between incompatible uses and land use districts. This shall not be interpreted to mean that parcels within a planned mixed use development must meet these requirements.
 - b. A buffer zone shall have a visual screen running the entire length of the property with a minimum opacity of 85 percent and a minimum height of six feet.
 - c. The use of existing native vegetation in buffer zones is preferred.
 - d. A five-foot buffer of native vegetation between a conservation designated land use and any other development shall be required. This is not in addition to buffers required by any permitting agency.
- (6) *Street trees for subdivisions.*
- a. The developer shall plant, within ten feet of the right-of-way of each street within a residential development meeting the subdivision requirements of this Code, one canopy tree for every 50 linear feet of right-of-way.
 - b. Except where property on one side of the right-of-way is not owned by the developer, the trees shall be planted alternately on either side of the street.
 - c. Existing trees and native tree species that need less water and maintenance are preferred.

- d. Coordination with the city utility departments is required prior to planting the street trees.
- e. Street trees planted shall have a minimum overall height of 2.5-inch DBH at time of planting.
- (7) *Certain functional uses not permitted.* No accessory structures, garbage or trash collection points or receptacles, parking, or any other functional use shall be permitted in the minimum required landscape area and/or buffer zone. Combining of compatible functions such as landscaping and drainage facilities are permitted.
- (8) *Concealing and location of dumpsters.*
 - a. Dumpsters must be concealed in opaque concrete, brick or chain-link fence with screening slats of enough height consistent with the size of the container to shield the container from view from all sides.
 - b. The front of screen must be accessible for service of the container.
 - c. The dumpster must be located on a paved surface of asphalt or concrete.
- (9) *Clear line of sight.* An unobstructed cross visibility shall be required within a triangle area formed by the intersection of two rights-of-way or access ways, as referenced in section 113-76.

(Code 2001, § 98-235; Ord. No. O-01-2000, § 6.06.03, 6-6-2000; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017, ex. A(98-235), 1-24-2017)

Sec. 113-247. Landscape design and materials.

- (a) *Design principles.* All landscaped areas required shall conform to the following general design principles:
 - (1) Landscaping should integrate the proposed development into existing site features through consideration of existing topography, hydrology, soils and vegetation.
 - (2) The functional elements of the development plan, particularly the drainage systems and internal circulation systems for vehicles and pedestrians, should be integrated into the landscaping plan.
 - (3) Landscaping should be used to minimize potential erosion through the use of ground covers or any other type of landscape material that aids in soil stabilization.
 - (4) Existing native vegetation should be preserved and used to meet landscaping requirements.
 - (5) Landscaping should enhance the visual environment through the use of materials that achieve variety with respect to seasonal changes, species of living material selected, textures, colors and size at maturity.
 - (6) Landscaping design should consider the aesthetic and functional aspects of vegetation, both when initially installed and when the vegetation has reached maturity. Newly installed plants should be placed at intervals appropriate to the size of the plant at maturity, and the design should use short-term and long-term elements to satisfy the general design principles of this section over time.
 - (7) Landscaping should enhance public safety and minimize nuisances.
 - (8) All landscaping and plant material shall be planted in a manner which shall not be intrusive or interfere, at or before maturity, with pavement surfaces, power, cable television, or telephone lines, sewer or water pipes, or any other existing or proposed overhead or underground utility services.
 - (9) Landscaping should maximize the shading of streets and vehicle use areas.
 - (10) Architectural planters.
 - a. Planters can be used to meet landscaping requirements.

- b. Planters shall be a minimum of ten square feet and shall have minimum depth of 15 inches.
 - c. Planters shall be maintained and replanted if necessary.
 - d. Planters cannot be located within the city right-of-way without prior consent from the development services director.
- (b) *Installation of required landscape and trees.*
- (1) *General.* All required trees and landscaping shall be installed according to generally accepted commercial planting procedures. Soil, free of limerock, rocks, and other construction debris, shall be provided. All landscaped areas shall be protected from pedestrian and vehicular encroachment by raised planting surfaces, depressed walks, curbs, edges, wheel stops and the like.
 - (2) *Florida No. 1 quality.*
 - a. All required plant materials, including, but not limited to, trees and shrubs, shall equal or exceed the standards for Florida No. 1 as established and revised by the state department of agriculture and consumer services.
 - b. Grass sod shall be healthy and reasonably free of weeds, pests and disease.
 - (3) *Proper planting and anchoring.*
 - a. All plant material shall be mulched to a depth of two inches.
 - b. Trees shall be installed with anchoring for a period of at least one year, in order to provide sufficient time for their roots to become established.
 - 1. Trees with trunks under four inches in diameter should be staked with one to three stakes.
 - 2. Trees with a diameter of 2.5 inches or more DBH should be guyed with three to four guy wires.
 - (4) *Irrigation.*
 - a. All landscaped areas shall be watered with an underground irrigation system or a drip irrigation system or hose bibs designed to allow differential operation schedules for high and low water requirement areas. To avoid operation of the system during periods of increased rainfall, an operational moisture sensor switch shall be required on all irrigation systems equipped with automatic controls that will override the irrigation cycle of the sprinkler system when adequate rainfall has occurred.
 - b. The use of reclaimed water as a water supply source for irrigation shall be required when such source is available or anticipated to be available within 100 feet of an existing or proposed city reclaimed water line. In areas where food is served or consumed, such as outdoor eating areas of restaurants, a dual supply source distribution system shall be installed whereby potable water shall serve as the source for the food serving and/or consumption areas and reclaimed water shall serve as the supply source in all other landscaped areas.
 - c. If a landscaped area contains primarily species native to the immediate region, or plants acceptable for xeriscape landscaping, the development services director may waive the requirement for installation of an irrigation system. Consideration of a waiver of the irrigation requirement shall include, in addition to the area covered by native vegetation, such local conditions as sun or shade, use of fill soil, and depth to water table.
 - b. The development services director may require or otherwise approve water supply provisions for unusual landscape conditions provided, however, that a readily available water source shall be located within 100 feet of any required landscaping plant material.

- (5) *Berm*. When a berm is used to form a required visual screen in lieu of, or in conjunction with, a required hedge or wall, such berm shall not exceed a slope of 30 degrees and shall be completely covered with shrubs, trees, or other living ground cover.
 - (6) *Grass*.
 - a. Grass shall be seeded, plugged, or sodded.
 - b. On swales, berms or other areas that are subject to erosion, grass shall be completely sodded.
 - (7) *Ground cover*. Ground cover shall be installed and maintained for all improved parcels, in order to prevent erosion and dust. Ground cover used in lieu of grass shall be planted in such a manner so as to present a finished appearance and reasonably complete coverage within three months after planting.
 - (8) *Nonliving materials*. Mulch shall be a minimum depth of two inches.
- (c) *Recommended plant list*. Below is a list of recommended plants by category:

Understory Trees/Sub-Canopy	
<i>Common Name</i>	<i>Botanical Name</i>
Redbud	<i>Cercis canadensis</i>
Anise	<i>Illicium spp.</i>
Drake/Chinese elm	<i>Ulmus parvifolia</i>
Flowering dogwood	<i>Comus florida</i>
Wax myrtle	<i>Myrica cerifera</i>
Loblolly bay	<i>Gordonia lasianthus</i>
Southern red cedar	<i>Juniperus silicicola</i>
Yaupon holly	<i>Ilex vomitoria</i>
Fringe tree	<i>Chionanthus virginica</i>
Sweet bay magnolia	<i>Magnolia virginiana</i>
Chinese fan palm	<i>Livistona chenensis</i>
Windmill palm	<i>Trachycarpus fortunei</i>
Washington palm	<i>Washingtonian robusta</i>
Dahoon holly	<i>Ilex cassine</i>
Savannah holly	<i>Ilex opaca</i> × <i>attenuate</i> & cultivars
River birch	<i>Betula nigra</i>
Palatka holly	<i>Ilex attenuate</i>

Understory	
<i>Common Name</i>	<i>Botanical Name</i>
Crape myrtle	<i>Lagerstroemia</i> × <i>fauriei</i>
Wax myrtle	<i>Myrica cerifera</i>
Loblolly bay	<i>Gordonia lasianthus</i>
Junipers	<i>Juniperus torulosa</i> & <i>spartan</i>
Bottlebrush	<i>Callistemon spp.</i>
Redbud	<i>Cercis canadensis</i>
Rusty pittosporum	<i>Pittosporum ferrugineum</i>
Podocarpus	<i>Podocarpus nagi</i>
Holly	<i>Ilex spp.</i>
Leyland cypress	<i>Cupressocyparis leylandi</i>

Canopy Trees	
<i>Common Name</i>	<i>Botanical Name</i>
American elm	Ulmus americana
Live oak	Quercus virginiana
Chinese elm	Ulmus parvifolia
Red bay	Persea borbonia
American sycamore	Platanus occidentalis
Tulip tree	Lirodendron tulipifera
Southern magnolia	Magnolia grandiflora & cultivar
Laurel oak	Quercus laurifolia
Canary Island palm	Phoenix canariensis
European fan palm	Chamaerops humillis
Pindo palm	Butia capitata
Hornbeam/bluebeech	Carpinus caroliniana
Water ash; pop ash	Fraxinus caroliniana
Florida winged elm	Ulmus alata
Florida elm	Ulmus americana floridana
Red maple	Acer rubrum
American holly	Ilex opaca & cultivars
Loblolly bay	Gordonia lasianthus

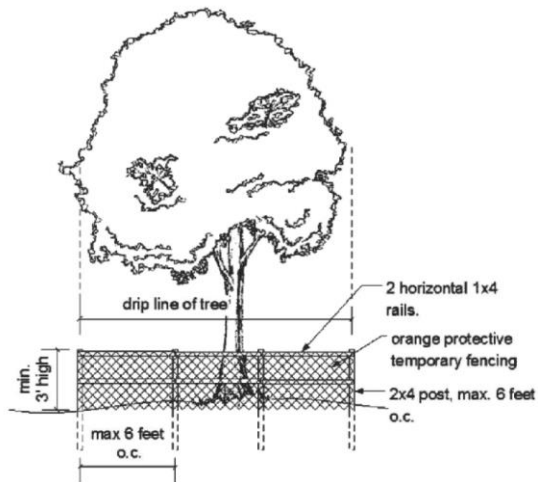
- (d) *Unacceptable plant species.* All prohibited species shall be allowed to be removed without a permit and prior to the development of the site.
- (e) *Maintenance and replacement of landscape plants.* All plant material shall be maintained according to the following standards:
- (1) All required trees, shrubs and landscaped areas shall be maintained in good and healthy condition for as long as the use continues to exist.
 - (2) Maintenance shall consist of mowing, removing of litter and dead plant material, necessary pruning, pest control, water and fertilizing.
 - (3) Maintenance also includes, but is not limited to, the replacement of plants damaged by insects, disease, vehicular traffic, acts of God and vandalism.
 - (4) Necessary replacements shall be made within a time period not to exceed 30 days after notification by the city of the violation.
 - (5) In order to increase the tree canopy within the city, give shade to paved surfaces, buffer pedestrian and vehicular traffic and provide scenic beauty and natural habitat, as well as prevent decay, sunburn and hazards to trees, all landscape material shall be pruned to maintain the natural shape of the plant.
 - (6) No topping, hat racking, poodle cutting, excess pruning or excess crown reduction shall be performed on trees within the right of way.
 - (7) The city shall encourage the standards of the International Society of Arboriculture and the Tree Care Industry Association for tree care operations, plant maintenance and proper pruning methods.

(Code 2001, § 98-236; Ord. No. O-01-2000, § 6.06.04, 6-6-2000; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017, ex. A(98-236), 1-24-2017)

Sec. 113-248. Tree preservation during development and construction.

- (a) Protective barriers.
 - (1) During construction, protective barriers shall be placed, as necessary and/or as directed by the development services director, to prevent the destruction or damaging of trees.
 - (2) Trees destroyed or receiving major damage must be replaced before occupancy or use unless approval for their removal has been granted during the site plan approval process
 - (3) All trees not designated for removal may be required to be protected by barrier zones erected prior to construction of any structures, roads, utility service, or other improvements,
- (b) The protective barrier shall be constructed to the following standards:
 - (1) The protective barrier shall be constructed outside the drip line of the tree, when possible (see Figure A). The protective barrier shall have a minimum of a six-inch radius, plus one inch for each one inch of caliper.
 - (2) The protective barrier shall be a minimum of three feet high.
 - (3) Protective barrier posts shall be two inches by four inches or larger and shall be no more than six feet apart.
 - (4) The barrier shall have two one-by-four-inch horizontal railings affixed securely to the posts.
 - (5) The entire protective zone shall be wrapped in orange safety fencing material, a minimum of three feet in height.
 - (6) The protective barriers shall be inspected by the department prior to the commencement of construction.
- (c) No grade changes shall be made within the protective barrier zones without prior approval of the city development services director.
- (d) Where roots greater than one-inch diameter are exposed, they shall be cut cleanly.
- (e) Protective barrier zones shall remain in place and intact until such time as landscape operations begin or construction is complete, whichever occurs first.
- (f) The development services director may conduct periodic inspections of the site before work begins and during clearing, construction and post-construction phases of development in order to ensure compliance.
- (g) No building materials, machinery or temporary soil deposits shall be placed within protective barrier zones defined above.
- (h) No attachments or wires other than those of a protective or non-damaging nature shall be attached to any tree.

Figure A



(Code 2001, § 98-237; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017 , exh. A(98-237), 1-24-2017)

Secs. 113-249—113-274. Reserved.

ARTICLE VI. LANDSCAPING

Sec. 113-242. Purpose and intent.

- (a) Landscape, landscaped areas, buffers, and tree protection shall be provided and/or accomplished for all premises in the manner set forth in this article. Required landscaped areas shall be located at or above grade unless otherwise prescribed in these land development regulations. The minimum provision of required landscape, landscaped areas, buffers, and trees may be exceeded. Unless otherwise prescribed, the most stringent provision of this schedule shall prevail.
- (b) Landscape, buffer, and tree protection requirements serve many purposes in the built-up environment. Landscape provides visual and climatic relief from buildings, structures, and broad expanses of pavement; landscape buffers pedestrian and vehicular traffic; and trees provide shade, scenic beauty, and natural habitat.
- (c) In general, landscaping and buffers shall be designed to:
 - (1) Enhance the urban development by blending natural and manmade environments.
 - (2) Provide shade for paved surfaces.
 - (3) Separate vehicular and non-vehicular use areas.
 - (4) Define vehicular access ways and access points.
 - (5) Screen vehicular movement, noise, and glare.
 - (6) Provide visual and physical separation of potentially incompatible land uses.
 - (7) Incorporate water conservation features such as drought tolerant landscaping and reclaimed water usage as required herein.
 - (8) Provide a protective buffer to mitigate the impact of climate change and enhance urban biodiversity.
- (d) As recommended by Florida Title XXVIII, Chapter 373, plant selection for development projects within the city of Green Cove Springs shall be in compliance with Florida Friendly Landscaping as provided for Zip Code 32043 on the Institute of Food and Agricultural Sciences, University of Florida web site;
<https://ffl.ifas.ufl.edu/apps/plants/>

(Code 2001, § 98-231; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017 , exh. A(98-231), 1-24-2017)

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Caliper means the diameter of a tree measured at breast height (DBH) which is approximately 4½ feet above the ground.

Canopy or shade tree means any tree grown specifically for its shade. The term "canopy or shade tree" usually applies to large trees with spreading canopies. Canopy trees normally grow to a minimum overall height of 30 feet and an average mature crown spread of 25 feet. Oaks, maples, ashes, lindens, and elms are examples canopy/shade trees. Canopy trees shall be a minimum of 2.5 inches caliper DBH. ~~Canopy Trees spaced 50 Feet apart~~ Listed in IFAS as "Trees – Large" spaced per guidance under "Appearance"

Clear trunk means the distance between the top of the root ball and the point of the trunk where lateral branching begins.

Commercial means all uses in RPO, CBD, GCN, GCC, C-1, and C-2 zoning districts and commercial development in a PUD zoning district.

Common area means that area which will be maintained by a homeowner's association, city service area, or other form of cooperative organization.

Dangerous Tree means any tree of any species which poses an immediate threat to persons or property due to disease, age, or mechanical injury. This can include damage from storms or other environmental factors.

Decorative turf means turf used purely for ornamental purposes having no use other than aesthetics.

Drip line means the vertical line running through the outermost portion of the tree crown projected vertically to the ground.

Florida Friendly Landscaping means quality landscapes that conserve water, protect the environment, are adaptable to local conditions, and are drought tolerant. The principles of such landscaping are the right plant in the right place, efficient watering, appropriate fertilization, mulching, attracting wildlife, responsible management of yard pests, recycling yard waste, reduction of storm runoff, and waterfront protection. Additional components include practices such as landscape planning and design, soil analysis, the appropriate use of solid waste compost, minimizing the use of irrigation, and proper maintenance.

Fully shielded lighting means lighting constructed in such a manner that all light emitted by the fixture, either directly from the lamp or a diffusing element, or indirectly by reflection or refraction from any part of the luminaire, is projected below the horizontal. Such fixtures usually have a flat, horizontally oriented lens and opaque (usually metal) sides. They are often described as shoebox luminaires if the luminaire has a predominantly rectangular form. Fixtures that either have reflecting surfaces or lenses (clear or prismatic) located below the lamp and visible from the side or above and fixtures that can be mounted such that the shielding is ineffective are not considered fully shielded lighting.

Grasses listed in IFAS as "Turfgrasses."

Groundcover means a low-growing plant, including turf grass, that, by the nature of its growth characteristics, completely covers the ground and does not usually exceed two feet in height. ~~Groundcovers are listed in IFAS as "Groundcovers."~~

Hat racking or topping means pruning a tree in such a way that the majority of limbs are removed and the tree is left with only a trunk and the stumps of a few primary limbs, with little or no foliage or other trimming or pruning that has the effect of preventing a tree from attaining its natural height and/or shape.

Hedge means a row of evenly spaced shrubs planted to form a continuous unbroken visual screen.

Immediate danger of collapse means that the tree may already be leaning, with the; surrounding soil heaving, and/or there is a significant likelihood that the tree will topple or otherwise fail and cause damage before a tree removal permit could be obtained through the non-. emergency process. "Immediate danger of collapse" does not include hazardous conditions that can be alleviated by pruning or treatment.

Industrial means all uses in M-1 and M-2 zoning districts and all industrial uses in a PUD zoning district.

Invasive Species means plants, animals, and other living organisms (e.g., microbes), non-native (or alien) to the ecosystem under consideration and, whose introduction causes or is likely to cause economic or environmental harm or harm to human health.

Landscape means vegetative and inert materials, including, but not limited to, grass, sod, shrubs, vines, hedges, trees, flowers, berms, and complementary structural landscape architectural features such as rocks, fountains, sculpture, decorative walls and tree wells or other hardscape features.

Landscaped area means land area to be provided with landscape.

Landscaped strip or *landscaped island* means required landscaped areas containing ground cover, shrubs, trees and/or other landscape used to divide parking areas into individual bays.

Large Ornamental listed in IFAS as “Palms and Palm Like Plants.”

Mitigation means the action used by an individual, company or agency to identify and minimize the risks from a proposed action that will reduce its impacts on people, property, and the environment and will restore and retain the biodiversity of the site.

Moisture sensors which means a device which has the ability to shut off an automatic irrigation controller after receiving a determined amount of rainfall.

Mulch means nonliving organic materials such as wood chips that is customarily placed around the base of trees, shrubs, and groundcovers for the purpose of retaining moisture and retarding weed infestation and soil erosion. Also, mulch is used in pathways and play areas.

Native or naturalizing plant species means plant species native to the region or introduced which once established are capable of sustaining growth and reproduction under local climatic conditions, without supplemental watering and enhance habitat for native wildlife.

Nonresidential means, pursuant to land use category headings reflected in Schedule B, Permitted Uses, in these land development regulations, all commercial, transient lodging and entertainment, automotive, miscellaneous business and services, industrial and public/semi-public uses.

Ornamental Landscape Trees, Small Trees listed in IFAS as “Trees – Medium.”

Parking area means a paved ground surface area used for the temporary parking and maneuvering of vehicles by employees or customers, either for compensation or to provide an accessory service to a commercial, industrial, institutional or residential use.

Paved ground surface area. See section 101-5.

Poodle cut means stripping off the lower branches of a tree and rounding or shearing the ends of the greenery to create an unnatural shape.

Protected Area means an existing natural area that has been determined by the City of Green Cove Springs, to be of significant aesthetic, environmental, or monetary value or which affords collective protection for the city from extreme weather events, and has been designated as protect by the City Council.

Protected Specimen tree means a particularly fine or unusual example of any tree due to its age, size, rarity, environmental or historical value or exceptional aesthetic quality. A tree may also be designated a specimen due to its association with historic events or persons. A specimen tree cannot be of a non-native species that is unacceptable as referenced in list of exempt trees in this Code. Status is obtained by submission for protection by the property owner with certification for a certified arborist or the Green Cove Springs Historical Society, annotation of the legal description of the property by a certified surveyor, which are submitted to the City Planning Office. After a period of public notice, a hearing shall be held by the city council after which a formal determination

is approved or denied. Designation will be annotated on the title to the property. Reversal of this determination will require action by the City Council.

Required landscaped area means any landscaped area required in this Code.

Residential means all uses in R-1, R-2, R-3, and PUD zoning districts; one-family, two-family and multiple-family dwellings.

Shrub means a self-supporting woody species of plant characterized by persistent stems and branches springing from the base. **Shrubs and requirements for Visual Screens listed in IFAS as “Shrubs-Large” spaced on center per guidance under “Appearance.”**

Tree means a self-supporting woody plant of a species that normally grows to a minimum overall height of 15 feet and has an average mature crown spread greater than 15 feet within the city.

Turf means upper layer of soil bound by grass and plant roots into a thick mat.

Understory, sub-canopy trees means trees which normally grow to a maximum overall height of 15 feet and an average mature crown spread of 15 feet. **Understory Trees. listed in IFAS as “Trees – Small”**

Vehicular circulation area means streets, rights-of-way, access ways, parking spaces, parking, loading, and unloading, and other similar or related functions.

***Viable tree* is a tree that is in compliance with Florida Friendly Landscaping as provided for Zip Code 32043 on the Institute of Food and Agricultural Sciences, University of Florida web site, which is capable of growing and developing in its natural form upon completion of development of a site. Trees that are dead, dying, or have their root systems or crowns severely altered during construction or are dangerous because of their growth habits are not a viable tree.**

(Code 2001, § 98-232; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017 , exh. A(98-232), 1-24-2017)

Sec. 113-244. Required landscaping.

- (a) Landscape requirements for one-family dwellings and two-family dwellings shall be as follows:
 - (1) At least one canopy tree, 2.5 inches DBH, shall be located in the required front yard of each dwelling unit.
 - (2) The lot shall be sodded, seeded, or appropriate ground cover for erosion control.
- (b) Landscape requirements for nonresidential uses, including multifamily structures with three or more dwelling units, shall be as follows:
 - (1) *Perimeter landscaping.* At a minimum, each site developed for multifamily, institutional, commercial, or industrial uses will contain one shade or canopy tree for each 50 linear feet of the perimeter of the site.
 - (2) *Interior landscaping.* There will be one tree per every 1,500 square feet of the first 10,500 square feet of the project site, then one tree for every 4,000 square feet of the remainder of the project site. The trees shall be an equal proportion of shade (canopy) and understory trees. At a minimum, 15 percent of the site shall be landscaped.
- (c) Landscape adjacent to streets and parcels.
 - (1) A landscaped strip shall be provided along all parcel lines and abutting street right-of-way lines.
 - (2) The depth of the required landscaped strip shall be measured and provided parallel to the parcel line or abutting street right-of-way in question.

- (3) Landscaped strips shall be considered to be required landscaped area.
- (4) A landscaped strip may be included in satisfying buffer requirements.
- (d) Landscaped strips shall be provided in the following manner:
- (1) Ten-foot landscaped strip along all rights-of-way.
 - (2) Alternative design for properties fronting on all roads classified as arterials, including, but not limited to, U.S. 17 (Orange Avenue), S.R. 16 East (Leonard C. Taylor Parkway) and S.R. 16 West (Ferris Street and Idlewild Avenue), shall comply with the following standards: The developer/property owner shall be responsible for providing a landscape buffer in the area abutting the designated roadway right-of-way lines by meeting one of the following conditions:
 - a. The roadway shall be separated from the back of curb by a six-foot landscaped strip, a six-foot pedestrian walkway, then a six-foot landscaped strip.
 - b. Building setback shall be calculated from the back of curb or ten-foot landscaped strip along all rights-of-way.
 - c. Alternative designs. Where natural features or spacing of existing driveways and roadways cause the access requirements of this section affecting placement or planting of landscaped buffers or trees to be physically infeasible, alternate designs may be approved as part of the issuance of the final development order.
 - (3) The landscape buffer area shall be planted in the following manner:
 - a. *Canopy trees.*
 1. One row of canopy trees, 2.5 inches DBH at planting. For 50 percent of the canopy trees, two sub-canopy/understory trees may be substituted for each canopy tree.
 2. The trees shall be planted every 50 feet and staggered so as to be midway between each other, and equal distance between each row and right-of-way and/or parcel line. Trees shall be evenly spaced. The tree spacing may be altered with approval of the development services, provided the total number of trees is provided.
 - b. *Sub-canopy/understory trees.* A minimum of four sub-canopy/understory trees per 100 feet of frontage shall be planted in and about each access point and intersection.
 - c. *Hedges.* When off-street parking, loading, unloading and vehicular circulation areas are to be located adjacent to the street right-of-way, a dense hedge of evergreen-type shrubs shall be provided in the following manner:
 1. At initial planting and installation, shrubs shall be at least 24 inches in height and shall be planted at least 36 inches or less on center.
 2. The hedge shall be planted four feet or more from the tree trunks.
 3. Within two years of initial planting and installation, shrubs shall have attained and be maintained at a minimum height of three feet and shall provide an opaque vegetative screen between the street and the use of the premises.
 4. In lieu of a vegetative hedge, the use of vegetated berms or other appropriate landscape materials in a manner that results in the visual separation of street right-of-way can be approved by the development services director.
 - d. *Shrubs.*

1. Buffer areas, not adjacent to a street right-of-way, shall include nine shrubs for every 100 linear feet of the parcel line
 2. Shrubs shall be at least 24 inches in height at the time of planting.
- (e) Groundcover. The buffer area shall be planted with groundcover minimum of 18 inches on center or solid grass sod, unless natural area to remain.

(Code 2001, § 98-233; Ord. No. O-01-2000, § 6.06.02, 6-6-2000; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017, ex. A(98-233), 1-24-2017)

Sec. 113-245. Exemptions and exceptions to landscape requirements.

Interior landscaping for parking garages or other vehicle use areas contained entirely with a roofed and walled structure. Landscaping shall be provided around the perimeter of the structures.

(Code 2001, § 98-234; Ord. No. O-01-2000, § 6.06.01, 6-6-2000; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017, ex. A(98-234), 1-24-2017)

Sec. 113-246. Parking area landscaping.

The requirements of this section apply to all development, unless exempted:

(1) *Internal landscape area.*

- a. Minimum required land area for required landscaped areas not in a parking area. Each required landscaped area shall contain a minimum land area of 200 square feet.
- b. The minimum required internal landscaped area for parking areas shall cover ten percent of the parking area.
- c. Required landscaped area for rows of parking spaces.
 1. A landscaped area shall be provided at each end of all rows of parking.
 2. In addition, at least one landscaped area shall be provided between every ten parking spaces.
 3. Each required landscaped area shall be five feet wide inside the curb or paving line running the entire length of the parking space.
 4. At least one canopy tree shall be provided at each island.
 5. A five-foot turning radius shall be accommodated at the end of parking rows.
- d. Parking space reduction to protect existing trees. The development services director shall have the authority to reduce the required number of off-street parking spaces when such reduction would result in the preservation of existing trees.
 1. Trees to be preserved must be a minimum of 12 inches in diameter measured at breast height above the ground.
 2. The reduction in the number of required parking spaces shall result in a reduction in an amount of required parking of less than five percent of the total number of required off-street parking spaces.

(2) *Required trees.*

- a. At least one canopy tree shall be provided in each required landscaped area.
 - b. One canopy trees or two sub canopy trees shall be provided for each required landscaped area for the rows of parking. A minimum of 50 percent of the trees used shall be canopy trees.
- (3) *Location of landscaped areas for interior landscaping.*
- a. A landscaped area or buffer shall be provided between all parking areas and principal structures or any sidewalks and street or rights-of-way.
 - b. This landscape area or buffer must contain at least one canopy tree per 50 feet linear perimeter of the parcel.
 - c. Every effort will be made to retain native vegetation and trees.
 - d. Minimum width of the landscape area:
 - 1. Ten feet when abutting a public right-of-way.
 - 2. Five feet when abutting alleys or the rear or side property lines.
 - e. Each landscaped area shall have five shrubs per each tree required.
 - f. All landscaped areas shall be covered in groundcover or turf.
- (4) *Maintenance of planted areas.*
- a. Irrigation shall be provided for all new planting. Hose bibs maybe installed as an alternative, one hose bib within 75 feet of all landscaped areas.
 - b. Maintenance shall be the responsibility of the developer and/or landowner.
 - c. Failure to maintain landscaped areas shall be considered a violation of this subpart and subject to code enforcement.
- (5) *Buffer zones for incompatible land uses.*
- a. A buffer zone is a five-foot landscaped strip along parcel boundaries that serves as a buffer between incompatible uses and land use districts. This shall not be interpreted to mean that parcels within a planned, mixed use development must meet these requirements.
 - b. A buffer zone shall have a visual screen running the entire length of the property with a minimum opacity of 85 percent and a minimum height of six feet.
 - c. The use of existing native vegetation in buffer zones is preferred.
 - d. A five-foot buffer of native vegetation between a conservation designated land use and any other development shall be required. This is not in addition to buffers required by any permitting agency.
- (6) *Street trees for subdivisions.*
- a. The developer shall plant, within ten feet of the right-of-way of each street within a residential development meeting the subdivision requirements of this Code, one canopy tree for every 50 linear feet of right-of-way.
 - b. Except where property on one side of the right-of-way is not owned by the developer, the trees shall be planted alternately on either side of the street.
 - c. Existing trees and native tree species that need less water and maintenance are ~~preferred~~ **required**.
 - d. Coordination with the city utility departments is required prior to planting the street trees.

- e. Street trees planted shall have a minimum overall height of 2.5-inch DBH at time of planting.
- (7) *Certain functional uses not permitted.* No accessory structures, garbage or trash collection points or receptacles, parking, or any other functional use shall be permitted in the minimum required landscape area and/or buffer zone. Combining of compatible functions such as landscaping and drainage facilities are permitted.
- (8) *Concealing and location of dumpsters.*
- a. Dumpsters must be concealed in opaque concrete, brick, or chain-link fence with screening slats of enough height consistent with the size of the container to shield the container from view from all sides.
 - b. The front of screen must be accessible for service of the container.
 - c. The dumpster must be located on a paved surface of asphalt or concrete.
- (9) *Clear line of sight.* An unobstructed cross visibility shall be required within a triangle area formed by the intersection of two rights-of-way or access ways, as referenced in section 113-76.

(Code 2001, § 98-235; Ord. No. O-01-2000, § 6.06.03, 6-6-2000; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017, exh. A (98-235), 1-24-2017)

Sec. 113-247. Landscape design and materials.

(a) *Design principles.* All landscaped areas required shall conform to the following general design principles:

- (1) **Florida Friendly Landscaping principles shall be incorporated into all projects.**
- (2) Landscaping should integrate the proposed development into existing site features through consideration of existing topography, hydrology, soils, and vegetation.
- (3) The functional elements of the development plan, particularly the drainage systems and internal circulation systems for vehicles and pedestrians, should be integrated into the landscaping plan.
- (4) Landscaping should be used to minimize potential erosion through the use of ground covers or any other type of landscape material that aids in soil stabilization.
- (5) Existing native vegetation ~~should~~ **shall** be preserved and used to meet landscaping requirements.
- (6) Landscaping should enhance the visual environment through the use of materials that achieve variety with respect to seasonal changes, species of living material selected, textures, colors and size at maturity.
- (7) Landscaping design should consider the aesthetic and functional aspects of vegetation, both when initially installed and when the vegetation has reached maturity. Newly installed plants should be placed at intervals appropriate to the size of the plant at maturity, and the design should use short-term and long-term elements to satisfy the general design principles of this section over time.
- (8) Landscaping should enhance public safety and minimize nuisances.
- (9) All landscaping and plant material shall be planted in a manner which shall not be intrusive or interfere, at or before maturity, with pavement surfaces, power, cable television, or telephone lines, sewer, or water pipes, or any other existing or proposed overhead or underground utility services.
- (10) Landscaping should maximize the shading of streets and vehicle use areas.
- (11) Architectural planters.

- a. Planters ~~can be~~ are used to meet landscaping requirements.
 - b. Planters shall be a minimum of ten square feet and shall have minimum depth of 15 inches.
 - c. Planters shall be maintained and replanted if necessary.
 - d. Planters cannot be located within the city right-of-way without prior consent from the development services director.
- (b) *Installation of required landscape and trees.*
- (1) *General.* All required trees and landscaping shall be installed according to generally accepted commercial planting procedures. Soil, free of lime rock, rocks, and other construction debris, shall be provided. All landscaped areas shall be protected from pedestrian and vehicular encroachment by raised planting surfaces, depressed walks, curbs, edges, wheel stops and the like.
 - (2) *Florida No. 1 quality*
 - a. All required plant materials, including, but not limited to, trees and shrubs, shall equal or exceed the standards for Florida No. 1 as established and revised by the state department of agriculture and consumer services **in the current Florida Grades and Standards for Nursery Plants.**
 - b. Grass sod shall be healthy and reasonably free of weeds, pests and disease.
 - (3) *Proper planting and anchoring.*
 - a. All plant material shall be mulched to a depth of two inches **over the root zone but avoid the actual trunk.**
 - b. Trees shall be installed with anchoring for a period of at least one year, in order to provide sufficient time for their roots to become established.
 - 1. Trees with trunks under four inches in diameter should be staked with one to three stakes.
 - 2. Trees with a diameter of 2.5 inches or more DBH should be guyed with three to four guy wires.
 - (4) *Irrigation.*
 - a. All landscaped areas shall be watered with an underground irrigation system or a drip irrigation system or hose bibs designed to allow differential operation schedules for high and low water requirement areas. To avoid operation of the system during periods of increased rainfall, an operational moisture sensor switch shall be required on all irrigation systems equipped with automatic controls that will override the irrigation cycle of the sprinkler system when adequate rainfall has occurred.
 - b. The use of reclaimed water as a water supply source for irrigation shall be required when such source is available or anticipated to be available within 100 feet of an existing or proposed city reclaimed water line. In areas where food is served or consumed, such as outdoor eating areas of restaurants, a dual supply source distribution system shall be installed whereby potable water shall serve as the source for the food serving and/or consumption areas and reclaimed water shall serve as the supply source in all other landscaped areas.
 - c. If a landscaped area contains primarily species native to the immediate region, or plants acceptable for xeriscape landscaping, the development services director may waive the requirement for installation of an irrigation system. Consideration of a waiver of the irrigation requirement shall include, in addition to the area covered by native vegetation, such local conditions as sun or shade, use of fill soil, and depth to water table.

- b. The development services director may require or otherwise approve water supply provisions for unusual landscape conditions provided, however, that a readily available water source shall be located within 100 feet of any required landscaping plant material.
- (5) *Berm*. When a berm is used to form a required visual screen in lieu of, or in conjunction with, a required hedge or wall, such berm shall not exceed a slope of 30 degrees and shall be completely covered with shrubs, trees, or other living ground cover.
- (6) *Grass*.
 - a. Grass shall be seeded, plugged, or sodded.
 - b. On swales, berms or other areas that are subject to erosion, grass shall be completely sodded.
- (7) *Ground cover*. Ground cover shall be installed and maintained for all improved parcels, in order to prevent erosion and dust. Ground cover used in lieu of grass shall be planted in such a manner so as to present a finished appearance and reasonably complete coverage within three months after planting.
- (8) *Nonliving materials*. Mulch shall be a minimum depth of two inches.
- (c) *Recommended plant list is available on the IFAS FFL Website at <https://ffl.ifas.ufl.edu/plants/> for Zip Code 32043.*

Understory Trees/Sub-Canopy	
<i>Common Name</i>	<i>Botanical Name</i>
Redbud	<i>Cercis canadensis</i>
Anise	<i>Illicium spp.</i>
Drake/Chinese elm	<i>Ulmus parvifolia</i>
Flowering dogwood	<i>Comus Florida</i>
Wax myrtle	<i>Myrica cerifera</i>
Loblolly bay	<i>Gordonia lasianthus</i>
Southern red cedar	<i>Juniperus silicicola</i>
Yaupon holly	<i>Ilex vomitoria</i>
Fringe tree	<i>Chionanthus virginica</i>
Sweet bay magnolia	<i>Magnolia virginiana</i>
Chinese fan palm	<i>Livistona chenensis</i>
Windmill palm	<i>Trachycarpus fortunei</i>
Washington palm	<i>Washingtonian robusta</i>
Dahoon holly	<i>Ilex cassine</i>
Savannah holly	<i>Ilex opaca × attenuate & cultivars</i>
River birch	<i>Betula nigra</i>
Palatka holly	<i>Ilex attenuate</i>

Understory	
<i>Common Name</i>	<i>Botanical Name</i>
Crape myrtle	<i>Lagerstroemia × fauriei</i>
Wax myrtle	<i>Myrica cerifera</i>
Loblolly bay	<i>Gordonia lasianthus</i>
Junipers	<i>Juniperus torulosa & spartan</i>
Bottlebrush	<i>Callistemon spp.</i>
Redbud	<i>Cercis canadensis</i>

Rusty pittosporum	Pittosporum ferrugineum
Podocarpus	Podocarpus nagi
Holly	Ilex spp.
Leyland cypress	Cupressocyparis leylandi

Canopy Trees	
Common Name	Botanical Name
American elm	Ulmus americana
Live oak	Quercus virginiana
Chinese elm	Ulmus parvifolia
Red bay	Persea borbonia
American sycamore	Platanus occidentalis
Tulip tree	Liriodendron tulipifera
Southern magnolia	Magnolia grandiflora & cultivar
Laurel oak	Quercus laurifolia
Canary Island palm	Phoenix canariensis
European fan palm	Chamaerops humillis
Pindo palm	Butia capitata
Hornbeam/bluebeech	Carpinus caroliniana
Water ash; pop ash	Fraxinus caroliniana
Florida winged elm	Ulmus alata
Florida elm	Ulmus americana floridana
Red maple	Acer rubrum
American holly	Ilex opaca & cultivars
Loblolly bay	Gordonia lasianthus

- (d) *Unacceptable plant species.* All **invasive** prohibited species shall ~~be allowed~~ **should** be removed, ~~without a permit and prior to the development of the site.~~
- (e) *Maintenance and replacement of landscape plants.* All plant material shall be maintained according to the following standards:
- (1) All required trees, shrubs and landscaped areas shall be maintained in good and healthy condition for as long as the use continues to exist.
 - (2) Maintenance shall consist of mowing, removing of litter and dead plant material, necessary pruning, pest control, water, and fertilizing.
 - (3) Maintenance also includes, but is not limited to, the replacement of plants damaged by insects, disease, vehicular traffic, acts of God and vandalism.
 - (4) Necessary replacements shall be made within a time period not to exceed 30 days after notification by the city of the violation.
 - (5) In order to increase the tree canopy within the city, give shade to paved surfaces, buffer pedestrian and vehicular traffic and provide scenic beauty and natural habitat, as well as prevent decay, sunburn and hazards to trees, all landscape material shall be pruned to maintain the natural shape of the plant.
 - (6) No topping, hat racking, poodle cutting, excess pruning or excess crown reduction shall be performed on trees within the right of way.

- (7) The city shall encourage the standards of the International Society of Arboriculture and the Tree Care Industry Association for tree care operations, plant maintenance and proper pruning methods.

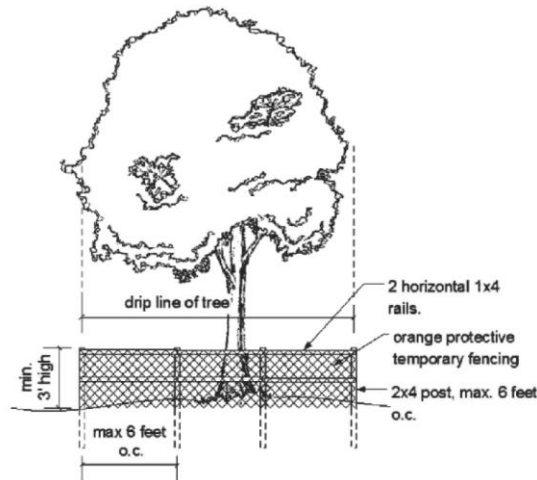
(Code 2001, § 98-236; Ord. No. O-01-2000, § 6.06.04, 6-6-2000; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017, exh. A(98-236), 1-24-2017)

Sec. 113-248. Tree preservation during development and construction.

- (a) Protective barriers.
- (1) During construction, protective barriers shall be placed, as necessary and/or as directed by the development services director, to prevent the destruction or damaging of trees.
 - (2) Trees destroyed or receiving major damage must be replaced before occupancy or use unless approval for their removal has been granted during the site plan approval process
 - (3) All trees not designated for removal may be required to be protected by barrier zones erected prior to construction of any structures, roads, utility service, or other improvements,
- (b) The protective barrier shall be constructed to the following standards:
- (1) The protective barrier shall be constructed outside the drip line of the tree, when possible (see Figure A). The protective barrier shall have a minimum of a six-inch radius, plus one inch for each one inch of caliper.
 - (2) The protective barrier shall be a minimum of three feet high.
 - (3) Protective barrier posts shall be two inches by four inches or larger and shall be no more than six feet apart.
 - (4) The barrier shall have two one-by-four-inch horizontal railings affixed securely to the posts.
 - (5) The entire protective zone shall be wrapped in orange safety fencing material, a minimum of three feet in height.
 - (6) The protective barriers shall be inspected by the ~~Zone and Planning~~ **Planning and Zoning Department** prior to the commencement of construction.
- (c) No grade changes shall be made within the protective barrier zones without prior approval of the city development services director.
- (d) Where roots greater than one-inch diameter are exposed, they shall be cut cleanly.
- (e) Protective barrier zones shall remain in place and intact until such time as landscape operations begin or construction is complete, whichever occurs first.
- (f) The development services director may conduct periodic inspections of the site before work begins and during clearing, construction, and post-construction phases of development in order to ensure compliance.
- (g) No building materials, machinery or temporary soil deposits shall be placed within protective barrier zones defined above.
- (h) No attachments or wires other than those of a protective or non-damaging nature shall be attached to any tree.
- (i) **A site survey of existing trees must be completed within two years by the developer and certified as accurate by the Planning Department as part of the submission process, including a mitigation plan, before a building permit is issued.**

(j) Protected areas and protected trees must be preserved unless that designation is changed by vote of the City Council.

Figure A



(Code 2001, § 98-237; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017 , exh. A(98-237), 1-24-2017)

Secs. 113-249—113-274. Reserved.

ARTICLE VII. TREES

Sec. 113-275. Removal of trees.

- (a) Removal of a tree includes any act which will cause a tree to die, such as damage inflicted upon the root system by heavy machinery, changing the natural grade above the root system or round the trunk, damage, including fire damage, inflicted on the tree permitting infection or pest infestation.
- (b) It shall be unlawful for any person, organization, society, association or corporation or any agent or representative thereof, directly, or indirectly, to cut down, destroy, remove, move, or effectively destroy through damaging any tree located on any property without obtaining a permit.
- (c) No authorization for the removal of a ~~protected~~ tree **designated as protected** shall be granted unless the developer demonstrates **a compelling** the reason for removal of **the trees**. **Authorization must be by vote of the City Council removing the protected status.**

(Code 2001, § 98-261; Ord. No. O-01-2000, § 6.07.01, 6-6-2000; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017 , exh. B(98-261), 1-24-2017)

Sec. 113-276. Exceptions and exemptions.

The following are exempt from the requirements of section 113-275.

- (1) Utility and public works projects undertaken by the city, including in the case of emergencies such as hurricane, windstorm, flood, freeze, or other disasters.
- (2) One- and two-family dwelling units.
 - a. In the event that a tree has not been designated as protected and the surrounding property owners object to its removal due to historic importance or impact on adjacent property values, a stay shall be issued pending review by the Planning and Zoning Commission to allow interested parties to address the City Council and seek designation as a protected tree.
- (3) Dangerous trees.
 - a. In the event that any tree endangers health or safety and requires immediate removal, verbal authorization may be given by the development services director.
 - b. The tree may be removed without obtaining a written permit provided a certified arborist has made such a determination. The verbal authorization shall later be confirmed in writing by the development services director.
 - c. In the event of a natural disaster, environmental or other emergency situation where immediate action is required, any recognized civil authority can authorize immediate removal, to include utility crews, Law Enforcement Officers, and Fire and Rescue Crews.
- (4) Exempt trees. **Nonnative** The following types of trees shall be exempt from the provisions of this section and removal allowed without a permit:

Common Name	Botanical Name
American mulberry	Morus rubra
Australian pine	Casuarinas spp.
Black cherry	Prunus serotina
Brazilian pepper	Shinus terebinthifolius
Cajuput tree	Melaleuca leucadendra
Camphor tree	Cinnamomum camphora
Cherry laurel	Prunus laurocerasis
Chinaberry	Meliaa azedarach
Chinese tallow tree	Sapium sebiferum Containerized trees and nursery stock trees grown for resale
Ear trees (Enterolobium contortisliquum)	Enterolobium cyclocarpum
Eucalyptus robusta	Eucalyptus robusta
Jacaranda	Jacaranda acutifolia
Golden rain tree	Koelreuteria elegans
Orchid tree	Bauhinia
Rosewood	Dalbergia sissoo
All pines	Pinus
Silk oak	Grevillea robusta
Pecan	Carya illinoensis

(Code 2001, § 98-262; Ord. No. O-01-2000, § 6.07.02, 6-6-2000; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017, exh. B(98-262), 1-24-2017)

Sec. 113-277. Drought-tolerant plant standards applicable to required landscaping.

Drought-tolerant plants which shall be used in required landscaping are native, noninvasive plants which will survive and flourish with comparatively little supplemental irrigation. Industrial, commercial, civic, and multifamily residential buildings or structures and common areas of single-family or multifamily residential developments shall incorporate drought tolerant trees, shrubs, and groundcovers in landscape plans as a water conservation measure. A list of plants which require minimal water are included in the St. Johns River Water Management District's publication Water Wise, Florida Landscapes. In addition, mulches and drought tolerant groundcovers shall replace narrow turf areas where irrigation is impractical. Interior remodels or minor modifications to the exterior of a structure are not subject to this requirement.

(Code 2001, § 98-263; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017 , exh. B(98-263), 1-24-2017)

Sec. 113-278. Conditions for tree removal.

The development services director shall issue the permit for removal of a tree if one of the following reasons for removal is found to be present:

- (1) The condition of the tree with respect to disease, insect attack, age or other damage creates a danger of falling, or otherwise causes the tree to have an adverse impact on the urban or natural environment **as determined by a certified arborist.**
- (2) Removal of the tree is necessary to construct proposed improvements in order to make use of the property **provided it does not have designation as a protected tree;**
- (3) To avoid interference with utility services; or
- (4) Removal of a tree in compliance with a state-approved timber management plan.

(Code 2001, § 98-264; Ord. No. O-01-2000, § 6.07.03, 6-6-2000; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017 , exh. B(98-264), 1-24-2017)

Sec. 113-279. Replacement.

- (a) *Generally.* In respect to removal of trees to allow construction of improvements on property, and as a condition to the granting of a permit, replacement shall be required.
 - (1) *Trees removed.*
 - a. *Live oaks, Bald Cypress, and Mature Southern Magnolia.*
 1. All efforts shall be made to maintain all live oak trees, **Bald Cypress, and Mature Southern Magnolia** on the site.
 2. Replacement of live oak trees **Bald Cypress, and Mature Southern Magnolia** shall be with live oak trees, **Bald Cypress, and Southern Magnolia** and the total caliper inches of replacement trees shall equal the total caliper inches of live oak trees removed.
 - b. *All other trees.*
 1. Trees removed over 12 inches DBH on the site shall be replaced.
 2. The replacement for all trees over 12 inches in caliper at DBH on the site shall equal one-third of the total caliper at DBH of the trees removed.

- (2) *Tree replacement or payment to city.* In lieu of replacement of trees on the site, the development services director may approve a plan for replacement of trees offsite or payment to the city tree mitigation fund. The value will be based on the average cost of other municipalities in northeast Florida. (Currently \$142.00 per caliper inch)
- (b) *Credit for trees.* Trees which are preserved shall receive credit against the landscape requirements according to the following schedule:
 - (1) Trees 12 to 18 inches: Live oaks, Bald Cypress, and Southern Magnolia one-inch credit; all others, 50 percent-inch credit.
 - (2) Trees 19 to 30 inches: Live oaks, Bald Cypress, and Southern Magnolia 1.25-inch credit; all others, 75 percent-inch tree credit.
 - (3) Trees over 30 inches: Live oaks, Bald Cypress, and Southern Magnolia 1.5-inch credit; all others, 100 percent-inch credit.
 - (4) A minimum of one fourth (¼) of the replacement credit shall consist of and same tree species removes and have a minimum caliper diameter of 4 inches per replacement tree.

(Code 2001, § 98-265; Ord. No. O-01-2000, § 6.07.04, 6-6-2000; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017, ex. B(98-265), 1-24-2017)

Sec. 113-280. List of plants recommended for the city can be obtained by the IFAS FFL
Website at <https://ffl.ifas.ufl.edu/plants/> for Zip Code 32043.

Understory Trees (Max. Height 15 Feet) <i>listed in IFAS as "Trees – Small"</i>	
Common Name	Botanical Name
Redbud	Cercis canadensis
Anise	Illicium spp.
Drake/Chinese elm	Ulmus parvifolia
Flowering dogwood	Comus florida
Wax myrtle	Myrica cerifera
Loblolly bay	Gordonia lasianthus
Southern red cedar	Juniperus silicicola
Yaupon holly	Ilex vomitoria
Fringe tree	Chionanthus virginica

Canopy Trees Spaced 50 Feet Apart <i>listed in IFAS as "Trees – Large" spaced per guidance under "Appearance"</i>	
Common Name	Botanical Name
American elm	Ulmus americana
Live oak	Quercus virginiana
Sweet bay magnolia	Magnolia virginiana
Silver dollar tree	Eucalyptus cinerea
Chinese elm	Ulmus parvifolia
Red bay	Persea borbonia
American sycamore	Platanus occidentalis
Tulip tree	Lirodendron tulipifera

Southern magnolia	Magnolia grandiflora & cultivar
Laurel oak	Quercus laurifolia
Washington palm	Washingtonian robusta
Canary Island palm	Phoenix canariensis
European fan palm	Chamaerops humillis
Sabal palm	Sabal palmetto
Chinese fan palm	Livistona chenensis
Windmill palm	Trachycarpus fortunei
Pindo palm	Butia capitata

<i>Canopy Trees Spaced 30 Feet Apart</i>	
<i>Common Name</i>	<i>Botanical Name</i>
Dahoon holly	Ilex cassine
Hornbeam/bluebeech	Carpinus caroliniana
Water ash; pop ash	Fraxinus caroliniana
Florida winged elm	Ulmus alata
Florida elm	Ulmus americana floridana
Red maple	Acer rubrum
Savannah holly	Ilex opaca x attenuate & cultivars
American holly	Ilex opaca & cultivars
Loblolly bay	Gordonia lasianthus
River birch	Betula nigra
Palatka holly	Ilex attenuate

<i>Ornamental Landscape Trees; Small Trees listed in IFAS as "Trees – Medium"</i>	
<i>Common Name</i>	<i>Botanical Name</i>
Crape myrtle	Lagerstroemia x fauriei
Wax myrtle	Myrica cerifera
Loblolly bay	Gordonia lasianthus
Junipers	Juniperus torulosa & spartan
Bottlebrush	Callistemon spp.
Redbud	Cercis canadensis
Rusty pittosporum	Pittosporum ferrugineum
Podocarpus	Podocarpus nagi
Holly	Ilex spp.
Leyland cypress	Cupressocyparis leylandi
Jerusalem thorn	Parkinsonia aculeate

<i>Large Ornamental Trees and Palms listed in IFAS as "Palms and Palm Like Plants"</i>	
<i>Common Name</i>	<i>Botanical Name</i>
Winged elm	Ulmus alata
Washington palm	Washingtonian robusta
Canary Island palm	Phoenix canariensis
European fan palm	Chamaerops humillis
Sabal palm	Sabal palmetto

Heritage river birch	Betula nigra "heritage"
Chinese fan palm	Livistona chenensis
Windmill palm	Trachycarpus fortunei
Pindo palm	Butia capitata

Shrubs and Minimum 2.0—4.0 ft) On-Center (OC)

Requirements for Visual Screens Listed in IFAS as "Shrubs-Large" spaced on center per guidance under "Appearance"

<i>Common Name</i>	<i>Botanical Name</i>	<i>On-Center</i>
Glossy abelia	Abelia spp.	2.0 OC
Allamanda	Cortadenia selloana	4.0 OC
Pineapple guava	Feijoa sellowiana	3.0 OC
Anise	Illicium floridanum	2.5 OC
Pittosporum	Pittosporum tobira	3.0 OC
Azalea	Rhododendron spp.	3.0 OC
Plumbago	Plumbago capensis	2.0 OC
Banana shrub	Michelia fuscata	3.0 OC
Primrose jasmine	Jasminum mesnyi	3.0 OC
Boxwood	Buxus microphylla	2.0 OC
Viburnum	Viburnum spp.	3.0 OC
Chinese juniper	Juniperus chinensis	3.0 OC
Silverthorn	Elaeagnus philippensis	3.0 OC
Podocarpus	Podocarpus macrophyllus	2.0 OC
Holly	Ilex spp.	2.0—3.0 OC
Indian hawthorne	Raphiolepis indica	2.5 OC

Groundcovers

<i>Common Name</i>	<i>Botanical Name</i>
Bugle weed	Ajuga reptans
Asparagus fern	Asparagus sprengeri
Iceplant	Carpobrotus edulis
False heather	Cuphea hyssopifolia
Dichondra	Dichondra carolinensis
Golden creeper	Ernodea littoralis
Trailing fig	Ficus sagittata
Carolina jessamine	Gelsemium sempervirens
Algerian ivy	Hedera canariensis
Beach sunflower	Helianthus debilis
Dwarf yaupon holly	Ilex vomitoria "Schellings"
Chinese juniper	Juniperus chinensis
Dwarf lantana	Lantana depressa
Lily turf	Liriope spicata
Sword fern	Nephrolepis exaltata
Oyster plant	Rhoeo spathacea
Erect selaginella	Selaginella involvens
Confederate jasmine	Trachelospermum asiaticum

Caltrops	Trilobus terrestris
Society garlic	Tulbaghia violacea
Coontie	Zamia pumila
Aloe	Aloe spp.
Cast iron plant	Aspidistra elatior
Gopher apple	Locania michauxii
Earth star	Cryptanthus spp.
Miniature agave	Dyckia brevifolia
Creeping fig	Ficus pumila
Dwarf gardenia	Gardenia jasminoides
Fig marigold	Glottiphyllum depressum
English ivy	Hedera helix
Daylily	Hemerocallis spp.
Beach elder	Iva imbricate
Shore juniper	Juniperus conferta
Trailing lantana	Lantana montevidensis
Partidge berry	Mitchella repens
Mondo grass	Ophiopegon japonicus
Leatherlef fern	Rumonra adiantiformis
Purple heart	Setcreasea pallida
Star jasmine	Trachelospermum jasminoides
Wedelia	Wedelia trilobata
Wandering jew	Zebrina pendula

Grasses Listed in IFAS as Turfgrasses
Bahia
St. Augustine cultivars
Annual ryegrass

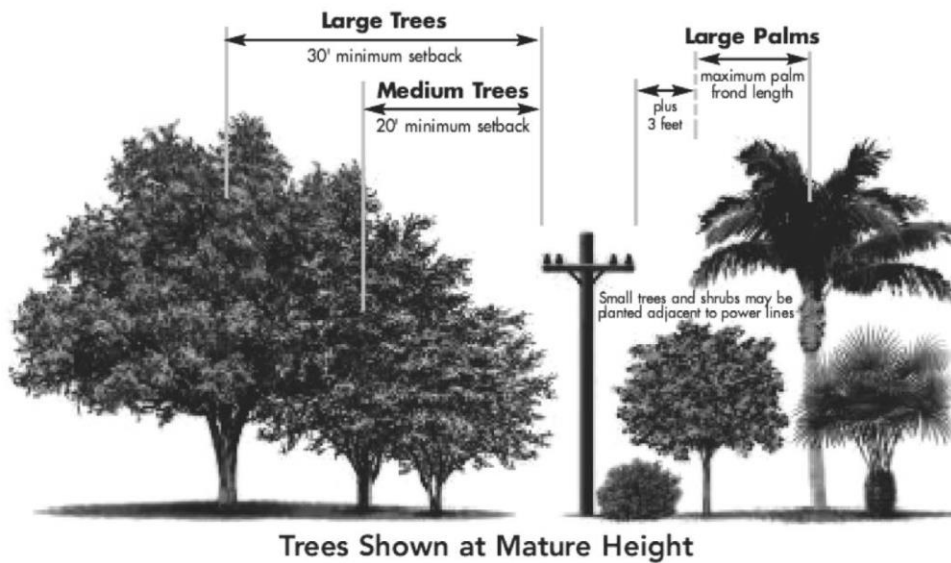


Figure 2
Large, Medium and Small Trees and Shrubs

(Code 2001, § 98-265; Ord. No. O-08-2011, § 5, 12-6-2011)

Secs. 113-281—113-308. Reserved.

SUBPART B - LAND DEVELOPMENT CODE
Chapter 113 - DEVELOPMENT STANDARDS
ARTICLE VI. LANDSCAPING

ARTICLE VI. LANDSCAPING

Sec. 113-242. Purpose and intent.

- (a) Landscape, landscaped areas, buffers, and tree protection shall be provided and/or accomplished for all premises in the manner set forth in this article. Required landscaped areas shall be located at or above grade unless otherwise prescribed in these land development regulations. The minimum provision of required landscape, landscaped areas, buffers, and trees may be exceeded. Unless otherwise prescribed, the most stringent provision of this schedule shall prevail.
- (b) Landscape, buffer, and tree protection requirements serve many purposes in the built-up environment. Landscape provides visual and climatic relief from buildings, structures, and broad expanses of pavement; landscape buffers pedestrian and vehicular traffic; and trees provide shade, scenic beauty, and natural habitat.
- (c) In general, landscaping and buffers shall be designed to:
- (1) Enhance the urban development by blending natural and manmade environments.
 - (2) Provide shade for paved surfaces.
 - (3) Separate vehicular and non-vehicular use areas.
 - (4) Define vehicular access ways and access points.
 - (5) Screen vehicular movement, noise, and glare.
 - (6) Provide visual and physical separation of potentially incompatible land uses.
 - (7) Incorporate water conservation features such as drought tolerant landscaping and reclaimed water usage as required herein.
 - (8) Provide a protective buffer to mitigate the impact of climate change and enhance urban biodiversity.
- (d) As recommended by Florida Title XXVIII, Chapter 373, plant selection for development projects within the city of Green Cove Springs shall be in compliance with Florida Friendly Landscaping as provided for Zip Code 32043 on the Institute of Food and Agricultural Sciences, University of Florida web site; <https://ffl.ifas.ufl.edu/apps/plants/>
- (Code 2001, § 98-231; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017, exh. A(98-231), 1-24-2017)

Sec. 113-243. Definitions.

The following words, terms, and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Berm means manmade earth contoured so as to form a mound above the general elevation of the adjacent ground or surface and designed to provide visual interest, screen undesirable view and/or decrease noise.

Buffer means a combination of physical space and vertical elements such as plants, berms, fences, or walls, whose purpose is to separate and screen incompatible land uses from one another.

Caliper means the diameter of a tree measured at breast height (DBH) which is approximately 4½ feet above the ground.

Canopy or shade tree means any tree grown specifically for its shade. The term "canopy or shade tree" usually applies to large trees with spreading canopies. Canopy trees normally grow to a minimum overall height of 30 feet and an average mature crown spread of 25 feet. Oaks, maples, ashes, lindens, and elms are examples canopy/shade trees. Canopy trees shall be a minimum of 2.5 inches caliper DBH. ~~Canopy Trees paced 50 Feet apart~~ Listed in IFAS as "Trees – Large" spaced per guidance under "Appearance"

Clear trunk means the distance between the top of the root ball and the point of the trunk where lateral branching begins.

Commercial means all uses in RPO, CBD, GCN, GCC, C-1, and C-2 zoning districts and commercial development in a PUD zoning district.

Common area means that area which will be maintained by a homeowner’s association, city service area, or other form of cooperative organization.

Dangerous Tree means any tree of any species which poses an immediate threat to persons or property due to disease, age, or mechanical injury. This can include damage from storms or other environmental factors.

Decorative turf means turf used purely for ornamental purposes having no use other than aesthetics.

Drip line means the vertical line running through the outermost portion of the tree crown projected vertically to the ground.

Florida Friendly Landscaping means quality landscapes that conserve water, protect the environment, are adaptable to local conditions, and are drought tolerant. The principles of such landscaping are the right plant in the right place, efficient watering, appropriate fertilization, mulching, attracting wildlife, responsible management of yard pests, recycling yard waste, reduction of storm runoff, and waterfront protection. Additional components include practices such as landscape planning and design, soil analysis, the appropriate use of solid waste compost, minimizing the use of irrigation, and proper maintenance.

Fully shielded lighting means lighting constructed in such a manner that all light emitted by the fixture, either directly from the lamp or a diffusing element, or indirectly by reflection or refraction from any part of the luminaire, is projected below the horizontal. Such fixtures usually have a flat, horizontally oriented lens and opaque (usually metal) sides. They are often described as shoebox luminaires if the luminaire has a predominantly rectangular form. Fixtures that either have reflecting surfaces or lenses (clear or prismatic) located below the lamp and visible from the side or above and fixtures that can be mounted such that the shielding is ineffective are not considered fully shielded lighting.

Grasses listed in IFAS as "Turfgrasses."

Groundcover means a low-growing plant, including turf grass, that, by the nature of its growth characteristics, completely covers the ground and does not usually exceed two feet in height. ~~Groundcovers are listed in IFAS as "Groundcovers."~~

Hat racking or topping means pruning a tree in such a way that the majority of limbs are removed and the tree is left with only a trunk and the stumps of a few primary limbs, with little or no foliage or other trimming or pruning that has the effect of preventing a tree from attaining its natural height and/or shape.

Hedge means a row of evenly spaced shrubs planted to form a continuous unbroken visual screen.

Immediate danger of collapse means that the tree may already be leaning, with the; surrounding soil heaving, and/or there is a significant likelihood that the tree will topple or otherwise fail and cause damage before a tree removal permit could be obtained through the non-emergency process. "Immediate danger of collapse" does not include hazardous conditions that can be alleviated by pruning or treatment.

Industrial means all uses in M-1 and M-2 zoning districts and all industrial uses in a PUD zoning district.

Invasive Species means plants, animals, and other living organisms (e.g., microbes), non-native (or alien) to the ecosystem under consideration and, whose introduction causes or is likely to cause economic or environmental harm or harm to human health.

Landscape means vegetative and inert materials, including, but not limited to, grass, sod, shrubs, vines, hedges, trees, flowers, berms, and complementary structural landscape architectural features such as rocks, fountains, sculpture, decorative walls and tree wells or other hardscape features.

Landscaped area means land area to be provided with landscape.

Landscaped strip or *landscaped island* means required landscaped areas containing ground cover, shrubs, trees and/or other landscape used to divide parking areas into individual bays.

Large Ornamental listed in IFAS as “Palms and Palm Like Plants.”

Mitigation means the action used by an individual, company or agency to identify and minimize the risks from a proposed action that will reduce its impacts on people, property, and the environment and will restore and retain the biodiversity of the site.

Moisture sensors which means a device which has the ability to shut off an automatic irrigation controller after receiving a determined amount of rainfall.

Mulch means nonliving organic materials such as wood chips that is customarily placed around the base of trees, shrubs, and groundcovers for the purpose of retaining moisture and retarding weed infestation and soil erosion. Also, mulch is used in pathways and play areas.

Native or naturalizing plant species means plant species native to the region or introduced which once established are capable of sustaining growth and reproduction under local climatic conditions, without supplemental watering and enhance habitat for native wildlife.

Nonresidential means, pursuant to land use category headings reflected in Schedule B, Permitted Uses, in these land development regulations, all commercial, transient lodging and entertainment, automotive, miscellaneous business and services, industrial and public/semi-public uses.

Ornamental Landscape Trees, Small Trees listed in IFAS as “Trees – Medium.”

Parking area means a paved ground surface area used for the temporary parking and maneuvering of vehicles by employees or customers, either for compensation or to provide an accessory service to a commercial, industrial, institutional or residential use.

Paved ground surface area. See section 101-5.

Poodle cut means stripping off the lower branches of a tree and rounding or shearing the ends of the greenery to create an unnatural shape.

Protected Area means an existing natural area that has been determined by the City of Green Cove Springs, to be of significant aesthetic, environmental, or monetary value or which affords collective protection for the city from extreme weather events, and has been designated as protect by the City Council.

Protected Specimen tree means a particularly fine or unusual example of any tree due to its age, size, rarity, environmental or historical value or exceptional aesthetic quality. A tree may also be designated a specimen due to its association with historic events or persons. A specimen tree cannot be of a non-native species that is unacceptable as referenced in list of exempt trees in this Code. Status is obtained by submission for protection by the property owner with certification for a certified arborist or the Green Cove Springs Historical Society, annotation of the legal description of the property by a certified surveyor, which are submitted to the City Planning Office. After a period of public notice, a hearing shall be held by the city council after which a formal determination is approved or denied. Designation will be annotated on the title to the property. Reversal of this determination

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will require action by the City Council. is approved or denied. Designation will be annotated on the title to the property. Reversal of this determination will require action by the City Council.

Commented [MPD1]: Recommend moving this language Sec. 113-274

Required landscaped area means any landscaped area required in this Code.

Residential means all uses in R-1, R-2, R-3, and PUD zoning districts; one-family, two-family and multiple-family dwellings.

Shrub means a self-supporting woody species of plant characterized by persistent stems and branches springing from the base. *Shrubs and requirements for Visual Screens listed in IFAS as "Shrubs-Large" spaced on center per guidance under "Appearance."*

Tree means a self-supporting woody plant of a species that normally grows to a minimum overall height of 15 feet and has an average mature crown spread greater than 15 feet within the city.

Turf means upper layer of soil bound by grass and plant roots into a thick mat.

Understory, sub-canopy trees means trees which normally grow to a maximum overall height of 15 feet and an average mature crown spread of 15 feet. Understory Trees. *listed in IFAS as "Trees – Small"*

Vehicular circulation area means streets, rights-of-way, access ways, parking spaces, parking, loading, and unloading, and other similar or related functions.

Viable tree is a tree that is in compliance with Florida Friendly Landscaping as provided for Zip Code 32043 on the Institute of Food and Agricultural Sciences, University of Florida web site, which is capable of growing and developing in its natural form upon completion of development of a site. Trees that are dead, dying, or have their root systems or crowns severely altered during construction or are dangerous because of their growth habits are not a viable tree.

(Code 2001, § 98-232; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017, ex. A(98-232), 1-24-2017)

Sec. 113-244. Required landscaping.

- (a) Landscape requirements for one-family dwellings and two-family dwellings shall be as follows:
- (1) At least one canopy tree, 2.5 inches DBH, shall be located in the required front yard of each dwelling unit.
 - (2) The lot shall be sodded, seeded, or appropriate ground cover for erosion control.
- (b) Landscape requirements for nonresidential uses, including multifamily structures with three or more dwelling units, shall be as follows:
- (1) *Perimeter landscaping.* At a minimum, each site developed for multifamily, institutional, commercial, or industrial uses will contain one shade or canopy tree for each 50 linear feet of the perimeter of the site.
 - (2) *Interior landscaping.* There will be one tree per every 1,500 square feet of the first 10,500 square feet of the project site, then one tree for every 4,000 square feet of the remainder of the project site. The trees shall be an equal proportion of shade (canopy) and understory trees. At a minimum, 15 percent of the site shall be landscaped.
- (c) Landscape adjacent to streets and parcels.
- (1) A landscaped strip shall be provided along all parcel lines and abutting street right-of-way lines.
 - (2) The depth of the required landscaped strip shall be measured and provided parallel to the parcel line or abutting street right-of-way in question.

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- (3) Landscaped strips shall be considered ~~to be~~ required landscaped area.
- (4) A landscaped strip may be included in satisfying buffer requirements.
- (d) Landscaped strips shall be provided in the following manner:
- (1) Ten-foot landscaped strip along all rights-of-way.
 - (2) Alternative design for properties fronting on all roads classified as arterials, including, but not limited to, U.S. 17 (Orange Avenue), S.R. 16 East (Leonard C. Taylor Parkway) and S.R. 16 West (Ferris Street and Idlewild Avenue), shall comply with the following standards: The developer/property owner shall be responsible for providing a landscape buffer in the area abutting the designated roadway right-of-way lines by meeting on of the following conditions:
 - a. The roadway shall be separated from the back of curb by a six-foot landscaped strip, a six-foot pedestrian walkway, then a six-foot landscaped strip.
 - b. Building setback shall be calculated from the back of curb or ten-foot landscaped strip along all rights-of-way.
 - c. Alternative designs. Where natural features or spacing of existing driveways and roadways cause the access requirements of this section affecting placement or planting of landscaped buffers or trees to be physically infeasible, alternate designs may be approved as part of the issuance of the final development order.
 - (3) The landscape buffer area shall be planted in the following manner:
 - a. *Canopy trees.*
 1. One row of canopy trees, 2.5 inches DBH at planting. For 50 percent of the canopy trees, two sub-canopy/understory trees may be substituted for each canopy tree.
 2. The trees shall be planted every 50 feet and staggered so as to be midway between each other, and equal distance between each row and right-of-way and/or parcel line. Trees shall be evenly spaced. The tree spacing may be altered with approval of the development services, provided the total number of trees is provided.
 - b. *Sub-canopy/understory trees.* A minimum of four sub-canopy/understory trees per 100 feet of frontage shall be planted in and about each access point and intersection.
 - c. *Hedges.* When off-street parking, loading, unloading and vehicular circulation areas are to be located adjacent to the street right-of-way, a dense hedge of evergreen-type shrubs shall be provided in the following manner:
 1. At initial planting and installation, shrubs shall be at least 24 inches in height and shall be planted at least 36 inches or less on center.
 2. The hedge shall be planted four feet or more from the tree trunks.
 3. Within two years of initial planting and installation, shrubs shall have attained and be maintained at a minimum height of three feet and shall provide an opaque vegetative screen between the street and the use of the premises.
 4. In lieu of a vegetative hedge, the use of vegetated berms or other appropriate landscape materials in a manner that results in the visual separation of street right-of-way can be approved by the development services director.
 - d. *Shrubs.*

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1. Buffer areas, not adjacent to a street right-of-way, shall include nine shrubs for every 100 linear feet of the parcel line
2. Shrubs shall be at least 24 inches in height at the time of planting.

(e) Groundcover. The buffer area shall be planted with groundcover minimum of 18 inches on center or solid grass sod, unless natural area to remain.

(Code 2001, § 98-233; Ord. No. O-01-2000, § 6.06.02, 6-6-2000; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017, ex. A(98-233), 1-24-2017)

Sec. 113-245. Exemptions and exceptions to landscape requirements.

Interior landscaping for parking garages or other vehicle use areas contained entirely with a roofed and walled structure. Landscaping shall be provided around the perimeter of the structures.

(Code 2001, § 98-234; Ord. No. O-01-2000, § 6.06.01, 6-6-2000; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017, ex. A(98-234), 1-24-2017)

Sec. 113-246. Parking area landscaping.

The requirements of this section apply to all development, unless exempted:

(1) *Internal landscape area.*

- a. Minimum required land area for required landscaped areas not in a parking area. Each required landscaped area shall contain a minimum land area of 200 square feet.
- b. The minimum required internal landscaped area for parking areas shall cover ten percent of the parking area.
- c. Required landscaped area for rows of parking spaces.
 1. A landscaped area shall be provided at each end of all rows of parking.
 2. In addition, at least one landscaped area shall be provided between every ten parking spaces.
 3. Each required landscaped area shall be five feet wide inside the curb or paving line running the entire length of the parking space.
 4. At least one canopy tree shall be provided at each island.
 5. A five-foot turning radius shall be accommodated at the end of parking rows.
- d. Parking space reduction to protect existing trees. The development services director shall have the authority to reduce the required number of off-street parking spaces when such reduction would result in the preservation of existing trees.
 1. Trees to be preserved must be a minimum of 12 inches in diameter measured at breast height above the ground.
 2. The reduction in the number of required parking spaces shall result in a reduction in an amount of required parking of less than five percent of the total number of required off-street parking spaces.

(2) *Required trees.*

-
- a. At least one canopy tree shall be provided in each required landscaped area.
 - b. One canopy trees or two sub canopy trees shall be provided for each required landscaped area for the rows of parking. A minimum of 50 percent of the trees used shall be canopy trees.
- (3) *Location of landscaped areas for interior landscaping.*
- a. A landscaped area or buffer shall be provided between all parking areas and principal structures or any sidewalks and street or rights-of-way.
 - b. This landscape area or buffer must contain at least one canopy tree per 50 feet linear perimeter of the parcel.
 - c. Every effort will be made to retain native vegetation and trees.
 - d. Minimum width of the landscape area:
 - 1. Ten feet when abutting a public right-of-way.
 - 2. Five feet when abutting alleys or the rear or side property lines.
 - e. Each landscaped area shall have five shrubs per each tree required.
 - f. All landscaped areas shall be covered in groundcover or turf.
- (4) *Maintenance of planted areas.*
- a. Irrigation shall be provided for all new planting. Hose bibs maybe installed as an alternative, one hose bib within 75 feet of all landscaped areas.
 - b. Maintenance shall be the responsibility of the developer and/or landowner.
 - c. Failure to maintain landscaped areas shall be considered a violation of this subpart and subject to code enforcement.
- (5) *Buffer zones for incompatible land uses.*
- a. A buffer zone is a five-foot landscaped strip along parcel boundaries that serves as a buffer between incompatible uses and land use districts. This shall not be interpreted to mean that parcels within a planned, mixed use development must meet these requirements.
 - b. A buffer zone shall have a visual screen running the entire length of the property with a minimum opacity of 85 percent and a minimum height of six feet.
 - c. The use of existing native vegetation in buffer zones is preferred.
 - d. A five-foot buffer of native vegetation between a conservation designated land use and any other development shall be required. This is not in addition to buffers required by any permitting agency.
- (6) *Street trees for subdivisions.*
- a. The developer shall plant, within ten feet of the right-of-way of each street within a residential development meeting the subdivision requirements of this Code, one canopy tree for every 50 linear feet of right-of-way.
 - b. Except where property on one side of the right-of-way is not owned by the developer, the trees shall be planted alternately on either side of the street.
 - c. Existing trees and native tree species that need less water and maintenance are ~~preferred~~ **required**.
 - d. Coordination with the city utility departments is required prior to planting the street trees.

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- e. Street trees planted shall have a minimum overall height of 2.5-inch DBH at time of planting.
- (7) *Certain functional uses not permitted.* No accessory structures, garbage or trash collection points or receptacles, parking, or any other functional use shall be permitted in the minimum required landscape area and/or buffer zone. Combining of compatible functions such as landscaping and drainage facilities are permitted.
- (8) *Concealing and location of dumpsters.*
- a. Dumpsters must be concealed in opaque concrete, brick, or chain-link fence with screening slats of enough height consistent with the size of the container to shield the container from view from all sides.
 - b. The front of screen must be accessible for service of the container.
 - c. The dumpster must be located on a paved surface of asphalt or concrete.
- (9) *Clear line of sight.* An unobstructed cross visibility shall be required within a triangle area formed by the intersection of two rights-of-way or access ways, as referenced in section 113-76.

(Code 2001, § 98-235; Ord. No. O-01-2000, § 6.06.03, 6-6-2000; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017, exh. A (98-235), 1-24-2017)

Sec. 113-247. Landscape design and materials.

- (a) *Design principles.* All landscaped areas required shall conform to the following general design principles:
- (1) Florida Friendly Landscaping principles shall be incorporated into all projects.
 - (2) Landscaping should integrate the proposed development into existing site features through consideration of existing topography, hydrology, soils, and vegetation.
 - (3) The functional elements of the development plan, particularly the drainage systems and internal circulation systems for vehicles and pedestrians, should be integrated into the landscaping plan.
 - (4) Landscaping should be used to minimize potential erosion through the use of ground covers or any other type of landscape material that aids in soil stabilization.
 - (5) Existing native vegetation ~~should~~ shall be preserved and used to meet landscaping requirements.
 - (6) Landscaping should enhance the visual environment through the use of materials that achieve variety with respect to seasonal changes, species of living material selected, textures, colors and size at maturity.
 - (7) Landscaping design should consider the aesthetic and functional aspects of vegetation, both when initially installed and when the vegetation has reached maturity. Newly installed plants should be placed at intervals appropriate to the size of the plant at maturity, and the design should use short-term and long-term elements to satisfy the general design principles of this section over time.
 - (8) Landscaping should enhance public safety and minimize nuisances.
 - (9) All landscaping and plant material shall be planted in a manner which shall not be intrusive or interfere, at or before maturity, with pavement surfaces, power, cable television, or telephone lines, sewer, or water pipes, or any other existing or proposed overhead or underground utility services.
 - (10) Landscaping should maximize the shading of streets and vehicle use areas.
 - (11) Architectural planters.

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- a. Planters ~~can be~~ **are** used to meet landscaping requirements.
 - b. Planters shall be a minimum of ten square feet and shall have minimum depth of 15 inches.
 - c. Planters shall be maintained and replanted if necessary.
 - d. Planters cannot be located within the city right-of-way without prior consent from the development services director.
- (b) *Installation of required landscape and trees.*
- (1) *General.* All required trees and landscaping shall be installed according to generally accepted commercial planting procedures. Soil, free of lime rock, rocks, and other construction debris, shall be provided. All landscaped areas shall be protected from pedestrian and vehicular encroachment by raised planting surfaces, depressed walks, curbs, edges, wheel stops and the like.
 - (2) *Florida No. 1 quality*
 - a. All required plant materials, including, but not limited to, trees and shrubs, shall equal or exceed the standards for Florida No. 1 as established and revised by the state department of agriculture and consumer services **in the current Florida Grades and Standards for Nursery Plants.**
 - b. Grass sod shall be healthy and reasonably free of weeds, pests and disease.
 - (3) *Proper planting and anchoring.*
 - a. All plant material shall be mulched to a depth of two inches **over the root zone but avoid the actual trunk.**
 - b. Trees shall be installed with anchoring for a period of at least one year, in order to provide sufficient time for their roots to become established.
 - 1. Trees with trunks under four inches in diameter should be staked with one to three stakes.
 - 2. Trees with a diameter of 2.5 inches or more DBH should be guyed with three to four guy wires.
 - (4) *Irrigation.*
 - a. All landscaped areas shall be watered with an underground irrigation system or a drip irrigation system or hose bibs designed to allow differential operation schedules for high and low water requirement areas. To avoid operation of the system during periods of increased rainfall, an operational moisture sensor switch shall be required on all irrigation systems equipped with automatic controls that will override the irrigation cycle of the sprinkler system when adequate rainfall has occurred.
 - b. The use of reclaimed water as a water supply source for irrigation shall be required when such source is available or anticipated to be available within 100 feet of an existing or proposed city reclaimed water line. In areas where food is served or consumed, such as outdoor eating areas of restaurants, a dual supply source distribution system shall be installed whereby potable water shall serve as the source for the food serving and/or consumption areas and reclaimed water shall serve as the supply source in all other landscaped areas.
 - c. If a landscaped area contains primarily species native to the immediate region, or plants acceptable for xeriscape landscaping, the development services director may waive the requirement for installation of an irrigation system. Consideration of a waiver of the irrigation requirement shall include, in addition to the area covered by native vegetation, such local conditions as sun or shade, use of fill soil, and depth to water table.

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- b. The development services director may require or otherwise approve water supply provisions for unusual landscape conditions provided, however, that a readily available water source shall be located within 100 feet of any required landscaping plant material.
- (5) *Berm*. When a berm is used to form a required visual screen in lieu of, or in conjunction with, a required hedge or wall, such berm shall not exceed a slope of 30 degrees and shall be completely covered with shrubs, trees, or other living ground cover.
- (6) *Grass*.
 - a. Grass shall be seeded, plugged, or sodded.
 - b. On swales, berms or other areas that are subject to erosion, grass shall be completely sodded.
- (7) *Ground cover*. Ground cover shall be installed and maintained for all improved parcels, in order to prevent erosion and dust. Ground cover used in lieu of grass shall be planted in such a manner so as to present a finished appearance and reasonably complete coverage within three months after planting.
- (8) *Nonliving materials*. Mulch shall be a minimum depth of two inches.
- (c) *Recommended plant list is available on the IFAS FFL Website at <https://ffl.ifas.ufl.edu/plants/> for Zip Code 32043.*

Understory Trees/Sub-Canopy	
Common Name	Botanical Name
Redbud	Cercis canadensis
Anise	Illicium spp.
Drake/Chinese elm	Ulmus parvifolia
Flowering dogwood	Comus Florida
Wax myrtle	Myrica cerifera
Loblolly bay	Gordonia lasianthus
Southern red cedar	Juniperus silicicola
Yaupon holly	Ilex vomitoria
Fringe tree	Chionanthus virginica
Sweet bay magnolia	Magnolia virginiana
Chinese fan palm	Livistona chenensis
Windmill palm	Trachycarpus fortunei
Washington palm	Washingtonian robusta
Dahoon holly	Ilex cassine
Savannah holly	Ilex opaca x attenuate & cultivars
River birch	Betula nigra
Palatka holly	Ilex attenuate

Understory	
Common Name	Botanical Name
Crape myrtle	Lagerstroemia x fauriei
Wax myrtle	Myrica cerifera
Loblolly bay	Gordonia lasianthus
Junipers	Juniperus torulosa & spartan
Bottlebrush	Callistemon spp.
Redbud	Cercis canadensis

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Rusty pittosporum	Pittosporum ferrugineum
Podocarpus	Podocarpus nagi
Holly	Ilex spp.
Leyland cypress	Cupressocyparis leylandi

Canopy Trees	
Common Name	Botanical Name
American elm	Ulmus americana
Live oak	Quercus virginiana
Chinese elm	Ulmus parvifolia
Red bay	Persea borbonia
American sycamore	Platanus occidentalis
Tulip tree	Liriodendron tulipifera
Southern magnolia	Magnolia grandiflora & cultivar
Laurel oak	Quercus laurifolia
Canary Island palm	Phoenix canariensis
European fan palm	Chamaerops humillis
Pindo palm	Butia capitata
Hornbeam/bluebeech	Carpinus caroliniana
Water ash; pop ash	Fraxinus caroliniana
Florida winged elm	Ulmus alata
Florida elm	Ulmus americana floridana
Red maple	Acer rubrum
American holly	Ilex opaca & cultivars
Loblolly bay	Gordonia lasianthus

- (d) ~~Unacceptable plant species. All invasive prohibited species shall be allowed to be removed, without a permit and prior to the development of the site.~~
- (e) *Maintenance and replacement of landscape plants.* All plant material shall be maintained according to the following standards:
 - (1) All required trees, shrubs and landscaped areas shall be maintained in good and healthy condition for as long as the use continues to exist.
 - (2) Maintenance shall consist of mowing, removing of litter and dead plant material, necessary pruning, pest control, water, and fertilizing.
 - (3) Maintenance also includes, but is not limited to, the replacement of plants damaged by insects, disease, vehicular traffic, acts of God and vandalism.
 - (4) Necessary replacements shall be made within a time period not to exceed 30 days after notification by the city of the violation.
 - (5) In order to increase the tree canopy within the city, give shade to paved surfaces, buffer pedestrian and vehicular traffic and provide scenic beauty and natural habitat, as well as prevent decay, sunburn and hazards to trees, all landscape material shall be pruned to maintain the natural shape of the plant.
 - (6) No topping, hat racking, poodle cutting, excess pruning or excess crown reduction shall be performed on trees within the right of way.

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- (7) The city shall encourage the standards of the International Society of Arboriculture and the Tree Care Industry Association for tree care operations, plant maintenance and proper pruning methods.

(Code 2001, § 98-236; Ord. No. O-01-2000, § 6.06.04, 6-6-2000; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017, exh. A(98-236), 1-24-2017)

Sec. 113-248. Tree preservation during development and construction.

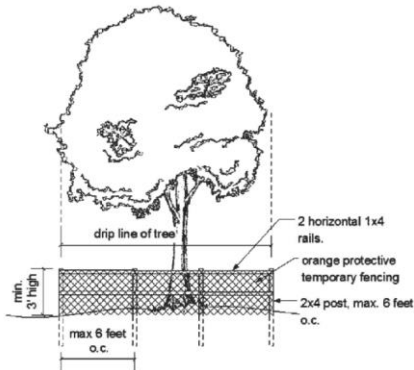
- (a) Protective barriers.
- (1) During construction, protective barriers shall be placed, as necessary and/or as directed by the development services director, to prevent the destruction or damaging of trees.
 - (2) Trees destroyed or receiving major damage must be replaced before occupancy or use unless approval for their removal has been granted during the site plan approval process
 - (3) All trees not designated for removal may be required to be protected by barrier zones erected prior to construction of any structures, roads, utility service, or other improvements,
- (b) The protective barrier shall be constructed to the following standards:
- (1) The protective barrier shall be constructed outside the drip line of the tree, when possible (see Figure A). The protective barrier shall have a minimum of a six-inch radius, plus one inch for each one inch of caliper.
 - (2) The protective barrier shall be a minimum of three feet high.
 - (3) Protective barrier posts shall be two inches by four inches or larger and shall be no more than six feet apart.
 - (4) The barrier shall have two one-by-four-inch horizontal railings affixed securely to the posts.
 - (5) The entire protective zone shall be wrapped in orange safety fencing material, a minimum of three feet in height.
 - (6) The protective barriers shall be inspected by the ~~Zone and Planning~~ **Planning and Zoning Department** prior to the commencement of construction.
- (c) No grade changes shall be made within the protective barrier zones without prior approval of the city development services director.
- (d) Where roots greater than one-inch diameter are exposed, they shall be cut cleanly.
- (e) Protective barrier zones shall remain in place and intact until such time as landscape operations begin or construction is complete, whichever occurs first.
- (f) The development services director may conduct periodic inspections of the site before work begins and during clearing, construction, and post-construction phases of development in order to ensure compliance.
- (g) No building materials, machinery or temporary soil deposits shall be placed within protective barrier zones defined above.
- (h) No attachments or wires other than those of a protective or non-damaging nature shall be attached to any tree.
- (i) **A site survey of existing trees must be completed within two years by the developer and certified as accurate by the Planning Department as part of the submission process, including a mitigation plan, before a building permit is issued.**

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- (j) Protected areas and protected trees must be preserved unless that designation is changed by vote of the City Council.

Figure A



(Code 2001, § 98-237; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017, exh. A(98-237), 1-24-2017)

Secs. 113-249—113-273. Reserved.

ARTICLE VII. TREES

Sec. 113-274. Protected Trees

- (a) Protected trees as defined in Sec. 113-243 shall be designated pursuant to the following requirements:
1. Submittal Application by the property owner
 2. Location and type and size of tree
 3. A specimen tree cannot be of a non-native species as set forth in Section 113-276 referenced in list of exempt trees in this Code. Status is obtained by submission for protection certification by a certified arborist that the tree complies with the definition of protected tree as set forth in Sec. 113-243.
 4. Additional relevant historical documentation, if applicable.
 5. Annotation of the legal description of the property by a certified surveyor,
 6. Public notice requirements shall include:
 - a. Mail copy of notice by regular mail to property owners within 300 feet no less than ten days before City Council Meeting
 - b. Post sign on property no less than 10 prior to City Council meeting.
 - c. A hearing shall be held by the Planning and Zoning Commission after which a formal determination is approved or denied.
 8. If approved, a lien shall be placed on the property and the lien shall be recorded within 30 days in the official county records at the property owners expense.

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SUBPART B - LAND DEVELOPMENT CODE
Chapter 113 - DEVELOPMENT STANDARDS
ARTICLE VII. TREES

9. Reversal of this determination shall require action by the City Council.

(b) Protected Area as defined in Sec. 113-243 shall be designated pursuant to the following requirements:

- 1 Submittal Application by the property owner
- 2 Location and type and size of tree
- 3 A specimen tree cannot be of a non-native species as set forth in Section 113-276 referenced in list of exempt trees in this Code. Status is obtained by submission for protection certification by a certified arborist that the tree complies with the definition of protected tree as set forth in Sec. 113-243.
- 4 Additional relevant historical documentation, if applicable.
- 5 Annotation of the legal description of the property by a certified surveyor,
- 6 Public notice requirements shall include:
 - a. Mail copy of notice by regular mail to property owners within 300 feet no less than ten days before City Council Meeting
 - b. Post sign on property no less than 10 prior to City Council meeting,
 - c. A hearing shall be held by the Planning and Zoning Commission after which a formal determination is approved or denied.
- 7 If approved, a tree protection easement shall be placed on the property and the easement shall be recorded within 30 days in the official county records at the property owner's expense.

9. Reversal of this determination shall require action by the City Council.

Sec. 113-275. Removal of trees.

- (a) Removal of a tree includes any act which will cause a tree to die, such as damage inflicted upon the root system by heavy machinery, changing the natural grade above the root system or round the trunk, damage, including fire damage, inflicted on the tree permitting infection or pest infestation.
- (b) It shall be unlawful for any person, organization, society, association or corporation or any agent or representative thereof, directly, or indirectly, to cut down, destroy, remove, move, or effectively destroy through damaging any tree located on any property without obtaining a permit.
- (c) No authorization for the removal of a protected tree designated as protected shall be granted unless the developer demonstrates a compelling reason for removal of the trees. Authorization must be by vote of the City Council removing the protected status. No authorization for the removal of a protected viable tree shall be granted unless the developer demonstrates the reason for removal of the trees.

(Code 2001, § 98-261; Ord. No. O-01-2000, § 6.07.01, 6-6-2000; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017, ex. B(98-261), 1-24-2017)

Commented [MPD2]: Moved protected tree language to Sec. 113-274

Sec. 113-276. Exceptions and exemptions.

The following are exempt from the requirements of section 113-275.

- (1) Utility and public works projects undertaken by the city, including in the case of emergencies such as hurricane, windstorm, flood, freeze, or other disasters.

(2) One- and two-family dwelling units.

a. In the event that a tree has not been designated as protected and the surrounding property owners object to its removal due to historic importance or impact on adjacent property values, a stay shall be issued pending review by the Planning and Zoning Commission to allow interested parties to address the City Council and seek designation as a protected tree.

(3) Dangerous trees.

- a. In the event that any tree endangers health or safety and requires immediate removal, verbal authorization may be given by the development services director.
- b. The tree may be removed without obtaining a written permit provided a certified arborist has made such a determination. The verbal authorization shall later be confirmed in writing by the development services director.
- c. In the event of a natural disaster, environmental or other emergency situation where immediate action is required, any recognized civil authority can authorize immediate removal, to include utility crews, Law Enforcement Officers, and Fire and Rescue Crews.

(4) Exempt trees. Nonnative The following types of trees shall be exempt from the provisions of this section and removal allowed without a permit: Nonnative trees as defined by IFAS, Florida Friendly Landscaping, Zip Code, 32043.

Commented [MPD3]: Concerned about the ramifications regarding:
 1. private property rights
 2. logistics of issuing a "stay" when tree permits aren't required for 1 and 2 family dwellings
 3. This code section is not being uniformly applied.

Commented [PD4]: Exempt Trees shall be just for nuisance trees, concerned that if this is left to all nonnative trees, trees will be removed and later claimed to be exempt.

Common Name	Botanical Name
American mulberry	Morus rubra
Australian pine	Casuarinas spp.
Black cherry	Prunus serotina
Brazilian pepper	Shinus terebinthifolius
Cajuput tree	Melaleuca leucadendra
Camphor tree	Cinnamomum camphora
Cherry laurel	Prunus laurocerasis
Chinaberry	Melias azedarach
Chinese tallow tree	Sapium sebiferum Containerized trees and nursery stock trees grown for resale
Ear trees	Enterolobium cyclocarpum
(Enterolobium contortisliquum)	
Eucalyptus robusta	Eucalyptus robusta
Jacaranda	Jacaranda acutifolia
Golden rain tree	Koelreuteria elegans
Orchid tree	Bauhinia
Rosewood	Dalbergia sissoe
All pines	Pinus
Silk oak	Grevillea robusta
Pecan	Carya illinoensis

(Code 2001, § 98-262; Ord. No. O-01-2000, § 6.07.02, 6-6-2000; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017, ex. B(98-262), 1-24-2017)

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Sec. 113-277. Drought-tolerant plant standards applicable to required landscaping.

Drought-tolerant plants which shall be used in required landscaping are native, noninvasive plants which will survive and flourish with comparatively little supplemental irrigation. Industrial, commercial, civic, and multifamily residential buildings or structures and common areas of single-family or multifamily residential developments shall incorporate drought tolerant trees, shrubs, and groundcovers in landscape plans as a water conservation measure. A list of plants which require minimal water are included in the St. Johns River Water Management District's publication *Water Wise, Florida Landscapes*. In addition, mulches and drought tolerant groundcovers shall replace narrow turf areas where irrigation is impractical. Interior remodels or minor modifications to the exterior of a structure are not subject to this requirement.

(Code 2001, § 98-263; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017, exh. B(98-263), 1-24-2017)

Sec. 113-278. Conditions for tree removal.

The development services director shall issue the permit for removal of a tree if one of the following reasons for removal is found to be present:

- (1) The condition of the tree with respect to disease, insect attack, age or other damage creates a danger of falling, or otherwise causes the tree to have an adverse impact on the urban or natural environment **as determined by a certified arborist.**
- (2) Removal of the tree is necessary to construct proposed improvements in order to make use of the property **provided it does not have designation as a protected tree;**
- (3) To avoid interference with utility services; or
- (4) Removal of a tree in compliance with a state-approved timber management plan.

(Code 2001, § 98-264; Ord. No. O-01-2000, § 6.07.03, 6-6-2000; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017, exh. B(98-264), 1-24-2017)

Sec. 113-279. Replacement.

(a) *Generally.* In respect to removal of trees to allow construction of improvements on property, and as a condition to the granting of a permit, replacement shall be required.

- (1) *Trees removed.*
 - a. *Live oaks, Bald Cypress, and Mature Southern Magnolia.*
 1. All efforts shall be made to maintain all live oak trees, **Bald Cypress, and Mature Southern Magnolia** on the site.
 2. Replacement of live oak trees **Bald Cypress, and Mature Southern Magnolia** shall be with live oak trees, **Bald Cypress, and Southern Magnolia** and the total caliper inches of replacement trees shall equal the total caliper inches of live oak trees removed.
 - b. *All other trees.*
 1. Trees removed over 12 inches DBH on the site shall be replaced.
 2. The replacement for all trees over 12 inches in caliper at DBH on the site shall equal one-third of the total caliper at DBH of the trees removed.

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(2) *Tree replacement or payment to city.* In lieu of replacement of trees on the site, the development services director may approve a plan for replacement of trees offsite or payment to the city tree mitigation fund. The value will be based on the average cost of other municipalities in northeast Florida. (Currently \$142.00 per caliper inch)

(b) *Credit for trees.* Trees which are preserved shall receive credit against the landscape requirements according to the following schedule:

- (1) Trees 12 to 18 inches: Live oaks, Bald Cypress, and Southern Magnolia one-inch credit; all others, 50 percent-inch credit.
- (2) Trees 19 to 30 inches: Live oaks, Bald Cypress, and Southern Magnolia 1.25-inch credit; all others, 75 percent-inch tree credit.
- (3) Trees over 30 inches: Live oaks, Bald Cypress, and Southern Magnolia 1.5-inch credit; all others, 100 percent-inch credit.
- (4) A minimum of one fourth (¼) of the replacement credit shall consist of and same tree species removes and have a minimum caliper diameter of 4 inches per replacement tree.

(Code 2001, § 98-265; Ord. No. O-01-2000, § 6.07.04, 6-6-2000; Ord. No. O-08-2011, § 5, 12-6-2011; Ord. No. O-03-2017, ex. B(98-265), 1-24-2017)

Sec. 113-280. List of plants recommended for the city can be obtained by the IFAS FFL
Website at <https://ffl.ifas.ufl.edu/plants/> for Zip Code 32043.

Understory Trees (Max. Height 15 Feet) listed in IFAS as "Trees—Small"	
Common Name	Botanical Name
Redbud	Cercis canadensis
Anise	Illicium spp.
Drake/Chinese elm	Ulmus parvifolia
Flowering dogwood	Comus florida
Wax myrtle	Myrica cerifera
Loblolly bay	Gordonia lasianthus
Southern red cedar	Juniperus silicicola
Yaupon holly	Ilex vomitoria
Fringe tree	Chionanthus virginica

Canopy Trees Spaced 50 Feet Apart listed in IFAS as "Trees—Large" spaced per guidance under "Appearance"	
Common Name	Botanical Name
American elm	Ulmus americana
Live oak	Quercus virginiana
Sweet bay magnolia	Magnolia virginiana
Silver dollar tree	Eucalyptus cinerea
Chinese elm	Ulmus parvifolia
Red bay	Persea borbonia
American sycamore	Platanus occidentalis
Tulip tree	Liriodendron tulipifera

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Southern magnolia	Magnolia grandiflora & cultivar
Laurel oak	Quercus laurifolia
Washington palm	Washingtonian robusta
Canary Island palm	Phoenix canariensis
European fan palm	Chamaerops humillis
Sabal palm	Sabal palmetto
Chinese fan palm	Livistona chenensis
Windmill palm	Trachycarpus fortunei
Pindo palm	Butia capitata

<i>Canopy Trees Spaced 30 Feet Apart</i>	
<i>Common Name</i>	<i>Botanical Name</i>
Dahoon holly	Ilex cassine
Hornbeam/bluebeech	Carpinus caroliniana
Water ash; pop ash	Fraxinus caroliniana
Florida winged elm	Ulmus alata
Florida elm	Ulmus americana floridana
Red maple	Acer rubrum
Savannah holly	Ilex opaca x attenuate & cultivars
American holly	Ilex opaca & cultivars
Loblolly bay	Gordonia lasianthus
River birch	Betula nigra
Palatka holly	Ilex attenuate

<i>Ornamental Landscape Trees; Small Trees listed in IFAS as "Trees - Medium"</i>	
<i>Common Name</i>	<i>Botanical Name</i>
Crape myrtle	Lagerstroemia x fauriei
Wax myrtle	Myrica cerifera
Loblolly bay	Gordonia lasianthus
Junipers	Juniperus torulosa & spartan
Bottlebrush	Callistemon spp.
Redbud	Cercis canadensis
Rusty pittosporum	Pittosporum ferrugineum
Podocarpus	Podocarpus nagi
Holly	Ilex spp.
Leyland cypress	Cupressocyparis leylandi
Jerusalem thorn	Parkinsonia aculeate

<i>Large Ornamental Trees and Palms listed in IFAS as "Palms and Palm Like Plants"</i>	
<i>Common Name</i>	<i>Botanical Name</i>
Winged elm	Ulmus alata
Washington palm	Washingtonian robusta
Canary Island palm	Phoenix canariensis
European fan palm	Chamaerops humillis
Sabal palm	Sabal palmetto

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(Supp. No. 3)

Heritage river birch	Betula nigra "heritage"
Chinese fan-palm	Livistona chenensis
Windmill palm	Trachycarpus fortunei
Pindo palm	Butia capitata

Shrubs and Minimum 2.0—4.0 ft) On-Center (OC)

Requirements for Visual Screens Listed in IFAS as "Shrubs-Large" spaced on-center per guidance under "Appearance"

Common Name	Botanical Name	On-Center
Glossy abelia	Abelia spp.	2.0 OC
Allamanda	Cortadenia seloana	4.0 OC
Pineapple guava	Feijoa sellowiana	3.0 OC
Anise	Illicium floridanum	2.5 OC
Pittosporum	Pittosporum tobira	3.0 OC
Azalea	Rhododendron spp.	3.0 OC
Plumbago	Plumbago capensis	2.0 OC
Banana shrub	Michelia fuscata	3.0 OC
Primrose jasmine	Jasminum mesnyi	3.0 OC
Boxwood	Buxus microphylla	2.0 OC
Viburnum	Viburnum spp.	3.0 OC
Chinese juniper	Juniperus chinensis	3.0 OC
Silverthorn	Elaeagnus philippensis	3.0 OC
Podocarpus	Podocarpus macrophyllus	2.0 OC
Holly	Ilex spp.	2.0—3.0 OC
Indian hawthorne	Raphiolepis indica	2.5 OC

Groundcovers

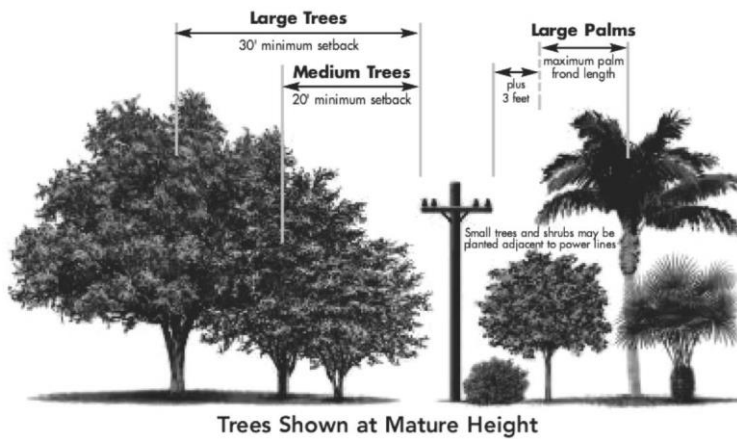
Common Name	Botanical Name
Bugle weed	Ajuga reptans
Asparagus fern	Asparagus sprengeri
Iceplant	Carpobrotus edulis
False heather	Cuphea hyssopifolia
Dichondra	Dichondra carolinensis
Golden creeper	Ernodea littoralis
Trailing fig	Ficus sagittata
Carolina jessamine	Gelsemium sempervirens
Algerian ivy	Hedera canariensis
Beach sunflower	Helianthus debilis
Dwarf yaupon holly	Ilex vomitoria "Schellings"
Chinese juniper	Juniperus chinensis
Dwarf lantana	Lantana depressa
Lily turf	Liriope spicata
Sword fern	Nephrolepis exaltata
Oyster plant	Rhoeo spathacea
Erect selaginella	Selaginella involvens
Confederate jasmine	Trachelospermum asiaticum

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(Supp. No. 3)

Caltrops	Trilobus terrestris
Society garlic	Tulbaghia violacea
Coontie	Zamia pumila
Aloe	Aloe spp.
Cast iron plant	Aspidistra elatior
Gopher apple	Locania michauxii
Earth star	Cryptanthus spp.
Miniature agave	Dyckia brevifolia
Creeping fig	Ficus pumila
Dwarf gardenia	Gardenia jasminoides
Fig marigold	Glottiphyllum depressum
English ivy	Hedera helix
Daylily	Hemerocallis spp.
Beach elder	Iva imbricate
Shore juniper	Juniperus conferta
Trailing lantana	Lantana montevidensis
Partridge berry	Mitchella repens
Mondo grass	Ophiopogon japonicus
Leatherleaf fern	Rumonra adiantiformis
Purple heart	Setcreasea pallida
Star jasmine	Trachelospermum jasminoides
Wedelia	Wedelia trilobata
Wandering jew	Zebrina pendula

Grasses Listed in IFAS as Turfgrasses
Bahia
St. Augustine cultivars
Annual ryegrass



Trees Shown at Mature Height

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(Supp. No. 3)

Figure 2
Large, Medium and Small Trees and Shrubs

(Code 2001, § 98-265; Ord. No. O-08-2011, § 5, 12-6-2011)

Secs. 113-281—113-308. Reserved.



STAFF REPORT

CITY OF GREEN COVE SPRINGS, FLORIDA

TO: City Council **MEETING DATE:** June 27, 2023
FROM: Development Services Department
SUBJECT: Review of a Site Development Plan for the Knight Center located at 1201 Orange Avenue

PROPERTY DESCRIPTION

APPLICANT: Kelly Hartwig, Cypress Management and Design **OWNER:** Brian & Jennifer Knight

PROPERTY LOCATION: 1201 Orange Avenue

PARCEL NUMBER: 018-025-000-00

FILE NUMBER: SPL-23-004

CURRENT ZONING: Planned Unit Development

FUTURE LAND USE DESIGNATION: Mixed Use

SURROUNDING LAND USE

<p>NORTH: FLU: Mixed Use Z: C-2 Use: Shopping Center</p>	<p>SOUTH: FLU: Mixed Use Z: Gateway Corridor Commercial (GCC) Use: Fast Food Restaurant</p>
<p>EAST: FLU: Neighborhood Z: R-3 Multifamily High Density Use: Residential Condominiums</p>	<p>WEST: FLU: Neighborhood Z: R-1, Residential Single Family Use: Single Family Home</p>

BACKGROUND

Kelly Hartwig of Cypress Management and Design, acting as agent for the property owner, applied for Site Development approval for the subject property for the development of a three story office building. The site is 1.1 acres. The property was previously approved for the development of an O'Reilly's AutoParts Store in 2020. In December of 2000, the zoning for the property was changed to PUD and included the following development conditions:

1. An 8' masonry wall shall be provided adjacent to the residential property to the southwest.
2. A 10' landscape buffer shall be provided adjacent to the residential property to the southwest.
3. The driveway access point shall be no further than 150' from Orange Avenue.
4. The trash dumpster shall be a minimum of 50' from the residential property to the southwest.

PROPERTY DESCRIPTION

The property, 1201 N Orange Ave, is currently undeveloped. The property slopes from south to north with the high point being in the southeast corner of the site and low point in the northwest corner. It is sparsely wooded with a combination of oak, magnolia and cypress trees. The north property line abuts Governor's Creek. In December of 2000, the zoning for the property was changed to PUD and included the following development conditions:

1. An 8' masonry wall shall be provided adjacent to the residential property to the southwest.
2. A 10' landscape buffer shall be provided adjacent to the residential property to the southwest.
3. The driveway access point shall be no further than 150' from Orange Avenue.
4. The trash dumpster shall be a minimum of 50' from the residential property to the southwest.

DEVELOPMENT DESCRIPTION

The applicant has submitted a site development plan for a three-story office building totalling 15,000 square feet.

PARKING, LOADING, & STACKING

The plan shows 57 onsite parking spaces and 3 handicapped spaces.

DRAINAGE RETENTION

A drainage retention plan has been provided showing a drainage retention . The applicant is required to secure a stormwater permit from the St Johns River Water Management District prior to moving forward with project development. In addition, the drainage retention plan has been submitted and shall comply with City staff and our consulting engineer's requirements prior to approval. The drainage plan will be designed to ensure that no additional runoff is sent to adjacent properties.

TRAFFIC AND ACCESS

The plan shows one vehicular access point on Governors Street.

Pursuant to the Institute of transportation Engineers (ITE) Trip Generation Report 9th Edition, the total of number of new trips created by a 15,000 square foot office is 165 Daily Trips and 22 PM and 23 AM Peak hour trips. These trip thresholds are below the requirements required for a traffic study.

UTILITY CONNECTIONS & SOLID WASTE

The new buildings will connect to City utilities – verification work orders cannot be completed at this stage. The utility plan (sheet 5) points shows location water and sewer connections. Electrical connections and transformer locations are still under review.

Solid Waste will be serviced by a commercial franchise. Dumpster location is note on the Utility Plan and is shown northeast corner of the site which is in compliance with the PUD requirement. The dumpster enclosure shall comply with screening requirements set forth in City Code Sec. 113-246(8).

LANDSCAPE PLAN

All existing trees are intended to be removed is 91 inches of trees, per city code 56 inches of trees shall be required to be replaced in addition to the tree planting requirement. The perimeter tree planting requirement requires a total of 72” of trees to be planted and the total number of trees shown to planted onsite is 104” which is 32” greater than the tree planting requirement. As a result, there is an additional 24” of trees that shall be planted or to be mitigated for in the City’s tree bank.

Pursuant to the PUD requirements and City Code, an 8’ masonry wall shall be constructed at the western property line adjacent to the existing single-family residence. In addition a 10’ landscape buffer consisting of live oak, bald cypress and holly trees are provided adjacent to the residential property.

Attachments:

- 1. Deficiency Report
- 2. Site Plan
- 3. Stormwater Calculations
- 4. Application

STAFF RECOMMENDATION
<p>Staff recommends approval of the Knight Center Site Development Plan subject to the outstanding staff comments provided in the attached deficiency notice.</p> <p>Recommended Motion:</p> <p style="padding-left: 40px;">Motion to approve the Knight Center Site Development subject to staff comments.</p>



City of Green Cove Springs Site Plan Application

FOR OFFICE USE ONLY

Item # 4.

P Z File # _____

Application Fee: _____

Filing Date: _____ Acceptance Date: _____

Review Type: SRDT P & Z CC

A. PROJECT

1. Project Name: Knight Center
2. Address of Subject Property: North Orange Ave
3. Parcel ID Number(s): 38-06-26-018025-000-00
4. Existing Use of Property: Old commercial
5. Future Land Use Map Designation : Commercial
6. Zoning Designation: Commercial
7. Acreage: 1.1 acres

B. APPLICANT

1. Applicant's Status Owner (title holder) Agent
2. Name of Applicant(s) or Contact Person(s): Kelly Hartwig Title: Agent
 Company (if applicable): Cypress management and Design
 Mailing address: PO Box 8880
 City: Fleming Island State: FL ZIP: 32006
 Telephone: () 759-9576 FAX: () e-mail: _____

3. If the applicant is agent for the property owner*:
 Name of Owner (title holder): Oreilly auto- Property under contract to new owner
 Company (if applicable): _____
 Mailing address: _____
 City: _____ State: _____ ZIP: _____
 Telephone: () _____ FAX: () _____ e-mail: _____

* Must provide executed Property Owner Affidavit authorizing the agent to act on behalf of the property owner.

C. ADDITIONAL INFORMATION

1. Is there any contract for sale of, or options to purchase the subject property? Yes No
 If yes, list names of all parties involved: Brain Knight
 If yes, is the contract/option contingent or absolute? Contingent Absolute

D. ATTACHMENTS (One copy reduced to no greater than 11 x 17, plus one copy in PDF format)

1. Site Plan and Survey including but not limited to:
 - a. Name, location, owner, and designer of the proposed development.
 - b. Vicinity map - indicating general location of the site and all abutting streets and properties.
 - d. Complete legal description.
 - e. Statement of Proposed Uses.
 - f. Location of the site in relation to adjacent properties, including the means of ingress and egress to such properties and any screening or buffers along adjacent properties.
 - g. Location of nearest fire hydrant, adjacent pedestrian sidewalks and bicycle paths.
 - h. Date, north arrow, and graphic scale (not to exceed one (1) inch equal to fifty (50) feet).
 - i. Area and dimensions of site.
 - j. Location of all property lines, existing right-of-way approaches, sidewalks, curbs, and gutters.
 - k. Access and points of connection to utilities (electric, potable water, sanitary sewer, gas, etc.).
 - m. Location and dimensions of all existing and proposed parking areas, loading areas, curb cuts.
 - n. Location and size of any lakes, ponds, canals, or other waters and waterways.
 - o. Structures and major features – fully dimensioned – including setbacks, distances between structures, floor area, width of driveways, parking spaces, proposed surface materials of driveways and parking areas, property or lot lines, and floor area ratio.
 - p. Required buffers.
 - q. Location of existing trees, identifying any trees to be removed.
 - r. Landscaping plan depicting type, size, and design of landscaped areas, buffers, and tree mitigation calculations.
 - s. Percent of pervious surface.
 - t. Lighting plan.
 - u. Location, design, height, and orientation of signs.
 - v. Location of dumpsters and detail of dumpster enclosure.
 - w. For development consisting of Multi-family residential;
 - i. Tabulation of gross acreage.
 - ii. Tabulation of density.
 - iii. Number of dwelling units proposed.
 - iv. Location and percent of total open space and recreation areas.
 - v. Floor area of dwelling units.
 - vi. Number of proposed parking spaces.
 - vii. Street layout.
2. Stormwater management plan - including the following:
 - a. Existing contours at one (1) foot intervals.
 - b. Proposed finished floor elevation of each building site.
 - c. Existing and proposed stormwater management facilities with size and grades.
 - d. Proposed orderly disposal of surface water runoff.
 - e. Centerline elevations along adjacent streets.
3. Legal description with tax parcel number.
4. Warranty Deed or other proof of ownership.
5. Permit or Letter of Exemption from the St. Johns River Water Management District.

6. Fee.

a. Based on size of site:

- i. For sites <10,000 s.f. - \$500
- ii. For sites >10,000 s.f.- \$1,000 + \$20 per acre

b. All applications are subject 10% administrative fee and must pay the cost of any outside consultants' fees.

No application shall be accepted for processing until the required application fee is paid in full by the applicant. Any fees necessary for technical review or additional reviews of the application by a consultant will be billed to the applicant at the rate of the reviewing entity. The invoice shall be paid in full prior to any action of any kind on the development application.

All 6 attachments are required for a complete application. A completeness review of the application will be conducted within five (5) business days of receipt. If the application is determined to be incomplete, the application will be returned to the applicant.

I/We certify and acknowledge that the information contained herein is true and correct to the best of my/our knowledge:

[Handwritten Signature]

Signature of Applicant

Signature of Co-applicant

Kelly Hartwig

Typed or printed name and title of applicant

Typed or printed name of co-applicant

5/11/2023

Date

Date

State of FLORIDA County of CLAY

The foregoing application is acknowledged before me this 11 day of MAY, 2023 by KELLY W

HARTWIG, who is/are personally known to me, or who has/have produced FLDL

as identification.

NOTARY SEAL

[Handwritten Signature]

Signature of Notary Public, State of FLORIDA





City of Green Cove Springs

321 Walnut Street, Green Cove Springs, FL 32043 904-297-7500

APPLICATION DEFICIENCY NOTICE V2

DATE: June 20, 2023

APPLICATION REFERENCE: Cypress Management and Design, SPL-23-004 – Site Plan for Knight Center, Orange Avenue

Dear Applicant:

The items you submitted for the above-referenced permit have been reviewed by the City representatives responsible for approving different aspects of your application. Attached to this notice is a list of comments in response to the materials submitted.

Each of the items on the attached list requires responses and revised materials be created and resubmitted before any further action can be taken on this permit. A hold is placed on this application and the time it takes you to respond to this list of items is excluded in calculating permit processing timeframes. Once corrected and/or new materials are submitted, your permit processing timeframe will begin again.

A complete response to each of the items on the attached list is required to be submitted **at the same time**. As applicable, a complete response is required to include:

1. A written document addressing all of your responses (one paper copy).
2. New and/or updated technical reports (one paper copy).
3. New and/or corrected plans. Please note that revisions to previously submitted plans are required to be identified by clouding, must be noted in a revision list on the plan sheet(s), and are required to be incorporated into a full set of revised plans (one paper copy).
4. A transmittal that itemizes everything being resubmitted (one paper copy).
5. A copy of the entire resubmittal must be provided electronically (either on a thumb drive or uploaded via the permit portal).

Your response must be received by our department within 180 days of the date noted on this letter to avoid this application being withdrawn from consideration. Withdrawn applications must be resubmitted as new applications requiring repayment of all applicable fees and processing requirements.

Thank you for your anticipated cooperation in submitting the items requested by staff. We look forward to working with you as this application continues to be processed.

APPLICATION DEFICIENCY NOTICE V2

DATE: June 20, 2023

APPLICATION REFERENCE: Cypress Management and Design, SPL-23-004 – Site Plan for Knight Center, Orange Avenue

PLANNING DIVISION COMMENTS - contact Michael Daniels (mdaniels@greencovesprings.com)

1. All Lighting shall be shielded and minimized impact on adjacent property pursuant to the standards set forth in the Illumination Engineers Society Lighting Handbook. A Photometric plan shall be provided with the building permit.
2. Dumpster shall comply with design requirements set forth in Sec. 113-246(8). Provide note citing above code section on the plan.
3. Show all trees to be removed. Show only 27" of tree preservation. Only trees 12" or greater count for tree preservation, 91" of trees are shown to be removed.
4. For every 2 crape myrtles planted they count as 1-3" shade/canopy tree. 8 Crape Myrtles were planted so they count as 12", as a result, the total new tree inches planted should equal 86".
5. 56" of trees are required to be replaced, 24-3 perimeter shade trees are required, 104" were provided. An additional 24" of trees shall be provided onsite or in the City's tree bank pursuant to the City tree bank calculations set forth in Sec. 113-279.
6. Existing conditions shall delineate flood hazard areas and wetlands of the site and comply with Chapter 121 Article III Floodplain Management and Environmentally Sensitive regulations. Provide a note on the plan that flood way areas zoned AE shall remain free of encroachment.

FIRE COMMENTS - contact Sandra Boike (sandra.boike@claycountygov.com)

Fire #8 Dock. All docks/ Marinas shall comply with NFPA 303. Separate permit required. Permit will be on condition of site plan approval. 6-16-2023 Dock still illustrated on the plans. Remove dock from plans if not part of this project.

Fire #9 Show the location of the Fire Department Connection. FDC shall be no further away from the fire hydrant than 100ft NFPA 1141:8.1.3

STORMWATER COMMENTS- contact Charles Sohm (csohm@toci.com)

1. Demonstrate the stormwater pond wall will withstand the outward pressure of the collected storm water and will retain water without seepage.
2. Provide drainage calculations demonstrating the pond has sufficient treatment volume and will perform adequately.
3. Demonstrate the ground downstream of the retention pond will not become saturated, liquify, and fail with stormwater from the upstream pond.
4. Note the pre-development runoff curve number is 57 but is listed as "good condition grass comb.". Per TR-55 table 2-2c, that value should be 32. This will affect the calculations for pre-runoff.
5. Note the BMP-trains pre-condition land use is "low-intensity commercial" which doesn't match the pre-development conditions in the stormwater calculations.
6. Because of these, an approved permit from the SJRWMD before construction approval.
7. Awaiting structural design submittal for pond wall and downslope soil

ELECTRIC COMMENTS – contact Steve Tye (stye@greencovesprings.com)

**New service meter center can be located on west side of building at south corner, with the new UG Transformer in that area.

New Electric Service Process and Info:

The Customer will provide and/or install the following per Green Cove Springs Electric (GCSE) Approved Design and Spec:

-
- 1) Customer to provide a complete set of final design plans for new development, for Green Cove Springs Electric to mark up with electric system design to be built by contractor.
 - 2) Customer to provide and install 2-4 Schedule 40 PVC conduits for Three Phase Services. Or 2-2 Schedule 40 PVC conduits for Single Phase Services. From the new point of service at New Riser Pole or UG Cabinet, to the new UG Padmount Transformer Pad location as located by Green Cove Springs Electric.
 - 3) Customer to provide and install the Three Phase Transformer Pad for Three Phase services. Customer to install the single-phase pad, provided by Green Cove Springs Electric, for Single Phase Services.
 - 4) Customer to provide and install all secondary conduit and conductor from the new UG transformer to the building service.
 - 5) If using CTs in transformer, install Meter Pedestal and CT Meter Can. *NOTE: Meter Pedestal and CT Meter Can provided by Green Cove Springs Electric.
 - 6) Customer to provide and install the 1 Schedule 40 PVC conduit for the potential wires, from CT Meter Can into transformer secondary side of the pad or CT Enclosure.
 - 7) If not, install CT Meter Can, and CT Enclosure on building. *Note: Only CT Meter Can Provided by Green Cove Springs Electric, CT Enclosure provided by customer. All other Meter Cans provided by the customer.
 - 8) If using, Customer to install Primary conduit to UG Switch/Fuse/Junction Cabinets Pad/Pit. Customer to install Green Cove Springs Electric provided Pad/Pit as located by Green Cove Springs Electric.
 - 9) There is an additional Customer in Aid Charge (CIAC) for the service, amount TBD when we have all the final design/service info.

Green Cove Springs Electric will provide and install the following after receiving the CIAC Payment:

-
- 1) Primary Conductor from New Riser Pole or UG Cabinet to the New UG Transformer Pad location and make up all primary connections. *Note: See #1 and #2 above.
 - 2) UG Padmount Transformer and make up all primary connections. *Note: See #3 above.
 - 3) Make Up all Secondary Conductors in Transformer. *Note: See #4 above.
 - 4) CTs in UG transformer or Customer installed CT Enclosure, CT Meter, and CT meter potential wires from CTs to Meter. *NOTE: See #5, #6 and #7 above.
 - 5) UG Switch/Fuse Cabinets. Make up all primary connections. *Note: See #8 above.

Parcel # 018 025.000-0

Item # 4.

ORDINANCE NO. O-12-2000

AN ORDINANCE OF THE CITY OF GREEN COVE SPRINGS, FLORIDA, REZONING PROPERTY SPECIFICALLY IDENTIFIED IN ATTACHMENT "A"; LOCATED ON GOVERNORS STREET, GREEN COVE SPRINGS, FLORIDA, FROM R-1, SINGLE FAMILY RESIDENTIAL AND C-2, GENERAL COMMERCIAL TO PUD, PLANNED UNIT DEVELOPMENT TO APPROVE THE DEVELOPMENT AS PROVIDED FOR SPECIFICALLY IN ATTACHMENT "B"; PROVIDING FOR SEVERABILITY; REPEALER; AND SETTING AN EFFECTIVE DATE.

WHEREAS, the property described below is currently designated as R-1, Single Family Residential and C-2, General Commercial on the Zoning Map of the City; and,

WHEREAS, the City has received a request to amend the Zoning Map to designate the property as a PUD, Planned Unit Development.

NOW THEREFORE, BE IT ENACTED BY THE CITY COUNCIL OF THE CITY OF GREEN COVE SPRINGS, FLORIDA AS FOLLOWS:

SECTION 1. The Zoning Map of the City shall be amended to designate the property specifically described in Attachment "A" as a Planned Unit Development (PUD) as provided for specifically in Attachment "B";

SECTION 2. Severability. The various parts, sections and clauses of this Ordinance are hereby declared severable. If any part, sentence, paragraph, section or clause is adjudged unconstitutional or invalid by a court of competent jurisdiction, the remainder of the Ordinance shall not be affected thereby.

SECTION 3. Repealer. Any ordinances or parts thereof in conflict with the provisions of this ordinance are hereby repealed to the extent of such conflict.

SECTION 4. Effective date. This ordinance shall become effective as allowed by law.

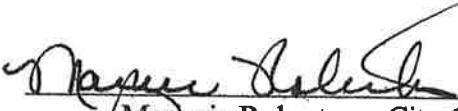
INTRODUCED on the first reading by the City Council of Green Cove Springs, Florida, this

5th day of December, 2000.

CITY OF GREEN COVE SPRINGS, FLORIDA

By: Jerry K. Williams
Jerry K. Williams, Mayor


ATTEST:



Marjorie Robertson, City Clerk


PASSED ON SECOND AND FINAL READING by the City Council of Green Cove Springs, Florida, this 16th day of January ~~2000~~ 2001.

CITY OF GREEN COVE SPRINGS, FLORIDA

By: 

Jerry K. Williams, Mayor

ATTEST:



Marjorie Robertson, City Clerk

EXHIBIT "A"

A portion of Lot 1, Block 51, North Suburbs, Green Cove Springs, Clay County, Florida, described as:

Commence at the Northeast corner of said Lot 1; thence on the easterly line thereof and the westerly line of Governors Street run South 19 degrees 51 minutes West 100 feet to the P.O.B; Thence North 61 degrees 34 minutes West 294 feet more or less to the waters of Governor's Creek; thence Southerly along the waters of Governors Creek a distance of 100 feet to a point; thence Southeasterly 263 feet more or less to a point on the Westerly line of Governor's Street which is exactly 101.40 feet Southerly from the Point of Beginning; thence North 19 degrees 51 minutes East 101.40 feet to the Point of Beginning.

FILE NO. _____
OFFICIAL RECORDS NO. 1021
PAGE 457 RECORDS VERIFIED
JAN 20 2 10 PM '87
FILED AND INDEXED IN PUBLIC RECORDS
George H. ...
CLERK OF COUNTY COURT

87-01717



ATTACHMENT B

PLANNED UNIT DEVELOPMENT**Submittal**

This submittal for Planned Unit Development is intended to comply with Chapter 3.03.02A of the City of Green Cove Springs Land Development Regulations.

At the time of this application, there is no specific use of this property. A portion of this property is already zoned C-2, approximately 45,000 square feet and the southwesterly 50 feet of the property is zoned RPO, approximately 15,000 square feet.

Rather than apply for a Comprehensive Plan Amendment changing the Future Land Use Designation from CLI to CHI and rezoning the southwesterly portion of the property to C-2 which abuts residential property, the Applicant has chosen to submit a Planned Unit Development which would allow the City of Green Cove Springs to place certain safeguards in the use of the applicant's property so as to protect the adjacent residential properties. This would make the entire parcel, approximately 60,000 square feet, a PUD.

The applicant proposes the following conditions in the PUD Ordinance:

1. **USES:**

Any permitted use allowed in C-2. In the event the applicant would request a special use as allowed in the C-2 LDR classification, it would have to apply and go through the procedure set forth in the LDR's.

2. **BUFFER:**

Construct a solid masonry six foot wall along the southwesterly boundary of the property, which adjoins the residential property, for a length of 150 feet or to the jurisdictional land, whichever is less.

3. **LANDSCAPE BUFFER.**

Provide a 10 foot landscape buffer either natural or planted adjacent to the residential property.

4. **DRIVEWAY CUT.**

No driveway cut on Governor's Street shall be further than 150 feet from Orange Avenue, thereby assuring there would be no driveway cut or dumpsters closer than 50 feet to the adjacent residential property.

5. **JURISDICTIONAL LANDS.**

The applicant shall comply with all rules, regulations governing the protection of the jurisdictional lands.

6. **RULES AND REGULATIONS.**

The applicant shall abide by all other City of Green Cove Springs regulations governing the setback requirements, lot coverage and height restrictions in the City of Green Cove Spring's C-2 Land Development Regulation.

7. **SITE PLAN APPROVAL.**

Once the specific use of the site has been determined, the applicant must have the site plan approved by the City Council.

The benefits to the City for allowing this Planned Unit Development are as follows:

A. Permits a creative approach the development of land by using the PUD vehicle adequate protection can be provided to the adjacent residential land use.

B. Accomplish more desirable environment than would be possible through the strict application of the minimum requirements of this Code. By using PUD zoning the City can require the applicant to construct a six foot masonry wall, provide 10 foot landscape buffer rather than a 5 foot landscape buffer and govern driveway access on Governor's Street.

C. Enhance the appearance of the neighborhoods by removing an undesirable building in use to a more compatible use in a much more attractive building.

D. By developing new construction the site will be more stable and compatible with the surrounding residential area.

E. By improving the site through the use of a PUD Ordinance it will increase the property values of the property and have a less detrimental effect of the adjacent residential uses.

AMENDMENT TO ATTACHMENT "B" OF
ORD 0-12-2000
AMENDING SUBMITTAL FOR PLANNED UNIT DEVELOPMENT

The Applicant Riverline, Inc., by and through their undersigned attorney hereby amends paragraph 2 of Attachment "B" to Ordinance 0-12-2000 so that as amended reads as follows:

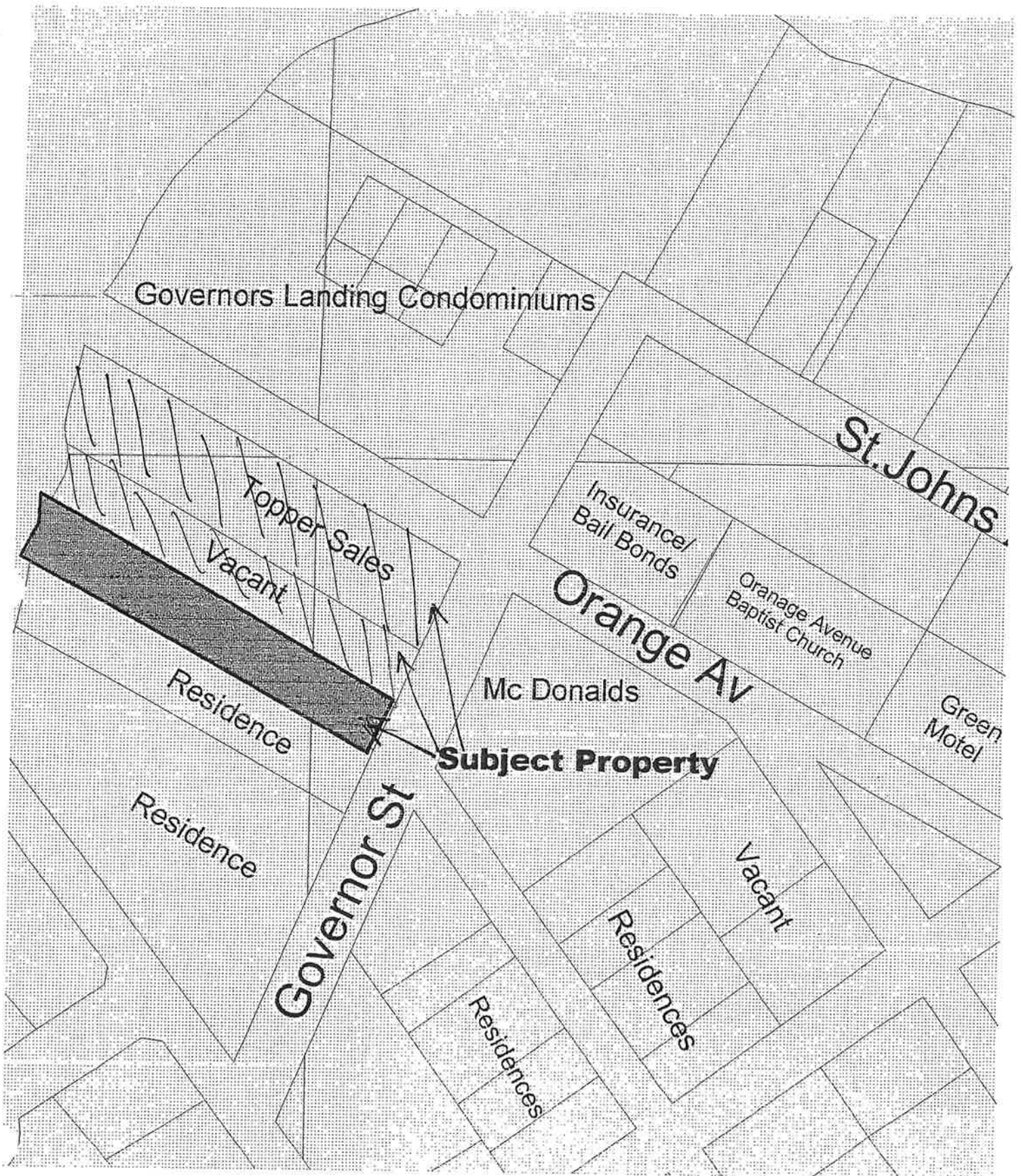
2. BUFFER:

Construct a solid masonry **eight** foot wall along the southwesterly boundary of the property, which adjoins the residential property, ~~for a length of 150 feet or to the jurisdictional land, whichever is less,~~ **and further agrees that the wall facing the adjacent residential property shall be stucco.**

Respectfully submitted,



JOHN KOPELOUSOS, Esquire
Post Office Box 562
Orange Park, FL 32067-0562
(904) 269-1111
Attorney for Riverline, Inc.



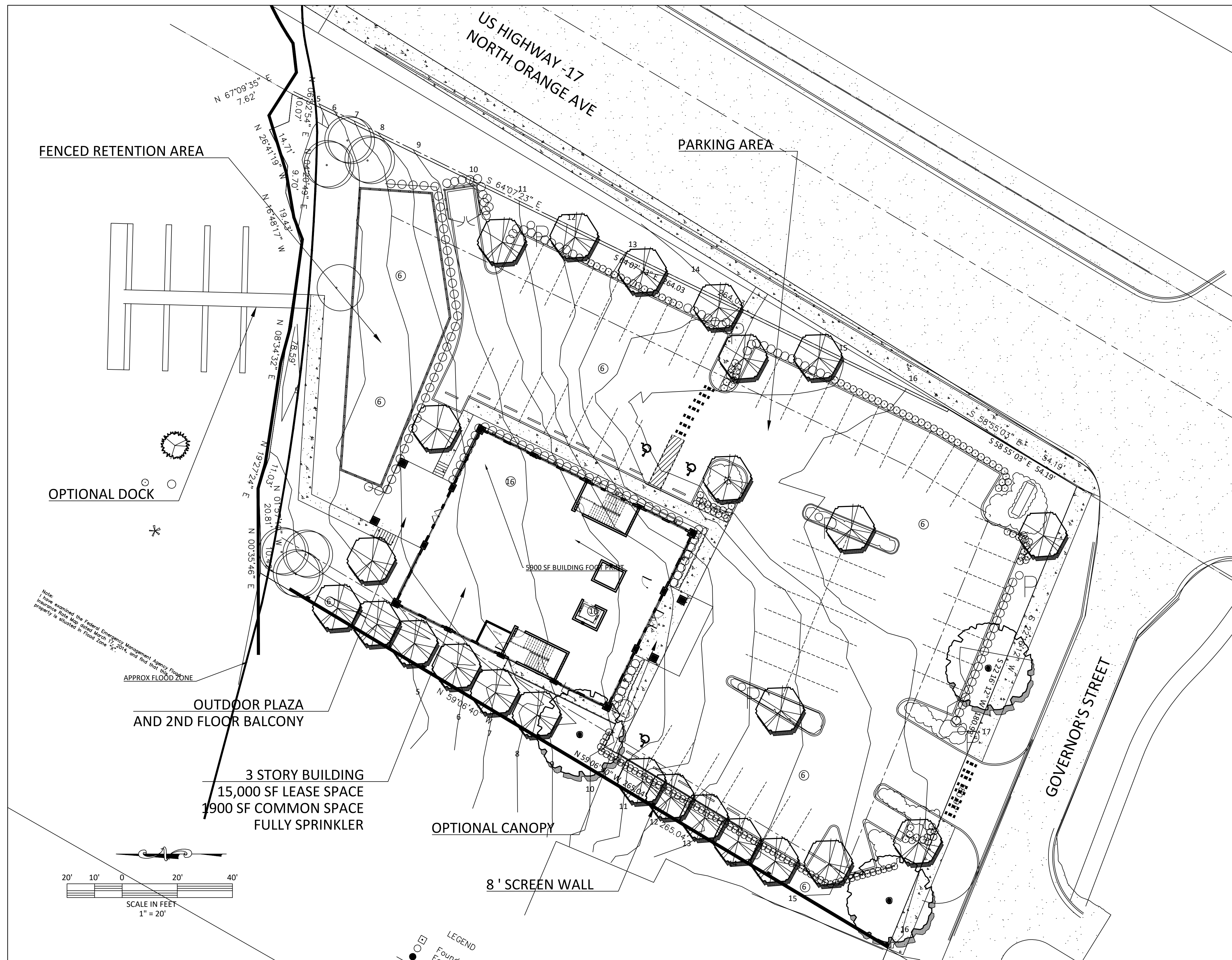
Sec. 102-167. - Permitted uses.

Item # 4.

The following are permitted uses in the commercial high intensive (CHI), C-2 general commercial zoning category:

- (1) Any use permitted in the C-1 zoning category district;
- (2) The following retail and service establishments and any determined similarly like or type uses not specifically described below: appliance and automobile sales, service, repair and rentals, automobile parts store, bait and tackle shops, bakeries, bicycle sales and service, billiards, boat and motor sales and service, bowling alleys, building supplies and materials, cabinet shops, carpet outlets, ceramic sales and studios, clothing shops, curio shops, dance, music, gymnastic studios, decorating studios and shops, department stores, drug sales, dry cleaners, electrical shops, financial institutions (including drive-through facilities), fruit and vegetable sales (retail, no packing), furniture stores, game rooms, grocery store, hardware stores, health spas, licensed masseurs, heating and air conditioning sales and service, hotels, motels, janitorial supplies, laundries and laundromats, meat markets, medical supplies, mobile home sales and service, motorcycle sales and service, nurseries, optical shops, pawn shops, pet shops, pet grooming, pool supplies, printing shops, rentals, restaurants, shoe stores, shopping centers, skating rinks, sporting goods stores, sundries and notions shops, television and radio sales and service, television and radio studios (excluding transmission equipment), theaters, tire sales and service, toy stores, upholstery shops, utility building sales, veterinarian clinic (within enclosed building), wearing apparel shops, well drilling and pump service;
- (3) Parking lots and commercial parking garages.

(Ord. No. O-01-2000, § 3.02.02(II)(C)(2), 6-6-2000; Ord. No. O-08-2011, § 6, 12-6-2011)



16,992 SF MAXIMUM BUILDING
 15,000 LEASE SPACE
 8' WALL ON WEST PROPERTY LINE
 ONLY ONE ENTRANCE
 WALLED RETENTION AREA -2847 SF- 4'-5' DEEP

22,688 PARKING-ROADS-ONSITE
 1,926 SF SIDEWALKS
 5900 SF FOOT-PRINT BUILDING
 936 SF ROOFED PATIO/ENTRANCE

LOT SIZE -49,549 SF-TOTAL
 30,514 SF IMPERVIOUS--62.9%
 17,980 SF GREEN SPACE-RETENTION- 37.1%

LOT SIZE -49,549 SF-TOTAL
 3 STORY BUILDING- 35' ABOVE ROAD MAX
 MAXIMUM SPACE- 16,992 FAR 35%

PARKING ALLOWS -15,000SF LEASE SPACE AT 1 PER 250
 (based on 60 spaces)

57 - REGULAR PARKING SPACES
 3 - HANDICAP SPACES
 60 TOTAL PARKING SPACES

Note:
 I have examined the Federal Emergency Management Agency Flood Insurance Rate Map (FIRM) dated March 17, 2014 and find that the property is located in Flood Zone "X".

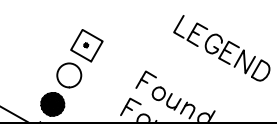
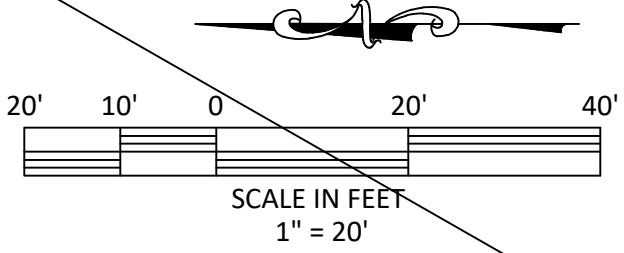
APPROX FLOOD ZONE

OUTDOOR PLAZA
 AND 2ND FLOOR BALCONY

3 STORY BUILDING
 15,000 SF LEASE SPACE
 1900 SF COMMON SPACE
 FULLY SPRINKLER

OPTIONAL CANOPY

8' SCREEN WALL



PROJECT SITE

- SHEET #
 LC-1 -COVER
 LC-2- EXISTING CONDITIONS
 LC-3- LAYOUT
 LC-4- GRADING AND DRAIANGE
 LC-5 -UTILITY
 LC-6 SITE ELECTRICAL
 LC-7 LANDSCAPE
 LC-8 SITE DETAILS
 LC-9 SITE DETAILS

RE Parcel # 38-06-26-018025-000-00
 1201-NORTH ORANGE AVENUE

CYPRESS MANAGEMENT
 AND DESIGN
 P.O. BOX 8880 FLEMING ISLAND, FL. 32006
 904-759-9576-----SITEOPT@BELLSOUTH.NET

DATE	REVISIONS	SITE PLAN REVISIONS
5-17-2023	XXX	
5-9-2023		

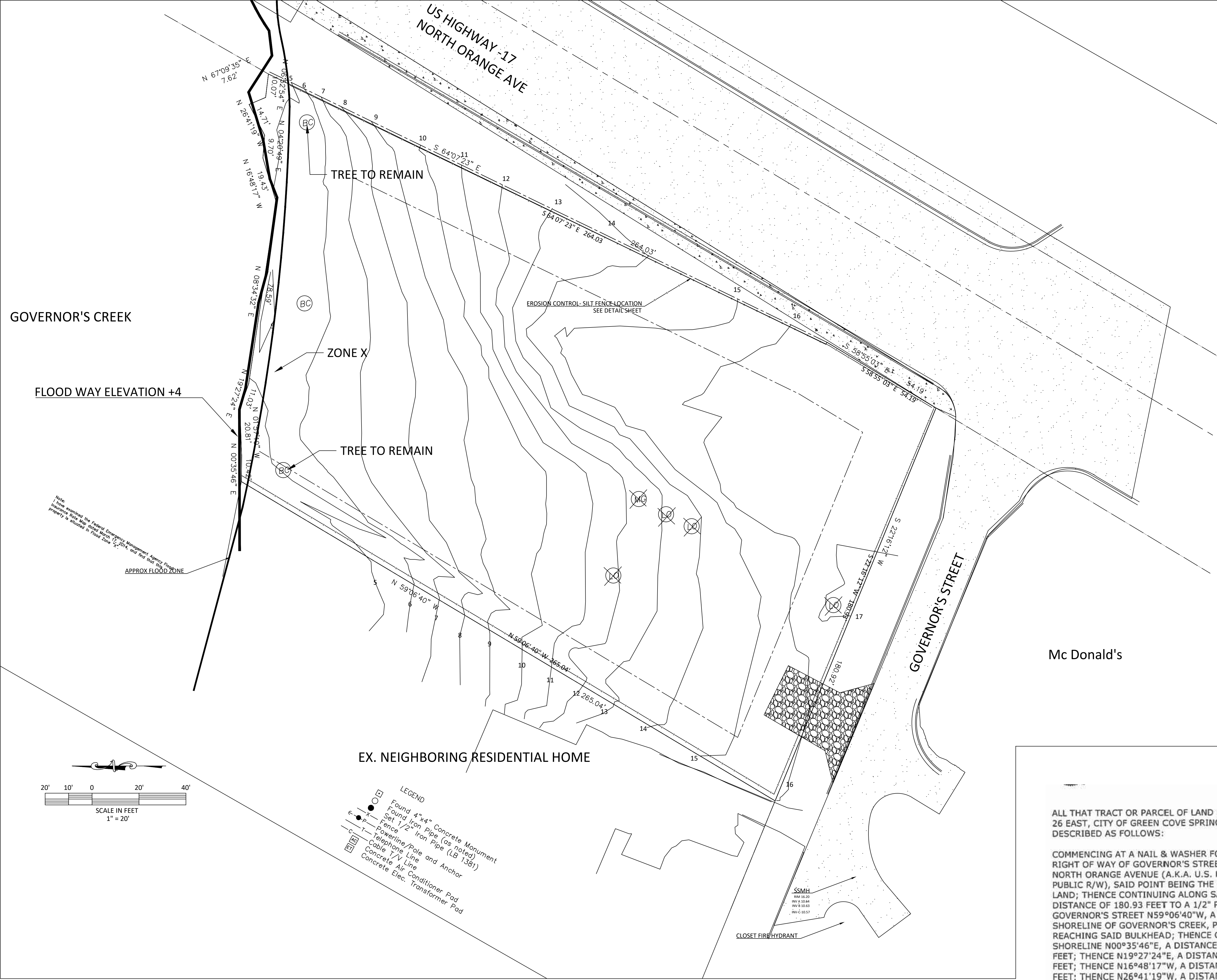
KNIGHT CENTER
 MASTER PLAN
 PRELIMINARY SITE PLAN

DATE 5-9--2023
 DRAWN BY _____
 CHKD. BY _____
 JOB NO. _____

ROBERT HARTWIG
 LA 0012

SHT. LC-1

49,549 TOTAL LOT SIZE



SEE LANDSCAPE NOTES FOR EX- TREES
 We are in the process of acquiring a new survey to insure location of trees

Mc Donald's

EXHIBIT "A"

ALL THAT TRACT OR PARCEL OF LAND LYING AND BEING IN SECTION 38, TOWNSHIP 6 SOUTH, RANGE 26 EAST, CITY OF GREEN COVE SPRINGS, CLAY COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A NAIL & WASHER FOUND (LB 1381) AT THE INTERSECTION OF THE NORTHWESTERLY RIGHT OF WAY OF GOVERNOR'S STREET (60' PUBLIC R/W) AND THE SOUTHWESTERLY RIGHT OF WAY OF NORTH ORANGE AVENUE (A.K.A. U.S. HIGHWAY 17, FLORIDA STATE ROAD 15, A VARIABLE WIDTH PUBLIC R/W), SAID POINT BEING THE POINT OF BEGINNING FOR THE HEREIN DESCRIBED TRACT OF LAND; THENCE CONTINUING ALONG SAID RIGHT OF WAY OF GOVERNOR'S STREET S22°16'12"W, A DISTANCE OF 180.93 FEET TO A 1/2" PIPE FOUND; THENCE LEAVING SAID RIGHT OF WAY OF GOVERNOR'S STREET N59°06'40"W, A TOTAL DISTANCE OF 265.04 FEET TO A BULKHEAD ALONG THE SHORELINE OF GOVERNOR'S CREEK, PASSING THROUGH A 1/2" PIPE FOUND BEFORE REACHING SAID BULKHEAD; THENCE CONTINUING ALONG THE MEANDER OF SAID BULKHEAD AND SHORELINE N00°35'46"E, A DISTANCE OF 10.42 FEET; THENCE N01°57'10"W, A DISTANCE OF 20.81 FEET; THENCE N19°27'24"E, A DISTANCE OF 11.03 FEET; THENCE N08°34'32"E, A DISTANCE OF 78.59 FEET; THENCE N16°48'17"W, A DISTANCE OF 19.43 FEET; THENCE N04°20'49"E, A DISTANCE OF 9.70 FEET; THENCE N26°41'19"W, A DISTANCE OF 14.71 FEET; THENCE N67°09'35"E, A DISTANCE OF 7.62 FEET; THENCE N06°52'54"E, A DISTANCE OF 10.07 FEET TO A POINT ON THE AFORESAID RIGHT OF WAY OF NORTH ORANGE AVENUE; THENCE ALONG SAID RIGHT OF WAY S64°07'23"E, A TOTAL DISTANCE OF 264.03 FEET, PASSING THROUGH A 1/2" PIPE FOUND AT 34.45 FEET FROM SAID SHORELINE; THENCE N30°49'02"E, A DISTANCE OF 1.00 FEET TO A NAIL & WASHER FOUND; THENCE S58°55'03"E, A DISTANCE OF 54.19 FEET TO THE POINT OF BEGINNING.

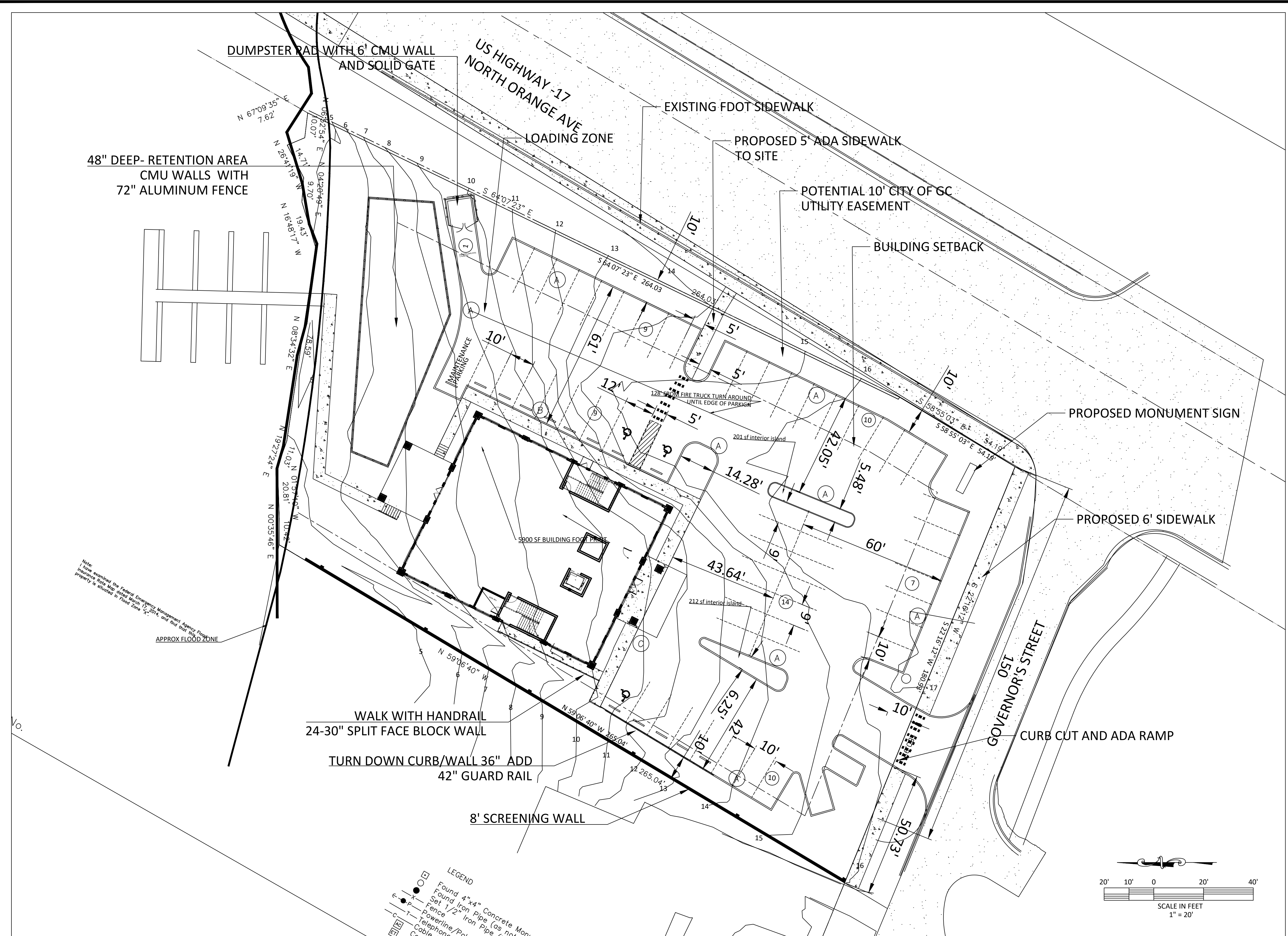
DATE	REVISION#	REVISIONS
6-9-2023	XXX	

KNIGHT CENTER
 EXISTING CONDITIONS PLAN
 PRELIMINARY SITE PLAN

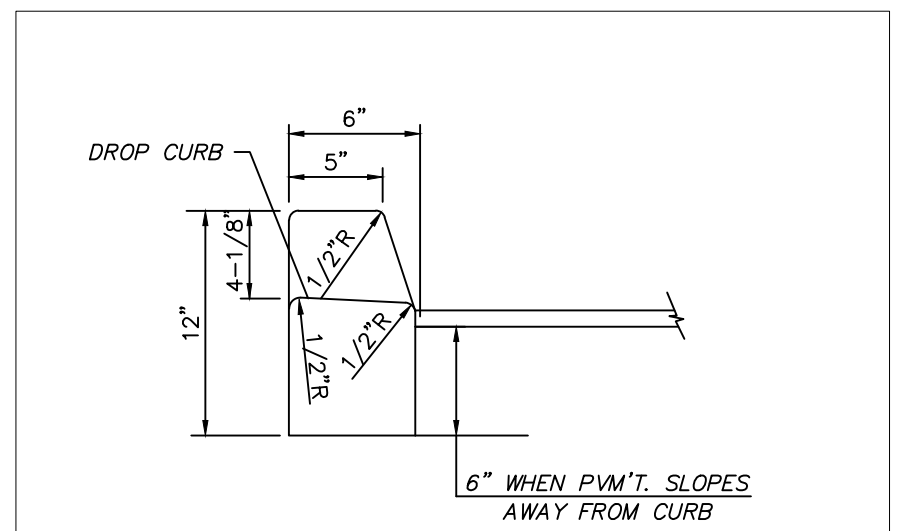
DATE 5-9-2023
 DRAWN BY
 CHKD. BY
 JOB NO.

ROBERT HARTWIG
 LA 0012

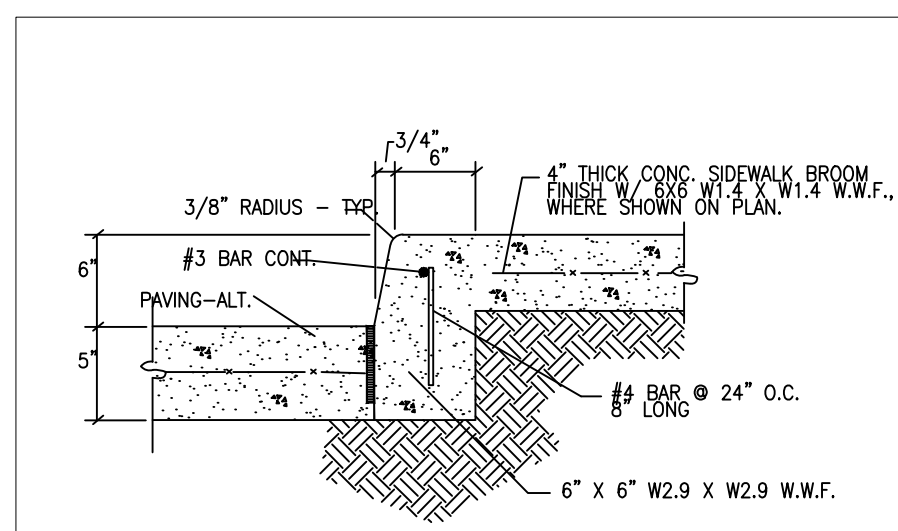
SHT. LC-2



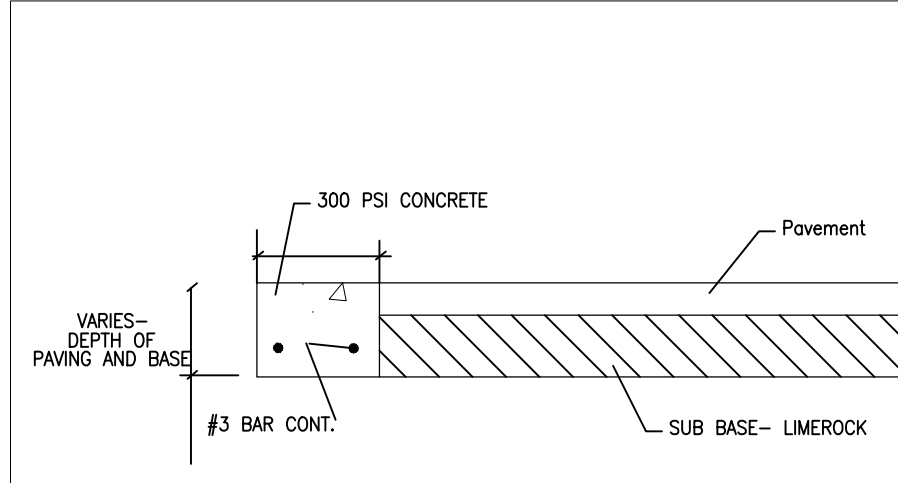
CONCRETE- CURBS- 1 1/2" ASPHALT PAVING
 SIDEWALKS WILL BE CONCRETE WITH BROOM
 FINISH OR CONCRETE PAVERS



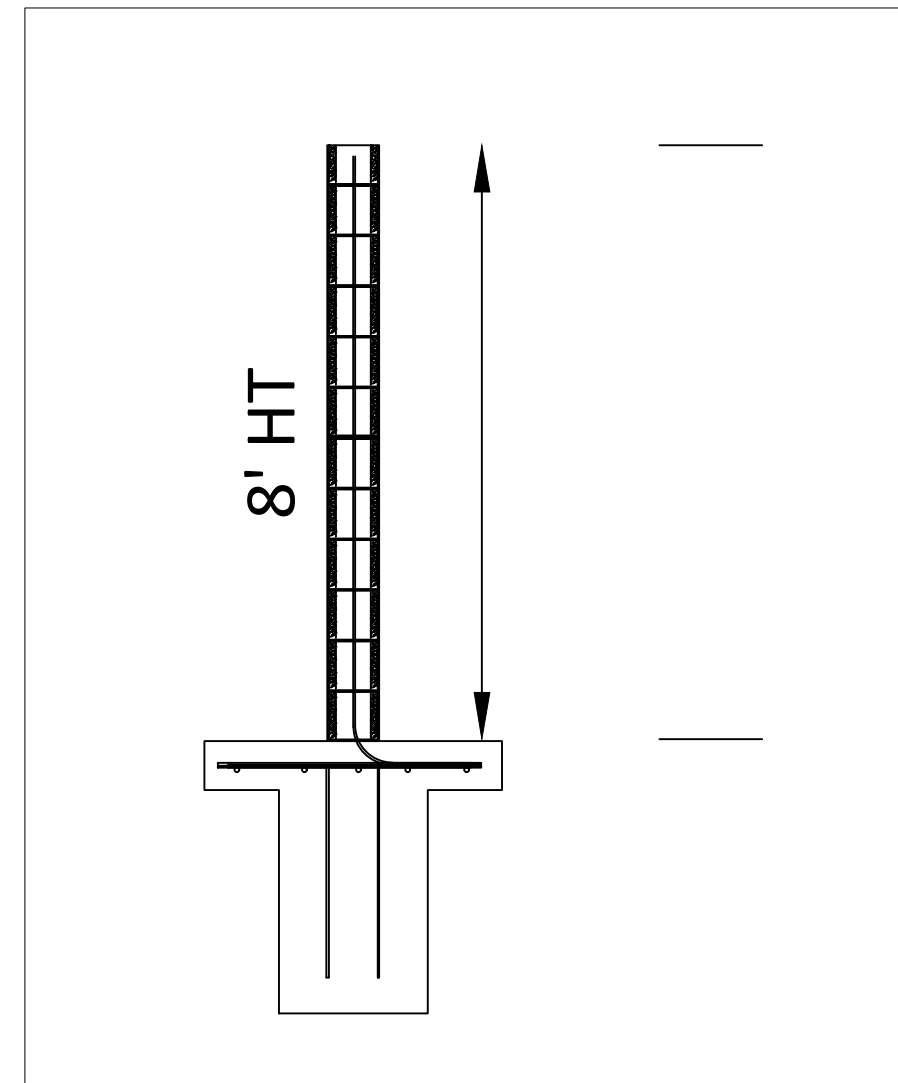
6" CURB DETAIL
 NOT TO SCALE



TURN DOWN CURB



RIBBON CURB



PROPERTY LINE WALL - 8' HT

**CYPRESS MANAGEMENT
 AND DESIGN**
 P.O. BOX 8880 FLEMING ISLAND, FL 32006
 904-759-9576 --- SITEOPT@BELLSOUTH.NET

DATE	REVISIONS
5-17-2023	SITE PLAN REVISION-1
6-9-2023	

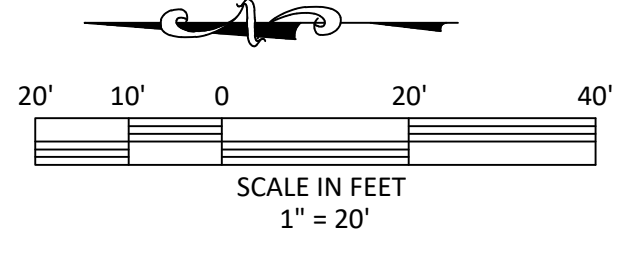
**KNIGHT CENTER
 SITE LAYOUT PLAN
 PRELIMINARY SITE PLAN**

DATE: 5-9-2023
 DRAWN BY:
 CHKD. BY:
 JOB NO.:

ROBERT HARTWIG
 LA 0012

SHT: **LC-3**

SEE ADDITIONAL DETAILS LC-8 AND LC-9



- LEGEND**
- Found 4"x4" Concrete Monument
 - Found 1/2" Iron Pipe (as noted)
 - Fence
 - Powerline
 - Telephone Pole
 - Cable

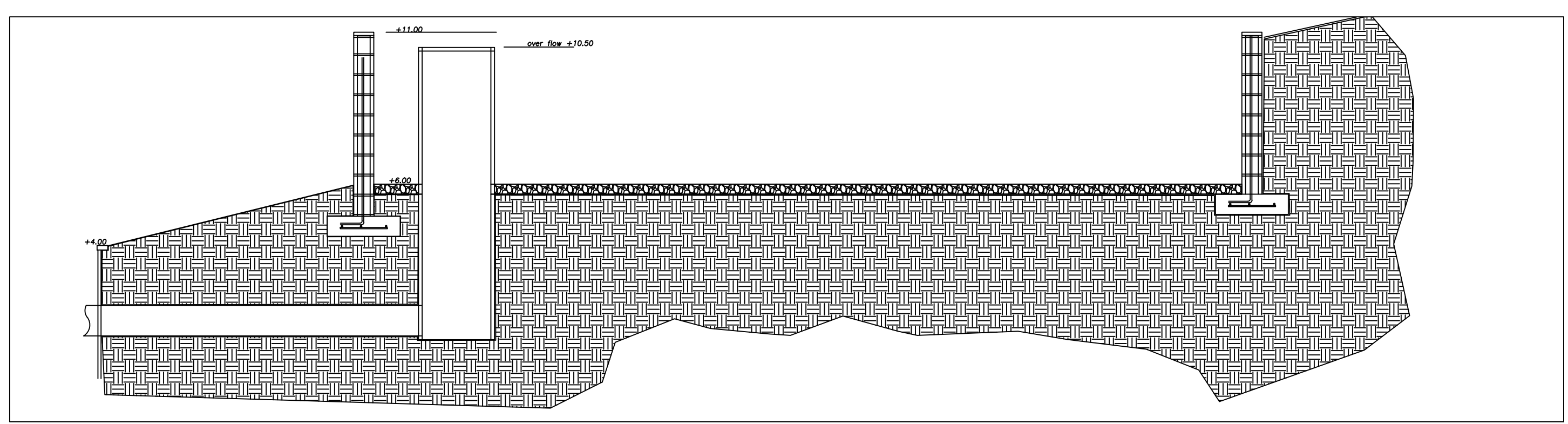
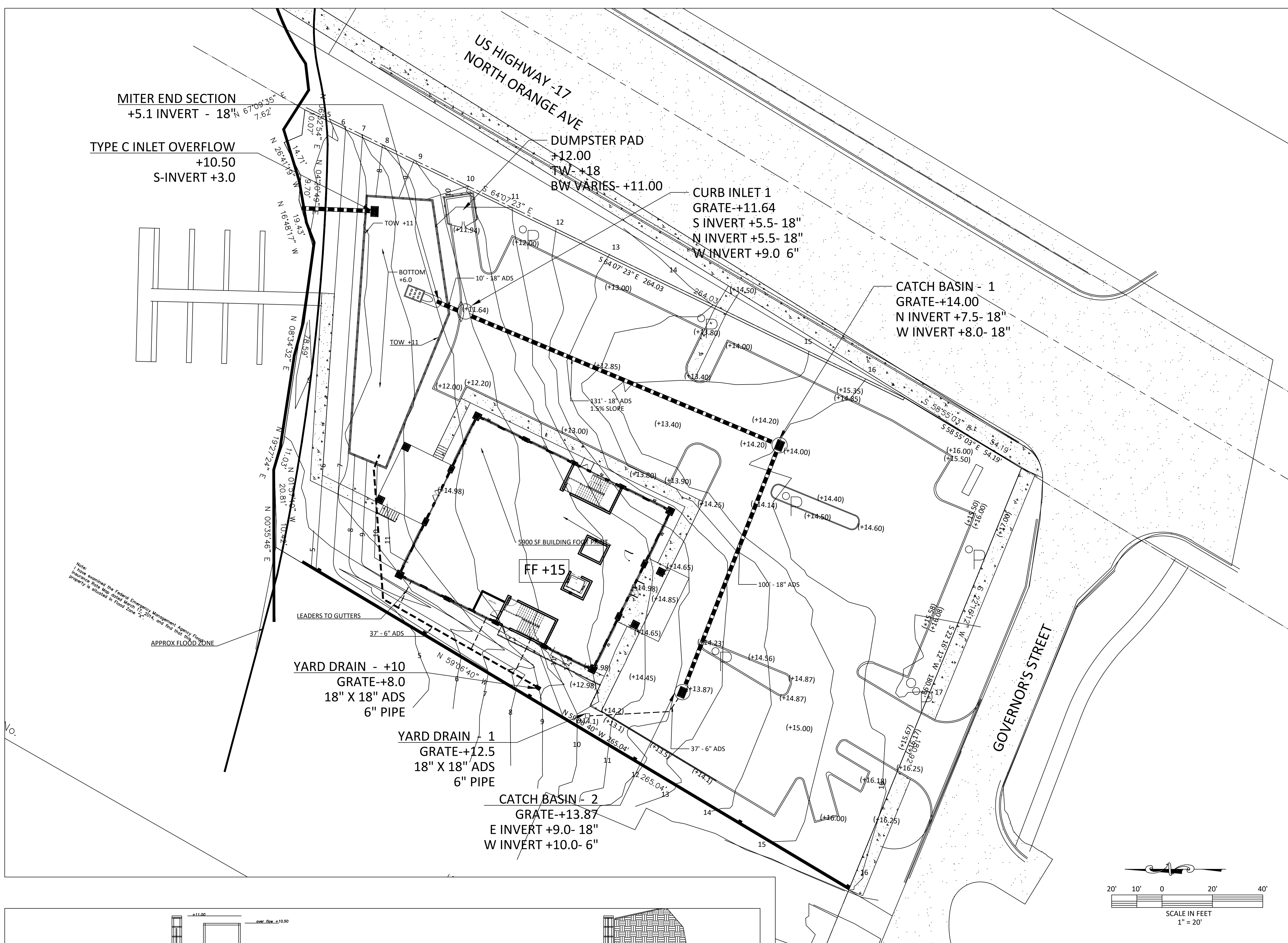
48" DEEP- RETENTION AREA
 CMU WALLS WITH
 72" ALUMINUM FENCE

APPROX FLOOD ZONE

WALK WITH HANDRAIL
 24-30" SPLIT FACE BLOCK WALL
 TURN DOWN CURB/WALL 36" ADD
 42" GUARD RAIL

8' SCREENING WALL

SEE SHEET LC-7 AND LC-8 FOR SITE DETAILS



CYPRESS MANAGEMENT AND DESIGN

P.O. BOX 8880 FLEMING ISLAND, FL 32006
904-759-9576 SITEOP@BELLSOUTH.NET

DATE	REVISIONS
5-17-2023	SITE PLAN REVISIONS
6-9-2023	

**KNIGHT CENTER
SITE DRAINAGE PLAN
PRELIMINARY SITE PLAN**

DATE 5-9-2023
DRAWN BY
CHKD. BY
JOB NO.

ROBERT HARTWIG
LA 0012

SHT. **LC-4**

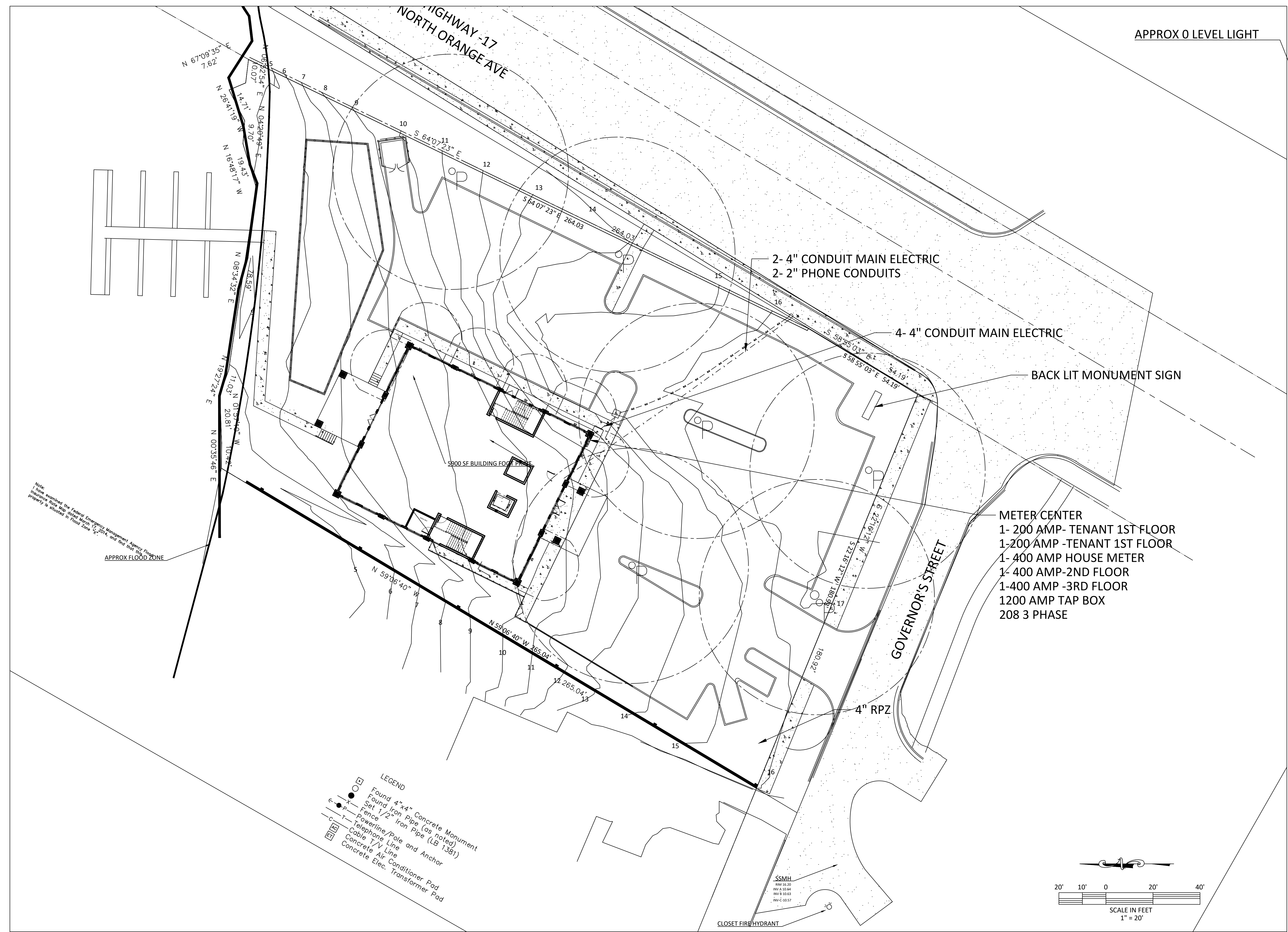
CYPRESS MANAGEMENT AND DESIGN
P.O. BOX 8880 FLEMING ISLAND, FL. 32006
904-759-9576--- SITEOPT@BELLSOUTH.NET

REVISIONS	DATE	DESCRIPTION
XXX	5-17-2023	SITE PLAN REVISIONS

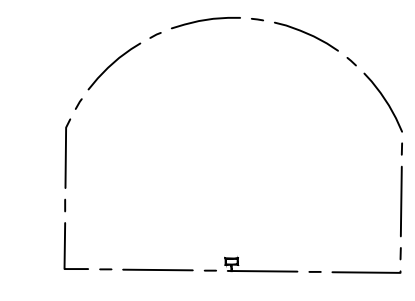
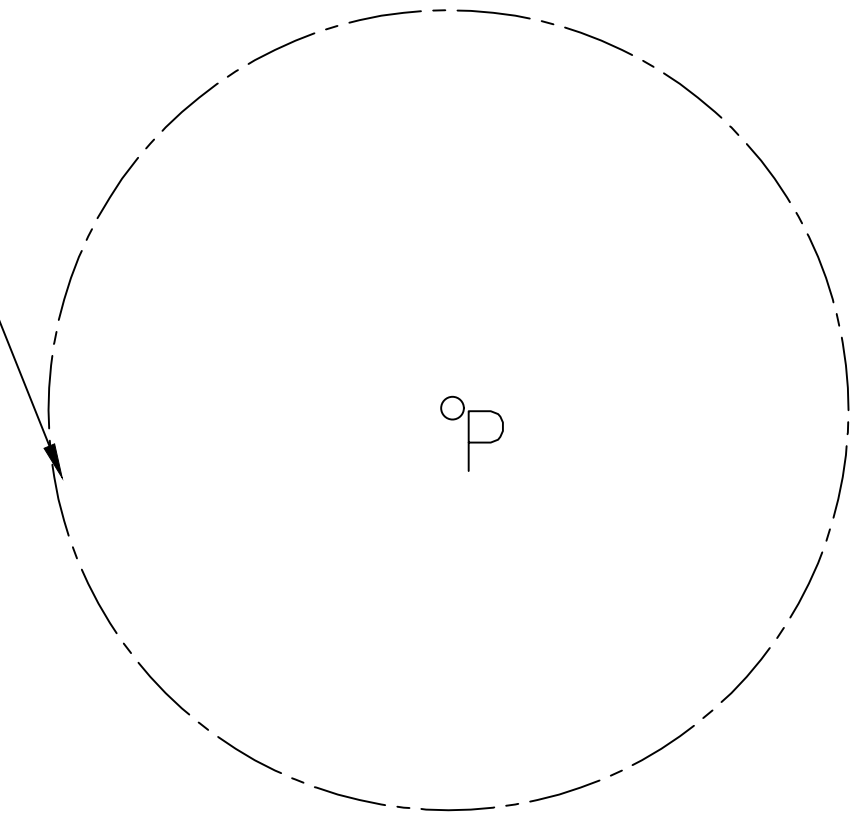
**KNIGHT CENTER
MASTER SITE PLAN
PRELIMINARY ELECTRICAL PLAN**

DATE 5-9-2023
DRAWN BY
CHKD. BY
JOB NO.

ROBERT HARTWIG
LA 0012
SHT. LC-6



APPROX 0 LEVEL LIGHT



LUMINAIRE SPECIFICATIONS

STYLING: CLASSIC
MATERIAL: CAST ALUMINUM
FINISH: POLYESTER POWDER COAT - BRASS
GLASS: CLEAR
MOUNTING: WALL MOUNTED
DIMENSIONS: 18" H x 12" W x 12" D
WEIGHT: 15 LBS

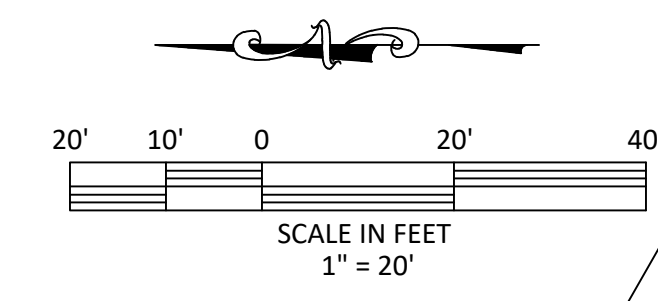
LAMP POST SPECIFICATIONS

STYLING: CLASSIC
MATERIAL: CAST ALUMINUM
FINISH: POLYESTER POWDER COAT - BRASS
GLASS: CLEAR
MOUNTING: WALL MOUNTED
DIMENSIONS: 18" H x 12" W x 12" D
WEIGHT: 15 LBS

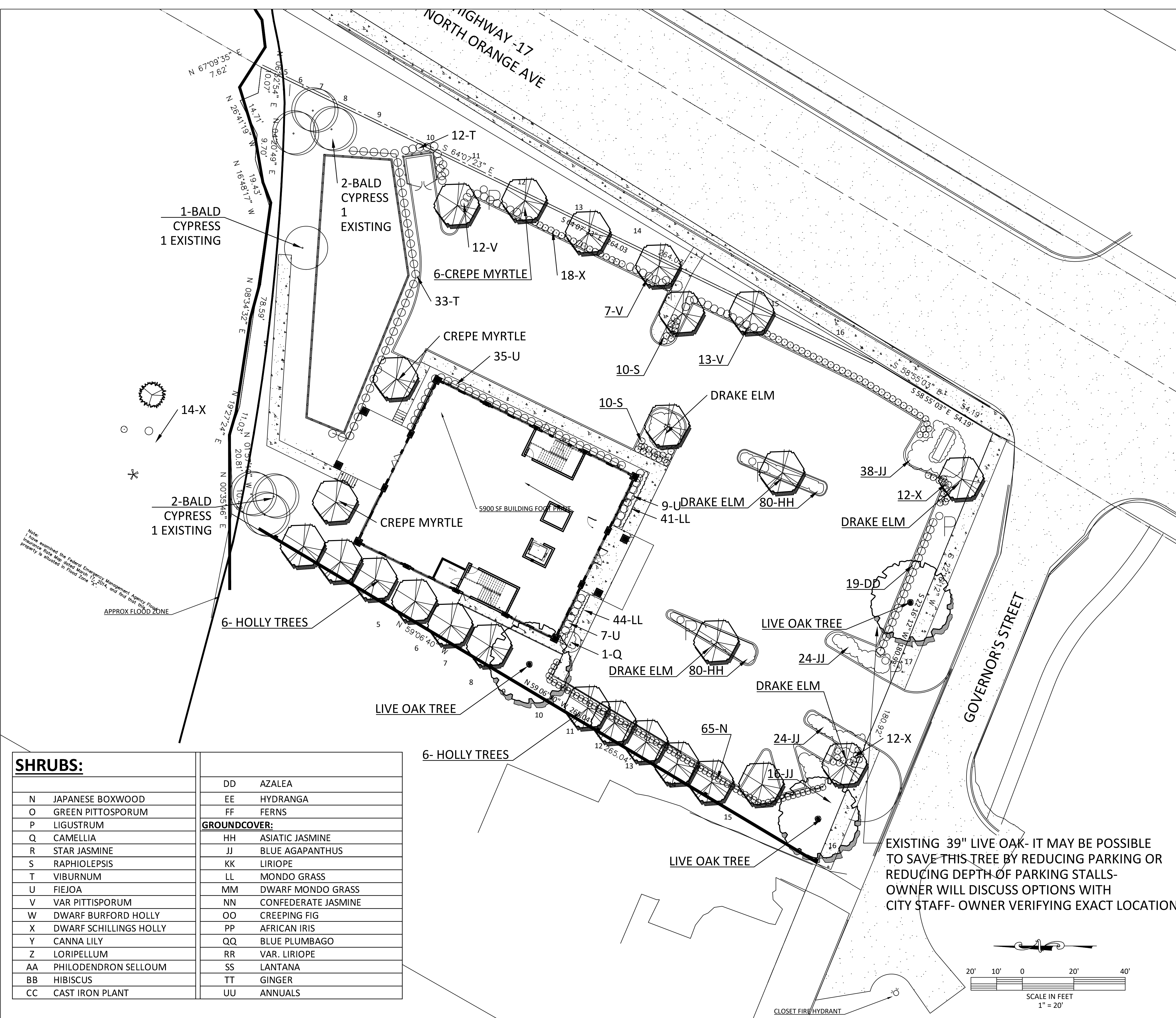
SPRINT INFORMATION

SECTION	TYPE	HEIGHT	WEIGHT
POST	18" H x 12" W x 12" D	18' 0"	15 LBS
LUMINAIRE	18" H x 12" W x 12" D	15'	15 LBS
TOTAL WEIGHT: 30 LBS			

Spring City Electrical Mfg. Co.
1800 W. 10th St., Spring City, TN 37174
615-397-1111



CONFIRM WITH CITY ALL UTILITY CONNECTIONS



SHRUBS:	
N	JAPANESE BOXWOOD
O	GREEN PITTOSPORUM
P	LIGUSTRUM
Q	CAMELLIA
R	STAR JASMINE
S	RAPHIOLEPSIS
T	VIBURNUM
U	FIEJOA
V	VAR PITTISPORUM
W	DWARF BURFORD HOLLY
X	DWARF SCHILLINGS HOLLY
Y	CANNA LILY
Z	LORIPPELLUM
AA	PHILODENDRON SELLOUM
BB	HIBISCUS
CC	CAST IRON PLANT
DD	AZALEA
EE	HYDRANGA
FF	FERNS
GROUND COVER:	
HH	ASIATIC JASMINE
JJ	BLUE AGAPANTHUS
KK	LIRIOPE
LL	MONDO GRASS
MM	DWARF MONDO GRASS
NN	CONFEDERATE JASMINE
OO	CREEPING FIG
PP	AFRICAN IRIS
QQ	BLUE PLUMBAGO
RR	VAR. LIRIOPE
SS	LANTANA
TT	GINGER
UU	ANNUALS

Tree Specifications
 3-Live Oak-6" Caliper 18"
 12-Holly Trees- 3" Caliper 36"
 5-Drake Elms- 4" Caliper 12"
 8-Crepe Myrtles- 4" caliper- multi stem 40"
 New Trees - 114" 28 total trees

28 NEW TREES
 3-4 RETAINED TREES DEPENDING ON LIVE OAK
 117" CALIPER TO 147" CALIPER DEPENDING ON LIVE OAK
 OVER 50% SHADE TREES

944 lf property line/50= 19 trees
 49,500 SF PROPERTY
 INTERIOR TREES
 1 FOR 10,500/1500 7
 38,049/4000 10

TOTAL TREES REQUIRED- 36

36 AT 2 1/2" CALIPER-- 90"

444' LF PROPERTY LINE NOT ADJACENT TO PROPERTY-
 ADD - 41 SHRUBS

PLANT SPACING- SIZE:
 V-26" HT MIN 3 GAL-36" O.C
 X- 24" HT MIN 3 GAL- 30" O.C
 U- 28" HT 5 GALLON- 36" O.C
 T- 36" HT- 5 GALLON- 42" O.C
 S- 18" MIN 3 GALLON-30" O.C
 ALL OTHER GROUND COVER- MIN 1 GALLON
 18" O.C

GRASS - ST AUGUSTINE SOD

100 % IRRIGATION ON ALL LANDSCAPE AREAS
 AUTOMATIC CLOCK LOCATE - OUTSIDE ON WEST SIDE OF
 BUILDING
 DRIP IRRIGATION ON ALL SHRUBS- SPRAY ZONES ON
 GRASS

ALL TREES AND SHRUBS TO BE FLORIDA #1 OR BETTER

Ex. Tree Removal
 Live Oak-39"- Not Specimen See Note
 Laurel Oak- 28"- Remove 28"
 Laurel Oak-26"- Deceased
 Southern Magnolia-24"- Remove 24"
 laurel Oak- 25"- Deceased
 Bald Cypress 27"- Retain
 Bald Cypress 9"- Retain
 Bald Cypress 9"- Retain

Total trees removed- 52" without Live Oak 91" with Oak

CONFIRM WITH ALL UTILITY TO AVOID PLANTING
 TREES DIRECTLY OVER LINES

CYPRESS MANAGEMENT
 AND DESIGN
 P.O. BOX 8880 FLEMING ISLAND, FL. 32006
 904-759-9576--- SITEOPT@BELLSOUTH.NET

DATE	REVISIONS	SITE PLAN REVISIONS
5-17-2023		
6-9-2023		

KNIGHT CENTER
 MASTER SITE PLAN
 PRELIMINARY ELECTRICAL PLAN

DATE 5-9-2023
 DRAWN BY
 CHKD. BY
 JOB NO.

ROBERT HARTWIG
 LA 0012
 SHT. LC-7

**PROPOSED OFFICE BUILDING
GREEN COVE SPRINGS, FLORIDA**

**ENVIRONMENTAL RESOURCE
PERMIT APPLICATION**

June 15, 2023

SUMMARY

The proposed project site is located at 310 Orange Avenue in Green Cove Springs, Florida. The project consists of constructing an office building and associated parking and site improvements. The project area is 1.10 acres and, upon completion of the project, will be 75.0% impervious over the whole site. Stormwater treatment will be provided by an onsite retention system that will outfall to Governors Creek.

Treatment volume for the site is included in the proposed dry retention facility. The facility contains **0.21 ac-ft** of treatment volume providing for more than **2.3 inches** of runoff from the site. The nutrient removal efficiency is met in the proposed facility. The retention facility includes an internal control weir at elevation 8.1'. Overflow from the facility is to Governors Creek.

Calculations, which follow, show that the proposed pond and its' controls will attenuate the peak flow rate for the 25 year, 24-hour storm to **2.3 cfs** with **0.6'** of freeboard compared to a peak pre-development flow calculated to be **2.3 cfs**.

There are no wetlands on the site.

BCE Ref. No. 23-004

Respectfully submitted,

Colin D. Groff, PE

SUPPORTING INFORMATION

I. SITE INFORMATION

Area maps and soils data are included in this report.

II. ENVIRONMENTAL CONSIDERATIONS

The proposed project will not impact any jurisdictional wetlands.

III. PLANS

The plans for the project are submitted herewith.

IV. CONSTRUCTION TECHNIQUES

All contractors working on this project will be bound by strict specifications with regard to erosion and siltation control, with limits on turbidity. Dewatering of work areas will be limited in time and discharge will be to temporary sediment traps. Record drawings will be required from the Contractor. Certification of permit conformance will be by the Owner's consulting engineer.

V. OPERATION & MAINTENANCE

The developed land will be under the ownership and control of the owner. Routine maintenance will include mowing the area and checking for erosion after significant storm events. Eroded areas will be revegetated when necessary.

VI. WATER USE

The site will be served by City of Green Cove Springs for both potable water and wastewater disposal.

The project is not expected to require any Consumptive Use or Water Use permitting.



**REPORT OF GEOTECHNICAL EXPLORATION
KNIGHT CENTER
GREEN COVE SPRINGS, FLORIDA
LEGACY PROJECT NO. 23-1132.1**

Prepared for:

Mr. Robert Hartwig
R. Hartwig Construction, LLC
P.O. Box 10193
Fleming Island

Prepared by:

Legacy Engineering, Inc.
6415 Greenland Road
Jacksonville, Florida 32258
Phone: 904.721.1100
www.legacyengineering.com

June 15, 2023



June 15, 2023

Mr. Robert Hartwig
R. Hartwig Construction, LLC
P.O. Box 10193
Fleming Island 32006

Report of Geotechnical Exploration and Engineering Services
Knight Center
Governor's Street and US 17
Green Cove Springs, Florida
Legacy Project No. 23-1132.1

Dear Mr. Hartwig:

As you have requested and authorized, Legacy Engineering, Inc. has completed a preliminary geotechnical exploration for the subject project. The exploration was performed to evaluate the general subsurface conditions within the proposed building areas and to provide guidelines to facilitate foundation support, earthwork preparation, pavement design, drainage, and retaining wall design.

We appreciate this opportunity to be of service as your geotechnical consultant on this phase of the project. If you have any questions, or if we may be of any further service, please contact us.

Sincerely:
Legacy Engineering, Inc.

Joseph Aganon, E.I.
Geotechnical Engineer

Lewis E. Hay, P.E.
Senior Geotechnical Engineer
Licensed, Florida No. 48098



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1.0 PROJECT INFORMATION

1.1 Site Location and Description

The site of the subject project is located directly southwest of the intersection of Governor Street and Highway 17 in Green Cove Springs, Florida. West of the site lies the St. Johns River while the east and north are bounded by Governor Street and Highway 17, respectively. To the south of the site are residential structures. The site topography sloped down toward the west Governor's Street to the St. Johns River. Topographic relief across the site is approximately 12 feet. The topographic relief across the proposed building area is approximately 8 feet.

1.2 Project Description

Project information was provided through correspondence with Mr. Robert Hartwig of R. Hartwig Construction, LLC. We were provided with a copy of the Site Layout Plan/Preliminary Site Plan dated May 9, 2023, prepared by Cypress Management and Design. The provided document shows the layout of the proposed construction, property boundary limits, and adjacent roadways.

Based on the information provided to us, we understand the proposed project will consist of constructing a 3-story, 5,900 square foot concrete block building at the subject site. We also understand that a stormwater retention pond will be contained within concrete block walls. We also understand an 8-foot concrete block retaining wall will be constructed along the west side of the property. It is desired to perform a geotechnical exploration to provide recommendations for foundation design, building support, pavement design, drainage design and retaining wall design. We have not been provided with the structural loading information for the proposed building at this time; however, we have assumed that wall and individual column loads will not exceed 4 klf and 60 kips, respectively. Soil supported floor loads are not expected to exceed 50 psf. We have also assumed that earthwork cuts and fills for the site will be limited to approximately 5 feet or less.

2.0 FIELD EXPLORATION

2.1 Soil Borings

In order to explore the subsurface conditions throughout the area of the proposed building, two (2) Standard Penetration Test (SPT) borings (B1 to B2) were drilled to a depth of 25 feet below the existing grades. Within the areas of the retaining wall and parking and driveway areas, we will drilled five (5) auger borings to depths of 5 and 6 feet each. Auger boring A1 was terminated at feet due to borehole instability associated with the groundwater conditions. Within the area of the proposed stormwater management pond, we drilled two (2) SPT borings to a depth of 15 feet each. The borings were located using a hand-held differentially corrected Global Positioning System (GPS) unit and should be considered accurate to the degree implied by the method utilized. The SPT and auger borings were conducted in accordance with ASTM D 1586 and ASTM D 1452, respectively. The subsurface conditions encountered at each boring

location, and the recorded groundwater levels, are presented on the Generalized Soil Profile and Boring Records in Appendix A.

2.2 Relatively Undisturbed Soil Samples

Two (2) relatively undisturbed soil samples (Shelby Tubes) were obtained from the upper 18 to 24 inches between the pond boring locations for the purpose of performing permeability (hydraulic conductivity) testing. The soil samples were obtained using a thin-walled, 3-inch O.D., 16 gauge tube (Shelby tube). One tube was oriented vertically, and one tube was oriented horizontally at the boring location. The Shelby tubes were carefully removed from the ground, secured and transported to our laboratory for permeability testing. The sampling procedure is described by ASTM D 1587.

3.0 LABORATORY TESTING

3.1 Index Testing

Soil samples recovered during the field exploration were visually classified in accordance with ASTM D 2488. Limited laboratory testing consisted of fines content, moisture content and organic content tests to assist in classification and estimation of soil properties. The results of the testing are presented on the Boring Records in Appendix A.

3.2 Permeability Testing

Permeability (hydraulic conductivity) tests were conducted on the undisturbed soil samples to estimate the permeability coefficients of the soil. The coefficient of permeability is a measure of a soil's ability to transmit water under hydraulic loading conditions. It typically is a required input parameter for groundwater modeling, such as dry pond recoveries, background seepage, etc. The laboratory permeability test is typically conducted by placing the undisturbed soil sample in a permeameter, and while in the permeameter, the soil sample is subjected to differential hydraulic loading over a period of time. The volume of water that is transmitted through the soil sample is recorded, and along with the known hydraulic loading conditions, Darcy's law is utilized to calculate the permeability coefficient. The permeability coefficients are shown on the drainage recommendations (Section 5.0).

4.0 GENERAL SUBSURFACE CONDITIONS

4.1 General Soil Profile

The boring locations and general subsurface conditions that were encountered are graphically illustrated on the Field Exploration Plan and Generalized Soil Profile in Appendix A. A detailed description of the subsurface conditions encountered is presented on the Test Boring and Auger Boring Records in Appendix A. When reviewing these records, it should be understood that the soil conditions may change significantly between and away from the boring locations. The following discussion summarizes the soil conditions encountered.

Beneath 3 to 4 inches of topsoil, the SPT borings in the building area encountered loose to firm fine sands (SP) and fine sands with silt (SP-SM) to a depth of 11.5 to 12.5 feet. Firm to very dense clayey fine sands (SC) were then penetrated to the boring termination depths of 25 feet.

Below 4 inches of topsoil, the SPT borings in the proposed stormwater retention pond area encountered very loose to very firm fine sands (SP), very loose to loose fine sands with silt (SP-SM) and firm silty fine sands (SM) to the boring termination depth of 15 feet below the existing grades. An exception to this general soil profile occurred at boring PB1 where brick fragments were penetrated between 3 and 4 feet.

Below 4 to 6 inches of topsoil, the auger borings in the pavement and retaining wall areas penetrated fine sands (SP) and fine sands with silt (SP-SM) to the boring termination depths of 5 to 6 feet.

4.2 Groundwater Level

The groundwater level was measured at the boring locations, subsequent to boring completion, at depths of 3.3 to 5.0 feet below the existing site grades. The depth of the groundwater level encountered at each boring location is presented on the Generalized Soil Profile and the Test Boring Records in Appendix A.

The groundwater table will fluctuate depending on seasonal rainfall activity, tidal fluctuations, seasonal variations, adjacent construction, surface water runoff, etc. Should rainfall intensity exceed normal quantities or should other variables that affect the seasonal high groundwater level be altered, the groundwater profile at the site could change significantly. The seasonal high groundwater table at this site is anticipated to range from 1 to 4.5 feet below the existing grade and will vary with the site topography.

5.0 DRAINAGE RECOMMENDATIONS

5.1 Drainage Parameters

The following parameters presented in the table below can be utilized for drainage design. A factor of safety of at least 2 should be utilized for design purposes. The permeability rates for the fine sands in the construction areas are presented in the table below.

Sample Location	Aquifer Depth ⁽¹⁾	Estimated Seasonal High Ground Water Depth ⁽¹⁾	Horizontal Permeability Rate	Vertical Permeability Rate
ST1	15 ft ⁽²⁾	2.0 feet ⁽¹⁾	29.8 ft/day	27.5 ft/day

(1) Depth below grade, at the boring location, existing at time of exploration.

(2) Aquifer depth limited to boring termination depth.

6.0 BUILDING AREA RECOMMENDATIONS

6.1 General

The following preliminary recommendations are made based upon a review of the attached soil test data, our understanding of the proposed construction, and experience with similar projects and subsurface conditions. If the structural loads, construction locations, or grading information change from those discussed previously, we request the opportunity to review and possibly amend our recommendations with respect to those changes.

Please report to us any conditions encountered during construction that were not observed during the performance of the borings. We will review, and provide additional evaluation as required.

The loose sandy soils encountered by the borings will require surface compaction with a vibratory drum roller prior to the placement of any elevating fill.

6.2 Building Foundations

Based on the results of the subsurface exploration, we consider the subsurface conditions at the site adaptable for support of the proposed building on a properly designed and constructed conventional shallow foundation system. Provided the soils are prepared in accordance with the Site Preparation Section (Section 6.3) of this report, the following parameters may be used for foundation design.

6.2.1 Bearing Pressure

The maximum allowable net soil bearing pressure for shallow foundations should not exceed 2,500 pounds per square foot (psf). Net bearing pressure is defined as the soil bearing pressure at the base of the foundation in excess of the natural overburden pressure. The foundations should be designed based upon the maximum load that could be imposed by all loading conditions.

6.2.2 Foundation Size

The minimum widths recommended for any isolated column footing and continuous wall footings are 24 inches and 18 inches, respectively. Even though the maximum allowable soil bearing pressure may not be fully achieved, these width recommendations should control the size of the foundations.

6.2.3 Bearing Depth

The exterior foundations should bear at a depth of at least 18 inches below the finished exterior grades and the interior footings should bear at a depth of at least 18 inches below the finish floor elevation to provide confinement to the bearing level soils. We recommend stormwater and surface water be diverted away from the building exterior, both during and after construction, to reduce the possibility of erosion adjacent to the exterior footings.

6.2.4 Bearing Material

The foundations may bear on compacted existing or structural fill/backfill. The bearing level soils, after compaction, should exhibit densities of at least 95 percent of the maximum dry density as determined by ASTM D 1557 (Modified Proctor), to the depth described subsequently in the Site Preparation section of the report. In addition to compaction, the bearing soils must exhibit stability and be free of "pumping" conditions.

6.2.5 Settlement Estimates

Post-construction settlement of the structure will be influenced by several interrelated factors, such as (1) subsurface stratification and strength/compressibility characteristics of the bearing soils; (2) footing size, bearing level, applied loads, and resulting bearing pressures beneath the foundations; (3) site preparation and earthwork construction techniques used by the contractor, and (4) external factors, including but not limited to vibration from offsite sources and groundwater fluctuations beyond those normally anticipated for the naturally-occurring site and soil conditions which are present.

Our settlement estimate for the structure is based upon adherence to the site preparation recommendations presented later in this report. Any deviation from these recommendations could result in an increase in the post-construction settlement of the structure.

Due to the sandy nature of the site soils, we expect a significant portion of anticipated settlement to be elastic in nature. This settlement is expected to occur rapidly, upon application of the fill and dead loads during and immediately following construction. Using the recommended maximum bearing pressure, the assumed maximum structural loads presented in this report, and the field and laboratory test data which we have correlated to the strength and compressibility characteristics of the subsurface soils, we estimate the total settlement of the structure will be on the order of one inch or less.

Differential settlement results from differences in applied bearing pressures and the variations in the compressibility characteristics of the subsurface soils. Based on the subsurface conditions as determined by the borings, it is anticipated that differential settlement will be approximately one-half of the total settlement.

6.3 Site Preparation for Shallow Foundations

We recommend the following site preparation guidelines for the foundation areas:

1. Prior to construction, the location of any existing underground utility lines within the construction area should be established. Provisions should then be made to relocate interfering utilities to appropriate locations. It should be noted that if underground pipes are not properly removed or plugged, they may serve as conduits for subsurface erosion which may subsequently lead to excessive settlement of the overlying structure.

-
2. Implement temporary groundwater control measures, as required. The groundwater should be maintained at least two feet below the depth of any excavations required during construction and two feet below compacted surfaces. Temporary groundwater control measures should be the responsibility of the contractor.
 3. Strip the proposed construction limits of all grass, roots, topsoil and other deleterious materials within and 5 feet beyond the perimeter of the proposed structure and pavement areas. Expect initial clearing and grubbing depths to be on the order of 4 inches more or less. Some areas may require more than 12 inches of stripping to remove concentrated root zones whereas other areas may require less than 4 inches.
 4. Compact the exposed soil surface using a medium-weight vibratory drum roller (3 to 4-foot drum diameter and 4 to 6 tons static weight) until density test results equivalent to at least 95 percent of the Modified Proctor Test (ASTM D 1557) maximum dry density are uniformly achieved to a depth of at least 12 inches. We recommend making at least eight to ten overlapping coverages of the building area in perpendicular directions with the roller in order to increase the density and improve the uniformity of the underlying loose sandy soils. The soils should exhibit moisture contents within 2 percent of the optimum moisture content as determined by the Modified Proctor Test (ASTM D 1557) at the time of compaction.

Should the soils experience pumping and soil strength loss during the compaction operations, compaction work should be immediately terminated and (1) the disturbed soils removed and backfilled with dry structural fill soils which are then compacted, or (2) the excess moisture content within the disturbed soils allowed to dissipate before recompacting.

5. Place any required structural fill to grade in loose lifts not exceeding a thickness of 12 inches when using the roller described above. Compact each lift until the density test results equivalent to at least 95 percent of the Modified Proctor maximum dry density (ASTM D 1557) have been achieved.
6. Test the compacted surface for density at a minimum of one test location per 2,500 square feet of the proposed building area (minimum of three test locations).
7. Excavate, compact and test footing excavations for density to a depth of one foot below the foundation bearing level. We recommend that you perform one density test per every 100 feet of wall footing, and test one out of every four column footings. Compaction operations in confined areas, such as footing excavations, can best be performed with a lightweight vibratory sled or other hand-held compaction equipment.

7.0 PAVEMENT RECOMMENDATIONS

7.1 General

We understand the subject project will utilize a flexible asphaltic concrete pavement section. In the following sections, we have presented our recommendations to guide pavement design and site preparation.

7.2 Pavement Section Recommendations

Our recommendations for pavement sections are presented below. Detailed traffic loading conditions were not available; therefore, we have provided pavement sections which can accommodate loading conditions typical of the subject construction over a design life of 20 years. The light duty pavement sections are based on 500,000 Equivalent Single Axle Loads (ESALs) of 18 kips. The heavy-duty pavement sections are based on 1,500,000 ESALs.

Pavement Section	Asphalt ⁽¹⁾ Thickness (in)	Base Course ⁽²⁾ Thickness (in)	Stabilized ⁽³⁾ Subgrade (in)
Light Duty Asphalt	1.5	6.0	12
Heavy Duty Asphalt	2.0	8.0	12

- 1) Flexible pavement should consist of FDOT SP 9.5 or SP 12.5 mix.
- 2) Base course should consist of limerock exhibiting an LBR of at least 100, or crushed concrete exhibiting an LBR of at least 130. Limerock and crushed concrete base course materials and gradations should conform to FDOT Standard Specifications for Road and Bridge Construction Sections 911 and 204, respectively.
- 3) Stabilized subgrade should exhibit an LBR of at least 40.

7.3 Site Preparation for Pavements

We recommend the following site preparation guidelines for pavement construction:

1. Prior to construction, the location of any existing underground utility lines within the construction area should be established. Provisions should then be made to relocate interfering utilities to appropriate locations. It should be noted that if underground pipes are not properly removed or plugged, they may serve as conduits for subsurface erosion which may subsequently lead to excessive settlement.
2. Implement temporary groundwater control measures, as required. The groundwater should be maintained at least two feet below the depth of any excavations required during construction and two feet below compacted surfaces. Temporary groundwater control measures should be the responsibility of the contractor.

-
3. Strip the proposed construction limits of all grass, roots, topsoil, and other deleterious materials within, and 3 feet beyond, the proposed pavement limits. Expect initial clearing and grubbing to depths of approximately 4 inches more or less.
 4. After stripping and grubbing, compact the exposed soil surface with a medium-weight vibratory drum roller (3 to 4-foot drum diameter and 5 to 7 tons static weight until densities of at least 95 percent of the modified Proctor maximum dry density (ASTM D 1557) are achieved to a depth of at least one foot below the exposed surface with the exception that densities of at least 98 percent should be obtained in the upper 12 inches below the base course. We recommend the compacted soils exhibit moisture contents within 2 percent of the optimum moisture content as determined by the Modified Proctor Test (ASTM D 1557).

Again, should the soils experience pumping and soil strength loss during the compaction operations, compaction work should be immediately terminated and (1) the disturbed soils removed and backfilled with dry structural fill soils which are then compacted, or (2) the excess moisture content within the disturbed soils allowed to dissipate before recompacting.

5. Test the compacted surface for density at a frequency of not less than one test location per 10,000 square feet of pavement area or one test per 300 linear feet of roadway.
6. Place any required structural fill to grade in the pavement areas in loose lifts not exceeding 12 inches. Compact each lift until densities of at least 95 percent of the Modified Proctor maximum dry density (ASTM D 1557) have been achieved within each lift of the compacted structural fill, with the exception that densities of at least 98 percent should be obtained in the upper 12 inches below pavement base course. Structural fill and backfill is typically defined as non-plastic, inorganic, granular soil having less than 10 percent material passing the No. 200 mesh sieve (relatively clean sand). Typically, the material should exhibit moisture contents within 2 percent of the Modified Proctor optimum moisture content (ASTM D 1557) during the compaction operations.
7. Perform density tests within each lift of fill at a frequency of not less than one test location per 10,000 square feet of pavement area or one test per 300 linear feet of roadway.
8. Place and compact base course until density test results of at least 100 percent of the modified Proctor maximum dry density are achieved. Compaction operations should be conducted with the drum roller noted above.
9. Perform density tests within the base course at a frequency of not less than one test location per 10,000 square feet of pavement area or 300 linear feet of roadway.

7.4 Additional Pavement Considerations

7.4.1 Asphaltic Concrete Pavement

Asphaltic concrete mixes should be a current FDOT approved design of the materials used. Samples of the materials delivered to the project should be tested to verify that the aggregate gradation and asphalt content satisfies the mix design requirements.

After placement and field compaction, core the wearing surface to evaluate material thickness and to perform laboratory density tests on the compacted asphalt. Obtain cores at frequencies of at least one core per 3,000 square feet of placed pavement, or a minimum of two cores per day of production.

7.4.2 Groundwater Separation

Groundwater, if not maintained below the base course an adequate distance, can result in weakened subgrade and base course soils, and therefore a greatly reduced pavement life. It is recommended the seasonal high groundwater level be maintained at least 24 inches below base courses. If the recommended vertical separation cannot be achieved through grading or permanent surface drainage improvements, underdrains can be considered to maintain the groundwater level at the recommended depths.

8.0 RETAINING WALL DESIGN

8.1 Lateral Earth Parameters

The table below provides soil parameters that can be utilized by the wall designer for the sheet piling/wall support. A suitable factor of safety should be utilized for the retaining wall design.

LATERAL EARTH PRESSURES

Soil Depth (ft)	Dry Unit Weight (pcf)	Saturated Unit Weight (pcf)	Buoyant Unit Weight (pcf)	K_a	K_p	K_o	Φ (degrees)	C (psf)	δ
Fill	110	122	60	0.31	3.25	0.47	32	0	20
0-6	105	117	55	0.33	3.0	0.50	30	0	20

- K_a = coefficient of active lateral earth pressure
- K_p = coefficient of passive lateral earth pressure
- K_o = coefficient of at-rest lateral earth pressure
- Φ = angle of internal friction
- C = cohesion
- δ = wall friction angle

The retaining wall should be installed to a sufficient depth below the mudline to ensure stability and prevent toe failures. A heavy, non-woven geotextile can be placed against the face of the retaining wall to prevent the migration of sandy backfill soils through construction joints. Fill and backfill placed behind the wall should be placed in uniform 4 to 6-inch loose lifts and compacted

to a minimum density of 95 percent of the Modified Proctor maximum dry density using light-weight walk-behind vibratory compactors. To minimize the lateral earth stresses imparted to the retaining wall, over compaction should be avoided and larger compaction equipment should not be used within 5 lateral feet of the wall. Larger vibratory rollers should be operated in static mode when utilized near the retaining wall. We recommend the soil, at the time of compaction, exhibit moisture contents within 2 percent of the soil optimum moisture content as determined by the Modified Proctor Test (ASTM D 1557).

8.2 Hydrostatic Pressure

The designer should consider the potential effects of hydrostatic pressure exerted by groundwater on the retaining walls. To help reduce significant hydrostatic pressure on the walls, a wall drain could be placed near the base of the walls. A number of commercially available geosynthetic composite drainage systems are available for retaining wall designs. Clean backfill should be utilized within five feet of the wall, thereby improving drainage. Structural fill and backfill is typically defined as non-plastic, inorganic, granular soil having less than 10 percent material passing the No. 200 mesh sieve (relatively clean sand). The drain should collect the groundwater and positively convey it away from the wall. It is recommended clean-outs be utilized so periodic maintenance of the drains can be conducted.

9.0 RETENTION POND RECOMMENDATIONS

9.1 General

The drainage system includes a stormwater retention pond. Based on the size of the proposed pond, suitable soils excavated for the pond construction can be a fill source for site development.

9.2 Borrow Suitability

The borings in the pond area were intended, in part, to provide an indication of the suitability of the soils for use as structural fill and backfill. The fine sands (SP) and fine sands with silt (SP-SM) are suitable for use as structural fill and backfill material. The fine sands typically exhibit higher permeability rates than the fine sands with silt, and therefore, are more desirable for use in areas requiring substantial drainage potential.

We recommend that soils containing bricks or brick rubble (see boring PB1) be segregated for disposal during the pond excavation. In addition, the fine sand with silt and organics penetrated from 5.5 to 9.5 feet in boring PB2 should also be segregated for disposal due to elevated organic content. The silty fine sands (SM) encountered below a depth of 11.5 feet in boring PB2 should not be used as structural due to moisture sensitivity associated with an elevated fines content. If allowed to dry, however, the silty sands could be mixed with cleaner sandy soils to produce an acceptable blend.

The soils in the proposed pond area that are below the groundwater level will have moisture contents in excess of the Modified Proctor optimum moisture content and will require



stockpiling or spreading to dry and reduce moisture contents to within 2 percent of the optimum moisture content corresponding to the required degree of compaction.

10.0 LIMITATIONS

We have conducted the preliminary geotechnical engineering evaluation in accordance with principles and practices normally accepted in the geotechnical engineering profession. Our analysis and recommendations are dependent on the information provided to us. Legacy Engineering, Inc. is not responsible for independent conclusions or interpretations based on the information presented in this report.

APPENDIX A

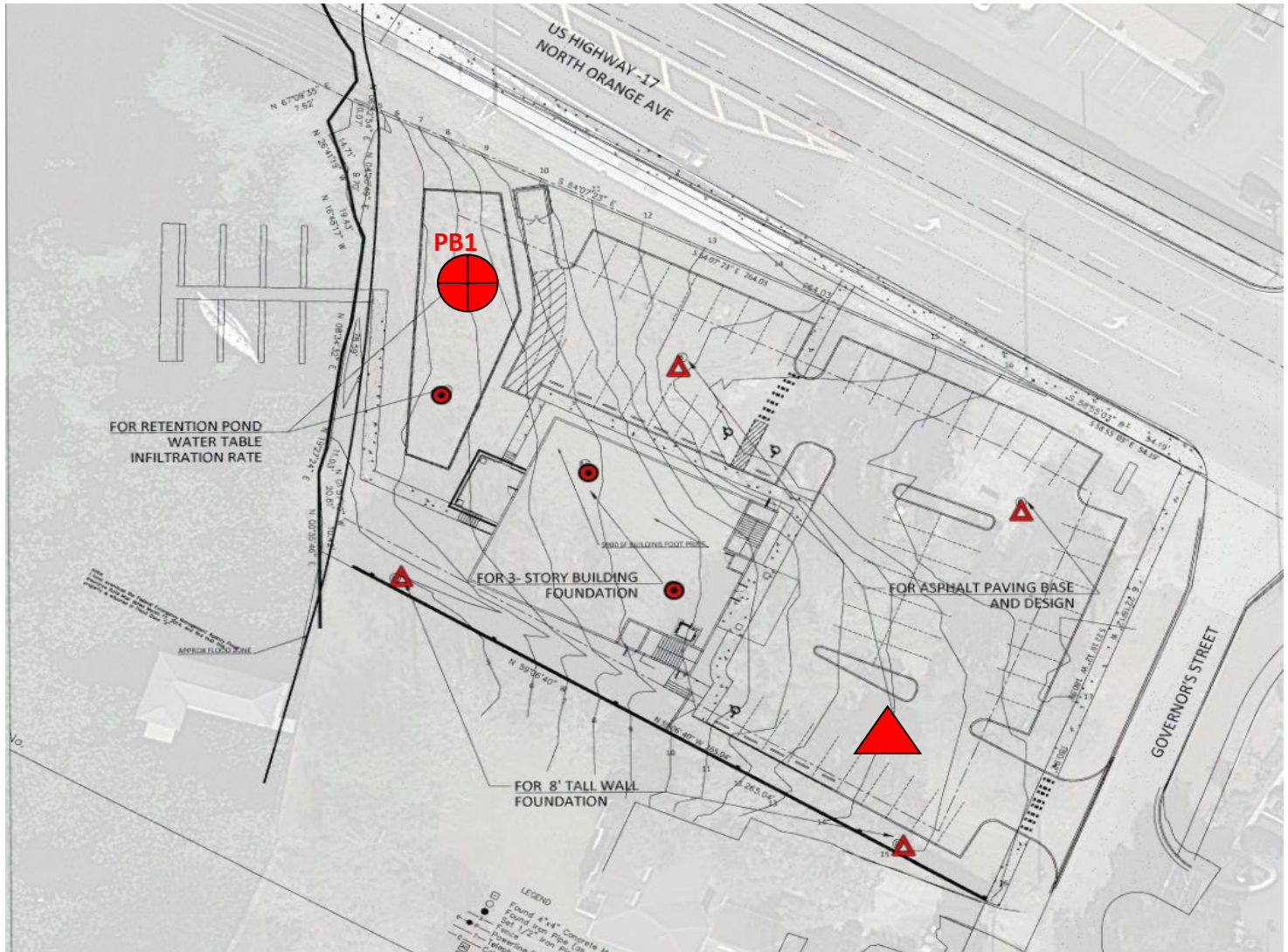
FIELD EXPLORATION PLAN

GENERALIZED SOIL PROFILE




TEST BORING RECORD

AUGER BORING RECORD

SUMMARY OF LABORATORY INDEX TEST RESULTS

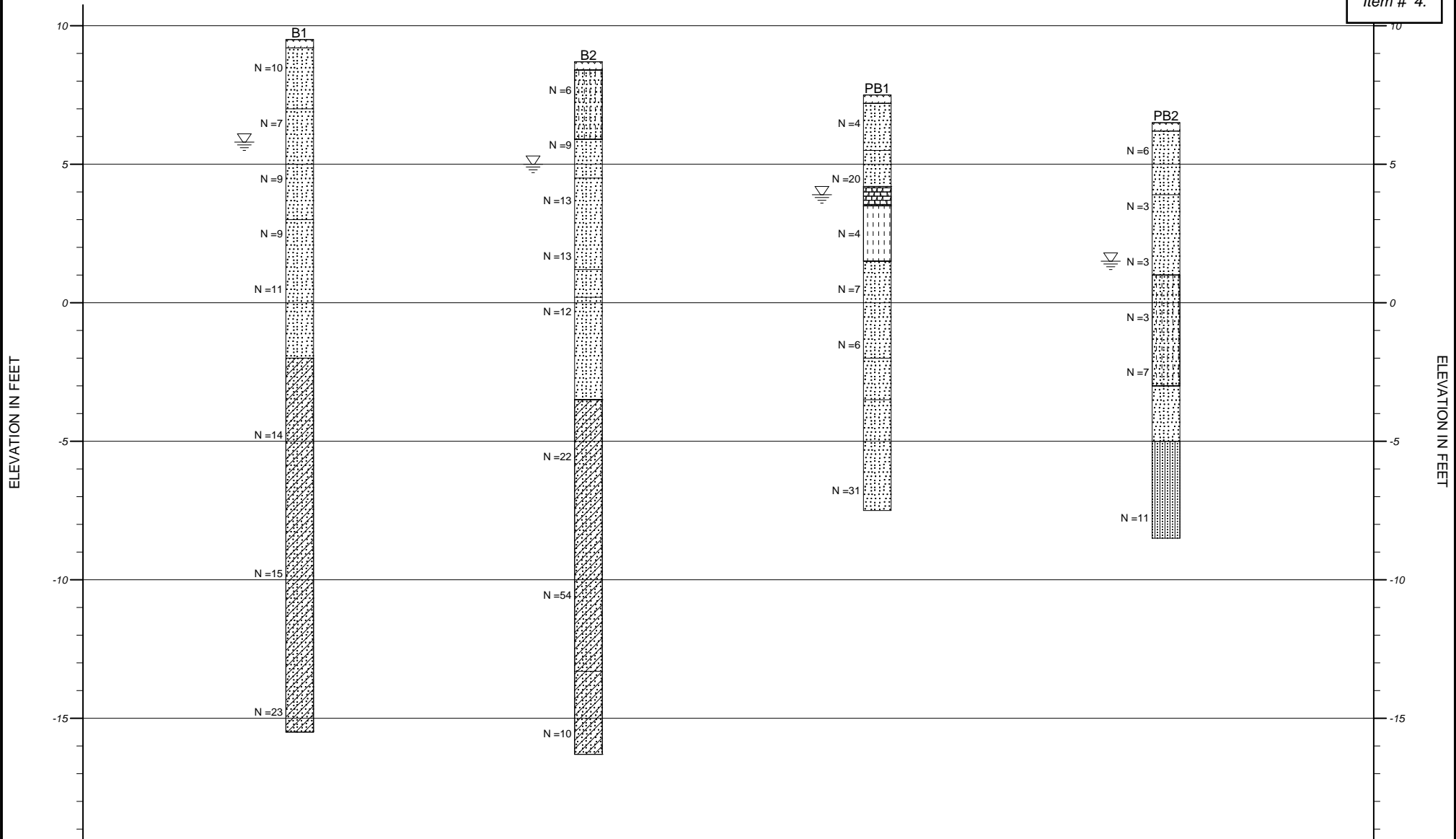


LEGEND

-  Approximate SPT Boring Locations
-  Approximate Auger Boring Locations
-  Approximate Shelby Tube Location



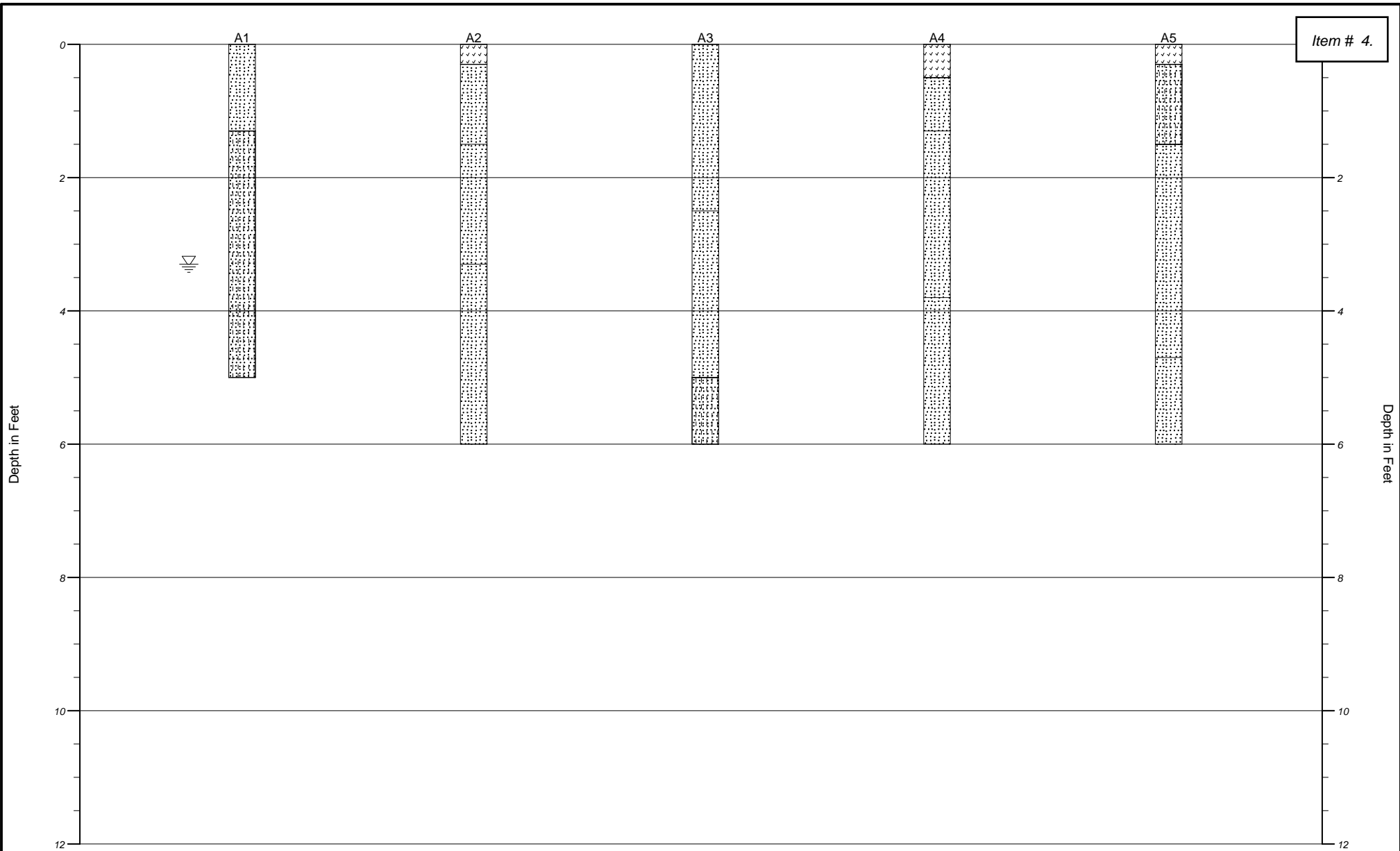
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Field Exploration Plan		
KNIGHT CENTER		
Green Cove Springs, Florida		
LEGACY ENGINEERING		
Date: 06/13/2023	Proj. No.: 23-1132.1	Figure 1






- Strata symbols**
- Topsoil
 - Fine SAND (SP)
 - Clayey to Very Clayey Fine SAND (SC)
 - Fine SAND with Silt (SP-SM)
 - Brick Fragments
 - No Return
 - Silty Fine SAND (SM)


Ground Water Depth

Legacy Engineering, Inc.		
GENERALIZED SOIL PROFILE		
HORIZONTAL SCALE:	DRAWN BY/APPROVED BY	DATE DRAWN
VERTICAL SCALE: 1"=5'	JEEII/JEEII	6/15/2023
Knight Center Green Cove Springs, Florida		
PROJECT NO. 23-1132		Page 135
		FIGURE NUMBER 2



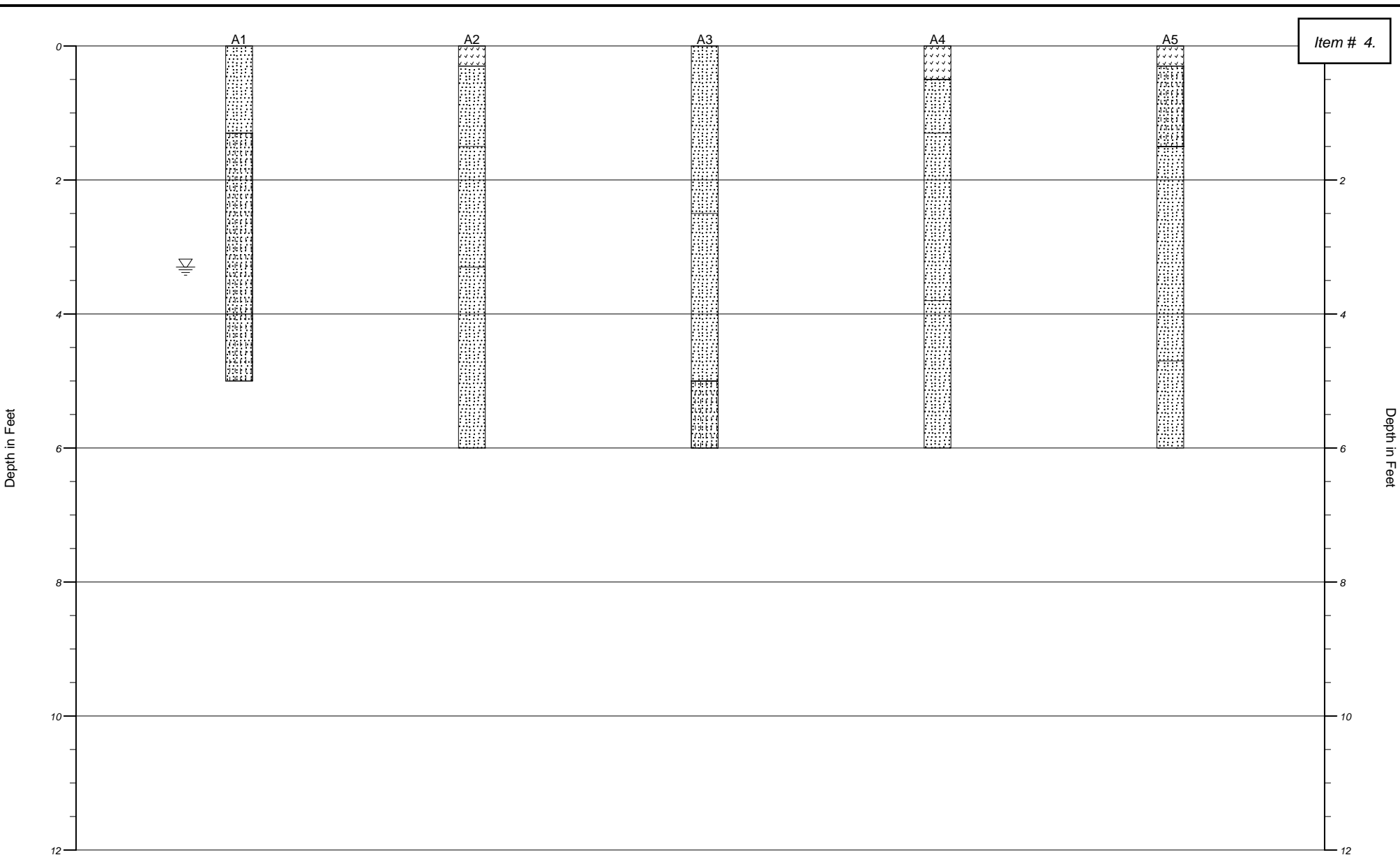
Strata symbols

-  Fine SAND (SP)
-  Fine SAND with Silt (SP-SM)
-  Topsoil




 Ground Water Depth


Legacy Engineering, Inc.		
GENERALIZED SOIL PROFILE		
HORIZONTAL SCALE:	DRAWN BY/APPROVED BY	DATE DRAWN
VERTICAL SCALE: 1"=2'	JEEII/JEEII	6/15/2023
Knight Center		
Green Cove Springs, Florida		
PROJECT NO. 23-1132		Page 136
		FIGURE NUMBER 2

Item # 4.



Strata symbols

-  Fine SAND (SP)
-  Fine SAND with Silt (SP-SM)
-  Topsoil

 Ground Water Depth

Legacy Engineering, Inc.		
GENERALIZED SOIL PROFILE		
HORIZONTAL SCALE:	DRAWN BY/APPROVED BY	DATE DRAWN
VERTICAL SCALE: 1"=2'	JEEII/JEEII	6/12/2023
Knight Center		
Green Cove Springs, Florida		
PROJECT NO. 23-1132		FIGURE NUMBER



TEST BORING RECORD

JOB NO. 23 Item # 4.

BORING NO. B1

Sheet 1 of 2

Boring Begun 06/06/2023

Boring Completed 06/06/2023

Driller Christian R.

Engineer John E. Ellis II

Project Knight Center

Boring Location Green Cove Springs, Florida

Ground Elevation 9.5 Feet Datum N/A Groundwater Depth 3.7 Feet

Length of Casing Set 5 Feet Casing Size 4 Inches

ELEV. (FT)	DEPTH (FT)	MATERIAL DESCRIPTION	SOIL SYMBOL	SAMPLE NO.	STANDARD PENETRATION TEST	
					BLOWS / 6-INCH	BLOW COUNT
9.5	0	Topsoil (4 Inches)	[Symbol]		3	
9.2		Loose Grayish Brown Fine SAND with Few Wood Pieces (SP)	[Symbol]	1	4	
	1				6	10
8		Loose Light Brown Fine SAND (SP)	[Symbol]	2	5	
	2				4	7
6		Loose Light Gray Fine SAND (SP)	[Symbol]	3	3	
	3				4	7
	4	Loose to Firm Light Gray Fine SAND (SP)	[Symbol]	4	4	
	5				3	9
4		Loose to Firm Light Gray Fine SAND (SP)	[Symbol]	5	4	
	6				5	9
2		Firm to Very Firm Brownish Orange Clayey Fine SAND (SC)	[Symbol]	6	7	
	7				4	9
	8	Firm to Very Firm Brownish Orange Clayey Fine SAND (SC)	[Symbol]	7	5	
	9				6	11
0		Firm to Very Firm Brownish Orange Clayey Fine SAND (SC)	[Symbol]	8	9	
	10					
	11	Firm to Very Firm Brownish Orange Clayey Fine SAND (SC)	[Symbol]	9		
	12					
-2		Firm to Very Firm Brownish Orange Clayey Fine SAND (SC)	[Symbol]	10		
	13					
	14	Firm to Very Firm Brownish Orange Clayey Fine SAND (SC)	[Symbol]	11	5	
	15				7	14
-4		Firm to Very Firm Brownish Orange Clayey Fine SAND (SC)	[Symbol]	12		
	16					
	17	Firm to Very Firm Brownish Orange Clayey Fine SAND (SC)	[Symbol]	13	7	
	18				7	14
-6		Firm to Very Firm Brownish Orange Clayey Fine SAND (SC)	[Symbol]	14		
	19					

REMARKS:

BORING & SAMPLING: ASTM D1586/CORE DRILLING: ASTM D

Ground Water Table

BLOW COUNT IS THE NUMBER OF BLOWS OF 140 LB. HAMM FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

ENGINEERING, INC.

Geotechnical & Materials Engineering and Testing

BORING NO. B1

Project Knight Center

Sheet 2 of 2

ELEV. (FT)	DEPTH (FT)	MATERIAL DESCRIPTION	SOIL SYMBOL	SAMPLE NO.	STANDARD PENETRATION TEST	
					BLOWS / 6-INCH	BLOW COUNT
	16	Firm to Very Firm Brownish Orange Clayey Fine SAND (SC), Continued		7		
	17					
-8	18					
	19					3
	20					4
-10	21					11
	22					
-12	23					
	24					10
-14	25					10
	26	Boring Terminated at 25 Feet		8	13	23
-15.5	27					
	28					
	29					
	30					
	31					



TEST BORING RECORD

JOB NO. 23 Item # 4.

BORING NO. B2

Sheet 1 of 2

Boring Begun 06/06/2023

Boring Completed 06/06/2023

Driller Christian R.

Engineer John E. Ellis II

Project Knight Center

Boring Location Green Cove Springs, Florida

Ground Elevation 8.7 Feet Datum N/A Groundwater Depth 3.7 Feet

Length of Casing Set 5 Feet Casing Size 4 Inches

ELEV. (FT)	DEPTH (FT)	MATERIAL DESCRIPTION	SOIL SYMBOL	SAMPLE NO.	STANDARD PENETRATION TEST	
					BLOWS / 6-INCH	BLOW COUNT
8.7	0	Topsoil (3 Inches)	[Symbol]		3	
8.4		Loose Grayish Brown Fine SAND with Silt (SP-SM)	[Symbol]	1	3	
8	1				3	
	2	Loose to Firm Dark Grayish Brown Fine SAND (SP)	[Symbol]	2	3	
5.9	3				5	
	4	Firm Grayish Brown Fine SAND (SP)	[Symbol]	3	4	
	5				5	
4	6	Firm Light Brown Fine SAND (SP)	[Symbol]	4	6	
	7				7	
2	8	Firm Light Grayish Brown Fine SAND (SP)	[Symbol]	5	4	
	9				10	
0	10	Very Firm to Very Dense Grayish Orange Clayey Fine SAND (SC)	[Symbol]	6	5	
	11				7	
-2	12		[Symbol]		8	
	13				8	
-3.5	14				8	
-4	15				12	22
-6					10	

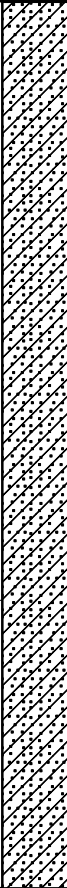
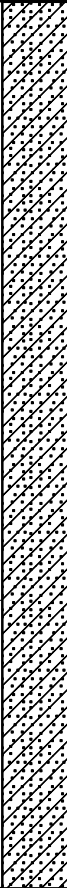
REMARKS:

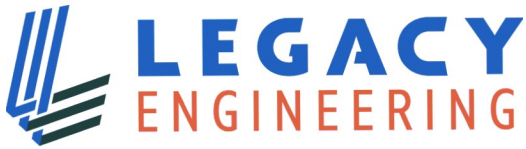
BORING & SAMPLING: ASTM D1586/CORE DRILLING: ASTM



Ground Water Table

BLOW COUNT IS THE NUMBER OF BLOWS OF 140 LB. HAMM FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.

ELEV. (FT)	DEPTH (FT)	MATERIAL DESCRIPTION	SOIL SYMBOL	SAMPLE NO.	STANDARD PENETRATION TEST	
					BLOWS / 6-INCH	BLOW COUNT
-8	16	Very Firm to Very Dense Grayish Orange Clayey Fine SAND (SC), Continued		7		
	17					
	18					
-10	19				13	
	20				21	54
	21				33	
-12	22	Loose Orange Clayey Fine SAND (SC)		8		
	23					
-14	24				5	
	25				5	10
-16	26				5	
-16.3	25	Boring Terminated at 25 Feet				
	26					
	27					
	28					
	29					
	30					
	31					



TEST BORING RECORD

JOB NO. 23 Item # 4.

BORING NO. PB1

Sheet 1 of 1

Boring Begun 06/06/2023

Boring Completed 06/06/2023

Driller Christian R.

Engineer John E. Ellis II

Project Knight Center

Boring Location Green Cove Springs, Florida

Ground Elevation 7.5 Feet Datum N/A Groundwater Depth 3.6 Feet

Length of Casing Set 5 Feet Casing Size 4 Inches

ELEV. (FT)	DEPTH (FT)	MATERIAL DESCRIPTION	SOIL SYMBOL	SAMPLE NO.	STANDARD PENETRATION TEST	
					BLOWS / 6-INCH	BLOW COUNT
7.5	0	Topsoil (4 Inches)			2	
7.2		Very Loose Grayish Brown Fine SAND (SP) Fines Content: 2.3%		1	2	4
	1				2	
6		Firm Grayish Brown Fine SAND (SP)		2	3	
	2				3	
4.2		Brick		2	16	20
4	3				4	
3.5		No Return		3	5	
	4				1	
	5	Loose Light Grayish Brown Fine SAND (SP)		4	1	4
2	6				3	
1.5		Loose Grayish Brown Fine SAND (SP)		5	2	
	7				3	7
0		Dense Light Gray Brown Fine SAND (SP)		6	4	
	8				4	
	9	Loose Grayish Brown Fine SAND (SP)		5	2	
	10				3	6
-2		Boring Terminated at 15 Feet		6	3	
	11				4	
	12				8	
	13				13	31
	14				18	
-6						
	15					
-7.5						

REMARKS:

BORING & SAMPLING: ASTM D1586/CORE DRILLING: ASTM D



Ground Water Table

BLOW COUNT IS THE NUMBER OF BLOWS OF 140 LB. HAMM FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.



TEST BORING RECORD

JOB NO. 23 Item # 4.

BORING NO. PB2

Sheet 1 of 1

Boring Begun 06/06/2023

Boring Completed 06/06/2023

Driller Christian R.

Engineer John E. Ellis II

Project Knight Center

Boring Location Green Cove Springs, Florida

Ground Elevation 6.5 Feet Datum N/A Groundwater Depth 5 Feet

Length of Casing Set 5 Feet Casing Size 4 Inches

ELEV. (FT)	DEPTH (FT)	MATERIAL DESCRIPTION	SOIL SYMBOL	SAMPLE NO.	STANDARD PENETRATION TEST	
					BLOWS / 6-INCH	BLOW COUNT
6.5	0	Topsoil (4 Inches)			2	
6.2	1	Loose to Very Loose Grayish Brown Fine SAND with Trace Roots (SP) Fines Content: 2.3%		1	3	6
6	2			3		
	3			2		
	4	Very Loose Dark Grayish Brown Fine SAND (SP)		2	1	
	5			2		
	6			1		
	7	Very Loose to Loose Dark Grayish Brown Fine SAND with Silt and Some Organics (SP-SM) Fines Content: 6.2% Organic Content: 4.5%		3	2	3
	8			2		
	9			1		
	10	Loose Grayish Brown Fine SAND (SP)		4	2	
	11			2		
	12			2		
	13	Firm Light Gray Silty Fine SAND (SM)		5	3	7
	14			4		
	15			4		
	16	Boring Terminated at 15 Feet		6	7	
	17			6	11	
	18			5		

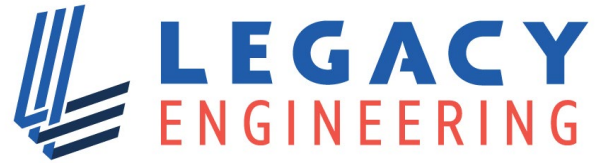
REMARKS:

BORING & SAMPLING: ASTM D1586/CORE DRILLING: ASTM D



Ground Water Table

BLOW COUNT IS THE NUMBER OF BLOWS OF 140 LB. HAMM FALLING 30 IN. REQUIRED TO DRIVE 1.4 IN. I.D. SAMPLER 1 FT.



SUMMARY OF LABORATORY INDEX TEST RESULTS

Knight Center
Green Cove Springs, Florida
Legacy Engineering Project No. 23-1132.1

Boring No.	Sample No.	Depth Range, Feet		Fines Content ¹	Moisture Content ²	Organic Content ³	Unified Soil Classification
		From	To				
PB1	1	0	2	2.3%	3.2%	-	SP
PB2	1	0	2	2.3%	2.7%	-	SP
PB2	3	4	6	6.2%	34.1%	4.5%	SP-SM

Notes: 1. Fines content testing performed in accordance with ASTM D1140
2. Performed in accordance with ASTM D2216
3. Performed in accordance with ASTM D2974

APPENDIX B

KEY TO SOIL CLASSIFICATION

FIELD AND LABORATORY TEST PROCEDURES

KEY TO SOIL CLASSIFICATION

CORRELATION OF PENETRATION WITH RELATIVE DENSITY & CONSISTENCY

SANDS AND GRAVEL	
BLOW COUNT	RELATIVE DENSITY
0-4	VERY LOOSE
5-10	LOOSE
11-20	FIRM
21-30	VERY FIRM
31-50	DENSE
OVER 50	VERY DENSE

SILTS AND CLAYS	
BLOW COUNT	CONSISTENCY
0-2	VERY SOFT
3-4	SOFT
5-8	FIRM
9-15	STIFF
16-30	VERY STIFF
31-50	HARD
OVER 50	VERY HARD

**PARTICLE SIZE IDENTIFICATION
(UNIFIED CLASSIFICATION SYSTEM)**

CATEGORY	DIMENSIONS
Boulders	Diameter exceeds 12 inches
Cobbles	3 to 12 inches
Gravel	Coarse - 0.75 to 3 inches in diameter Fine - 4.76 mm to 0.75 inch diameter
Sand	Coarse - 2.0 mm to 4.76 mm diameter Medium - 0.42 mm to 2.0 mm diameter Fine - 0.074 mm to 0.42 mm diameter
Silt and Clay	Less than 0.074 mm (invisible to the naked eye)

MODIFIERS

These modifiers provide our estimate of the amount of minor constituent (sand, silt, or clay size particles) in the soil sample

PERCENTAGE OF MINOR CONSTITUENT	MODIFIERS
0% to 5%	No Modifier
5 % to 12 %	With Silt, With Clay
12% to 30%	Silty, Clayey, Sandy
30% to 50%	Very Silty, Very Clayey, Very Sandy

APPROXIMATE CONTENT OF OTHER COMPONENTS (SHELL, GRAVEL, ETC.)	MODIFIERS	APPROXIMATE CONTENT OF ORGANIC COMPONENTS
0% to 5%	TRACE	1 to 2%
5% to 12%	FEW	2% to 4%
12% to 30%	SOME	4% to 8%
30% to 50%	MANY	>8%

FIELD AND LABORATORY TEST PROCEDURES

Penetration Borings

The penetration borings were made in general accordance with ASTM D 1586-67, "Penetration Test and Split-Barrel Sampling of Soils". Each boring was advanced to the water table by augering and, after encountering the groundwater table, further advanced with a rotary drilling technique that uses a circulating bentonite fluid for borehole flushing and stability. At two-foot intervals within the upper 10 feet and at five-foot intervals thereafter, the drilling tools were removed from the borehole and a split-barrel sampler inserted to the borehole bottom. The sampler was then driven 18 inches into the material using a 140-pound SPT hammer falling, on the average, 30 inches per hammer blow. The number of hammer blows for the final 12 inches of penetration is termed the "penetration resistance, blow count, or N-value". This value is an index to several in-place geotechnical properties of the material tested, such as relative density and Young's Modulus.

After driving the sampler 18 inches (or less, if in hard rock or rock-like material) at each test interval, the sampler was retrieved from the borehole and a representative sample of the material within the split-barrel was placed in a watertight container and sealed. After completing the drilling operations, the samples for each boring were transported to our laboratory where our Geotechnical Engineer examined them in order to verify the driller's field classifications. The samples will be kept in our laboratory for a period of two months after submittal of formal written report, unless otherwise directed by the Client.

Auger Borings

The auger borings were performed using a continuous flight auger attached to a rotary drill rig or manually using a post-hole auger; and thus in general accordance with ASTM D 1452-80, "Soil Investigation and Sampling by Auger Borings". Representative samples of the soils brought to the ground surface by the augering process were placed in watertight containers and sealed. After completing the drilling operations, the samples for each boring were transported to the laboratory where the Geotechnical Engineer examined them in order to verify the driller's field classifications. The samples will be kept in our laboratory for a period of two months after submittal of formal written report, unless otherwise directed by the Client.

Soil Classification

Soil samples obtained from the performance of the borings were transported to our laboratory for observation and review. An engineer, registered in the State of Florida and familiar with local geological conditions, conducted the review and classified the soils in accordance with ASTM 2488. The results of the soil classification are presented on the boring records.

Moisture Content

The moisture content of the sample tested was determined in general accordance with ASTM D 2216. The moisture content is the actual moisture content of the sample as sampled in the field during the performance of the soil boring.

Fines Content

The percent fines of material passing the No. 200 mesh sieve of the sample tested was determined in general accordance with ASTM D 1140. The percent fines are the soil particles in the silt and clay size range.

Organics Content

The organics content of the sample tested was determined in general accordance with ASTM D 2974. The organics content is the percent of loss of material of an oven-dried sample of material after the sample has been heated in a muffle furnace to 440 °C.

Constant Head Permeability Test

The coefficient of permeability for the laminar flow of water through granular soils was determined in general accordance with the latest revision of ASTM D 2434. The constant head permeability test is a measure of the quantity of water that flows through a sample contained in a cylinder of known height and diameter in a measured time while maintaining a constant head of water on the sample. The coefficient of permeability is determined by application of the Darcy's Law shown below:

$$k = \frac{QL}{hAt}$$

k = Coefficient of permeability

Q = Quantity of water discharge

L = Length of specimen

h = Constant head of water

A = Cross-sectional area of specimen

t = Total time of discharge

Undisturbed Sampling

A relatively undisturbed sample was obtained in general accordance with the latest revision of ASTM A 1587, "Thin-Walled Tube Sampling of Soils". A piston-type sampler was used to advance the 3-inch O.D. - 16 gauge stainless steel sampler tuber into the soils at the borehole bottom. After retrieving the sample from the boring, the ends were sealed with wax and then transported to our laboratory.

Black Creek Engineering, Inc.

SAINT JOHNS RIVER
 WATER MANAGEMENT DISTRICT
 RETENTION POND
 FOR
Knight Center

DATE: 12/01/21
 PROJECT NO.: 23-004
 MADE BY: CDG

Pre Development

<u>Description</u>	<u>% Imp.</u>	<u>Impervious</u>	<u>Pervious</u>	<u>Total</u>
Prev Developed Site	5%	0.05 acres	0.95 acres	1.00 acres
Existing Pavement	100%	0.10 acres	0.00 acres	0.10 acres
Total Project		0.15 acres	0.95 acres	1.10 acres

Existing % Impervious = 13.6%

Post Development

<u>Description</u>	<u>% Imp.</u>	<u>Impervious</u>	<u>Pervious</u>	<u>Total</u>
Site	75.0%	0.77 acres	0.26 acres	1.03 acres
Total to Pond		0.77 acres	0.26 acres	1.03 acres
Pond	0%	0.00	0.07	0.07
Total Project		0.77 acres	0.33 acres	1.10 acres

Proposed % Impervious = 75.0%
 (excluding pond)

Curve Number - Pond 1

Pre Development

Grass Comb. – Fair Condition, A Soils	0.95 acres	CN = 49
Impervious	0.15 acres	CN = 98
Total	1.10 acres	

Weighted CN = 56

Post Development

Proposed Impervious	0.77 acres	CN = 98
Grass Cover - Good Condition, A Soils	0.33 acres	CN = 39
Total	1.10 acres	

Weighted CN = 80

Runoff Coefficient - Pond 1

Post Development

Pervious	0.33 acres	c = 0.25
Impervious	0.77 acres	c = 0.95
Total	1.10 acres	

Weighted c = 0.74

Complete Report

Project: Knight Center
Date: 6/21/2023 9:17:59 PM

Site and Catchment Information

Analysis: Net Improvement

Catchment Name	Commercial Center
Rainfall Zone	Florida Zone 2
Annual Mean Rainfall	52.00

Pre-Condition Landuse Information

Landuse	Low-Intensity Commercial: TN=1.13 TP=0.188
Area (acres)	1.10
Rational Coefficient (0-1)	0.05
Non DCIA Curve Number	49.00
DCIA Percent (0-100)	5.00
Nitrogen EMC (mg/l)	1.130
Phosphorus EMC (mg/l)	0.188
Runoff Volume (ac-ft/yr)	0.257
Groundwater N (kg/yr)	0.000
Groundwater P (kg/yr)	0.000
Nitrogen Loading (kg/yr)	0.359
Phosphorus Loading (kg/yr)	0.060

Post-Condition Landuse Information

Landuse	High-Intensity Commercial: TN=2.40 TP=0.345
Area (acres)	1.10
Rational Coefficient (0-1)	0.61
Non DCIA Curve Number	39.00
DCIA Percent (0-100)	75.00
Wet Pond Area (ac)	0.10
Nitrogen EMC (mg/l)	2.400

Phosphorus EMC (mg/l)	0.345
Runoff Volume (ac-ft/yr)	2.638
Groundwater N (kg/yr)	0.000
Groundwater P (kg/yr)	0.000
Nitrogen Loading (kg/yr)	7.807
Phosphorus Loading (kg/yr)	1.122

Catchment Number: 1 Name: Commercial Center

Project: Knight Center

Date: 6/21/2023

Retention Design

Retention Depth (in) 2.300

Retention Volume (ac-ft) 0.192

Watershed Characteristics

Catchment Area (acres) 1.10

Contributing Area (acres) 1.000

Non-DCIA Curve Number 39.00

DCIA Percent 75.00

Rainfall Zone Florida Zone 2

Rainfall (in) 52.00

Surface Water Discharge

Required TN Treatment Efficiency (%) 95

Provided TN Treatment Efficiency (%) 95

Required TP Treatment Efficiency (%) 95

Provided TP Treatment Efficiency (%) 95

Media Mix Information

Type of Media Mix Not Specified

Media N Reduction (%)

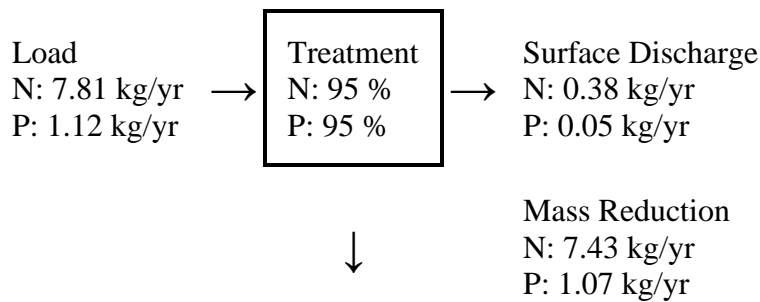
Media P Reduction (%)

Groundwater Discharge (Stand-Alone)

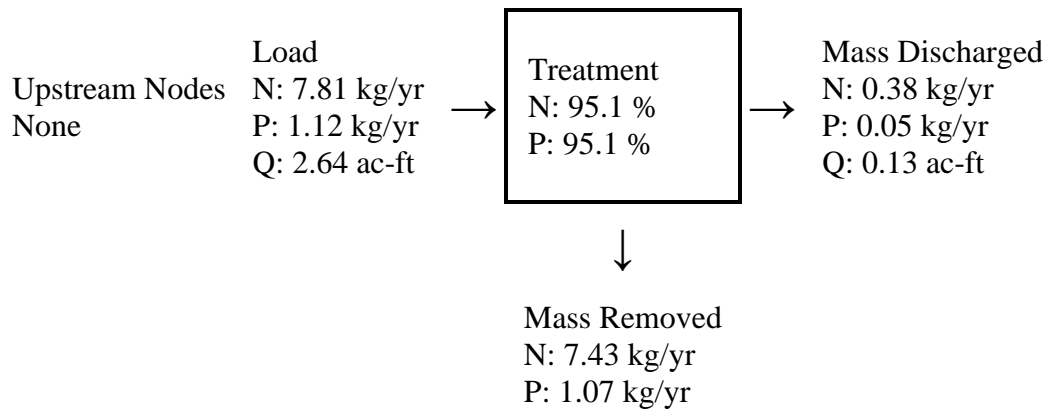
Treatment Rate (MG/yr) 0.000

TN Mass Load (kg/yr) 7.427
TN Concentration (mg/L) 0.000
TP Mass Load (kg/yr) 1.068
TP Concentration (mg/L) 0.000

Load Diagram for Retention (stand-alone)



Load Diagram for Retention (As Used In Routing)



Summary Treatment Report Version: 4.3.5

Project: Knight Center

Analysis Type: Net Improvement

Date:6/21/2023

BMP Types:

Catchment 1 - (Commercial Center) Retention

Routing Summary
Catchment 1 Routed to Outlet

Based on % removal values to the nearest percent

Total nitrogen target removal met? **Yes**

Total phosphorus target removal met? **Yes**

Summary Report

Nitrogen

Surface Water Discharge

Total N pre load	.36 kg/yr	
Total N post load	7.81 kg/yr	
Target N load reduction	95 %	
Target N discharge load	.36 kg/yr	
Percent N load reduction	95 %	
Provided N discharge load	.38 kg/yr	.84 lb/yr
Provided N load removed	7.43 kg/yr	16.38 lb/yr

Phosphorus

Surface Water Discharge

Total P pre load	.06 kg/yr	
Total P post load	1.122 kg/yr	
Target P load reduction	95 %	
Target P discharge load	.06 kg/yr	
Percent P load reduction	95 %	
Provided P discharge load	.055 kg/yr	.12 lb/yr
Provided P load removed	1.068 kg/yr	2.354 lb/yr

Black Creek Engineering, Inc.

SAINT JOHNS RIVER
 WATER MANAGEMENT DISTRICT
 CHAMBER DESIGN
 FOR

MADE BY: CDG
 DATE: 12/01/21
 CDG NO.: 23-004

Knight Center

PROJECT LOCATION: Green Cove Springs
 TYPE OF DEVELOPMENT: COMMERCIAL

PROJECT AREA (ACRES): 1.10
 PERCENT IMPERVIOUS (EXCL POND AREA): 75.0% %
 RUNOFF COEFFICIENT: 0.74

OFF-SITE DRAINAGE AREA (acres): 0.00
 PERCENT IMPERVIOUS: 0.00 %
 RUNOFF COEFFICIENT: 0.00

NORMAL GROUNDWATER ELEVATION AT POND (ft): 4.0
 DESIGN TAILWATER ELEVATION (ft): 0.0

POND STAGE/STORAGE DATA - Three combined ponds separated into two in model

	STAGE (ft)	AREA (sq ft)	(acres)	VOLUME (acre-ft)	ICPR STORAGE (acre-ft)	
BOTTOM	6.0	2850	0.1	0.0	0.000	O.K.
BOT.+ 1.0	7.0	2850	0.1	0.1	0.100	
T.O.B.	10.0	2850	0.1	0.4	0.400	

IS POND LENGTH >= 2 x POND WIDTH? (Y or N) Y O.K.

TREATMENT VOLUME REQUIRED: ON -LINE SYSTEM

RUNOFF @ 1 in.X AREA 0.09 ac-ft
 (Project area + Offsite area)/12 x

OR

IMPERVIOUS AREA @ 1.25 in. 0.08 ac-ft
 (((Project area - Pond area) x % Impervious)
 +(Offsite area x % Impervious) x 1.25/12)
 PLUS 0.5 in. x AREA 0.05 ac-ft

CONTROLLING VALUE (ac-ft): 0.12 ac-ft

IMPAIRED WATER BODY TREATMENT = 2.3 " / Basin 0.211 ac-ft
 (Use BMPTrains to calculate treatment volume)

REQUIRED TREATMENT VOLUME 0.21 ac-ft

CONTROL STRUCTURE

MIN. WEIR ELEVATION (ft): 8.11 USE: 8.1
 ((TOB-BOT)xTrtmt Vol/TOB Storage)+BOT

TRTMT VOL DEPTH (ft) 2.1 VOL PROVIDED: 0.21 ac-ft

DRAWDOWN

WEIR ELEV= 8.1 Kh= 6 ft/day

SAINT JOHNS RIVER
 WATER MANAGEMENT DISTRICT
 CHAMBER DESIGN
 FOR

MADE BY: CDG
 DATE: 12/01/21
 CDG NO.: 23-004

Knight Center

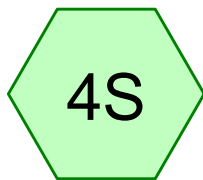
BOTTOM ELEV=	6.0	SAFETY FACTOR (SF)=	2
WATER TABLE ELEV=	4.0	Kvs=	4.35 ft/day
IMPERV LAYER ELEV=	2.0	f=	0.2

hu=	0.40	hv>hu
Kvu=	2.90 ft/day	2/3xKvs
ld=	1.45 ft/day	Kvu/SF
TIME (tunsat)=	0.3 days	
fx(BOT-WT)x24hrs/day/ld		
Vu=	0.03 ac-ft	
Vs=	0.18 ac-ft	
d2=	2.04 ft	
Ht=	4.04 ft	
Fy=	0.49	
Fx=	1.40	
D=	3.00	
TIME (tsat)=	0.27 days	
TIME (total)=	0.54 days=	13.0 hrs <72

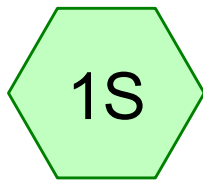
Drawdown OK

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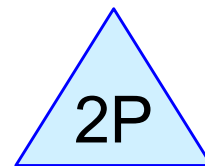
CREST ELEV (ft):	8.1
CREST LENGTH (ft):	0.5
WEIR COEFFICIENT:	2.8
GATE OPENING:	999
GATE DISCH COEFF.:	0
# IDENTICAL WEIRS:	1



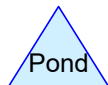
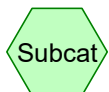
Pre



Post



SW Facility



Routing Diagram for 23-004 Hydrocad Model
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23-004 Hydrocad Model

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Project Notes

Rainfall events imported from "21-011REV1-Mixed Use.hcp"

23-004 Hydrocad Model

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Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-Year	Type II FL 24-hr		Default	24.00	1	3.89	2
2	2-Year	MSE 24-hr	5	Default	24.00	1	4.45	2
3	5-Year	MSE 24-hr	5	Default	24.00	1	5.49	2
4	10-Year	MSE 24-hr	5	Default	24.00	1	6.47	2
5	25-Year	Type II FL 24-hr		Default	24.00	1	8.02	2
6	50-Year	MSE 24-hr	5	Default	24.00	1	9.35	2
7	100-Year	MSE 24-hr	5	Default	24.00	1	10.81	2
8	Custom	FDOT 24-hr		Default	24.00	1	8.02	2

23-004 Hydrocad Model

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Page 4

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.100	80	Post Development (1S)
1.100	61	Predevelopment (4S)
2.200	71	TOTAL AREA

23-004 Hydrocad Model

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
2.200	Other	1S, 4S
2.200		TOTAL AREA

23-004 Hydrocad Model

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.000	1.100	1.100	Post Development	1S
0.000	0.000	0.000	0.000	1.100	1.100	Predevelopment	4S
0.000	0.000	0.000	0.000	2.200	2.200	TOTAL AREA	

23-004 Hydrocad Model

Type II FL 24-hr 1-Year Rainfall=3.89"

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Post

Runoff Area=1.100 ac 0.00% Impervious Runoff Depth>1.78"
 Flow Length=150' Slope=0.0100 '/' Tc=2.6 min CN=80 Runoff=1.44 cfs 0.163 af

Subcatchment 4S: Pre

Runoff Area=1.100 ac 0.00% Impervious Runoff Depth>0.65"
 Flow Length=200' Slope=0.0400 '/' Tc=15.4 min CN=61 Runoff=0.42 cfs 0.060 af

Pond 2P: SW Facility

Peak Elev=8.20' Storage=0.144 af Inflow=1.44 cfs 0.163 af
 Outflow=0.07 cfs 0.019 af

Total Runoff Area = 2.200 ac Runoff Volume = 0.223 af Average Runoff Depth = 1.22"
100.00% Pervious = 2.200 ac 0.00% Impervious = 0.000 ac

23-004 Hydrocad Model

Type II FL 24-hr 1-Year Rainfall=3.89"

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Summary for Subcatchment 1S: Post

[49] Hint: Tc<2dt may require smaller dt

Runoff = 1.44 cfs @ 12.07 hrs, Volume= 0.163 af, Depth> 1.78"

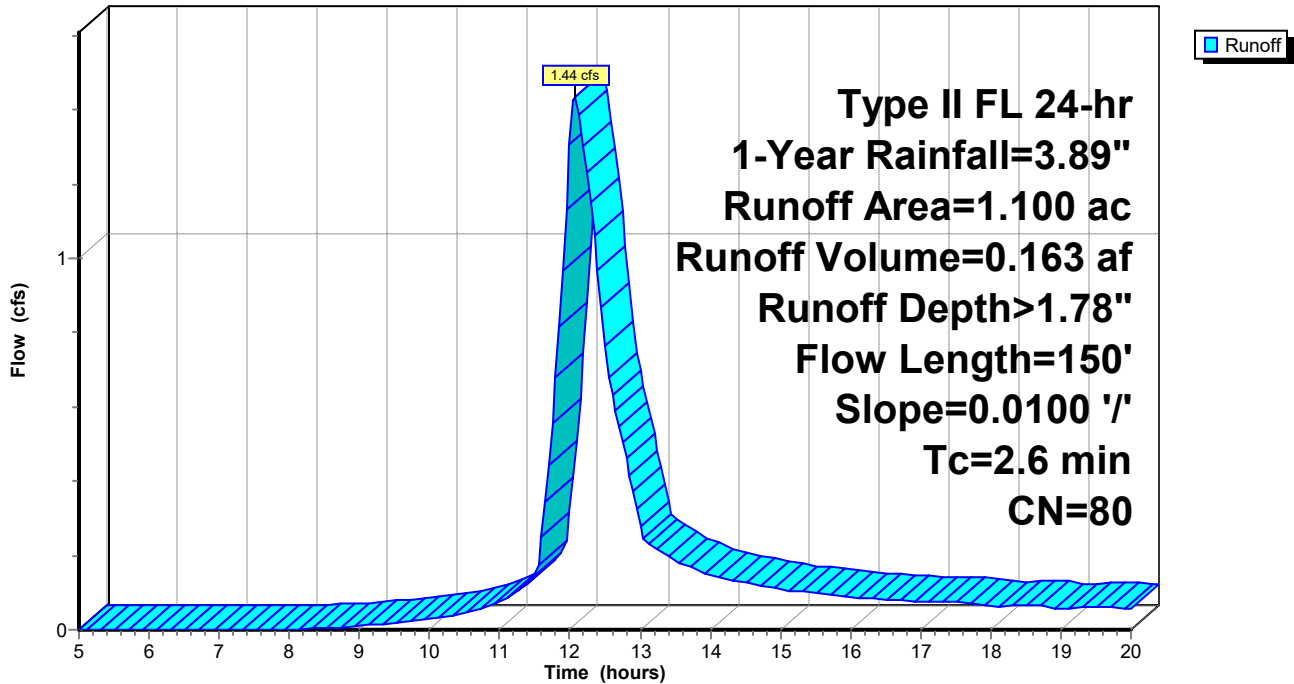
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II FL 24-hr 1-Year Rainfall=3.89"

Area (ac)	CN	Description
* 1.100	80	Post Development
1.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.6	150	0.0100	0.95		Sheet Flow, Direct Flow to Pond Smooth surfaces n= 0.011 P2= 2.25"

Subcatchment 1S: Post

Hydrograph



23-004 Hydrocad Model

Type II FL 24-hr 1-Year Rainfall=3.89"

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Summary for Subcatchment 4S: Pre

Runoff = 0.42 cfs @ 12.44 hrs, Volume= 0.060 af, Depth> 0.65"

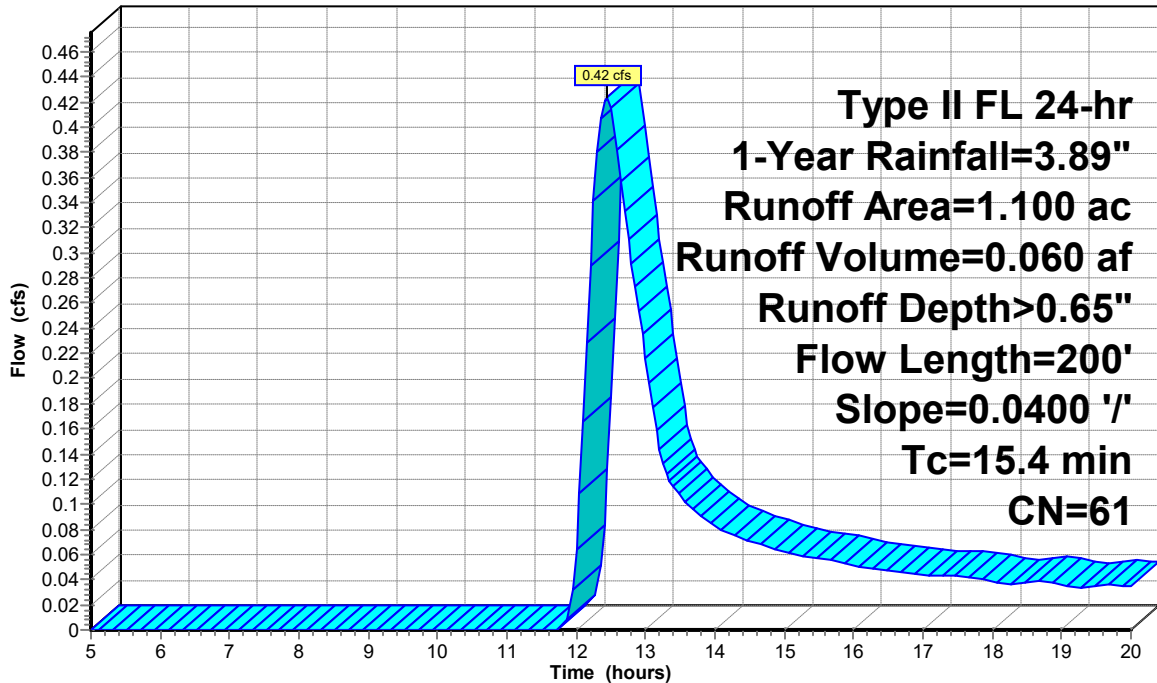
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II FL 24-hr 1-Year Rainfall=3.89"

Area (ac)	CN	Description
* 1.100	61	Predevelopment
1.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.4	200	0.0400	0.22		Sheet Flow, Sheet Flow Grass: Short n= 0.150 P2= 2.25"

Subcatchment 4S: Pre

Hydrograph



23-004 Hydrocad Model

Type II FL 24-hr 1-Year Rainfall=3.89"

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Summary for Pond 2P: SW Facility

Inflow Area = 1.100 ac, 0.00% Impervious, Inflow Depth > 1.78" for 1-Year event
 Inflow = 1.44 cfs @ 12.07 hrs, Volume= 0.163 af
 Outflow = 0.07 cfs @ 17.86 hrs, Volume= 0.019 af, Atten= 95%, Lag= 347.2 min
 Primary = 0.07 cfs @ 17.86 hrs, Volume= 0.019 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 8.20' @ 17.86 hrs Surf.Area= 0.065 ac Storage= 0.144 af
 Flood Elev= 10.00' Surf.Area= 0.065 ac Storage= 0.262 af

Plug-Flow detention time= 420.0 min calculated for 0.019 af (12% of inflow)
 Center-of-Mass det. time= 288.2 min (1,089.7 - 801.4)

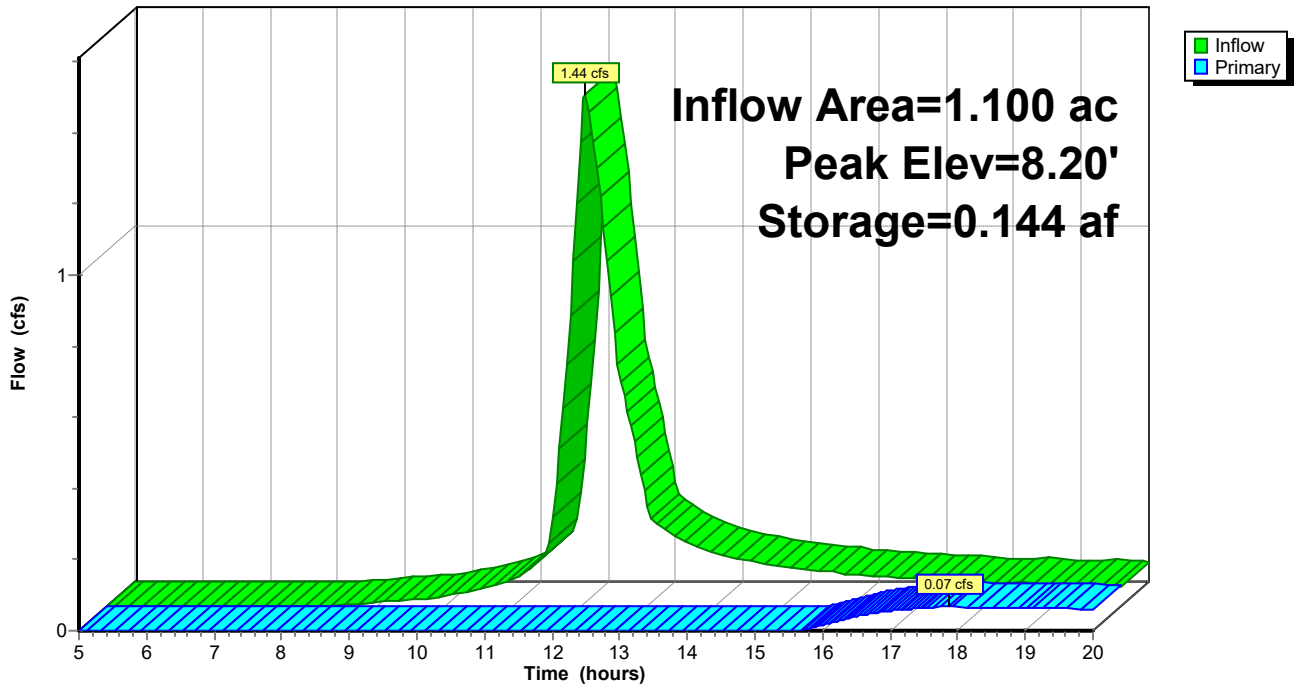
Volume	Invert	Avail.Storage	Storage Description
#1	6.00'	0.262 af	28.50'W x 100.00'L x 4.00'H Prismatic

Device	Routing	Invert	Outlet Devices
#1	Primary	8.10'	0.7' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.07 cfs @ 17.86 hrs HW=8.20' (Free Discharge)
 ←1=Broad-Crested Rectangular Weir (Weir Controls 0.07 cfs @ 0.91 fps)

Pond 2P: SW Facility

Hydrograph



23-004 Hydrocad Model

Type II FL 24-hr 25-Year Rainfall=8.02"

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Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Post

Runoff Area=1.100 ac 0.00% Impervious Runoff Depth>5.24"
 Flow Length=150' Slope=0.0100 '/' Tc=2.6 min CN=80 Runoff=4.20 cfs 0.480 af

Subcatchment 4S: Pre

Runoff Area=1.100 ac 0.00% Impervious Runoff Depth>3.11"
 Flow Length=200' Slope=0.0400 '/' Tc=15.4 min CN=61 Runoff=2.28 cfs 0.285 af

Pond 2P: SW Facility

Peak Elev=9.18' Storage=0.208 af Inflow=4.20 cfs 0.480 af
 Outflow=2.61 cfs 0.331 af

Total Runoff Area = 2.200 ac Runoff Volume = 0.766 af Average Runoff Depth = 4.18"
100.00% Pervious = 2.200 ac 0.00% Impervious = 0.000 ac

23-004 Hydrocad Model

Type II FL 24-hr 25-Year Rainfall=8.02"

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Summary for Subcatchment 1S: Post

[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 4.20 cfs @ 12.06 hrs, Volume= 0.480 af, Depth> 5.24"

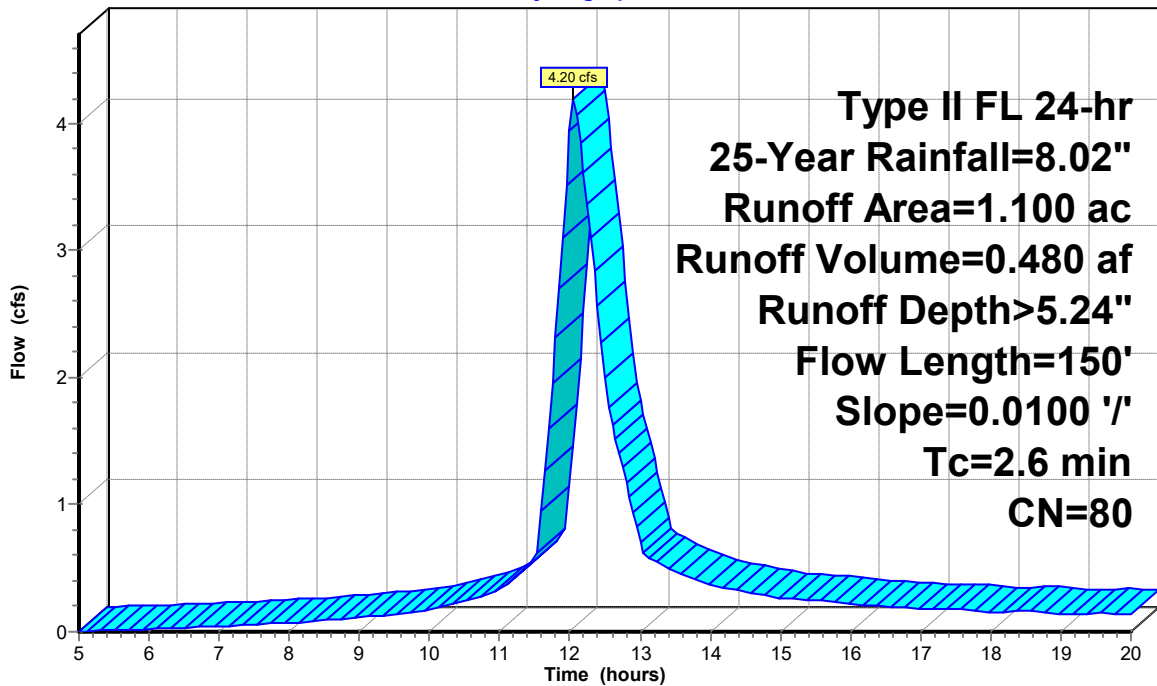
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II FL 24-hr 25-Year Rainfall=8.02"

Area (ac)	CN	Description
* 1.100	80	Post Development
1.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.6	150	0.0100	0.95		Sheet Flow, Direct Flow to Pond Smooth surfaces n= 0.011 P2= 2.25"

Subcatchment 1S: Post

Hydrograph



23-004 Hydrocad Model

Type II FL 24-hr 25-Year Rainfall=8.02"

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Summary for Subcatchment 4S: Pre

Runoff = 2.28 cfs @ 12.31 hrs, Volume= 0.285 af, Depth> 3.11"

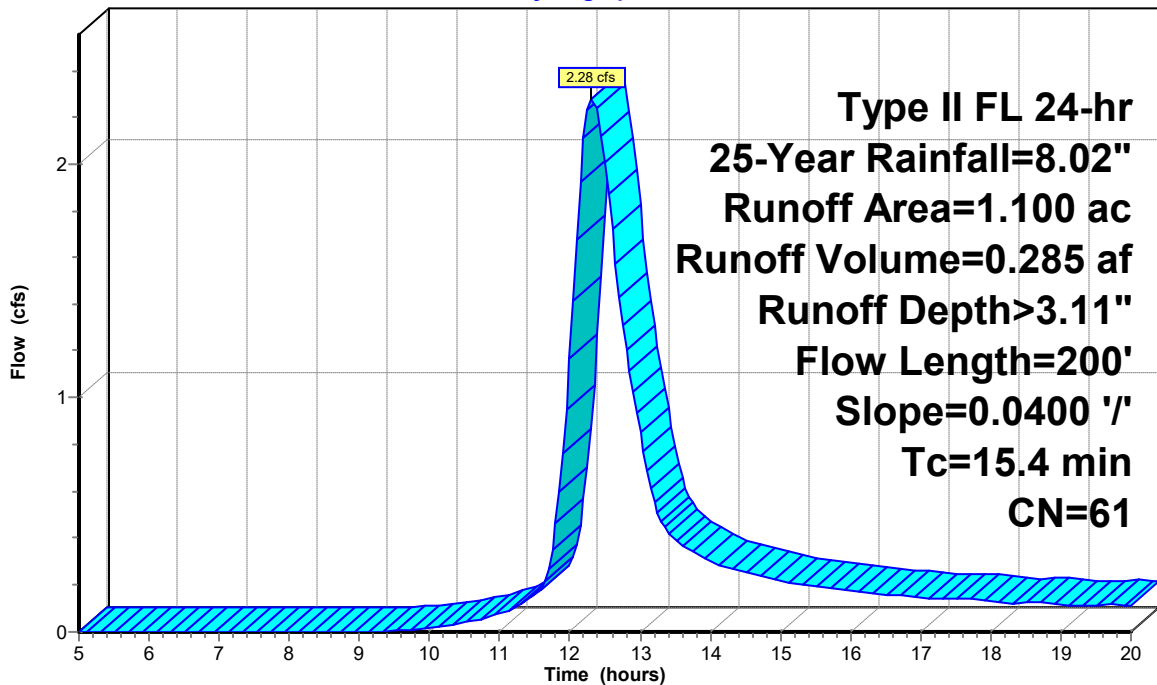
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Type II FL 24-hr 25-Year Rainfall=8.02"

Area (ac)	CN	Description
* 1.100	61	Predevelopment
1.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.4	200	0.0400	0.22		Sheet Flow, Sheet Flow Grass: Short n= 0.150 P2= 2.25"

Subcatchment 4S: Pre

Hydrograph



Runoff

23-004 Hydrocad Model

Type II FL 24-hr 25-Year Rainfall=8.02"

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Summary for Pond 2P: SW Facility

Inflow Area = 1.100 ac, 0.00% Impervious, Inflow Depth > 5.24" for 25-Year event
 Inflow = 4.20 cfs @ 12.06 hrs, Volume= 0.480 af
 Outflow = 2.61 cfs @ 12.39 hrs, Volume= 0.331 af, Atten= 38%, Lag= 20.1 min
 Primary = 2.61 cfs @ 12.39 hrs, Volume= 0.331 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 Peak Elev= 9.18' @ 12.39 hrs Surf.Area= 0.065 ac Storage= 0.208 af
 Flood Elev= 10.00' Surf.Area= 0.065 ac Storage= 0.262 af

Plug-Flow detention time= 137.8 min calculated for 0.330 af (69% of inflow)
 Center-of-Mass det. time= 68.1 min (842.2 - 774.1)

Volume	Invert	Avail.Storage	Storage Description
#1	6.00'	0.262 af	28.50'W x 100.00'L x 4.00'H Prismatic

Device	Routing	Invert	Outlet Devices
#1	Primary	8.10'	0.7' long x 0.5' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=2.61 cfs @ 12.39 hrs HW=9.18' (Free Discharge)
 ←1=Broad-Crested Rectangular Weir (Weir Controls 2.61 cfs @ 3.45 fps)

Pond 2P: SW Facility

Hydrograph

