CITY OF TITUSVILLE

PLANNING AND ZONING COMMISSION

AGENDA

Regular Meeting

December 3, 2025 - 6:00 PM

Council Chamber at City Hall

555 South Washington Avenue, Titusville, FL 32796

All persons who anticipate speaking on any Public Hearing item must fill out an Oath Card to be heard on that agenda item and sign the oath contained thereon. These cards are located on the table near the entrance to the Council Chamber or may be obtained from the Recording Secretary. This meeting will be conducted in accordance to the procedures adopted in Resolution #24-1997

Those speaking in favor of a request will be heard first, those opposed will be heard second, and those who wish to make a public comment on the item will speak third. The applicant may make a brief rebuttal if necessary. A representative from either side, for or against, may cross-examine a witness.

Anyone who speaks is considered a witness. If you have photographs, sketches, or documents that you desire for the Commission to consider, they must be submitted into evidence and will be retained by the City. Please submit such exhibits to the Recording Secretary.

1. **CALL TO ORDER**
2. **PLEDGE OF ALLEGIANCE**
3. **ROLL CALL**
4. **DETERMINATION OF A QUORUM**
5. **APPROVAL OF MINUTES**

   A. **Minutes November 19, 2025**
   Approve Minutes

6. **QUASI-JUDICIAL CONFIRMATION PROCEDURES**
7. **PETITIONS AND REQUESTS FROM THE PUBLIC PRESENT**
8. **OLD BUSINESS**

9. NEW BUSINESS

A. **Comprehensive Plan Amendment #2-2025 Gemini Lakes (Royal Oak Golf Course) TRANSMITTAL**

Continue the hearing to the January 7, 2026, regular Commission meeting.

10. PETITIONS AND REQUESTS FROM THE PUBLIC PRESENT

11. REPORTS

A. **City Staff**

B. **City Attorney**

C. **Chairman**

D. **Members**

12. ADJOURNMENT

Any person who decides to appeal any decision of the Planning and Zoning Commission with respect to any matter considered at this meeting will need a record of the proceedings, and for such purpose, may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based.

The City desires to accommodate persons with disabilities. Accordingly, any physically handicapped person, pursuant to Chapter 286.26 Florida Statutes, should, at least 48 hours prior to the meeting, submit a written request to the chairperson that the physically handicapped person desires to attend the meeting.

City of Titusville

"Gateway to Nature and Space"

REPORT

To: Members of the Planning and Zoning Commission

From: Bradley Parrish, Community Development Director

Subject: **Minutes November 19, 2025**

Department/Office: Planning

Recommended Action:
Approve Minutes

Summary Explanation & Background:

Alternatives:

Item Budgeted:

Source/Use of Funds/Budget Book Page:

Strategic Plan:

Strategic Plan Impact:

ATTACHMENTS:
1. 11.19.25 Minutes Draft P&Z

The Planning and Zoning Commission (P&Z) of the City of Titusville, Florida met in regular session in City Hall Council Chamber located at 555 South Washington Avenue on Wednesday November 19, 2025 at 6:00 p.m.

XXX

Chairman Aton called the meeting to order at 6:00 p.m. Present were, Vice Chairman Christopher Childs, Secretary Grant, Member John Scully, Member Janay Gelin, Alternate Member James Troutman and Alternate Member AnnMarie Seidler. Member Garrod and Member Fayson were absent. Also, in attendance were Planner Tabitha Armstrong, City Attorney Andriene Treasure and Recording Secretary Laurie Dargie.

XXX

Vice Chairman Childs made a motion to approve the minutes from the November 5, 2025 meeting as presented. Secretary Grant seconded. There was a unanimous voice vote in favor.

XXX

Quasi-Judicial Confirmation Procedures

XXX

Petitions and Requests from the Public Present
None

XXX

Chairman Aton requested that item 9B: Development Agreement #1-2025 be heard first since it is a tabling request from the applicant.

XXX

Old Business
None

XXX

New Business

Tranquility Development Agreement DA#1-2025 – Fifth Amendment
Chairman Aton stated that the Planning and Zoning Commission received an email that the applicant has asked that this item be tabled to the January 7, 2026 meeting. Mr. Rodney Honeycutt acknowledged that this was correct.

XXX

DRAFT

Vice Chairman Childs made a motion to table Tranquility Development Agreement DA#1-2025 – Fifth Amendment to the January 7, 2026 Planning and Zoning Commission meeting. Secretary Grant seconded.

Roll call was as follows:

Member Scully	Yes
Member Seidler	Yes
Vice Chairman Childs	Yes
Member Gelin	Yes
Secretary Grant	Yes
Member Troutman	Yes
Chairman Aton	Yes

Motion passed.

XXX

Conditional Use Permit CUP# 7-2025 – 3838 S. Hopkins Avenue & 3900 S. Hopkins Avenue
Planner Tabitha Armstrong gave an overview of this item.

The Planning and Zoning Commission had some questions for staff regarding fencing, screening and height of storage items.

Micah Loyd, applicant, of Titusville, Florida came to speak in favor of this item and to answer questions.

XXX

Vice Chairman Childs made a motion to recommend approval of the Conditional Use Permit CUP#7-2025 – 3838 S. Hopkins Avenue & 3900 S. Hopkins Avenue with all of the staff recommended conditions, which are as follows: 1. Outdoor storage areas shall be screened from view of adjacent rights-of-way and lots by buildings and/or an opaque masonry wall or fence at least eight (8) feet in height, maintained in good condition at all times. 2. Applicant to apply for a building permit demonstrating restoration of the existing eight-foot opaque fence at 3900 S Hopkins Avenue and installation of opaque fencing at 3838 S Hopkins Avenue. Compliance shall be verified through the building permit review process. 3. Outdoor storage areas shall be kept in a neat and orderly arrangement. Materials shall not be stacked higher than the screen wall or fence.4. All outdoor storage areas shall be located on paved, stabilized surfaces designed and constructed to prevent soil or water contamination. Member Gelin seconded.

Roll call was as follows:

Member Gelin	Yes
Secretary Grant	Yes
Vice Chairman Childs	Yes
Member Scully	Yes
Member Troutman	Yes
Member Seidler	Yes
Chairman Aton	Yes

Motion passed.

XXX

Petitions & Requests from the Public Present
None

XXX

Reports
No reports

XXX

Adjournment 6:21pm

DRAFT

City of Titusville

"Gateway to Nature and Space"

REPORT

To:	Members of the Planning and Zoning Commission
From:	Bradley Parrish, Community Development Director
Subject:	**Comprehensive Plan Amendment #2-2025 Gemini Lakes (Royal Oak Golf Course) TRANSMITTAL**
Department/Office:	Planning

Recommended Action:

Continue the hearing to the January 7, 2026, regular Commission meeting.

Summary Explanation & Background:

The applicant requested the hearing be continued to the January 7, 2026, regular Commission meeting.

The applicant, Robert Wolf, on behalf of the property owner Royal Oaks FL, LLC – FKA Toulon Apartments, is requesting to amend the City of Titusville Comprehensive Plan by changing the future land use designation of a 150-acre parcel known as the Royal Oak Golf Course located at Country Club Drive, south of Harrison Street and north of Knox McRae Drive. The applicant is requesting to change the Future Land Use Map (FLUM) designation from the Recreational and Conservation designations to the Low Density Residential designation.

The State of Florida requires that any comprehensive plan amendment request which is larger than would be allowed to be considered as a small scale comprehensive plan amendment first be transmitted to the State for review by any relevant state agencies. If transmittal of the request is approved, the State will review the request and provide a report with any objections, recommendations, and comments to the City within 60 days. Once the State response has been received and addressed, new hearing dates will be scheduled to consider the adoption of the request with both the Planning and Zoning Commission and the City Council.

The application includes a request to rezone the property from the General Use (GU) and Open Space and Recreation (OR) districts to the Planned Development (PD) with master plan. It is anticipated adoption hearings for the comprehensive plan amendment and rezoning will be scheduled in the Spring of 2026. If adopted then the PD zoning district and master plan will govern the development of the property. The applicant is proposing to develop a residential subdivision with 551 detached single-family and townhouse lots, open space and recreation, and a redesigned stormwater system.

The City Council will hold the Transmittal public hearing on December 9, 2025.

Enclosed for the Commission's review are the applications, a narrative, maps, including the comprehensive plan land use map amendment, the master plan, and environmental, concurrency and traffic reports. The deed, title report and operating agreement are on file.

Alternatives:

1. Approve the transmittal of the application to the State of Florida's Land Planning Agency for review.
2. Do not approve the transmittal of the application.
3. Do not approve the transmittal of the application and direct staff to conduct a small area study to guide redevelopment of the area.

Item Budgeted:
N/A

Source/Use of Funds/Budget Book Page:
N/A

Strategic Plan:
Goal 1: Quality of Life
Goal 2: Efficient & Effective Services
Goal 6: Community Design

Strategic Plan Impact:

ATTACHMENTS:
1. Continuance request P&Z to January - Kim Rezanka
2. Defer P&Z to January - Josh Long
3. Staff Report
4. MAPS
5. Gemini Lakes Amended FLUM App
6. FLU Application Amendment Narrative20251104
7. Application REZ 9-11-25
8. GEMINI LAKES REVISION 2025-11-17
9. Community Engagement Report
10. Landscape Plan 5-30-25
11. Survey
12. School Concurrency Letter
13. Environmental Report

14. Pesticide Analysis Report
15. Traffic Study

Parrish, Bradley

From: Kim Rezanka <krezanka@LLR.Law>
Sent: Thursday, November 20, 2025 3:27 PM
To: Parrish, Bradley
Cc: Galindo, Eddy; Treasure, Andriene; Josh Long; brucem@mbveng.com; Wanda Kessler
Subject: FW: CPA 2-2025 Royal Oaks FL, LLC (Gemini Lakes) - continuance to be requested

Brad,

The Applicant, Royal Oaks FL, LLC, will be requesting a continuance of the P & Z transmittal hearing, from Dec. 3rd to Jan. 7th, to allow time for additional meetings with the Community. As you know, there is a new Master Plan that addresses additional concerns raised by community members. While the CPA does not require review of the Master Plan, it will inevitably be discussed by members of the pubic, and it is important that the public be aware of the current Master Plan.

I will attend Dec. 3rd to request the continuance.

Thank you.

Sincerely,
Kim Rezanka

LACEY REZANKA
6013 Farcenda Place, Suite 101
Melbourne, FL 32940
krezanka@llr.law
Office 321.608.0892

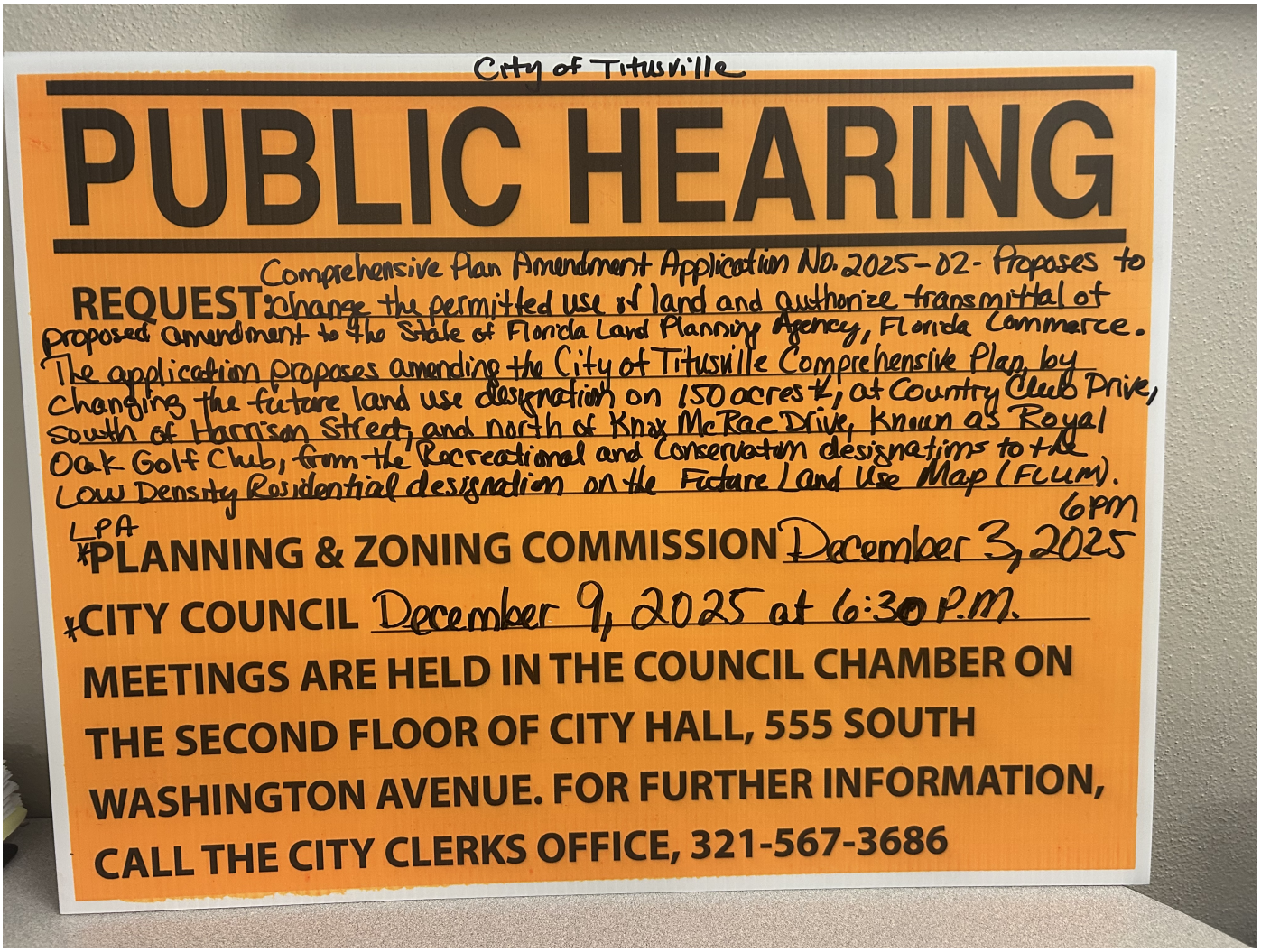
From: Parrish, Bradley <Brad.Parrish@titusville.com>
Sent: Thursday, November 20, 2025 1:11 PM
To: Josh Long <JLong@brookfieldkolter.com>
Subject: FW: Legal Notice & Advertising CPA 2-2025

fyi

From: Donhoff, Jolynn <Jolynn.Donhoff@Titusville.com>
Sent: Thursday, November 20, 2025 1:06 PM
To: Parrish, Bradley <Brad.Parrish@titusville.com>; Galindo, Eddy <eddy.galindo@titusville.com>
Subject: Legal Notice & Advertising CPA 2-2025

FYI re: recent public notices that were completed for CPA 2-2025.

- November 18, 2025 – **1,032** post card notices were mailed to property owners within 500-feet at rate of 61 cents (1,032 x .61 = $629.52 estimate). Records attached.
- November 18, 2025 – 8 orange hearing (public notice) signs were created and provided to Planning staff to install at subject site. Image below.
- November 20, 2025 – The transmittal legal ad published in Florida Today Newspaper today. Record attached from online and hardcopy clipped from paper.



Best regards,
Jolynn J. Donhoff, MPA, MMC, FCRM
Assistant City Clerk | City of Titusville
555 S. Washington Avenue
Titusville, FL 32796
(321) 567-3683

Parrish, Bradley

From: Josh Long <JLong@brookfieldkolter.com>
Sent: Thursday, November 20, 2025 12:15 PM
To: Parrish, Bradley
Cc: Galindo, Eddy
Subject: Gemini Lakes - Deferral Request to January Hearings

Importance: High

Brad,

We would like to defer our Land Use application for P&Z and CC from December 3rd and 9th to January 2026.

Can you please hold off on the public mailers your department is getting ready to mail out.

Please reply to confirm receipt of this email.

Josh

Joshua I. Long, AICP
VP Planning & Entitlements
Brookfield Kolter Land Partners LLC
O: (561) 682-9500 Ext.112
C: (561) 762-4077

Brookfield Kolter
LAND PARTNERS

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City of Titusville

Planning Department Staff Report

Transmittal Hearings

Comprehensive Plan Map Amendment and Planned Development Rezoning with Master Plan

CPA No. 2-2025 – GEMINI LAKES PLANNED DEVELOPMENT

(AKA Royal Oak Golf Course)

Meeting Dates:

Commission/Council	Meeting dates
Planning and Zoning Commission	December 3, 2025
City Council Transmittal Public Hearing	December 9, 2025

Prepared By: Eddy Galindo, AICP – Principal Planner

Applicant(s): Robert Wolf for Royal Oaks FL, LLC – FKA Toulon Apartments, owner

Applicant's Request: **CPA:** To amend the Comprehensive Plan Future Land Use Map by amending the Recreation and Conservation future land use designations to Low Density Residential.

REZ: To rezone the property from General Use (GU) and Open Space and Recreation (OR) zoning districts to Planned Development (PD).

Staff Recommendation: ***Consider one of the following actions:***

1. Transmit the amendment to the State Land Planning Agency (FloridaCommerce) as proposed to replace the Recreational and Conservation future land use designations with the Low Density Residential future land use designation.
2. Do not Transmit the amendment and direct staff to initiate a small area study to guide the redevelopment of this area.

BACKGROUND INFORMATION

Robert Wolf, representing Royal Oaks FL, LLC, is requesting a Comprehensive Plan Amendment (CPA) for property located at 2150 Country Club Drive (Parcel ID No. 22-35-16-00-6) to change the future land use designations from Recreational and Conservation to Low Density Residential and change the zoning districts from General Use (GU) and Open Space and Recreation (OR) to Planned Development (PD) with a Master Plan. The intent of this request is to develop 551 single family homes on the site, which is approximately 149 acres in size. The site is the location of the previous Royal Oak golf course and there are no uses currently in operation at the site.

The applicant is requesting a Large Scale Comprehensive Plan Map Amendment. The amendment must be Transmitted to the State's Land Planning Agency (LPA) for review prior to City Council adoption. The City Council is to consider the map amendment for Transmittal only. Adoption hearings for the comprehensive plan amendment and rezoning with master plan may be scheduled after receipt of comments from the State. Analysis of the Planned Development (PD) Rezoning with Master Plan will be conducted after the State completes its review.

PROPERTY INFORMATION

Existing Use, Future Land Use, and Zoning

Existing Use	Future Land Use	Zoning
Golf Course (Not Currently in Operation)	Recreational	General Use (GU) for up to 35 residential units (1 du/3ac)
	Conservation	Open Space and Recreation (OR) for up to 7 residential units (1 du/5ac)

Proposed Use, Future Land Use, and Zoning: Amending the boundaries

Proposed Use	Future Land Use	Zoning
Residential Development	<u>Applicant Proposal</u> Low Density Residential for up to 745 residential units (5 du/ac)	Planned Development (PD) with master plan and conditions of approval for up to 551 residential lots (3.8 du/ac)

SURROUNDING PROPERTY INFORMATION

Existing Use, Future Land Use, and Zoning

Location	Use	Future Land Use	Zoning
North	Single Family Residential Detached	Low Density Residential	Single Family Medium Density (R-1B)
	Condominiums	High Density Residential	Multifamily High Density (R3)
South	Condominiums	High Density Residential	Multifamily High Density (R3)
	Townhomes	Medium Density Residential	Multifamily Medium Density (R-2)
	Vacant	Commercial High Intensity	Community Commercial (CC)
East	Single Family Residential Detached	Low Density Residential	Single Family Medium Density (R-1B)
	Condominiums	High Density Residential	Multifamily High Density (R3)
West	Single Family Residential Detached	Low Density Residential	Single Family Medium Density (R-1B)
	Single Family Residential Detached	High Density Residential	Multifamily High Density (R3)
	Condominium Common Area	High Density Residential	Multifamily High Density (R3)

General Information:

- General Information: The Applicant is requesting a Comprehensive Plan Amendment (CPA) and Rezoning (REZ) to a Planned Development (PD) with Master Plan (MP) to develop approximately 147.13 acres of vacant property which previously served as the Royal Oak golf course. The requested Planned Development (PD) proposes a maximum of five hundred fifty-one (551) dwelling units, which equates to a residential density of 3.8 units/acre. In comparison, the most common single family residential zoning district adjacent to the subject property is the Medium Density Residential (R-1B) zoning district, which allows a greater maximum residential density at 5 units/acre. The housing typologies proposed include single family residences: detached, townhomes, and villas. The estimated population from the development as proposed on the master plan is 1,229 residents.

- Land Use: The City adopted its first land use map in 1988. At that time, the entirety of the subject property was assigned the Recreational land use designation.

  In 1992, the land use designation on the property was amended to add the Conservation land use to the golf course ponds throughout the site and to replace the Recreational land use designation on the portion of the site of the former clubhouse amenity and the surrounding property, generally located northwest of Country Club Drive, with the Residential land use designation.

  The City could study the issue, determine its options and develop a small area or neighborhood/community plan consistent with Comprehensive Plan Future Land Use Element Objective 1.1 and Policies 1.1.2-1.1.4. A typical plan could identify the issue and propose remedies that align with the City's goals. These may include ways to preserve the status quo or provide allowances for redevelopment within established parameters.

- Zoning: The site first appears as incorporated within the city limits on the city's zoning map dated December 12, 1968. At the time the property was primarily zoned General Use (GU), while the site of the former clubhouse amenity and the surrounding property, generally located northwest of County Club Drive, was zoned Tourist (T).

  In 1993, with the citywide rezoning of Ordinance No. 5-1993, most of the property remained in the GU zoning district; however, the Open Space and Recreation (OR) zoning district was applied to the golf course ponds throughout the site and the property along County Club Drive, previously zoned Tourist, was rezoned to High Density Multifamily (R-3).

  The City completed a brief study of the golf course in 2017. The City adopted a moratorium to research the issue and better understand the conditions of the Royal Oak golf course. The result was a draft ordinance to establish a golf course overlay. The overlay required a master plan with specific conditions in the event a permit was submitted for redevelopment or to subdivide the property. The ordinance was ultimately not adopted.

- Master Plan: The City will need to consider issues related to drainage, traffic, access management, recreational amenities, and the scale and compatibility with the

surrounding built development. The master plan includes single family lots, townhome lots and villas.

COMPREHENSIVE PLAN AMENDMENT REVIEW

Future Land Use Map Amendment Sprawl Criteria

The following list is the review criteria under which the Planning and Zoning Commission and the City Council review applications as they relate to urban sprawl [Section 34-23 of the LDR].

Summary of Staff's findings

Based on the criteria below, the staff did not find that the proposed future land use amendment will encourage sprawl.

1. The extent to which the proposed amendment is contiguous to an existing development area which has developed in a manner providing a compact, contiguous development pattern with the proposed amendment;

   Staff Comment: The surrounding area is predominantly detached single-family and multifamily residential.

2. The extent to which population growth and development trends warrant an amendment, including an analysis of vested and approved but unbuilt development;

   Staff Comment: Based on recent growth of employment opportunities within the City and the most recent growth rate of approximately 1.2% per year. The estimated population from the development as proposed on the master plan is 1,229 residents. The proposed amendment is in line with the typical growth pattern for the City.

3. The extent to which adequate infrastructure to accommodate the proposed amendment exists, or is programmed and funded through an adopted capital improvement schedule, or will be privately financed through a binding executed agreement, or will otherwise be provided at the time of development impacts as required by law;

   Staff Comment: Roads, reclaimed water, potable water and sewer infrastructure are present throughout the Royal Oak subdivision and will have to be extended into the current golf course in order to support the proposed development.

   The preliminary concurrency evaluation provided by the Brevard County School Board states that currently there is adequate capacity available at Apollo and Coquina Elementary, Jackson Middle and Titusville High schools. As with all preliminary concurrency reviews, a final evaluation will be completed prior to construction of any development of the site.

   The traffic analysis completed by Kimley Horn included a school operational analysis in response to concerns expressed from the community. The analysis concluded that the intersection of Park Avenue and County Club Drive operates with acceptable levels of service with volume to capacity rations of less then one (1.0) in buildout (2027) morning and afternoon peak hour conditions.

4. The extent to which the amendment will result in an efficient use of public funds needed for the provision of new infrastructure and services related to it;

   Staff Comment: Roads, reclaimed water, potable water and sewer infrastructure are available to serve the property.

   The preliminary concurrency evaluation provided by the Brevard County School Board states that currently there is adequate capacity available at Apollo and Coquina Elementary, Jackson Middle and Titusville High schools. As with all preliminary concurrency reviews, a final evaluation will be completed prior to construction of any development of the site.

5. The extent to which the amendment will not result in a sprawl development pattern as determined by Chapter 163, Florida Statutes, and will not discourage infilling of more appropriate areas available for development within existing Development Area Boundaries; and

   Staff Comment: Section 163.3164(52) of the Florida Statutes defines Urban Sprawl as a development pattern characterized by low density, automobile-dependent development with either a single use or multiple uses that are not functionally related, requiring the extension of public facilities and services in an inefficient manner, and failing to provide a clear separation between urban and rural uses.

   The additional residential units will be added to an area which is surrounded by existing residential and commercial development.

6. The extent to which the amendment will result in a sustainable development pattern through a balance of land uses that is internally interrelated, demonstrates an efficient use of land, ensures compatible development adjacent to agriculture lands, protects environmental qualities and characteristics, provides interconnectivity of roadways, supports the use of non-automobile modes of transportation, and appropriately addresses the infrastructure needs of the community.

   Staff Comment: The subject property is internal to an approved subdivision. There are no environmentally sensitive areas identified on the property as the existing lakes were created for stormwater treatment and are not naturally occurring.

7. The extent to which the amendment results in positive market, economic and fiscal benefits of the area as demonstrated through a market demand analysis, economic impact analysis and fiscal impact analysis.

   Staff Comment: Based on recent growth of employment opportunities within the City and the most recent growth rate of approximately 1.2% per year. The estimated population from the development as proposed on the master plan is 1,229 residents. The proposed amendment is in line with the typical growth pattern for the City.

Consistency with the Comprehensive Plan

The following is an analysis of the consistency of the request with the City's Comprehensive Plan. The request for a Comprehensive Plan Amendment and rezoning is consistent with the Comprehensive Plan and more specifically with the following objectives and policies of the Comprehensive Plan.

[Future Land Use Element (FLUE)] Policy 1.1.3: The City shall promote single-family development and redevelopment by restricting the proliferation of multifamily dwellings within neighborhoods, such as the Indian River City subdivision area, which have developed primarily with traditional, detached, low density single family dwelling units on individual lots.

Staff Comment: The future land use designations on the surrounding properties are primarily Low Density Residential and High Density Residential. The proposed master plan only includes single family residential housing typologies (Single family detached residence, townhome, and villas) and the master plan is binding, unless amended through the public hearing process.

FLUE Policy 1.7.5: The City shall encourage the establishment of residential, retail, office, and civic uses within ¼ mile of neighborhood centers as an effective way to reduce vehicular trips and promote transit, walking and bicycling.

Staff Comment: The proposed subdivision does not include a variety of uses and will create a large swath of residential land use; however, the subject property is bounded by commercial nodes at two adjacent collector intersections: Barna Avenue and Harrison St to the north and Barna Avenue and Knox McRae Drive to the south. The proposed trail and roadway network will provide additional connectivity between the existing surrounding neighborhood and these commercial nodes.

[FLUE] Policy 1.7.8: A development must be readily accessible to infrastructure, services and public facilities to be designated as infill development.

Staff Comment: As noted above, the subject properties are readily accessible to existing infrastructure serving the Royal Oak development.

[FLUE] Objective 1.14: Residential Land Use. The City of Titusville shall provide for appropriate and adequate land for residential land uses through the designation of Residential One, Residential Two, Low Density Residential, Medium Density Residential, and High Density Residential on the Future Land Use Map to provide a variety of housing opportunities and locations.

Staff Comment: The requested land use will provide for a variety of housing opportunities and locations. It will allow for the single family housing typologies proposed in the binding master plan and planned development in the current request.

[FLUE] Policy 1.14.1: Sites for residential development shall be located throughout the City in a variety of residential zoning classifications, which provide for a variety of lot sizes, floor areas, setbacks, and residential densities.

Staff Comment: The request is to apply the Low Density Residential to a portion of the Future Land Use Map which is currently Recreational and is generally surrounded by Low Density Residential and High Density Residential. In general, there are more areas in the Low Density Residential future land use designation throughout the city and approval of the request would increase this mix.

[FLUE] Policy 1.14.8: Negative impacts of residential land uses on environmentally sensitive areas shall be minimized. The Conservation Element objectives and policies shall be utilized in determining the appropriateness of residential land uses designation and the specific intensity of use authorized by land development regulations.

Staff Comment: The subject property is internal to an approved subdivision and was developed and utilized as a golf course since the 1960's.

The applicant submitted the environmental report prepared by Florida Environmental Consulting, Inc. dated March 2025, which provides the following conclusions regarding the property:

a. *Contains mostly disturbed excessively drained sandy soils.*
b. *Is not in a floodplain except for the onsite stormwater retention ponds which are in flood zones AE-18.7 and AE-19.7*
c. *Supports remnant native live oaks, laurel oaks, slash pines and cabbage palms.*
d. *Supports the gopher tortoise.*
e. *May support the eastern indigo snake and American alligator.*
f. *Supports the sandhill crane and may support various wading birds.*
g. *Does not contain jurisdictional wetlands, nor Waters of the United States, but does support numerous stormwater retention ponds.*
h. *Land development improvements unless properly planned and permitted may cause adverse environmental impacts to native trees and protected species.*
    i. *A formal gopher tortoise survey and relocation permitting is recommended prior to any proposed site work along with the standard protection measures for the eastern indigo snake.*
    ii. *A site inspection for crane and wading bird nests as well as alligators is recommended prior to any proposed site work.*

[FLUE] Policy 1.14.9: Residential development sites shall be accessible to and/or provide essential public services at levels of service adopted by the Comprehensive Plan including transportation, potable water, sewage treatment, solid waste, drainage, recreation and open space, law enforcement and fire protection.

Staff Comment: No level of service issues have been identified for this request. The subject properties are within the City's Urban Service Area and all services are available to the site.

The applicant provided a traffic impact analysis dated March 2025 completed by Kimley Horn. The conclusions of the report are provided below.

a. *The proposed development is anticipated to general 4,472 daily trip and 403 PM peak hour trips.*

b. *The roadway segment capacity analysis did not identify any roadway segment capacity conditions.*

c. *An operational analysis performed for existing, background and buildout considerations that no operational deficiencies would occur at buildout of the proposed development.*

d. *The need for exclusive ingress left-turn and right-turn lanes were evaluated based on the NCHRP Report 457 thresholds for the proposed project driveways on County Club Drive and Barna Avenue. A left-turn lane is warranted at the project driveway on Barna Avenue; however, there is an existing two-way left-turn lane at this location, so no additional improvements are needed.*

[FLUE] Policy 1.16.1: Designate Conservation land uses on the Future Land Use Map based upon site specific studies and field determinations as primary data sources consistent with the Goals, Objectives and Policies of the Conservation Element.

Staff Comment: The areas designated as Conservation are stormwater retention ponds that are exempt from the wetland and natural surface water criteria in F.A.C. 373.414 pursuant to F.A.C. 62-340.700(2)(B). Specifically, this grants an exemption from the application of state water quality standards set forth in F.A.C. 373.414 to works, impoundments, reservoirs, and other water courses in use for stormwater treatment constructed before a permit was required, as is the case for the onsite ponds. Further, based on the lack of wetlands and permanent downstream hydrologic connections, Waters of the United States are not present onsite.

[FLUE] Policy 1.16.2: As of 2009, the wetlands shown as Conservation Land Use on the Future Land Use Map were established using the National Wetlands Inventory Map of 1988. These wetlands shown on this map have not been ground-truthed. In order to provide more accurate mapping of wetlands, when the City receives a wetland delineation on specific sites, the delineations will be accepted by the City of Titusville and the Future Land Use Map will be amended accordingly. The Conservation Land Use shall be amended to include all wetland areas on the site to be preserved, unless such wetlands are preserved by a conservation easement as part of a Planned Development (PD) or other master-planned development, and any other upland areas to be permitted for preservation for state and/or federal listed wildlife species.

Staff Comment: The environmental study submitted by the applicant does not identify any jurisdictional wetlands on the site. The areas designated as Conservation are stormwater retention ponds that are exempt from the

wetland and natural surface water criteria in F.A.C. 373.414 pursuant to F.A.C. 62-340.700(2)(B). Specifically, this grants an exemption from the application of state water quality standards set forth in F.A.C. 373.414 to works, impoundments, reservoirs, and other water courses in use for stormwater treatment constructed before a permit was required, as is the case for the onsite ponds. Further, based on the lack of wetlands and permanent downstream hydrologic connections, Waters of the United States are not present onsite.

[FLUE] Strategy 1.16.2.1: When Conservation Land Use is present on a specific site, a property owner shall submit a preliminary environmental assessment, including a wetland delineation when wetlands are present, prior to any future development. If the environmental assessment indicates that only wetlands are present and the wetlands are to be preserved rather than mitigated, the City shall accept the wetland delineation and amend the Future Land Use Map to align the Conservation Land Use with that delineation.

Staff Comment: The environmental study submitted by the applicant does not identify any jurisdictional wetlands on the site. The areas designated as Conservation are stormwater retentions that are exempt from the wetland and natural surface water criteria in F.A.C. 373.414 pursuant to F.A.C. 62-340.700(2)(B). Specifically, this grants an exemption from the application of state water quality standards set forth in F.A.C. 373.414 to works, impoundments, reservoirs, and other water courses in use for stormwater treatment constructed before a permit was required, as is the case for the onsite ponds. Further, based on the lack of wetlands and permanent downstream hydrologic connections, Waters of the United States are not present onsite.

[FLUE] Strategy 1.16.2.2: When Conservation Land Use is present on a specific site, a property owner shall submit a preliminary environmental assessment, including a wetland delineation when wetlands are present, prior to any future development. If the environmental assessment indicates that state and/or federal listed wildlife are present within the areas of the site that are designated as Conservation Land Use, the City shall not amend the Conservation Land Use until the property owner submits an environmental study which confirms the presence and potential locations of the state and/or federal list wildlife species. If the study identifies a location or locations on the site for suitable habitat for preservation, and these areas ae accepted by the permitting agencies as preservation for the identified species, then the City shall amend the Conservation Land Use to include these areas.

Staff Comment: The environmental study submitted by the applicant does not identify any jurisdictional wetlands on the site. The areas designated as Conservation are stormwater retentions that are exempt from the wetland and natural surface water criteria in F.A.C. 373.414 pursuant to F.A.C. 62-340.700(2)(B). Specifically, this grants an exemption from the application of state water quality standards set forth in F.A.C. 373.414 to works, impoundments, reservoirs, and other water courses in use for stormwater

treatment constructed before a permit was required, as is the case for the onsite ponds. Further, based on the lack of wetlands and permanent downstream hydrologic connections, Waters of the United States are not present onsite.

[FLUE] Policy 1.16.3: Permitted uses within the Conservation land use area shall be limited to residential uses of one unit per five acres, conservation, recreation, open space, and stormwater management systems consistent with the policies of the Conservation Element and the land development regulations.

Staff Comment: The subject properties are internal to an approved subdivision and the areas designated as Conservation were developed and utilized for stormwater management as permitted by this policy.

[FLUE] Policy 1.16.4: Impacts to areas designated as Conservation land use designation shall be considered if it is unavoidable due to absence of feasible and/or practical alternatives for reasonable use of the land, or the regulations create an inordinate burden on an existing use of the land or a vested right to a specific use of the land, or due to significant site constraint and/or practical design modification constraint. The allowable impacts shall be based upon site specific evaluation determined through the permitting process conducted by all the regulatory agencies with jurisdiction.

Staff Comment: The areas designated as Conservation land were developed and utilized for stormwater management purposes. Such use will continue under the proposed development.

[FLUE] Strategy 1.17.1.1: The following items shall be addressed in the analysis of the land use changes:

1. Surrounding uses;

   Staff Comment: See page 2 of this report.

2. Surrounding zoning;

   Staff Comment: See page 2 of this report.

3. Acreage;

   Staff Comment: The site size subject of this amendment is 147+/- acres.

4. Description of site;

   Staff Comment: See pages 1 and 2.

5. Soils and topography;

   Staff Comment: See soils map as part of environmental report.

6. Flood zone

   Staff Comment: According to the environmental study provided by the applicant, the subject property at an elevation of approximately 25 feet. The property is not in a floodplain except for the onsite

stormwater retention ponds which are in flood zones AE-18.7 and AE-19.7 See enclosed flood zone map.

7. Recharge potential;

Staff Comment: The subject property is outside of the Area of Critical Concern.

8. Traffic counts on adjacent streets; and

Staff Comment: Traffic counts have been provided as part of the traffic analysis completed by Kimley Horn.

The applicant provided a traffic impact analysis dated March 2025. The conclusions of the report are provided below.

a. The proposed master planned development is anticipated to general 4,472 daily trip and 403 PM peak hour trips.

b. The roadway segment capacity analysis did not identify any roadway segment capacity conditions.

c. An operational analysis performed for existing, background and buildout considerations that no operational deficiencies would occur at buildout of the proposed development.

d. The need for exclusive ingress left-turn and right-turn lanes were evaluated based on the NCHRP Report 457 thresholds for the proposed project driveways on County Club Drive and Barna Avenue. A left-turn lane is warranted at the project driveway on Barna Avenue; however, there is an existing two-way left-turn lane at this location, so no additional improvements are needed.

[FLUE] Policy 1.23.5: The City shall require applicants of land use and zoning application submittals to schedule and conduct a community meeting with interested members of the public regarding their application at least seven (7) days prior to the first public hearing. The applicant shall provide notification to all property owners within 500 feet of the subject property of the land use and zoning application and shall notify the City of the meeting as well.

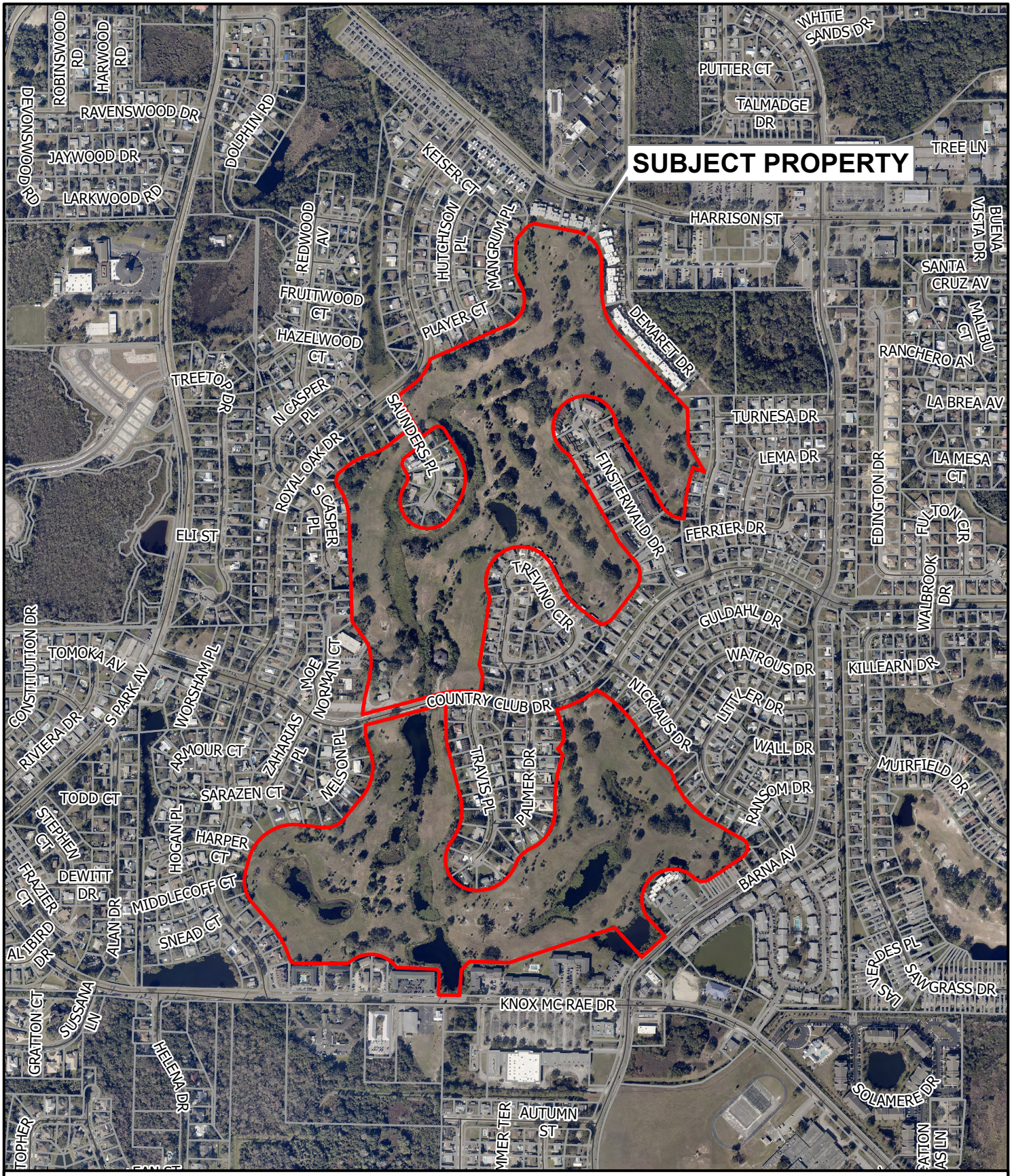
Staff Comment: The required community engagement meeting was conducted on January 11, 2024.

RECOMMENDATION:

Consider one of the following actions:

1. Transmit the amendment to the State Land Planning Agency (FloridaCommerce) as proposed to replace the Recreational and Conservation future land use designations with the Low Density Residential future land use designation.

2. Do not Transmit the amendment and direct staff to initiate a small area study to guide the redevelopment of this area.



Aerial 2025

CPA #2-2025

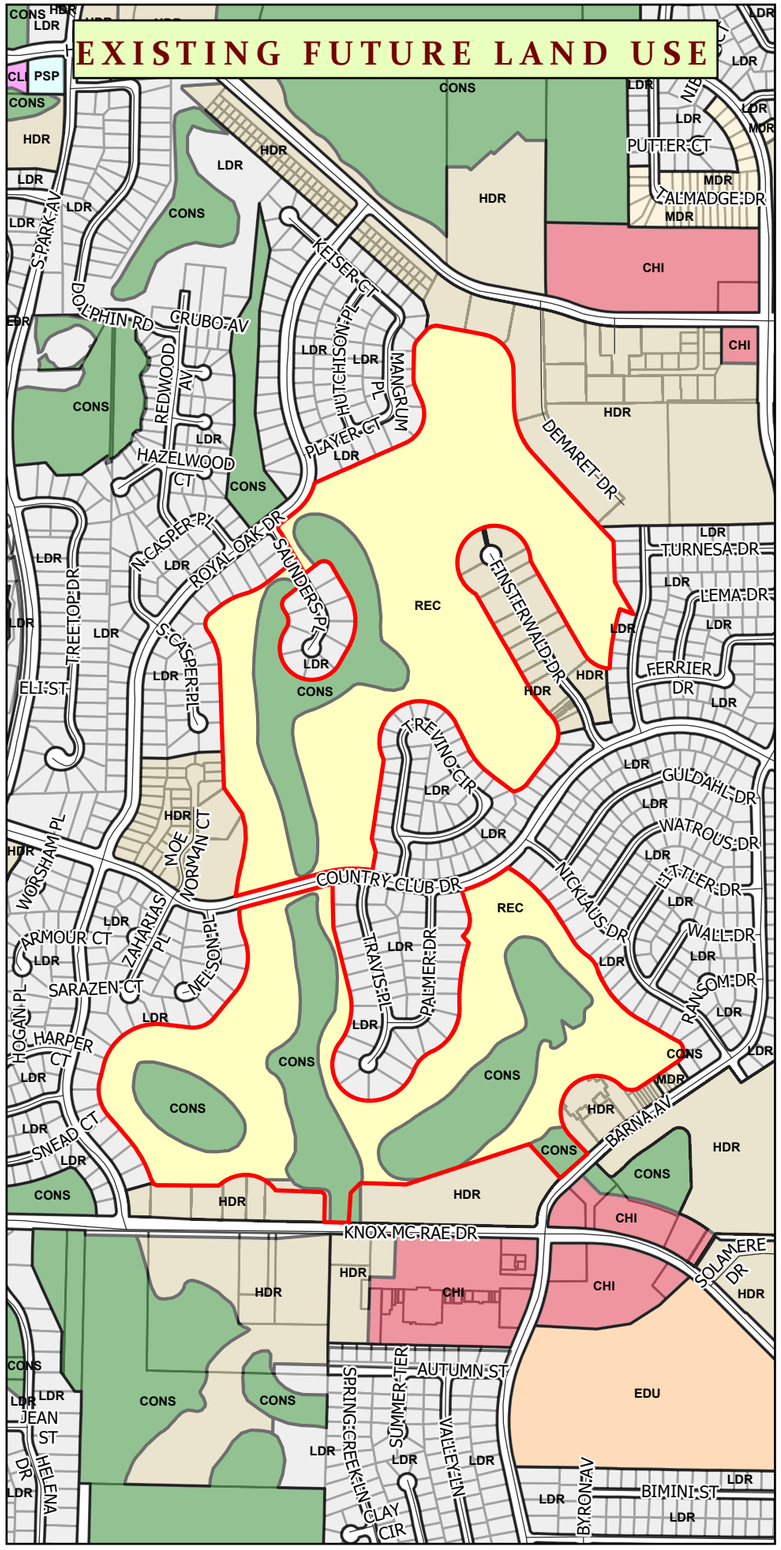
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Community Development Department

Aerial photography provided by the Brevard County Property Appraiser's Office

11/17/2025

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CPA #2-2025

EXISTING FLU ACREAGE

REC: +/- 105.01
CONS: +/- 39.20 AC
HDR: +/- 0.38 AC

PROPOSED FLU ACREAGE

LDR: +/- 144.21 AC
HDR: +/- 0.38 AC

N W E S

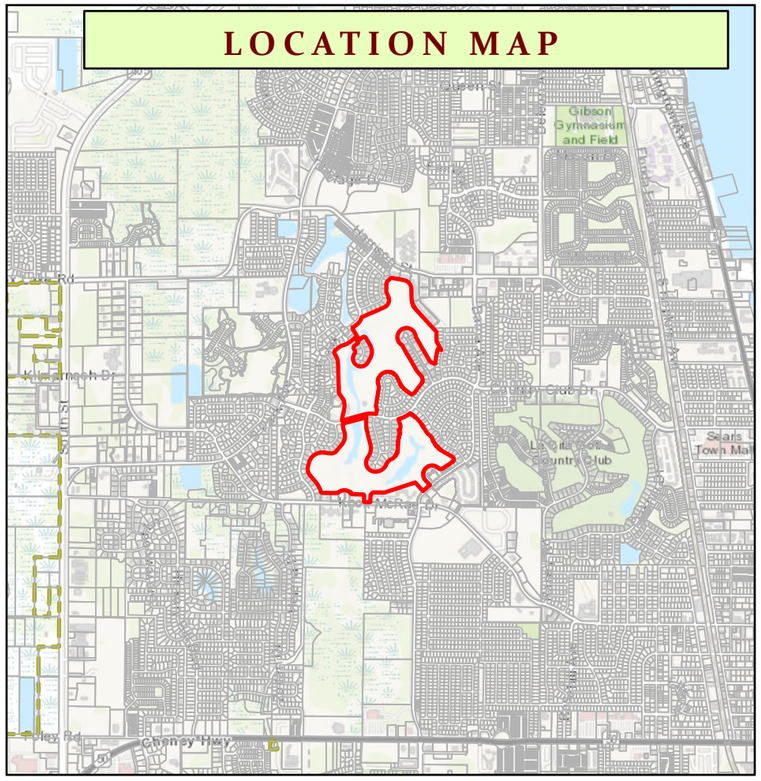
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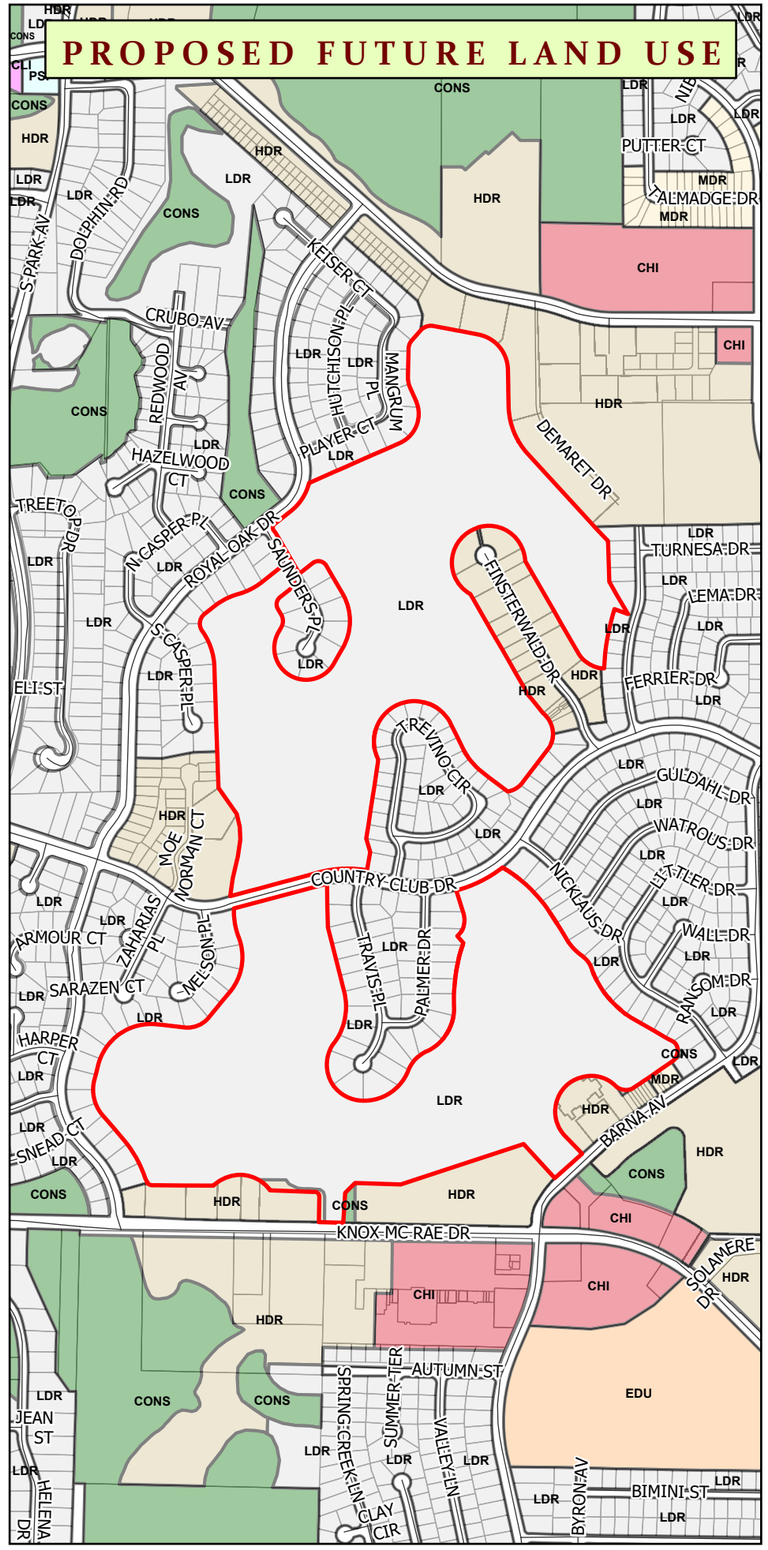
FLU

- COMMERCIAL HIGH INTENSITY
- COMMERCIAL LOW INTENSITY
- CONSERVATION
- EDUCATIONAL
- HIGH-DENSITY RESIDENTIAL
- LOW-DENSITY RESIDENTIAL
- MEDIUM-DENSITY RESIDENTIAL
- PUBLIC/SEMI-PUBLIC

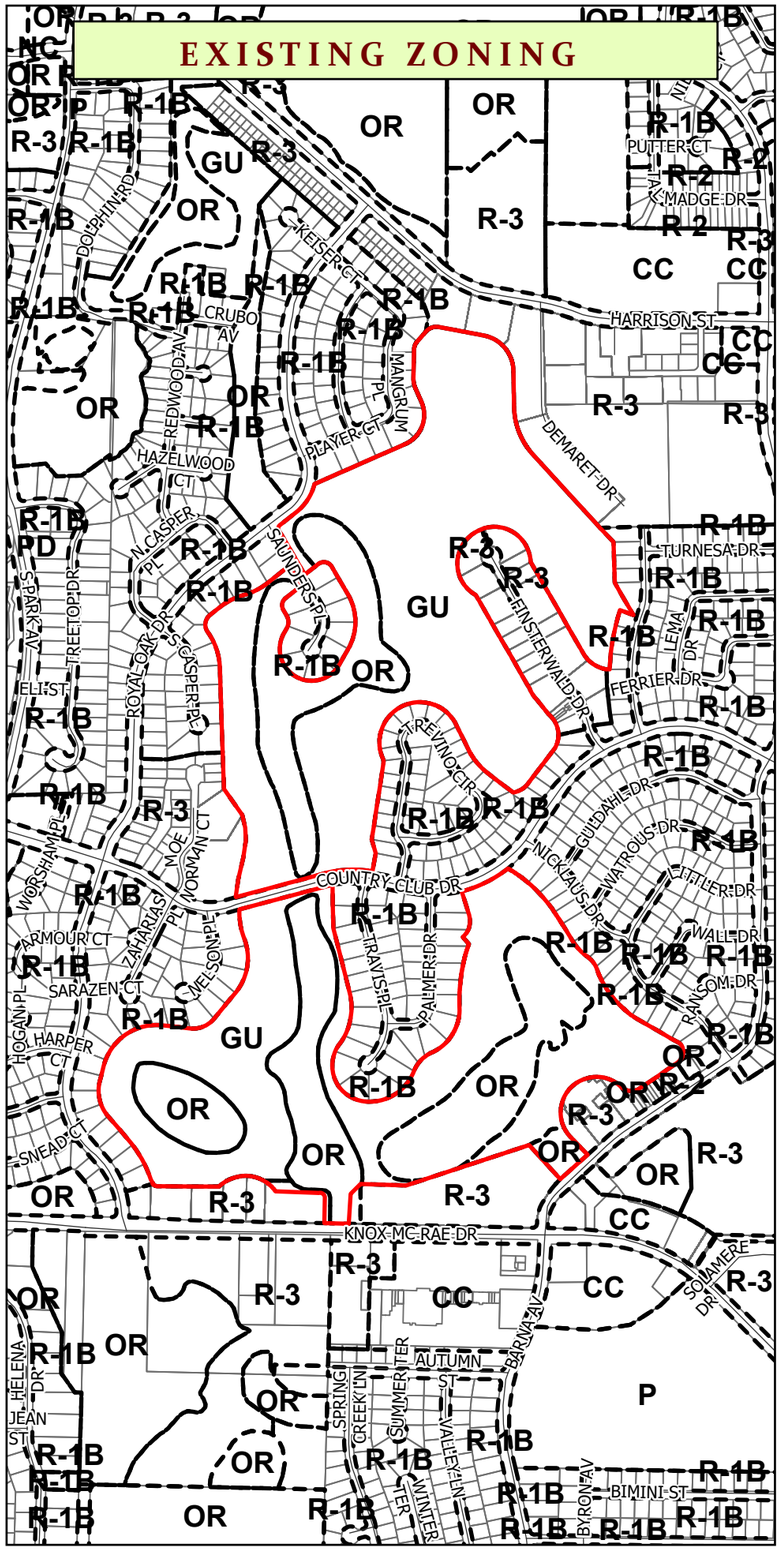
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LOCATION MAP





EXISTING ZONING



CPA #2-2025

EXISTING ZONING ACREAGE

GU: +/- 105.01 AC
OR: +/- 39.20 AC
R-3: +/- 0.38 AC

PROPOSED ZONING ACREAGE

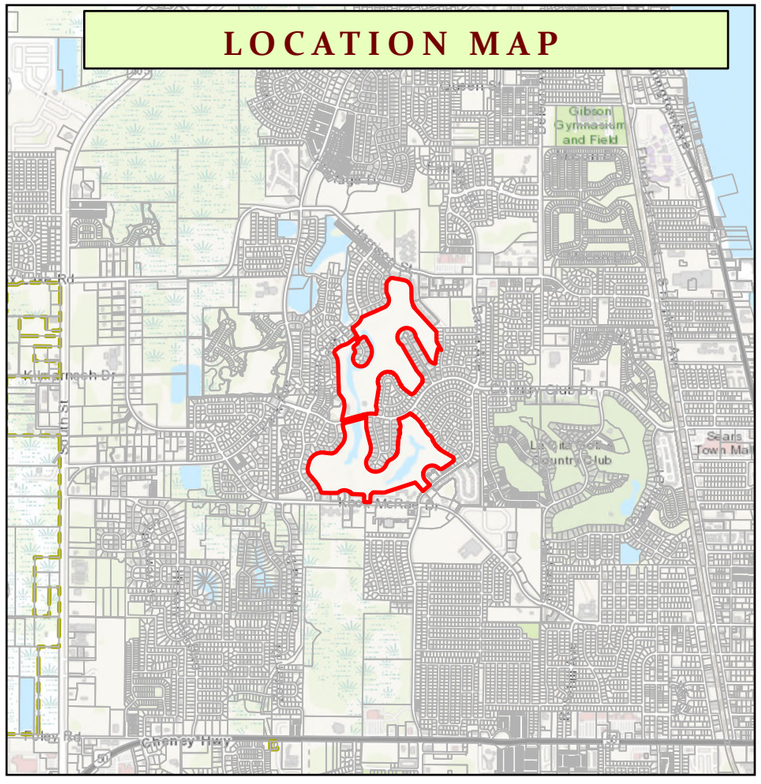
PD: +/- 144.59 AC

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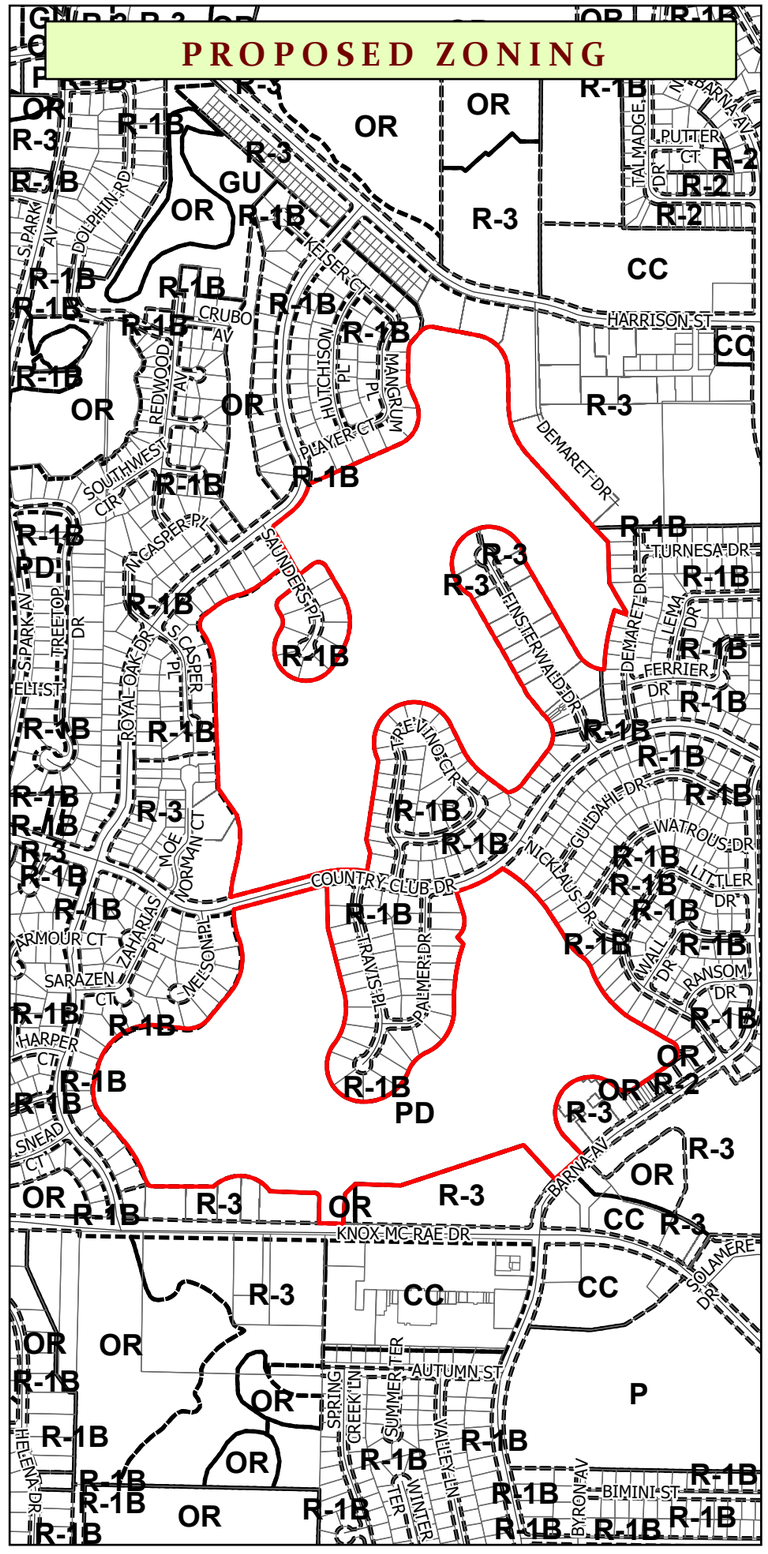
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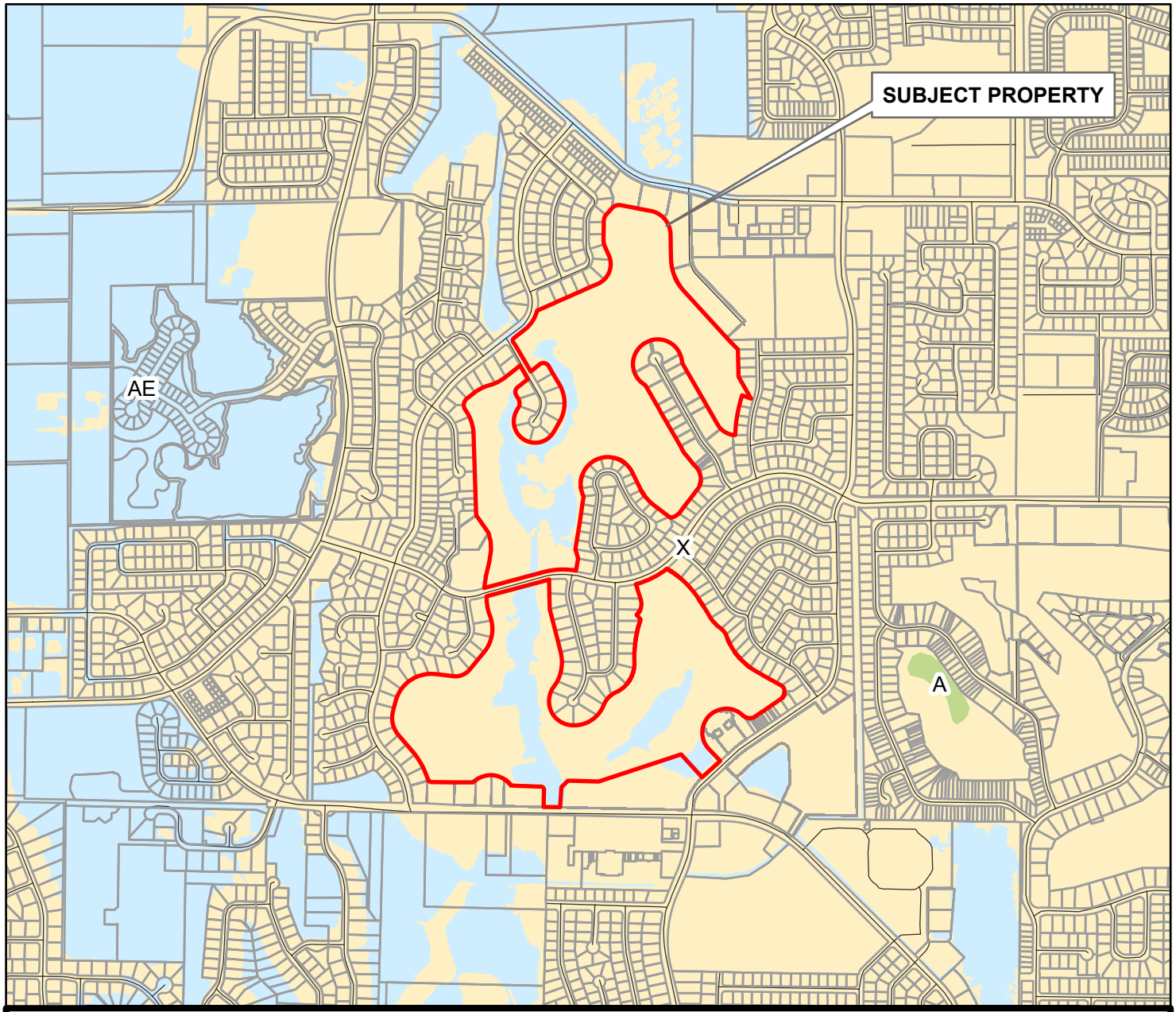
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LOCATION MAP



PROPOSED ZONING





FEMA FLOOD HAZARD AREAS

CPA #2-2025

Special Flood Hazard Area Zones

- A
- A0
- AE
- AO
- VE

Moderate Flood Hazard Area Zone

- X5

Minimal Flood Hazard Zones

- C
- X
- X .2 PCT

Other Flood Zone Areas

- D
- FW

N
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S

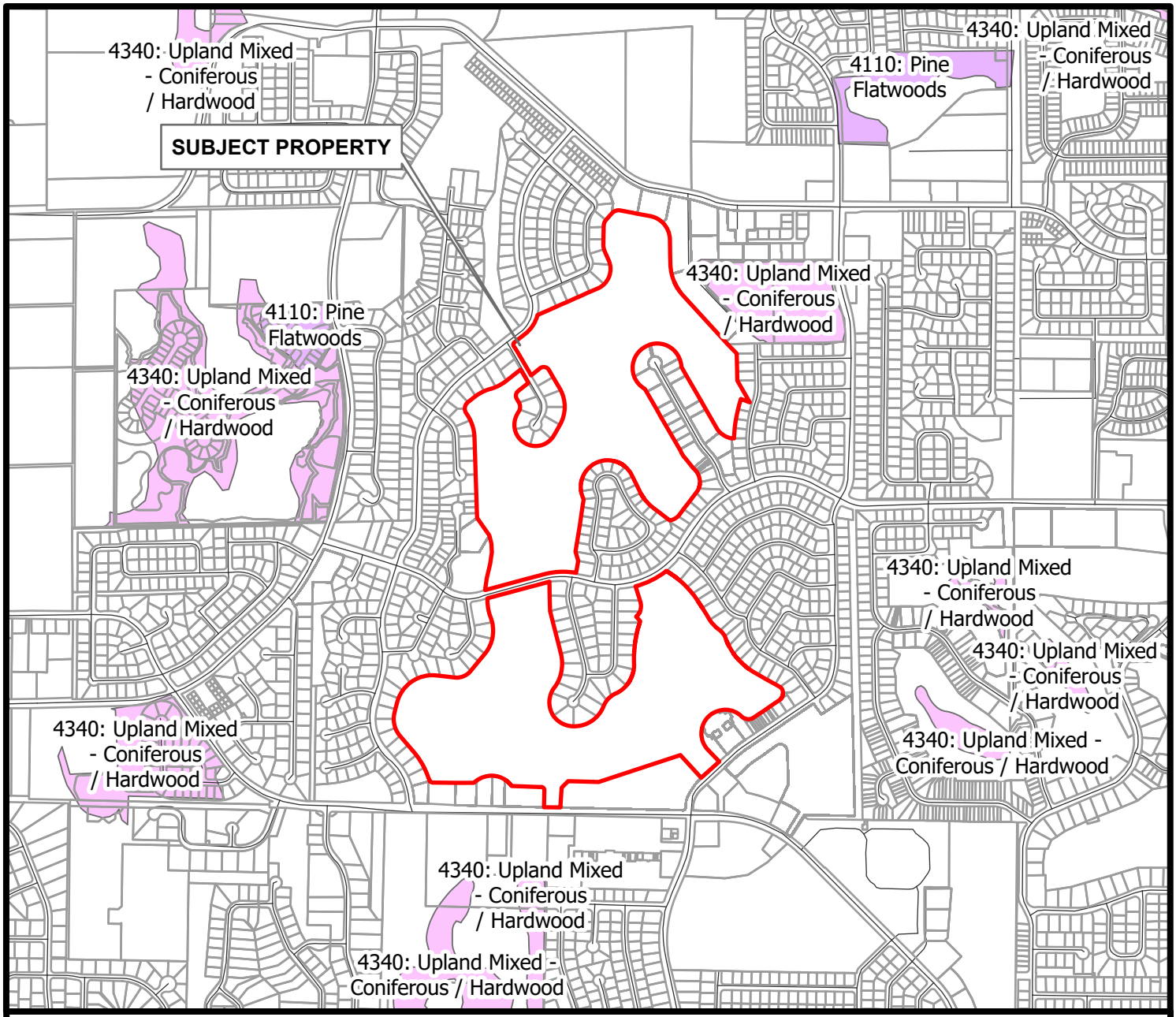
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Community Development Department

Source: FEMA FHA Update, 01/29/2021

11/17/2025

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SJRWMD Florida Land Use Cover Classification System
Upland Forests - 4000 Series
CPA #2-2025

LANDCOVER DESCRIPTION

- 4110: Pine Flatwoods
- 4340: Upland Mixed - Coniferous / Hardwood

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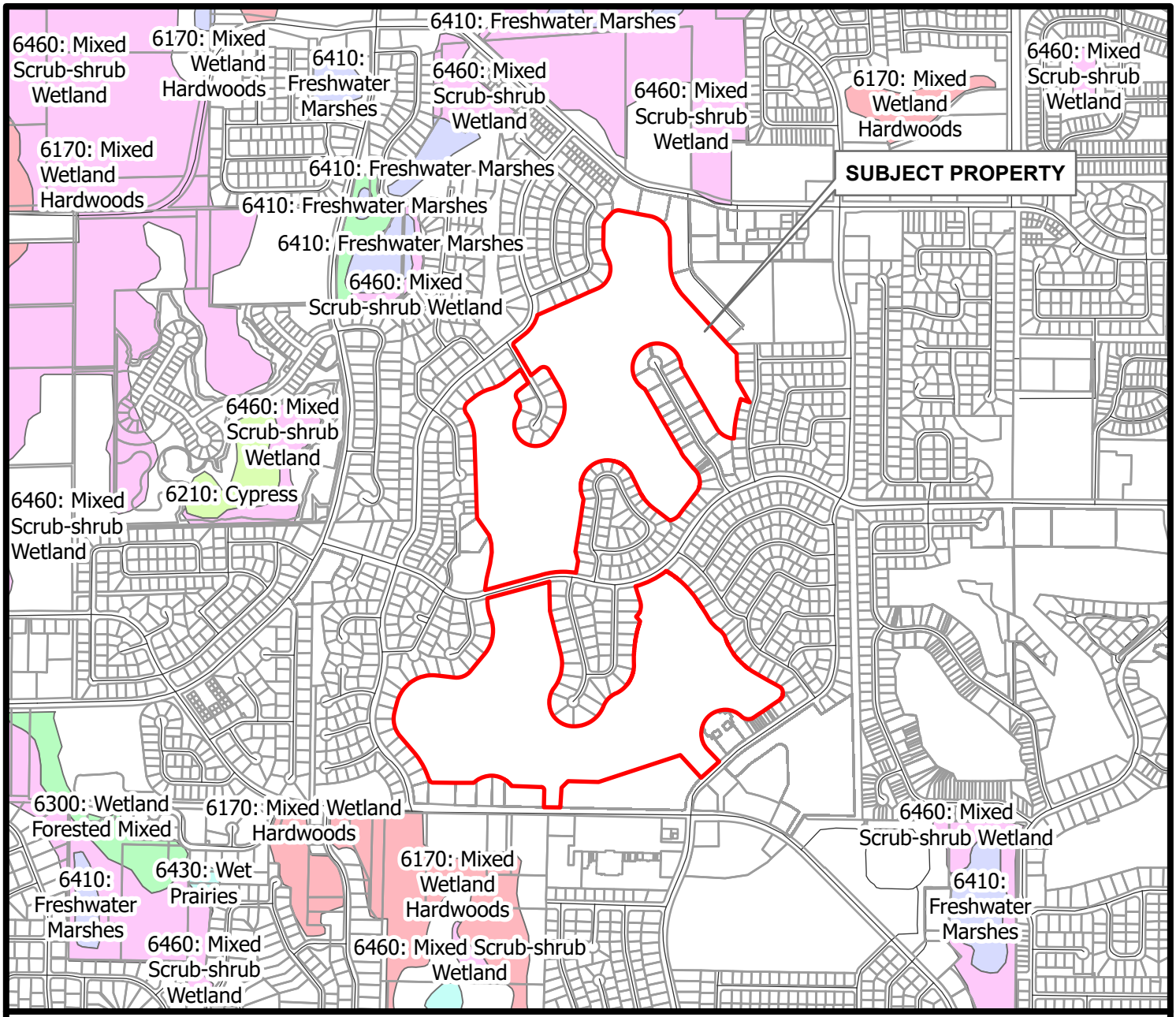
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This dataset (2017) is a compilation of the Land Use/Land Cover datasets created by St. John's River Water Management District

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SJRWMD Florida Land Use Cover Classification System
Wetlands - 6000 Series

CPA #2-2025

SJRWMD Land Cover 6000 Series

LANDCOVER DESCRIPTION

- 6170: Mixed Wetland Hardwoods
- 6210: Cypress
- 6300: Wetland Forested Mixed
- 6410: Freshwater Marshes
- 6430: Wet Prairies
- 6460: Mixed Scrub-shrub Wetland

Base Map

- Parcels
- Subject

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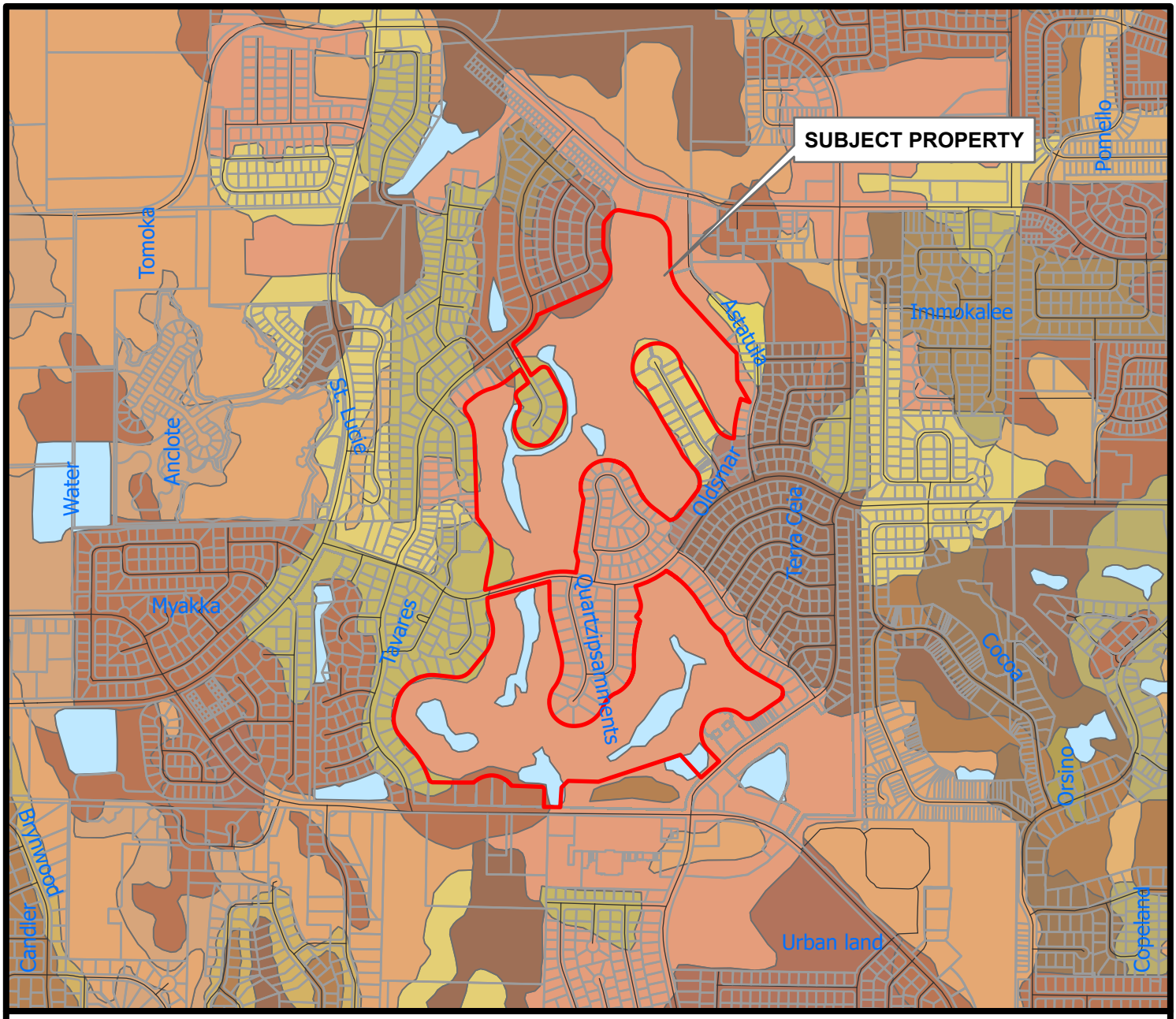
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Community Development Department

11/17/2025

This dataset (2017) is a compilation of the Land Use/Land Cover datasets created by St. John's River Water Management District

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SOILS IN THE VICINITY OF SUBJECT PROPERTY
CPA #2-2025

- Anclote
- Astatula
- Brynwood
- Candler
- Cocoa
- Copeland
- Immokalee
- Myakka
- Oldsmar
- Orsino
- Pomello
- Quartzipsamments
- St. Lucie
- Tavares
- Terra Ceia
- Tomoka
- Urban land
- Water

N W E S

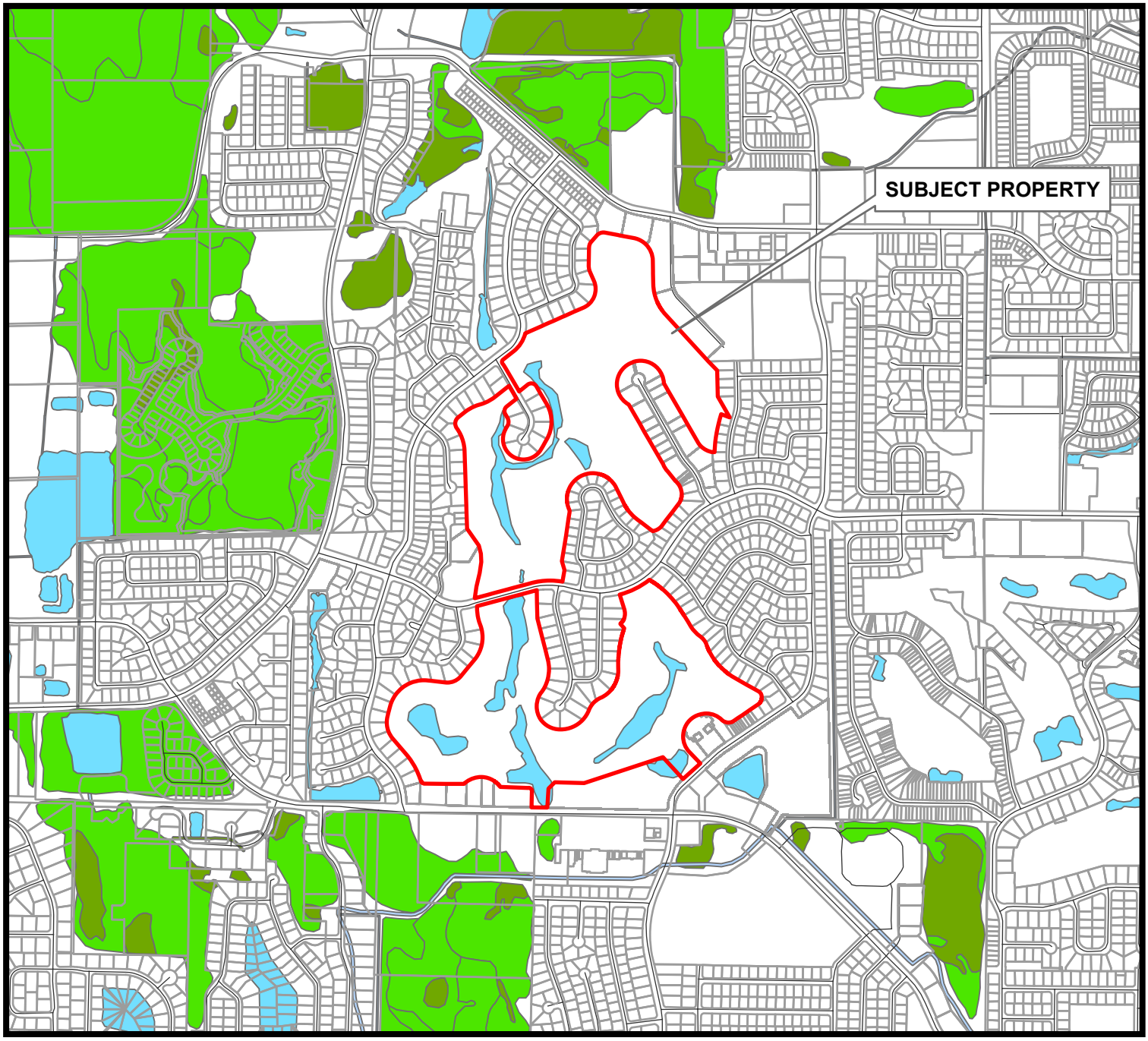
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Community Development Department

11/17/2025

Soils data source: The U.S. Department of Agriculture, Natural Resources Conservation Service. (2024)

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WETLANDS IN VICINITY OF PROPERTY

CPA #2-2025

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WETLAND_TY

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine

11/17/2025

Scale:1:15,000

Community Development Department
Source: USFWS NWI (2023)

This data set represents the approximate location and type of wetlands and deepwater habitats. The primary intended use is for regional and watershed data display and analysis, rather than specific project data analysis.

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Titusville
Gateway to Nature & Space

APPLICATION FOR COMPREHENSIVE PLAN AMENDMENT

Please submit electronically a completed application including required submittals to the Planning Department for payment and meeting scheduling. Chapter 34 of the Titusville Land Development Regulations contains the instructions for filing and the required exhibits. INCOMPLETE APPLICATIONS SHALL NOT BE ACCEPTED.

1. Annexation	Does the request include an annexation?	☐ Yes ☑ No
2. Regular or Small Scale Amendment	Regular Amendment (CPA) Property **50 acres or greater** ☑	Small Scale Amendment (SSA) Property **less than 50 acres** ☐
3. Project Information	Project Name: Gemini Lakes PD (FKA Royal Oak)	Property Address/Location Description: Off Knox McCrae Blvd.
4. Applicant / Owner	Name of Applicant/Contact: Robert Wolf for Royal Oaks FL, LLC	Name of Owner: - FKA Toulon Apartments
	Street Address: 4706 18th Avenue	Street Address: 4706 18th Avenue
	City: Brooklyn State: NY Zip: 11204	City: Brooklyn State: NY Zip: 11204
	Telephone #: 718-972-7878 Fax #:	Telephone #: 718-972-7878 Fax #:
	E-Mail Address: aklein@readprop.com	E-Mail Address: aklein@readprop.com
5. Applicant Status	☑ Owner ☐ Tenant ☐ Agent ☐ Other	
6. Parcel ID	22-35-16-00-6	**Tax Acct.** 2207847
7. Site Size (Attach Legal Description)	Acres: +/- 147	Square Feet: +/- 6,490,440
8. Current Land Uses	Identify the land uses located on-site and adjacent to the subject site (identify "all" uses that touch property on each boundary), such as grocery store, citrus farm, office, single family residential, etc.:	
	SUBJECT SITE: REC / CONS	
	NORTH: LDR / HDR	
	SOUTH: LDR / HDR	
	EAST: LDR / HDR	
	WEST: LDR / HDR	

9. Current Designation	Future Land Use: REC / CON		Zoning: GU /	
10. Proposed Designations	Future Land Use: LDR		Zoning: PD /OR	
11. Subject Property	Current Use: Abandoned Golf Course		Proposed Use: Townhomes, Villas, SFR	
12. Note any previous amendments on the site				
13. Check other applications submitted	Conditional Use ☐	Vacation of Easement ☐	Master Plan Approval ☑	Rezoning ☑
	Vacation of Right of Way ☐	Site Plan ☐	Subdivision/ Plat ☐	Other: sketch plat

14. Narrative

This Comprehensive Plan Amendment is to create a consistent Future Land Use designation over the entire project area and to allow for redevelopment of abandoned golf course which has caused proliferation of rodents and nuisance activities. This redevelopment is actually infill development as the golf course is "vacant land" surrounded by existing built areas. The existing roadways will be expanded, and connectivity between the neighborhoods will be maintained by a community walking path. The combination of single-family homes and townhomes will provide for choices of living styles to appeal to the existing and new residents of the City. The mixture of housing types discourages urban sprawl and achieves energy efficient land use patterns. The proposed amendment is contiguous to an existing development area which has developed in a manner providing a compact, contiguous development pattern with the proposed amendment. The extension and expansion of utilities and roadways promotes the infill development.

The Amendment will provide for a sustainable development pattern through a balance of land uses that is internally interrelated, demonstrates an efficient use of land, protects environmental qualities, provides interconnectivity of roadways, allows for pedestrian, bicycle and golf cart modes of transportation, and enhances the infrastructure needs of the community. The Project "Gemini Lakes" is consistent with the attached Comprehensive Plan Goals, Objectives, Policies and Strategies related to FLUE redevelopment and PD, as well as the Housing Element, Recreation and Open Space Element, Transportation Element and Property Rights Element.

The proposed development does not contain wetlands, as explained in the Environmental Impact Report, despite the designations of the FLUM. The Recreation and Conservation FLU designation was applied to fairways, greens, cart paths, stormwater ponds and "water hazards". These FLU designations are no longer appropriate since the golf course is defunct. This Amendment will result in positive market, economic and fiscal benefits of the area as the construction of 551 dwelling units will provide much needed housing, provide substantial impact fees to the City and increase the tax base of Titusville.

The need for new housing is needed to accommodate the business growth in North Brevard County, including NASA's Kennedy Space Center. In creating the North Brevard Economic Development Zone (NBEDZ) in 2011, the very clear objective of the Board of County Commissioners was to create a vehicle dedicated specifically to facilitating job growth and economic development within North Brevard County. See NBEDZ Economic Development Plan 2012. According to the NEBDZ's Winter 2023 Regional Economic Assessment Report, "the latest population statistics reveal that the North Brevard MA has continued to grow, largely due to the emerging private aerospace industry globally, along with the growth of other sectors, including specialty (advanced) manufacturing and defense industry work. Consider that, in 2010, the population of the City of Titusville was 43,761; according to the 2020 Census numbers, that figure had grown by more than 11%, to 48,789 persons." Additionally, "The local housing market in Brevard County has continued to benefit from the increased business activity in the county, particularly from the aerospace and defense industry."

According to NASA, KSC's transformation into a multi-user spaceport has profoundly impacted space systems and exploration on the Space Coast, and KSC's structural changes have had a strong economic impact in the state of Florida. "By establishing a vital anchor for launch operations, payload processing, scientific research, and technological innovation, the spaceport generates significant employment opportunities, with wage and non-wage compensation giving rise to the production of goods and services that increase regional gross domestic product (GDP). Indeed, Kennedy Space Center produces an impressive economic stimulus within the state. Overall, the economic activity associated with the spaceport supports 27,004 jobs, providing a crucial pillar of support for Central Florida communities." See NASA's Kennedy Space Center's economic Impact Study FY 2021 (NP-2022-04-332-KSC).

- **All applications shall require Community Development Staff review prior to submittal.**
- All applications shall be submitted to the Planning Department electronically and officially logged in by **end of business day**.
- Tentative hearing dates are scheduled approximately 4 months from the time a completed application is submitted.
- Incomplete applications will not be accepted and will not be considered to be officially submitted until the appropriate information and fees are submitted. Meeting dates for incomplete applications will not be set until all required information and fees are submitted.
- Petitions requiring review from other boards or commissions prior to being forwarded to the Planning and Zoning Commission and City Council are not guaranteed placement on the schedule noted above.
- All meeting agendas will be posted on the City's web site and staff reports for the request can be obtained by contacting the Planning Department at 321-567-3782.

ACKNOWLEDGEMENT

1. I am the owner and/or legal representative of the owner of the property described, which is the subject of this application.
2. All answers to the questions in said application and all surveys and/or site plans and data attached to and made a part of this application are honest and true to the best of my knowledge and belief. By my signature below, I acknowledge that I have complied with all submittal requirements and that this request package is complete. I further understand that an incomplete application submittal may cause my application to be deferred.
3. Should this application be granted, I understand that any condition(s) imposed upon the granting of this request shall be binding to the owner, his heirs, and successors in title to possession of the subject property.
4. I understand that I must attend all applicable meetings and have been informed of the meeting date(s) and time(s). I understand that if I fail to appear at an applicable meeting, the appropriate Board or Commission may either table or deny the request.
5. I understand that my request if approved does not encumber provision of utility, road or other City infrastructure capacity. The analysis provided by staff of existing levels of service for public facilities and services in the vicinity of the parcel identified in this application is a non-binding analysis, and does not guarantee capacity will be available in the future or encumber/reserve capacity for any period of time.
6. I understand that as the Applicant, I must hold a public meeting prior to the scheduling of any public hearings before the Planning and Zoning Commission or City Council for this item. Notices for this meeting must be sent to all property owners within 500 feet of the subject property.

This matter is subject to quasi-judicial rules of procedure. Interested parties should limit contact with the City Council, Board of Adjustment & Appeals, and Planning & Zoning Commission on this topic to properly noticed public hearings or to written communication to the City Clerk's Office, City of Titusville, P.O. Box 2806, Titusville, FL 32781

/s/_____ 11-3-25

(Signature*) (Date)

* *By entering your name in the "Signature" box above, you are signing this Application electronically. You agree your electronic signature is the legal equivalent of your manual signature on this Application. By entering your name in the "Signature" box above, you consent to be legally bound by this Application's terms and conditions.*

Date Received:_____

Accepted by:_____

Gateway to Nature & Space

SUBMITTAL CHECKLIST

(Development Review Procedures Manual Section 4)

Please fill out the following and submit the documents to the Planning Department electronically. Payment of fees does not ensure a favorable decision. Additional information may include documents initially waived at the pre-application meeting but subsequently determined necessary by staff.

1.	Complete Application and Fees	☐
2.	Warranty Deed	☐
3.	Notarized Owner Authorization Form (If applicable)	☐
4.	Legal Description (from a certified survey in Microsoft Word format)	☐
5.	Certified Survey (sealed and containing permanent reference points as described by Chapter 177, Florida Statutes, with bearings, distances and closures) in electronic PDF format.	☐
6.	Names, addresses and address labels for all property owners within 500 feet of the subject property. *Note: This listing is available from either the Brevard County Property Appraiser's Office or the City of Titusville Planning Department. Current charge for this service is $35.00.*	☐
7.	Additional site-specific data as necessary to describe any impacts to conservation / wetland areas, and other environmentally sensitive resources, including any mitigation efforts to be proposed or required by these regulations.	☐
8.	Traffic counts and Level of Service (LOS) on streets providing access to subject property may be required by the City. A determination of the needed information will be provided by the City prior to submittal of the request.	☐
9.	Pre-Application Meeting Held – Date: Staff in Attendance:	☐
10.	Preliminary School Concurrency Determination Submitted. Contact Brevard County Public Schools, David Lindemann to receive this application for completion. Lindemann.David@BrevardSchools.org	☐
11.	Community Meeting per Ordinance 26-2019 – Tentative meeting date _____	☐

Conceptual Site Plan Checklist

(Development Review Procedures Manual Section 4)

In order to illustrate the proposed use of the property to be rezoned, the applicant is encouraged to submit a conceptual site plan in support of the proposal. If a conceptual site plan or developer's agreement is not provided with the application, the City shall review the application based on the most intensive land use and the maximum intensity and/or density within the zoning district requested within the application. If a conceptual site plan is submitted, the following information shall be provided:

1.	A vicinity map indicating the general location of the abutting streets and utilities.	☐
2.	General information regarding the existing site conditions and physical characteristics, adjacent community facilities and public utilities, and surrounding property conditions.	☐
3.	General description of the proposed development including the total acreage, the proposed number of buildings, or the number of units.	☐
4.	The location of existing buildings and structures including the dimensions.	☐
5.	The means of ingress and egress to the project.	☐
6.	General location and dimension of all existing and proposed parking and/or loading areas.	☐
7.	Information showing approximate location of all structures and major features, setbacks, distance between structures and property lines, floor areas, width of driveways, parking spaces, property or lot lines, percent of property or lot lines, percent of property coverage.	☐

MBV ENGINEERING, INC.
MOIA BOWLES VILLAMIZAR & ASSOCIATES

November 4, 2025

Mr. Brad Parrish
Deputy Community Development Director,
City of Titusville
555 S Washington Avenue
Titusville, FL 32796

Via Electronic Delivery

Subject: Gemini Lakes AKA Royal Oak
Parcel: 2207847
MBV #: 25-1016

Gemini Lakes FLUM Application Amendment

Please allow this letter to serve as narrative for the revision to the previously submitted FLUM application submitted to the City of Titusville.

Our previous request was for a High-Density Land Use, at this time we would like to amend that to Low Density Land Use. The proposed PUD application and Master Plan do not change and are not affected by our amendment.

A copy of the newly signed FLUM application is attached to accompany this cover letter.

Sincerely,



Bruce Moia, P.E., President

1835 20th Street
Vero Beach, FL 32960
772.569.0035
Fax: 772.778.3617

1250 W. Eau Gallie Blvd., Suite L
Melbourne, FL 32935
321.253.1510
Fax: 321.253.0911

806 Delaware Avenue
Ft. Pierce, FL 34950
772.468.9055
Fax: 772.778.3617

Gateway to Nature & Space

APPLICATION FOR REZONING (REZ) / PLANNED DEVELOPMENT (PD) / MASTER PLAN (MP)

Please submit electronically a completed application including to the Planning Department for payment and meeting scheduling. Chapter 34 of the Titusville Land Development Regulations contains the instructions for filing and the required exhibits. INCOMPLETE APPLICATIONS SHALL NOT BE ACCEPTED.

1. Project Information	Project Name Gemini Lakes PD (AKA Royal Oak)		Property Address/Location Description 2150 Country Club Drive, Titusville 32780	
2. Type of Request	Rezoning (REZ) [X]	Planned Development (PD) [X]	Master Plan (MP) [X]	
2. Applicant/ Owner	Name of Applicant/Contact Robert Wolf as manager for Royal Oaks FL LLC		Name of Owner Royal Oaks FL LLC	
	Street Address 4706 18th Avenue		Street Address 4706 18th Avenue	
	City Brooklyn	State NY	City Brooklyn	State NY
	Zip 11204		Zip 11204	
	Telephone # 718-972-7878 Fax #		Telephone # 718-972-7878 Fax #	
	E-Mail Address aklein@readprop.com		E-Mail Address aklein@readprop.com	
3. Applicant Status	[X] Owner	[ ] Tenant	[ ] Agent	[ ] Other
4. Parcel ID	22-35-16-00-6		**Tax Acct.**	2207847
5. Site Size	Acres: +/- 147		Square Feet: +/- 6,490,440	
6. Current Land Uses	Identify the land uses located on-site and adjacent to the subject site (identify "all" uses that touch property on each boundary), such as grocery store, citrus farm, office, single family residential, etc.:			
	SUBJECT SITE:	REC / CONS - Abandoned Golf Course		
	NORTH:	LDR / HDR - Residential		
	SOUTH:	LDR / HDR - Residential		
	EAST:	LDR / HDR - Residential		
	WEST:	LDR / HDR - Residential		

7. Current Future Land Use Designation	Future Land Use: REC / CON Requesting HDR			
8. Existing Zoning District	GU / OR			
9. Proposed Zoning District	PD			
10. Building Status	Existing Building(s) on the site? 4 (to be demolished)	New Buildings Proposed? 164 Townhomes, 148 Villas, 239 SFR detached units. 551 Total		
11. Note any previous rezonings on the site				
12. Check other applications submitted	Conditional Use ☐	Vacation of Easement ☐	Master Plan Approval ☒	Rezoning ☒
	Vacation of Right of Way ☐	Site Plan ☒	Subdivision/ Plat ☒	Other: FLU / Sketch Plat

13. Narrative

The Applicant has submitted the draft PD Ordinance, which includes the Master Development Plan with all the zoning standards that apply to the Project. The PD provides flexibility for this redevelopment of the abandoned golf course. The health, safety and welfare of the general public is protected by the increased stormwater system, the buffering and the new roadways which would not have been possible under traditional zoning. The increased requirement for parks and open space for the PD results in less development than would be allowed in traditional zoning.

The Project "Gemini Lakes" is consistent with the attached Comprehensive Plan Goals, Objectives, Policies and Strategies related to FLUE redevelopment and PUD, as well as the Housing Element, Recreation and Open Space Element, Transportation Element and Property Rights Element. In 2015, the Titusville Community Development Department prepared a Golf Course Redevelopment Report, but the companion 2016 Golf Course Redevelopment Overlay District Ordinance was never adopted by City Council.

The Overall Site Data Exhibit for the Gemini Lakes PUD, along with the Master Plan shows the internal compatibility and design. Infrastructure improvements shall Include modification of the existing stormwater ponds, installation of roadways and sidewalks, drainage pipes and structures, water and sewer services. Within boundaries of the PD, no minimum lot size is required. However, the maximum impervious surface for the entire development of 147.13 acres shall be forty (40%) percent of the project site acreage, excluding the thirty-five (35%) percent open space requirement, or ±38.25 acres of impervious areas. The Open Space / Recreation will be 24.13 acres and the Stormwater will be 43.37 acres. The Proposed Greenway Trail Network and Proposed Community Open Space Exhibit describes the connectivity for the Project and for the community. These trails include many of the beautiful and historic trees that will be preserved.

Gemini Lakes shall not negatively impact the quality of life for any adjacent residential uses as it will enhance property values and not create a substantial increase in noise or traffic, as demonstrated by the submitted traffic analysis. The new roadways and street patterns of the Project shall compliment and be compatible with the existing street system of the surrounding development.

- **All applications shall require Community Development Staff review prior to submittal.**
- All applications shall be submitted to the Planning Department electronically and officially logged in by **end of business day**.
- Tentative hearing dates are scheduled approximately 4 months from the time a completed application is submitted.
- Incomplete applications will not be accepted and will not be considered to be officially submitted until the appropriate information and fees are submitted. Meeting dates for incomplete applications will not be set until all required information and fees are submitted.
- Petitions requiring review from other boards or commissions prior to being forwarded to the Planning and Zoning Commission and City Council are not guaranteed placement on the originally scheduled date(s).
- All meeting agendas will be posted on the City's web site and staff reports for the request can be obtained by contacting the Planning Department at 321-567-3782.

ACKNOWLEDGEMENT

1. I am the owner and/or legal representative of the owner of the property described, which is the subject of this application.
2. All answers to the questions in said application and all surveys and/or site plans and data attached to and made a part of this application are honest and true to the best of my knowledge and belief. By my signature below, I acknowledge that I have complied with all submittal requirements and that this request package is complete. I further understand that an incomplete application submittal may cause my application to be deferred.
3. Should this application be granted, I understand that any condition(s) imposed upon the granting of this request shall be binding to the owner, his heirs, and successors in title to possession of the subject property.
4. I understand that I must attend all applicable meetings and have been informed of the meeting date(s) and time(s). I understand that if I fail to appear at an applicable meeting, the appropriate Board or Commission may either table or deny the request.
5. I understand that my request if approved does not encumber provision of utility, road or other City infrastructure capacity. The analysis provided by staff of existing levels of service for public facilities and services in the vicinity of the parcel identified in this application is a non-binding analysis, and does not guarantee capacity will be available in the future or encumber/reserve capacity for any period of time.
6. I understand that as the Applicant, I must hold a public meeting prior to the scheduling of any public hearings before the Planning and Zoning Commission or City Council for this item. Notices for this meeting must be sent to all property owners within 500 feet of the subject property.

This matter is subject to quasi-judicial rules of procedure. Interested parties should limit contact with the City Council, Board of Adjustment & Appeals, and Planning & Zoning Commission on this topic to properly noticed public hearings or to written communication to the City Clerk's Office, City of Titusville, P.O. Box 2806, Titusville, FL 32781.

/s/_____ 02-18-2025

(Signature*) (Date)

** By entering your name in the "Signature" box above, you are signing this Application electronically. You agree your electronic signature is the legal equivalent of your manual signature on this Application. By entering your name in the "Signature" box above, you consent to be legally bound by this Application's terms and conditions.*

FOR OFFICE USE ONLY

DATE RECEIVED: _____

PRE-APPLICATION MEETING DATE: _____

ACCEPTED BY: _____

PLANNING AND ZONING COMMISSION DATE & TIME: _____

CITY COUNCIL PUBLIC HEARING DATE & TIME: _____

CASE NUMBER:

Gateway to Nature & Space

SUBMITTAL CHECKLIST

(Development Review Procedures Manual Section 5 and 6)

Please fill out the following and submit the documents to the Planning Department electronically. Payment of fees does not ensure a favorable decision. Additional information may include documents initially waived at the pre-application meeting but subsequently determined necessary by staff.

1.	Complete Application and Fees	X
2.	Warranty Deed	X
3.	Notarized Owner Authorization Form (If applicable)	X
4.	Legal Description (from a certified survey)	X
5.	Certified Survey (sealed and containing permanent reference points as described by Chapter 177, Florida Statutes, with bearings, distances and closures) in electronic PDF format	X
6.	Names, addresses and address labels for all property owners within 500 feet of the subject property. *Note: This listing is available from either the Brevard County Property Appraiser's Office or the City of Titusville Planning Department. Current charge for this service is $35.00.*	X
7.	For **Planned Development and Master Plan** applications, a conceptual site plan (minimum 24" x 36") in electronic PDF format. See table below for requirements.	X
8.	For **Master Plan** applications, a Unified Control Agreement pursuant to Sec. 34-54 of the Land Development Regulations.	X
9.	Pre-Application Meeting Date: 01-21-2025 Staff in Attendance:	X
10.	Community Meeting per Ordinance 26-2019 – Tentative meeting date _____	X

Conceptual Site Plan Checklist

(Development Review Procedures Manual Section 5 and 6)

THE CONCEPTUAL SITE PLAN SHALL INCLUDE THE FOLLOWING:

1.	All information required for a sketch plat. (if applicable)	X
2.	Development plan identifying the location and acreage of each component and district of the project, including the location and placement of proposed land uses by type and density, density, layout of lots, open space designation, location of landscape buffer areas required by these regulations, recreational facilities, commercial uses, other permitted uses, off-street parking and loading locations and refuse collection locations.	X
3.	Development plans showing access and buffer areas (both external and internal) to the development and how pedestrian and other non-motoring travel will be safely integrated.	X
4.	Tabulations of acreage devoted to each use and total gross acreage of the project. These tabulations shall include acreage totals for each use, open space designations, recreation facilities, streets, parks, schools and other uses. Within these tabulations, information relative to the total number and type of residential units, the residential density for each type of unit, and the overall residential density of the project shall be provided.	X
5.	An environmental component, including maps and analyses, which determine the effect of the proposed development upon the conservation/preservation of native habitat, wildlife, floodplains, recreation advantages wetlands and other natural resources.	X
6.	Documentation as to the impact of the proposed development on the levels of service for roads, potable water, sanitary sewer, solid waste drainage, parks and any other public facilities and services. (Preliminary Concurrency Analysis)	X
7.	A stormwater management plan with sufficient detail included to demonstrate that the proposed development can comply with the requirements of the Land Development Regulations.	X
8.	The location of existing buildings and structures including the dimensions.	X

ARTICLE I. PLANNED DEVELOPMENT (PD)

Sec. 33-1. Purpose and intent.

The Planned Development (PD) is an alternative to standard zoning districts in which the landowner and City Council negotiate the zoning standards that will apply to a specific parcel of land such that the resulting development will be of superior quality while protecting the health, safety and welfare of the general public. The PD will promote efficient and economical land use, an improved level of amenities, appropriate and harmonious variety in physical development, creative design, improved living environments, and protection of existing and future City development. Under this development process, land development is planned as an entity under a Master Development Plan and overall density of the site remains constant while dwelling units are transferred throughout the site and developed in clusters, tracts, pods, etc. Additionally, greater amounts of land are allocated for open space, a mixture and variety of housing types and land use are provided for and natural elements are preserved. Planned Developments may include a mixture of uses, but such uses must conform to and implement the Comprehensive Plan. The district shall be consistent with the Future Land Use category in which the property is located.

Sec. 33-2. Applicability.

(a) The PD agreement shall include a Master Development Plan and shall comprehensively set forth all of the zoning standards that shall apply to the subject parcel of land and shall be approved pursuant to the Master Plan and Rezoning procedures specified in Chapter 34 Procedures, Article II Legislative and Quasi-judicial.

(b) All PD (including PUD and PUDZ) agreements adopted prior to the effective date of this ordinance shall continue to be governed by the terms of such agreements. All PD zoning designations shall be indicated on the Zoning Atlas.

(c) Where a Planned Development is located in an overlay district, development shall also be in accordance with the requirements of those districts. Should a conflict arise between requirements contained in the aforementioned overlay zones, the stricter requirements shall prevail.

Sec. 33-3. Permitted uses.

(a) All uses proposed within a PD shall be specified in the application for rezoning to the PD Zoning District. The applicant shall identify the specific uses in the application. The uses shall be included in the PD rezoning ordinance. Upon approval by City Council, buildings or structures or land or water may be used only for the following purposes. Light Industrial Services and Warehousing (M-1), commercial, convenience stores, and health studios and spas shall be permitted subject to City Council determination at the time of PD approval that such uses are compatible with the existing and future development of adjacent and nearby lands within the PD. All uses permitted in a planned development shall be consistent with the comprehensive land use plan designation for the subject site, including densities and intensities of use. A PD may include, and shall be limited to, the following permitted uses:

Planned Development	Consistency	Consistent with the Following Minimum Standards
Residential Sec. 33-3(a)(1)		Secs. 33-4—33-6

Commercial Sec. 33-3(a)(2)	The PD must be consistent with the existing comprehensive plan land use designation	Secs. 33-4—33-7
Light Industrial Sec. 33-3(a)(3)		Secs. 33-4—33-6
Mixed-use Sec. 33-3(a)(1), (2)		Secs. 33-4—33-7
Mixed-use Sec. 33-3(a)(1)—(3)		Secs. 33-4—33-6

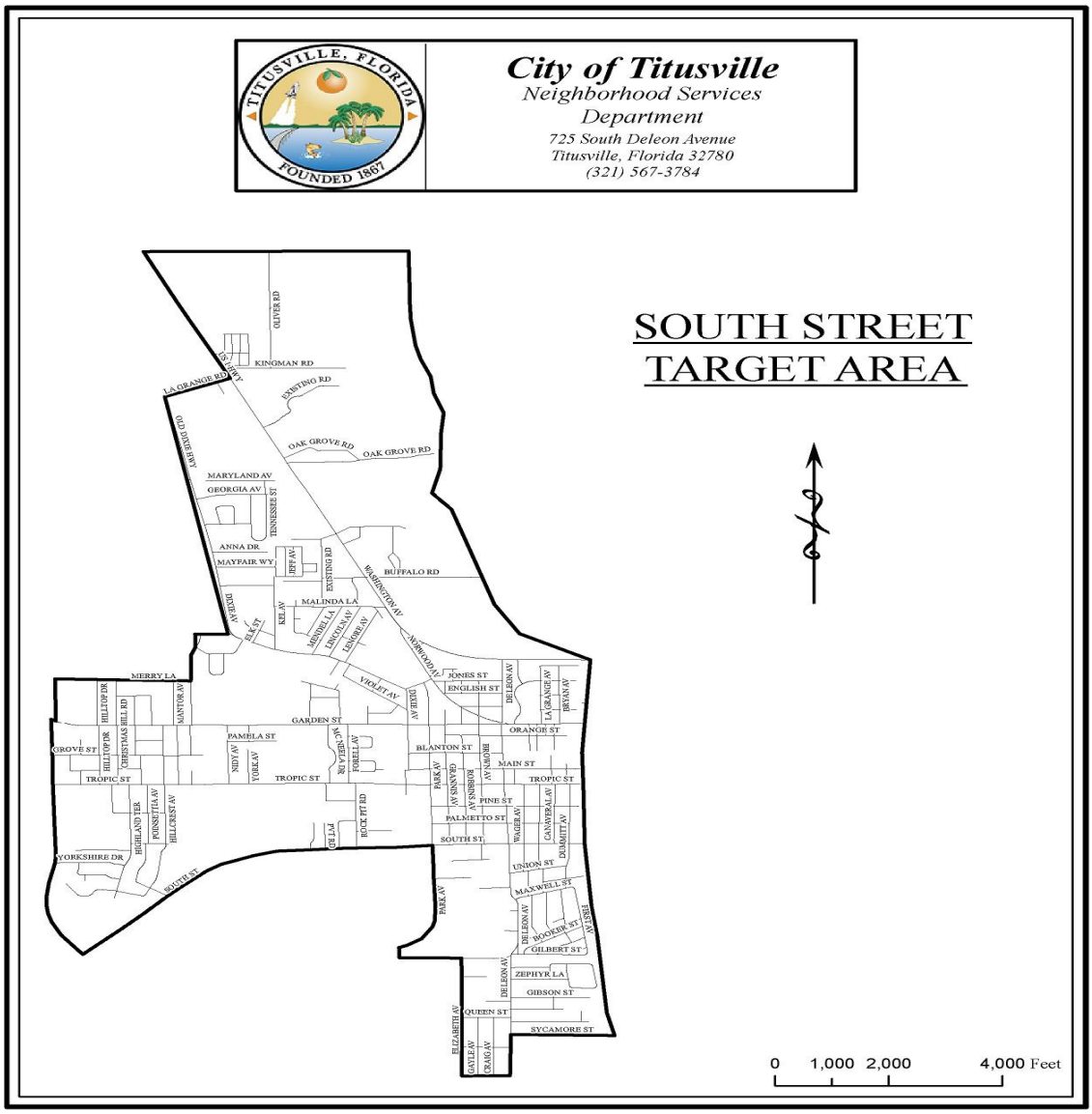
(1) Residential may include single-family detached dwellings, patio homes, townhouses, multifamily, family day care homes and neighborhood group homes, or combinations thereof, consistent with the residential uses established in Chapter 28 Zoning, Article V, Use Standards.

(2) Commercial uses consistent with the commercial uses established in Chapter 28, Zoning, Article V, Use standards.

(3) Light Industrial [uses] consistent with the Light Industrial Services and Warehousing (M-1) zoning district established in Chapter 28, Zoning, Article V, Use standards.

Sec. 33-4. Minimum land area required for a planned development.

(a) The minimum land area shall be five (5) acres. However, a two-acre minimum site size will be allowed if the PD is located in the southern area of the Community Development Block Grant Action Plan South Street Target Area, generally bounded by South Street to the north, Harrison Street to the south, Barna Avenue to the west, and F.E.C. Railroad and Deleon Avenue to the east, and as shown on the attached [following] map:



Sec. 33-5. Planned Development Standards.

(a) *Standards for PD zoning.*

(1) Applicants for PD zoning shall have the burden of demonstrating that the proposed PD zoning standards will protect the health, safety and welfare of the general public to a greater extent than would have been possible pursuant to the standard zoning regulations set forth in this article.

(2) A Planned Development shall be so located with respect to arterial streets, collector streets and other transportation facilities, as to provide direct access to such PD without creating or generating traffic along local streets in residential areas or clusters outside the PD.

(3) Planned Developments shall be so located and developed in relation to sanitary sewer and potable water lines, storm and surface drainage systems and other utility systems and installations that neither extensions nor enlargement of such systems will be required in manner,

form, location, degree, scale or timing resulting in higher public costs or earlier inclusion of public costs then would development in forms generally permitted under existing zoning in the area. The developer shall confirm public water and sewerage disposal facilities by written agreement with the City and/or other governmental agency or private utility firm acceptable to the City. The developer shall provide all necessary stormwater management, street access, paved streets, parking facilities, fire hydrants and street lighting making provisions for service and access with adjoining properties under other ownerships. Further, where existing streets or traffic control devices are affected by the development, the developer shall provide the necessary changes or additions, as may be required by the City.

(4) The developer shall place all utility lines underground, including all telephone lines and service lateral electrical distribution lines serving individual installations. Other high voltage electrical lines may be placed underground or on concrete poles provided the poles are within street right-of-way and have provisions for street lighting. Large transformers shall be placed on the ground and be contained in pad mounts, enclosures, or vaults. Where enclosures or vaults are used, the construction shall be compatible with the primary building design. Landscaping with shrubs and plants shall be provided to screen the pad mount transformers.

(5) In no instance shall industrial uses be located abutting and/or adjacent to any residential districts and/or uses. Residential and industrial districts shall be required to be separated by another district, landscaped buffer area or combination of both with a minimum separation from boundary to boundary between the residential and industrial districts of five hundred (500) feet.

(b) *Access.* Every dwelling unit or other use permitted in a PD, shall have access to a public street, either directly or via approved private roads dedicated for public or private use guaranteeing access. Permitted uses in a PD are not required to front on a dedicated public road.

(1) The right-of-way and pavement width for roadways shall be consistent with the City's Land Development Regulations and all primary and secondary impacts shall be subject to concurrency as provided in the City's Comprehensive Plan and the concurrency requirements set forth per Chapter 30 Development Standards, Article IV Concurrency of the Land Development Regulations.

(2) Dedicated streets and roadways shall be subject to all design criteria of the state, county, or City dependent upon which jurisdiction maintains control of the roadway.

(c) *Parks and Open Space.*

(1) The minimum percentage of parks and open space required for a PD is thirty-five (35) percent of the total gross acreage of the PD. The open space shall meet the minimum standards set forth per Chapter 30, Development standards, Article III, Improvements, Division 3, Open space.

(2) All parks and open space shall be preserved for its intended purpose as expressed in the Master Plan. The developer shall choose a method of administering open space as specified in Chapter 30, Development standards, Article I, General provisions, Division 3, Operations and maintenance.

Sec. 33-6. Internal yard and bulk requirements.

(a) The following shall be required for development in a PD:

(1) Minimum lot size. Within the boundaries of the PD, no minimum lot size shall be required. In an Area of Critical Concern, the maximum impervious surface for the entire development area shall be forty (40) percent of the site, excluding the thirty-five (35) percent open space requirement, public rights-of-way, wet retention areas and wetlands. In the case of residential subdivisions,

the total amount of maximum impervious surface for each lot will be noted individually on the final plat.

(2) Frontage. In no instance shall any one (1) building extend more than three hundred (300) feet in length without being separated by a break of at least twenty (20) feet, or a difference in facade treatments.

(3) Minimum living areas.

a. Single-family: Nine hundred (900) square feet.

b. Town homes: Eight hundred (800) square feet.

c. Condominiums: Eight hundred (800) square feet.

d. Multifamily apartments: Six hundred (600) square feet.

e. Tiny house: Three hundred fifty (350) square feet to six hundred (600) square feet as a cottage home development.

(4) Maximum building height. Building height must comply with any design standards or other plans or policies provided for in the area of the development, or must be compatible with the surrounding existing development patterns in the area. In all instances, the maximum building height shall be fifty (50) feet.

(5) Dedication and construction of public rights-of-way. Upon recommendation from the Administrator, City Council may additionally require a time schedule and appropriate surety for dedication and construction of public rights-of-way at time of need within and surrounding the proposed PD.

(6) Maximum residential density and floor area ratio shall not exceed the maximums of the designated Comprehensive Plan future land use category.

(7) A cottage home development shall include a minimum of five (5) residential dwelling units with front doors facing and abutting a centralized common area of at least six thousand five hundred (6,500) square feet. The centralized common area and any required landscape yards may count toward any minimum open space requirement. Cottage home developments shall be consistent with the standards described in Chapter 28, Article V, Division 3 for tiny house or tiny house on wheels.

(Ord. No. 4-2021, § 5, 2-9-21)

Sec. 33-7. Exemptions.

Reserved.

Sec. 33-8. Review criteria.

(a) In evaluation and consideration of an application for rezoning to the Planned Development (PD) District, the City shall consider the following criteria:

(1) Consistency with the Comprehensive Plan and any other small area plan, design standards, or visioning plan that applies to the area in which the development is located.

(2) Internal Compatibility and Design:

a. The streetscape pattern shall provide for pedestrian and bicycle pathways, as well as an interesting vista that includes street trees, sidewalk treatments, and lighting.

b. The overall development shall make use of existing natural features and interesting topography.

c. In commercial and residential PDs, a variety of residential designs and commercial spaces shall be included, and the mix of land uses should be designed to be compatible and complimentary.

d. Building designs shall provide for architectural styles that are compatible with surrounding development or design standards that apply to the area.

e. Open space shall provide for quality recreational amenities including fountains and passive recreational amenities, such as benches and lighting.

f. Projects in existing urban contexts shall provide urban amenities, such as structured automobile parking, amenities for bicycle users, and public meeting areas.

(3) External Compatibility:

a. The proposed development shall not negatively impact the quality of life for any adjacent residential uses. Negative impacts can include a decrease in property values and any substantial increase in noise or traffic. Any traffic impacts shall be demonstrated with a traffic analysis and the developer, in accordance with the Comprehensive Plan, shall mitigate the impacts.

b. The proposed development shall not negatively impact any adjacent conservation lands.

c. The proposed development shall provide bikeway and trails to be consistent and compatible with the Brevard Metropolitan Planning Organization's overall Greenways and Trails program.

d. Access and street patterns of the development shall compliment and be compatible with the existing street system of the surrounding development.

e. Commercial and industrial uses within the development shall be adequately buffered from any adjacent residential uses.

Sec. 33-9. Procedure for securing approval of a Planned Development.

(a) A formal pre-application meeting shall be held with the Planning Department staff. At this meeting, discussion should take place on the project's concept, project compliance with the City's policies and ordinances, identification of any development issues for possible resolution and a tentative schedule of submittal deadlines and review dates.

(b) Submission of plans and action thereon.

(1) Procedure for securing approval of a Planned Development shall follow the Master Plan approval process for a rezoning set forth per Chapter 34, Procedures, Article II, Legislative and Quasi-judicial.

(2) The development plan of the Planned Development shall meet the requirements of professional land planning services; promote public health, safety and general welfare; provide adequate light, air, privacy and convenience, conserve the values of surrounding property; and protect against nuisances and hazards.

(3) Development plans for all master plans shall be submitted in accordance with the City's general site plan and/or subdivision development plan requirements contained in Chapter 30, Development Standards and Chapter 34, Procedures of this Code [the Land Development Regulations].

(4) The applicant shall submit a detailed textual statement containing all proposed uses within the Planned Development, including all restrictions, covenants, limitations, hours of operation, rules, regulations and such other data and information as the City shall require, which the applicant intends to place on the property. Upon approval by the City Council, this textual statement shall become a part of the City's zoning regulations for that Planned Development. After final approval of the Planned Development, including the textual statement, any amendment to the provisions of the textual statement must be made in accordance with the Master Plan Procedures specified in Chapter 34, Procedures of the Land Development Regulations.

(c) Time periods and extensions thereof.

(1) Construction shall begin within a period of five (5) years, beginning with the enactment date of the ordinance creating the Planned Development. Failure to begin construction within this five-year period shall automatically cause the ordinance establishing the Planned Development to be rescinded, unless a request for an extension of time is granted.

(2) An application for an extension of the five-year period shall be made to the City Council and shall be accompanied by such evidence as shall be necessary to show substantial need and shall be made before the expiration of the five-year period. In its sole discretion, the City Council may, by resolution, grant the extension; provided, however, that the petitioner shall have no vested right to receive such an extension.

(3) After a Planned Development has been approved by the City Council, no substantial modification to the approved plan of development shall be made unless submitted to the City Council and approved by the City Council.

(4) If the City Council determines that the plan is abandoned, or if construction is terminated after the completion of any stage, or if construction is abandoned or discontinued for a period of one (1) year, or if there is evidence that further development is not contemplated, the City Council may rescind or modify the ordinance establishing the Planned Development.

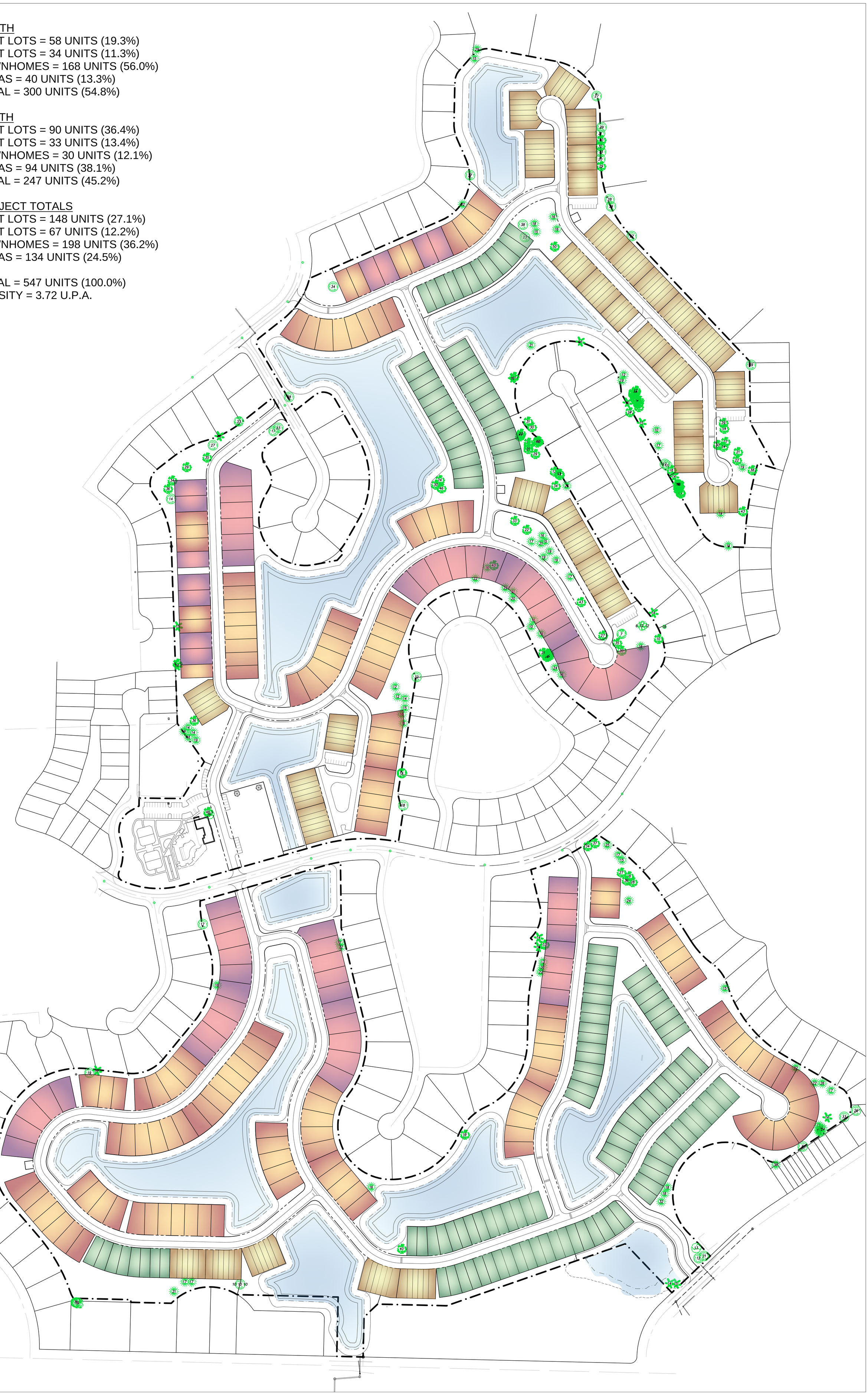
Secs. 33-10—33-20. Reserved.

NORTH
50-FT LOTS = 58 UNITS (19.3%)
60-FT LOTS = 34 UNITS (11.3%)
TOWNHOMES = 168 UNITS (56.0%)
VILLAS = 40 UNITS (13.3%)
TOTAL = 300 UNITS (54.8%)

SOUTH
50-FT LOTS = 90 UNITS (36.4%)
60-FT LOTS = 33 UNITS (13.4%)
TOWNHOMES = 30 UNITS (12.1%)
VILLAS = 94 UNITS (38.1%)
TOTAL = 247 UNITS (45.2%)

PROJECT TOTALS
50-FT LOTS = 148 UNITS (27.1%)
60-FT LOTS = 67 UNITS (12.2%)
TOWNHOMES = 198 UNITS (36.2%)
VILLAS = 134 UNITS (24.5%)

TOTAL = 547 UNITS (100.0%)
DENSITY = 3.72 U.P.A.



MBV ENGINEERING, INC.
CIVIL ■ STRUCTURAL ■ SURVEYING ■ ENVIRONMENTAL
Vero Beach 772.569.0035 Melbourne 321.253.1510 Ft. Pierce 772.468.9055

CITIZEN PARTICIPATION REPORT

Gemini Lakes (AKA Royal Oak Golf Club)

MBV PROJECT #: 25-1016

Because of the deep concerns within the community regarding this development, two voluntary public meetings were held for this project. At the first meeting, no concept plan was prepared. We listened to all the comments and suggestions from the community, answered what we could and took the concerns to our development team. The second meeting included a concept plan based on the input received in the first meeting, which we believe addressed all the concerns that were brought forward.

The first meeting was held on January 11, 2024 at La Cita Country Club. There were 133 neighbors that attended the meeting.

- **Exhibit A** is the postcard invitation that was sent to all residents within a 500 ft. radius of the development.
- **Exhibit B** is a copy of the sign in sheet for the meeting.
- **Exhibit C** is a copy of the questions and concerns brought forward by the community.

The second meeting was held on April 29, 2024 at the Grove Church, there were 129 neighbors who attended this meeting.

- **Exhibit D** is a copy of the postcard invitation for the January 11th meeting, again sent to all residents within a 500 ft. radius of the development.
- **Exhibit E** is a copy of the sign in sheet for the meeting.
- **Exhibit F** is a copy of the presentation to the Community, that included the concept development plans and addressed the concerns in the first meeting.

The Radius Package Mailing List that was provided by Brevard County, is attached as **Exhibit G.**

MBV
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CIVIL ■ STRUCTURAL ■ SURVEYING ■ ENVIRONMENTAL
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It is always our goal within these meetings to help alleviate the concerns of the community, to establish a working relationship with them and to incorporate all possible suggestions that they had. It is well known that the surrounding community has been adamantly against any development on this parcel.

As a development team, we are willing to listen and to incorporate changes to our plans as suggested by the community whenever possible. We conveyed to them that the development, as a result of the requested zoning changes, will upgrade the stormwater system to current standards and accommodate existing drainage from the surroundings; increase the perimeter landscape buffering; create pedestrian connection to the existing schools; establish new roadways; and provide ample open spaces for passive and active recreation. Our Greenway Trail will save many of the beautiful historic trees on the property and provide natural recreational areas that will be shared with the neighboring community. It is also our belief that this development will increase neighboring property values.

It is our belief that this proposed development will be an asset for both the neighboring community and the City of Titusville and hope that the City agrees with us.

Sincerely,



Bruce A. Moia, P.E., President

1835 20th Street
Vero Beach, FL 32960
772.569.0035
Fax: 772.778.3617

1250 W. Eau Gallie Blvd., Suite H
Melbourne, FL 32935
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Fax: 321.253.0911

806 Delaware Avenue
Ft. Pierce, FL 34950
772.468.9055
Fax: 772.778.3617

901 Martin Downs Blvd., Suite 203
Palm City, FL 34990
772.426.9959
Fax: 772.778.3617

EXHIBIT A

Post Card Front

ROYAL OAKS GOLF COURSE REDEVELOPMENT COMMUNITY ENGAGEMENT MEETING

Dear Neighbor,

Kolter Land, a division of The Kolter Group, is working with the owners of the closed and former Royal Oaks Golf Course to enhance and re-design the prior plan for a more compatible master-planned community of new single-family homes, garden-villas, and townhomes.

Kolter and their design team invites you to join them on January 11, 2024 for a community engagement meeting to learn more about Kolter and to discuss this new community.

We intend to gather information at the meeting that can be utilized in the plan before moving forward with any future meetings or approvals.

The Kolter Group LLC, is a private investment firm focused on real estate development and investment, based in Delray Beach, FL. The Kolter Group develops first-class real estate projects throughout the southeastern United States (including Florida, Georgia, South Carolina, North Carolina, and Tennessee). Additional information can be found at www.kolter.com or www.kolterland.com

Kolter's planning and design team looks forward to answering your questions and engaging in thoughtful conversations.

We look forward to meeting with you!

Josh Long, AICP
Kelly Hyvonen, AICP

Please see reverse side for meeting details and contact information.
RSVP requested.

Post Card Back

ROYAL OAKS GOLF COURSE REDEVELOPMENT COMMUNITY ENGAGEMENT MEETING

Thursday, January 11, 2024
6:00 - 7:30pm

La Cita Country Club
777 Country Club Drive
Titusville, FL 32780

Please RSVP and contact us for more information:

Josh Long, AICP
VP of Planning & Entitlements
Kolter Land, LLC
Delray Beach, FL
jlong@kolter.com
561-762-4077 cell

Kelly Hyvonen, AICP
Principal Planner
Land Development Strategies, LLC
Melbourne, FL
kelly.hyvonen@gmail.com
612-710-9296 cell

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Bradenton FL 34211-1234

EXHIBIT B

Royal Oaks Golf Course Redevelopment Sign-In Sheet

Meeting Date: January 11, 2024

Name:	Address:	E-mail Address:
PATTICIA JAURASI	3530 TRAVIS PL	ptaurasi@bellsouth.net
Dave Taurasi	3530 TRAVIS PL	dtaurasi@msn.com
TONY SIMON	3590 TRAVIS PL.	SIMONT@CFL.RR.COM.
James & Lisa Landen	3355 Treetop Dr	lisac@paradisepalm.com
JILL STIRLING	3514 NELSON PLACE	jstirling@cfl.rr.com
SARITA SACHDEV	3504 TRAVIS PL Titusville	SSACHDEV@AOL.COM.
William Balint	2756 Demaret Dr. Titusville	
Marc Moore	3340 ZACHARIAS PL	007xmoore@gmail.com
Robin Moore	Same as	007remoore@gmail.com
Milton Rack	1890 Knox McRae Dr. F209	MSRack@Yahoo.com
Bill Warner	1880 Knox McRae Dr	Wm Warner Jr @ Yahoo
DON RITTER	2945 LA CITA LANE	CRITTER44@CFL.RR.COM

Royal Oaks Golf Course Redevelopment Sign-In Sheet

Meeting Date: January 11, 2024

Name:	Address:	E-mail Address:
Kathleen E Flynn	2805 Player Ct on 8th hole	Kateflynn2000@hotmail.com
DENNIS BOLEN	3605 TRAVIS R	dbolen1@CFL.RR.COM
TOM	SQUIRE DR	—
MAY CHAVEZ	MUIRFIELD Dr	MCHAVEZMC70@GMAIL.COM
Gail Hudson	Travis Place	GMH7239@aol.com
Pauline Nelson	Travis Pl.	321-267-5188
Denis Dalton	Arizona	623-910-5007
Sandra Mance	Royal Oak	N/A
LORI LAPOINT	2520 Royal Oak Titusville	954-605.5304
Joey Sawyer.	850 COUNTRY CLUB DR.	514-742-4797.
KAY PRUITT	2830 ROYAL OAK DR	321-307-1336
EARL JOHNSON	3135 SAUNDERS PL	321-544-7578

Royal Oaks Golf Course Redevelopment Sign-In Sheet

Meeting Date: January 11, 2024

Name:	Address:	E-mail Address:
Rudolph Canfield	2805 Player Ct	rudycanfield@hotmail.com
NEIL RAGONE	2835 ROYAL OAK DR	NRAGONE@CFLNN.COM
TANNER, CHARLES	3294 MOE NORMAN CT	CHARLES.E.TANNER@GMAIL
Kim Lavoie	6665 Lakewood LN	kaelan31@yahoo.com
Janet McCarthy	3590 Nicklaus Dr	jcn33166@bellsouth.net
Ed McCarthy	3590 Nicklaus Dr	mac33166@bellsouth.net
Bill Queen	3085 Sandpiper	BQueenWC@earthlink.net
BRAD LYTLE	3631 ROYAL OAK DR	bradlytle@gmail.com
Diane McQueen	3180 Dornoch Dr	DJMCP@BELLSOUTH.NET
Maxine McDougall	3180 Dornoch Dr.	N/A 813-743-5398
Cubalit Clevon Holmes	3075 Saunders Pl	cbholmes666@gmail.com
MICHAEL RUDZIAK	1880 KNOX McRAE DR	MRUDZIAK@NETZERO.NET

Royal Oaks Golf Course Redevelopment Sign-In Sheet

Meeting Date: January 11, 2024

Name:	Address:	E-mail Address:
Karen Schlesinger	3399 Royal Oak Dr	artnuts@msn.com
Al Koller	2645 Royal Oak	AlKoller@gmail.com
Stephen Lavoie	665 Lakewood Ln	WTFAM@live.com
Zona Kerr	3501 Travis Pl.	zrbsfamily@yahoo.com
Pete Sommers	3027 Finsterwald Dr	PTSommers07@icloud.com
Linda Lampagnano	2234 country club Dr	mrsvlampo31@gmail.com
[illegible]	3535 Palmer Dr.	2016toby@gmail.com
Sarah Hanson	1850 Knox McRae Dr	SARAHP HANSON@YAHOO.COM
Dave Raff	1880 Knox McRae Dr D210	RGRAFF68@AOL.com
Ann Marie Seidler	1880 Knox McRae Dr 116E	annmarieseidler@gmail.com
Messer	2485 Keiser Ct.	aptabin@gmail.com
Vickie Conklin	2920 Royal Oak Dr	vickiejc@hotmail.com

Royal Oaks Golf Course Redevelopment Sign-In Sheet

Meeting Date: January 11, 2024

Name:	Address:	E-mail Address:
Sarah Whitney	3274 Moe Norman Ct	hdudani-13@yahoo.com
Kathleen O'Rourke	3525 Palmer Drive	Fbkathleen@gmail.com
JoAnne Daunter	1890 Knox McRae Unit 205	joannedjdaunter@sbcglobal.net
ROGER SCHUETERS	1880 KNOX MCRAE	RONAS@TDS.NET
Left Tom Mosier		lisa.mosierfl@gmail.com
Joe L Hudson	1890 Knox McRae Unit 101F	Joehudson44@ICloud.com
Linda L Henderson	1890 Knox McRae Unit 107 F	Lhende4133@aol.com
Dee Campbell	3734 Renard Dr.	gincee@hotmail.com
Jim & Judy Smith	3492 Trevino Cir	judyjahsmith@gmail
Hunter Wiltsie	2565 Royal Oak Dr.	wiltsiehunter@gmail.com
MICHAEL BROWNING	3470 TREVINO CIR TITUSVILLE	Mbrowning225@gmail
SCOTT & KATHY BREDE	3191 FINSTERWALD TITUSVILLE	F16SKYBUM@AOL.COM

Royal Oaks Golf Course Redevelopment Sign-In Sheet

Meeting Date: January 11, 2024

Name:	Address:	E-mail Address:
Paula Clute	104B 32780 Knox McRae Dr.	PaulaORTO@gmail.com
David Kelley	3524 Royal Oak Drive	jdkelley1@aol.com
Yash Sachder	3504 Polaris Place	YSachder@AOL.com
Linda Siano		
Nancy Wilson	2540 Royal Oak Circle	NSW1966@YAHOO.com
Shirley Panning	3570 Nuckles	shirley.panning@gmail.com
Billy Specht	3230 S. Cosper PL	bspecht@att.Net
ELIZABETH MILLER	3447 TREVINO	SCOTSBELLS@YAHOO.COM
MARILYN HUNT	3680 BARNA AVE a113	MCHUNT200@AOL.com
P.J. & JACKIE ZACKEL	1632 LITTLER DR	jtz1632@yahoo.com
Pat Service	3680 Barna Ave	martin.service01@hotmail.com
Julia Bumgarner	1608 Wall Dr.	albumgar@AOL.com

Royal Oaks Golf Course Redevelopment Sign-In Sheet

Meeting Date: January 11, 2024

Name:	Address:	E-mail Address:
Roddy Campbell	2734 D'Amato Dr Titusville 32780	RoDTober@aol.com
Evelyn FRENSSEN	3477 Trevino 32780	MATTI5151@gmail.
Paula Dalbo	2565 Royal Oak	407-683-7086
NEIL & DAWN MOORE	3520 NELSON PL.	INTERCEPTOR8724@YAHOO.COM.
MAURA & SHELLY SKIREK		
RICK & DIANNE BARTEK	1602 TARNESA DRIVE	RICINNE@MSN.COM
BRIENNE ROBERTSON	2180 COUNTRY CLUB	briennerobertson@gmail.com
Robert + Brenda Wallis	2828 Country Club	
Tracey & OttmAR Thiele	2357 ARmour Ct 1640 Ford Rd, Mims	traceythiele@earthLink.NET
Daniel Brand	8670 Bonaire Ave Titusville, FL	dub175440@gmail.com
MORGAN DENMAN & TED MARTIN	3115 Royal Oak Dr	hello@morgandenman.com
Patti Patch	3129 S Casper PL	
JAMES SNELL	3096 FINSBERRY RD JVL	JIM.JANET.SNELL@ICLOUD.COM

Royal Oaks Golf Course Redevelopment Sign-In Sheet

Meeting Date: January 11, 2024

Name:	Address:	E-mail Address:
Sandra Valenkrie	3100 Finsterwald Lane 32780	possyfoot30@yahoo.com
LIZ PARKER	3418 Trevino Ln Titusville	liz@justforthecause.com
Carl & Ramona Streetman	2630 Hutchison Place Titusville	Crstreetman@msn.com
Ala Lori Sprayberry	1816 Country Club Dr. Titusville	asprayberry@icloud.com
Patricia Cattell	3085 Finsterwald Tr	
Ed Fell	3590 Muirfield Dr	gebertx@yahoo.com
David Clark	1524 Wall Dr	opusfla@gmail.com
CAROL LEE	3120 FINSTERWALT	CLEE9@CFL.RR.COM
Lori Cardone	1748 Guldahl Dr	Lacardone@gmail.com
HELEN CASZ	3400 Royal Oak Dr.	
MIKE MAGNA	3520 NICKLAUS DR	MIKEMAGNA4931@GMAIL.COM
Linda Snowden	1517 Wall Drive	LNDSNOWDEN@yahoo.com

Royal Oaks Golf Course Redevelopment Sign-In Sheet

Meeting Date: January 11, 2024

Name:	Address:	E-mail Address:
Rob Vieira	1905 Country Club Dr. Titusville, FL 32780	mrrobrocks@yahoo.com
DON AVANZATO	2606 Mangrum Pl T'Ville 32780	deanjal2@gmail.com
Kenneth Tauer	3680 Barna Ave #218 Titusville	KTauer65@MSN.com
Wenant Herbert & Diana	1860 Knox McRae Titusville	dwenant@yahoo.com
John & Dawn Acklin	3490 Trevino Cr. Titusville	Dawnacklin@yahoo.com
Patty Fishman	1602 Country Club DR Titusville	PAFishman83@yahoo
Brian Moore Marilyn Barbe	1890 Knox McRae Titusville	Bmoore6161@Hotmail.com
Steve Weaver	3501 Nelson Pl.	stevenw@cfl.rr.com
Rick Tenedini	3641 Royal Oak Dr	rickteefit@gmail
Barbara Harper	2571 Indian Hill	bharper4@aol.com

Royal Oaks Golf Course Redevelopment Sign-In Sheet

Meeting Date: January 11, 2024

Name:	Address:	E-mail Address:
Nathan & Lisa Taylor	2351 Harpe Ct.	natet@cfl.rr.com
FRED BURGESS	3482 TREVINO CIRCLE	FASTFRED33@ [illegible]
Albert Garst	1880 Knob McRae Dr Titusville FL	2bsolut2lbert17@gmail.com
Ingrid Patterson	3442 Trevino Cir. TVL, FL 32780	
Ann Mambella	3680 BARNA	annmambella@gmail.com
Jennifer Horner	2221 Country Club Dr.	jhorner002@gmail.com
DEBORAH A. BIELLING	3080 DEMARET DR	d.bielling@yahoo.com
Seth Adams	3525 Nelson Place	couponhandy@gmail.com
RON REYNOLDS CHERYL REYNOLDS	3594 NICKLAUS DRIVE	CUETEME1@GMAIL.COM
Carolina Alvarez	3680 Barna Ave Unit #224	carolinaAlvarez5@yahoo.com
Megan	—	✓

Royal Oaks Golf Course Redevelopment Sign-In Sheet

Meeting Date: January 11, 2024

Name:	Address:	E-mail Address:
Cheryl Gueck Walter Paddick	1730 Goldah Dr.	Cgueni@Yahoo
Penni Geber	1900 Knox McRae	geber penni @ yahoo. com
Ron Landry	3509 Nelson PL	RONL96@Netscape.Net
Fred Reynolds	3203 Mac Norman	Kgig5@aol.com
Sheila + Andrew Tischler	3264 Mac Norman ct	Sheilatischler@gmail
Mark Puckett	3160 Saunders Place	mpuck4@aol.com
Rick Morris & Jeanie Morris	1608 Wall Dr.	RHM383@GMAIL.COM
Kim Panther	1418 Ranson Dr.	Kacisunset@yahoo.com
Roger Hoffman		
Joey Myers	1905 Country Club Dr	—
Sean + Manning IRADA	2705 ROYAL OAK	Manning626@gmail.com

Royal Oaks Golf Course Redevelopment Sign-In Sheet

Meeting Date: January 11, 2024

Name:	Address:	E-mail Address:
DALE TANDERT LISA TANDERT	2630 Liberty Ave	Pcruz@cfl.rr.com
John & Christine Merz	3680 Dana Ct	systemsdlot@gmail.com
Carrie Jones	3117 S. Casper Pl	blingby carrie@gmail.com
Sarah Stoeckel		
Mark Gibson	2326 SNEAD CT	MRKGBSN2326@gmail.com

EXHIBIT C

1. You state no apartments or low income housing, Will there be single family homes according to current zoning? (i.e. 1600SQ minimum, 1/4 acre minimum, 20ft between residents. No zero plot lines.

2. Will community club house take advantage of a full restaurant and banquet/wedding facilities as it once had? We need quality dining areas in town, Theres only a couple currently, not chains or mexican/cuban. (we have enough of that).

3. Possibly pickle ball courts, or full tennis courts?

4. (long shot) skeet shooting range or outdoor shooting range for members.

Also, another suggestion. take the lower 9 holes make into a community to mix in with existing community houses and make the upper 9 hole a short golf course, mixed with walking trails, preserve those large oak tree on the overall property, etc

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Just a heads-up for anyone who is concerned about the City of Titusville continuing to approve high density projects which tax our infrastructure (schools with too few teachers, already limited potable water and pressure, severely limited sewage capability with spills in the Indian River and back-ups onto residential streets and into homes, roadways already at-capacity, stormwater not properly managed, pollution of the Indian River Lagoon, etc), destroy our green spaces, increase traffic, etc, while adding nothing of value to the existing community... The Royal Oak Golf Course developer, Kolter Group, is supposedly hosting a Community Meeting to share their plans (no formal Notice has been received by the community, to my knowledge). The meeting is currently scheduled for April 29th (a week from Monday), 6:00 pm - 8:00 pm, at the Grove Church. This is Kolter:

_____

Kolter Land's invitation asked for questions by email. I will be asking some questions related to "forever chemicals" used on the golf course, storm water control, shallow water tables (resulting in muddy fairways), and water flow throughout all lakes on the property.

Are there duplex, triplex, quadruplex proposed? How tall? Where? What will be the management by HOA, or individual owners?

Any multifamily proposed, same questions as above?

Is there a plan to widen any of the roads that access these type of residences/townhouse/condo.

_____

Are you building under the current zone of medium density?

What are your plans for handling run-off for the entire community?

Thank you for holding the second Community Engagement Meeting for the redevelopment of the Royal Oak Golf Course. I will be attending your meeting, I'm looking forward to the Master Plan Presentation. I have some questions for your consideration.

First Question, Property Contamination with Forever Chemicals:

I spoke with several people at the first Community Engagement Meeting on January 11, about "forever chemicals" (such as Agent Orange and arsenic) that were used for decades as herbicides on the golf course. These "forever chemicals" do not break down in the environment and they are known carcinogens.

The former Royal Oak head golf pro (Jim Schacht) told me about the use of these chemicals. He expressed concerns about developing this property at all. He said the development of other closed golf courses in the area have faced environmental issues that have made property development impossible.

We have a concern that these chemicals are buried under elevated greens and lakes of the golf course. These chemicals may be safely buried today, but as the property is developed the elevated greens will be flattened for roads and lots, lakes will be moved and reshaped. This means thousands of yards of potentially contaminated soil will be uncovered. This will expose construction workers, current and future residents to these cancer causing chemicals. We need to know if these chemicals exist under the greens and in the lakes. Environmental mitigation of these chemicals must be completed as part of any construction permit.

The Florida Department of Agriculture and Consumer Services (FDACS) was contacted about this concern. They tested two soil samples and provided a "Pesticide Analysis Report" dated February 24, 2023. I have attached the report for your information.

The FDACS took soil samples in the wrong location. In 2022 they took soil samples of the surface of one green and one tee box. These areas had not been treated with chemicals since the golf course closed in 2011. No samples were taken from the soil at the bottom of the lakes or under the surface of the greens where the chemicals would accumulate. The report found some chemicals, but the report was looking for a "misuse" of pesticides. The report needs to address the buildup of buried chemicals in the soil under the greens and in the lakes. Although this report was well intentioned it must be repeated by testing soil samples taken underground below the green and in the soil in the lakes next to greens where the chemicals would most likely be found.

Second Question, Stormwater Retention Plans:

The golf course property and lakes provide stormwater retention for the homes in the Royal Oak area. My home is adjacent to the golf course. While living there I have experienced several hurricanes including Mathew and Irma. During these storms the lake and fairway on the golf course behind my house floods. The flood waters cover the entire fairway, almost to my property line. My house and my neighbors' homes remain dry. Based on this, the stormwater capacity created by the lake and fairway behind my house is adequate. I am not aware of any homes flooded around the golf course during any storm. My message to you, "don't screw it up". Adding roads and houses will add new impervious surfaces on golf course property. Stormwater retention will need to be greatly expanded. All must be planned correctly. What are the plans for new stormwater retention capacity?

Third Question, Overgrown Lakes, Poor Water Quality:

All the lakes on the golf course are connected together. Water is supposed to flow from lake to lake. Today the water in the lakes are (mostly) stagnate and they are overgrown with aquatic weeds. Water flow onto-and-off golf course property is limited by the vegetation. Poor water quality and overgrown lakes is the result.

I understand the lakes on the golf course are "owned" by the Florida St. Johns River Water Management District. They are responsible for managing groundwater and surface water resources. What are the plans for these lakes? They need to be expanded to provide additional stormwater capacity. Overgrown aquatic weeds must be removed from the lakes to provide proper water flow from lake-to-lake and facilitate water flow among water retention areas. This should improve water quality. Long term lake maintenance (to keep the lakes clear weeds) will be needed. Please comment on this.

Fourth Question, Land-Bound Lake:

One golf course lake on the NE corner of the intersection of Knox McRae Drive and Royal Oak Drive, is "land-bound" (this is actually behind my house). No water flows into or out of the lake. Its water level rises during the rainy summer months and lowers during the dry winter months. The fairway becomes muddy during the rainy months. The grass and weeds grow in the wet ground in the summer. Since the golf course closed, this is one of the worst looking places on the entire golf course.

You cannot build a road or a house on top of ground that is muddy 6 months out of a year and floods with over a foot of water during a storm. The water level in the lake needs to be controlled and the water table on the fairway lowered. I assume the lake will have to be connected to the other golf course lakes. The retention volume of the lake will be expanded and new fill added to raise the ground level of the fairway. I don't know what is best for this area, please comment on this.

Thanks for the opportunity to ask these questions. It is not necessary to specifically address these to me during the meeting. They can be addressed in general terms during your Master Plan Presentation.

If you have any questions please reach out to me.

My biggest concern is traffic, especially on country club. It's already a high traffic area and more people is gonna drive up the danger of living on the street. My other concern is utilities. I'm sure water and sewer is going to be strained.

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as a resident of the Fairways at Royal Oak condominiums, I would like to know what that transition between our lot line and the Kolter lot line will look like. Will it be delineated by plants? A barrier? Will our ponds stay as is?

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1. Will this development be a gated community? If so, will the gate be set back adequately to prevent interruption of traffic flow?

2. How many units total and what distribution between single family home, duplex, quadplex, etc?

3. How will realistic increase in traffic including peak hour traffic (work and school peak times) be addressed to avoid congestion and boxing in of side streets?

4. What will be the impact on potable water supply? What will be the minimum fire flow required for the community and will this increase in need reduce current hydrant flow and residential flow rates?

5. What is the estimated impact on emergency services and the nearest hospital (PMC)? Only 3 primary emergency transport ambulances are present in the city of Titusville (R20, R23, R24) and the next closest hospital is in Rockledge.

6. How will stormwater mitigation be addressed, specifically during hurricane level surges? The drainage is already a problem in some parts of Royal Oak and that entire plot of land provides a much needed buffer.

7. How long will the project take and how will the site work impact the existing community during construction?

8. What past complaints have you received from neighboring communities during development and how did you resolve them?

9. What happens if interest rates, supply costs, or other factors result in the development becoming underfunded or unfunded during the project? Adjacency to delayed or abandoned project sites is a less than ideal situation for both aesthetics and crime.

EXHIBIT D

Post Card Front

Royal Oaks Golf Course Redevelopment Community Engagement Meeting

Dear Neighbor,

Kolter Land, a division of the The Kolter Group, is pleased to present their proposed Master Plan to redevelop the former Royal Oak Golf Course at a Community Engagement Meeting on April 29, 2024. This plan incorporates comments and input received at the initial Community Engagement Meeting held on January 11, 2024.

The Master Plan proposes a new community club house with pool that will offer memberships to residents within the area, a green trails and parks system, traffic improvements, compatible density patterns, preservation of existing tree canopies and enhanced landscape buffers.

Kolter's planning and design team will make a formal presentation to unveil the new Master Plan, explain the plan's new components and answer questions which were received at the January 11, 2024 Community Engagement Meeting. Following the presentation, our team will be available to answer your questions.

NO APARTMENTS OR LOW-INCOME HOUSING PROPOSED

Please see reverse side for meeting and RSVP details.

Post Card Back

Master Plan Presentation & Community Engagement Meeting

When: Monday, April 29, 2024

Time: 6:00pm – 8:00pm

Location: 1450 Harrison Street
Titusville, FL 32780

Provide RSVPs and Questions to: KOLTER.RSVP@gmail.com

Josh Long, AICP
VP of Planning & Entitlements
Kolter Land, LLC
105 NE 1st Street
Delray Beach, FL 33444

EXHIBIT E

Royal Oaks Golf Course Redevelopment Sign-In Sheet

Meeting Date: April 29, 2024

Name:	Address:	E-mail Address:
Susie Gibson	1725 Guldahl Drive.	Sus512@aol.com
Andrew Tischler	3264 Mac Norman Ct	Tischlafo yahoo.com
Ken Tauer	3680 Baine Ave.	Ktauer65@MSN.com
David Clark	1524 Wald Drive	opsflo@gmail.com
LARRY + DIANE LARIVEE	1864 country club Dr	DICUDA68@YAHOO.com
Carol Heil	1731 Guldahl Dr	CarolSue173@gmail
Lisa Landen	3355 Treetop Dr	lisa@CalParadisePalm.com
Jim Landen		
Janet + Ed McCarthy	3590 Nicklaus Dr	mac331666@bellsouth.net
Janet Davis	1619 Turnesa	
Susan Doherty	1880 Knox McRae Dr.	dohertys@CFLrr.com
Joe Robb	1890 Knox McRae 101F	JHudson44@icloud.com

Royal Oaks Golf Course Redevelopment Sign-In Sheet

Meeting Date: April 29, 2024

Name:	Address:	E-mail Address:
Steve Paulick	1740 Locke St	Paulick.Steve71@mail.com
Chris English	1730 Goldahl Dr.	CENGLISH@YAHOO
Garry Reck	3085 Royal Oak Dr.	GLRECK@AOL.COM
Seth Adams	3525 Nelson Place	Couponhandy@gmail.com
WILLIAM DEITER CAROL DEITER	1731 GOLDAHL DR	CTATUM@AOL.COM
Ronda Dickerson	1518 Ransom	dickersonronda@gmail
Thomas van Veldhuisen	1725 Country Club	swimmingtiger96@gmail.com
Christine & John Merza	3680 Barna Ave.	
Eugene B Kelly		blackfalcon779@gmail.com

Royal Oaks Golf Course Redevelopment Sign-In Sheet

Meeting Date: April 29, 2024

Name:	Address:	E-mail Address:
Wm. Porter	3460 Trevino	
LORI LAPOINT	2520 Royal Oak	
Robb & Carrie Jones	3117 S. Casper Pl	
ROGER HOFFMAN	2063 FINSTERWALD	ROGERLWESTHOFFMAN@GMAIL
LORI + DAVE MADGETT	3135 S. CASPER PL	78loriak@gmail.com
(2) Susan Patrizio	3604 Travis PL	SMPATRIZIO @aol.com
Mark Puckett	3160 Saunders Place	mpuck49@aol.com
Marilyn Burdine	2345 Middlecoff Dr	mburdine@sbcglobal.net
JIM KIENER	2845 PLAYER CT	JIMKIENER@SBCGLOBAL.NET
MADELEINE MORRIS		MADELEINEMORRIS@YMAIL.COM
EARL JOHNSON	3135 SAUNDERS PL.	JCLOUSEAU@
3135 SAUNDERS P	3105 SAUNDERS PL	BELLSOUTH.NET
	1713 COUNTRY CLUB DR	
Romansky's	3458 Trevino Cir Titusville 32780	heathromans@gmail
Jane Doe		

Royal Oaks Golf Course Redevelopment Sign-In Sheet

Meeting Date: April 29, 2024

Name:	Address:	E-mail Address:
Penny Storm	1848 COUNTRY CLUB DR	pstorm1@bellsouth.net
NEIL RAHONE	2835 ROYAL OAK DR	NRAHONE@CFL.RR.COM
Susan & William	3409 Royal Oak Dr	SINGVES@GMAIL.COM
Paula Ortho	1870 KNOXMERE DR 104B	PaulaORTO1982gmail.com
NEIL & DAWN MOORE	3520 NELSON PL TSVL	INTERCEPTOR8724 @YAHOO.COM
William Barb Balint	2256 Demaret	
Rebekah Lapic	3535 Palmer Dr.	2016toby@gmail.com
Joey & Beth Myers	1965 Country Club Dr	
MORGAN DENMAN & TED MARTIN	3115 Royal Oak Dr	hello@morgandenman.com
DANIEL & Shell	2180 Country Club DR	DTOGRA1959@AOL.COM
Sean & IRADA	2705 ROYAL OAK DR	MANNING626@GMAIL.COM
JOE & BRUCE	114-115 COUNTRY CLUB	Joeranda@gmail.com

Royal Oaks Golf Course Redevelopment Sign-In Sheet

Meeting Date: April 29, 2024

Name:	Address:	E-mail Address:
S Morrison	2960 N. Casper Pl.	bart1937@AOL
B Morrison	"	"
A. Martinez	3284 Mae Norman Ct	am9187@gmail.com
Don Mangone	1900 KNOX McRAE 211 H	dmarco4@msn.com
Nancy Wilson	2540 Royal Oak Drive	Nan12966@yahoo.com
Pamela Freeman	2030 Hutchison P	
Marc & Robin Moore	3340 Zaharis Pl	007xmoore@gmail.com
Lauren Wallace Fabien Sarran.	2319 snead Ct Titusville 32780.	Lauren.Wallace1@gmail.com.
Philip Meisel Brianna ~~Robertson~~ Robertson	2180 COUNTRY CLUB DR.	briennerobertson@gmail.
Lisa Mosier		lisamosier3872@gmail.com
Rick & Jennifer Morris	1602 WALL DR	
Graham Cochrane	3680 Barna Ave. Unit 110	gcochrane1@gmail.com

Royal Oaks Golf Course Redevelopment Sign-In Sheet

Meeting Date: April 29, 2024

Name:	Address:	E-mail Address:
Kathy Allen	3484 Travis Cir.	mickeallen@yahoo.com
DENNIS BOLEN	3605 TRAVIS PL	DBOLEN1@CFL.RR.COM
AL KOLLER	2645 Royal Oak Drive	ALKOLLER@GMAIL.COM
David, Lorna & Anna Holland	1755 Country Club Dr	hollandfamilyfarm@gmail.com
Marilyn & Chris Jansman	1999 Harrison St	mnplansman@gmail.com
Edwin Upthegrove	3508 Travis Place	drivewaysinc@aol.com
Karen + Tony DeBats	Titusville 3404 Royal Oak Dr	TDBLDR1@yahoo.com
Cheryl Brandt	3640 Bonna Ave	cherylmarie1957@gmail.com
Rick Logan	1736 Country Club Dr	
Barbara Duryea	1736 Country Club Dr.	
Debra Robertson Richard Tarkersley	3295 Royal Oak Dr.	deb5378robertson@gmail.com
Frank & Elizabeth Kaeger	1575 S. Park Ave Titusville	

Royal Oaks Golf Course Redevelopment Sign-In Sheet

Meeting Date: April 29, 2024

Name:	Address:	E-mail Address:
Frank + Kathie Hardy	2578 Demaret Dr.	
Cathie Hardy		
Corey Stano		cpstano@gmail.com
Mary/John Higgins		mhiggins8365@hotmail.com
Charles Tanner		CHARLES.E.TANNER@GMAIL.COM
Steven Alle		
MAYAHUELI Alle		
MARY SCHWAGER	2570 DEMARET DR. T-VILLE	SQLUCREW@HOTMAIL.COM
DONNA ATKINS	UNIT 101 1675 HARRISON ST.	
Peggy Crooks		PegCTville@aol.com
B A Tucker	3654 Royal Oak Dr.	
Debbie Bielling	3080 DEMARET DR	dbielling@yahoo.com

Royal Oaks Golf Course Redevelopment Sign-In Sheet

Meeting Date: April 29, 2024

Name:	Address:	E-mail Address:
FRED BURGESS	3482 TREVINO CIRCLE	FASTFRED33@Yahoo.com
Ingrid Patterson	3442 Trevino	
VITO LAMPUGNANO	2234 COUNTRY CLUB DR	VLAMPO1951@GMAIL.COM
Cheryl Reynolds	3594 Nicklaus Dr	
Ron Reynolds	" "	CUBZMOM@GMAIL.COM
SKIP Tony	Titusville	SKIP Tony G.MAIL Co
SKIP Marcia Breen	Titusville, F	Mbreen@CFL.rr.com
Leslie Williams	3481 Trevino CR	leslieroo12@gmail.com
Michael Browning	3470 trevino Cir	mbrowning225@gmail
Bill Specht	3230 S. Cooper PL	bspecht@att.net
Diana Chaves	"	"
TONY SIMON	3590 TRAILS PL.	SIMONT@CFL.RR.COM

Royal Oaks Golf Course Redevelopment Sign-In Sheet

Meeting Date: April 29, 2024

Name:	Address:	E-mail Address:
Mindy Ritz-Owen	3530 Palmer Drive	mindy@K-Oconcepts.com
Rita Aven	2760 Hutchison Pl.	—
Pat Stevenson	3070 N. Cooper St.	petestevenson3070@[illegible]
Paula Sandel	3504 Travis Pass	Ssandel@aol.com
GERARD PHILLIPS	1755 HARRISON ST #125	ghostrider642@outlook.com
Kate Flynn		
Rudy Canfield		
Elizabeth Miller	3447 TREVINO	SCOTSBELLS@YAHOO
Linda Lampugnano	2234 country club Dr Titusville	mrsvlampo31@gmail.com
Julie Jones	3486 Trevino Cir	mijou.2008@yahoo.com
[illegible] WILSON	HUTCHISON PL	—
BRAD LYTLE	3631 ROYAL OAK DR TITUSVILLE	bradlytle6@gmail.com

Royal Oaks Golf Course Redevelopment Sign-In Sheet

Meeting Date: April 29, 2024

Name:	Address:	E-mail Address:
JANET SHEA	3096 FINSBURY DR	JIM.JANET.SHEA@ICLOUD.COM
Randy Owen	3530 Palmer Dr.	
Curt Panning	3570 Nicklaus Dr	shirleypanning@gmail.com
Shirley Panning	3570 Nicklaus Dr	shirleypanning@gmail.com
Pauline Nelson		
	3584 Travis Rd.	
JOSEPH PIERETTI	3005 KNOX McRAE DRIVE	JOEPIERETTI@GMAIL.COM
HUNTER, JUDE	348 STIRLING CIR.	GREATWHITEHUNTER77@GMAIL.COM
Evelyn Fransson	3477 Irvino Circle	Mathis151@gmail.com
Judy Hathaway	3443 Irvino Circle	judyhat@yahoo.com jimhathaway@yahoo.com
SARAH HANSON	1582 KNOX McRAE DRIVE	SARAHPNANSON@YAHOO.COM
Fran Mingus	1700 Knox McRae 202G	doglady620@att.net

Royal Oaks Golf Course Redevelopment Sign-In Sheet

Meeting Date: April 29, 2024

Name:	Address:	E-mail Address:
Vickie Conklin	2920 Royal OAK Dr Titusville FL 32780	vickiejc@hotmail.com
JILL STIRLING	3514 NELSON PLACE TITUSVILLE FL 32780	jstirling@cfl.rr.com
Julia Bumgarner	1608 Wall Dr. Titusville, Fl 32780	albumgar@AOL.COM
Gail Hudson	3494 Tunis Ct. Titusville FL	GMH7239@aol.com
Judy Smith	3492 Trevi Cir. T'ville	judyjahsmith@gmail
Sima Smith	Same	
DAYBRITT		
David Smith	1967 Harrison St Titusville FL 32780	soca1.2treasurer@gmail.com
Kathy Brown	2226 Country Club Dr	awbyasser@att.net
Aries Antonio		
Aidan Rossi		
Lawrence Rossi		

Royal Oaks Golf Course Redevelopment Sign-In Sheet

Meeting Date: April 29, 2024

Name:	Address:	E-mail Address:
DAVID & PATRICIA TAURASI	3530 TRAVIS PL	dtaurasi@msn.com
CATHY & TONY THIGPIN	3555 PALMER DR	tmgt2005@aol.com
PHILIP PORCARI	3095 SAUNDERS PL	porcari@msn.com
Kathy & Tom Lostracco	3680 Barna Ave.	
Liz Parker	3446 Trevino Circle	liz@justfortheCourse.com
Ann Marie Seidler	1880 Knox McRae Dr, 116E	annmarieseidler@gmail.com
B.J. Henderson	1847 Harrison St.	
Susan Canne	3025 N. Casper Pl. Titusville	alilyfield31@gmail.com

Royal Oaks Golf Course Redevelopment Sign-In Sheet

Meeting Date: April 29, 2024

Name:	Address:	E-mail Address:
Thysis Reid	2590 Hutchison Pl	thysisreid@yahoo.com
Brenda Wallis	2321 Country Club Dr	—
11		
SHARON Anjac	2600 MANGRUM PL.	SHARONNA33@PROTONMAIL.COM
MARK & GWEN GIBSON	2326 SNEAD CT.	MRKGBSN2326@GMAIL.COM

Royal Oak Community Engagement Meeting
April 29, 2024

January 11th Survey Card

COMMUNITY ENGAGEMENT
CONCERNS AND CONSIDERATIONS

Thank you for attending today's engagement session related to the Royal Oak golf course property! Your input is valuable as we move forward with design plans.

What are your top three concerns related to the development of this property? Please circle up to three or write in your own.

Architecture and aesthetics	Property values
Commercial uses	Residential density
No development at all	Residential uses
Environmental concerns (pollution, wildlife habitat)	Stormwater and retention
Noise	Traffic
Pedestrian safety	Tree preservation
Privacy, views, and buffering	Water and sewer availability
Other: _____	
Other: _____	
Other: _____	

-- See other side --

What are your top three items that the development team should consider implementing when designing plans for the property?

Please circle up to three or write in your own.

Community pool	Pedestrian safety
Dog park	Public park/playground
Height to not exceed two stories	Residential only, no commercial
Mix of residential and commercial uses	Single-family homes only
Mix of single- and multi-family housing	Walking and biking trails
Open green space	
Other: _____	
Other: _____	
Other: _____	

Anything additional you would like to express? We will read through all responses and take them into consideration.

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Q. What are your top 3 concerns related to the development of this property

- Residential density
- Traffic
- Property values
- Stormwater and retention

- Environmental concerns
- Privacy, views, and buffering
- No Development at All
- Water and Sewer availability

- Pedestrian safety
- Architecture and aesthetics
- Tree preservation

Q. What are your top three items that the development team should consider implementing when designing plans for the property?

- Single-family homes only
- Height
- Walking and biking trails
- Open Green Space

- Residential only, no commercial
- Public parks/playgrounds
- Pedestrian Safety
- Community Pool

- Mix of Residential Housing
- Mix of Uses (Commercial and Res)
- Dog Park

Royal Oak Comments (Ranked)

- No Rezoning
- Keep 79 Homes
- Traffic Congestion
- Buffering adjacent to existing homes

- Home Values
- SF Homes {unit types, height, compatibility)
- Toxic Waste, Landfill, Forever Chemicals
- Lack of Green Space for outdoor recreation

- Stormwater, Flooding, Historic Water Flow
- Secondary Exit Points
- Interconnectivity, walkability, greenways
- Infrastructure, Water Pressure, Old Pipes

- Safety, Crime, Noise
- Preserve Tree Canopy, Protect Wildlife
- Rebuild Golf Course
- Traffic Safety, Speeding, Signal

- No Rental Apartments, No Low-Income Housing
- Schools overcrowded
- Clubhouse, pool, dining option, gathering space

Environmental

1) Ground Water and Soil Contamination
2) Wildlife Protection
3) Tree Preservation

Ground Water & Soil Contamination

- Comments Received:
  - Site used as Landfill (dump)
    - No knowledge of a landfill or dump which would have received household waste, trash & debris.
    - It is very common for Golf Courses to have a landscape clippings area that could have been misconstrued as a landfill or referred to by employees as the ‘dump.’
  - Forever Chemicals
    - Agent Orange was not used at Royal Oaks, Agent Orange was banned in the 70’s and would not have been used at a Golf Course prior to that.
    - We do acknowledge the historic use of herbicides and pesticides that contain hazardous ‘forever chemicals’ will require remediation.

Ground Water & Soil – Regulations & Remediations

- Comprehensive Testing will be conducted and any ‘forever chemicals’ identified in the ground water or soil will be mitigated through various methods which include, but are not limited to:
  - Soil Blending, Soil Disposal and Capping



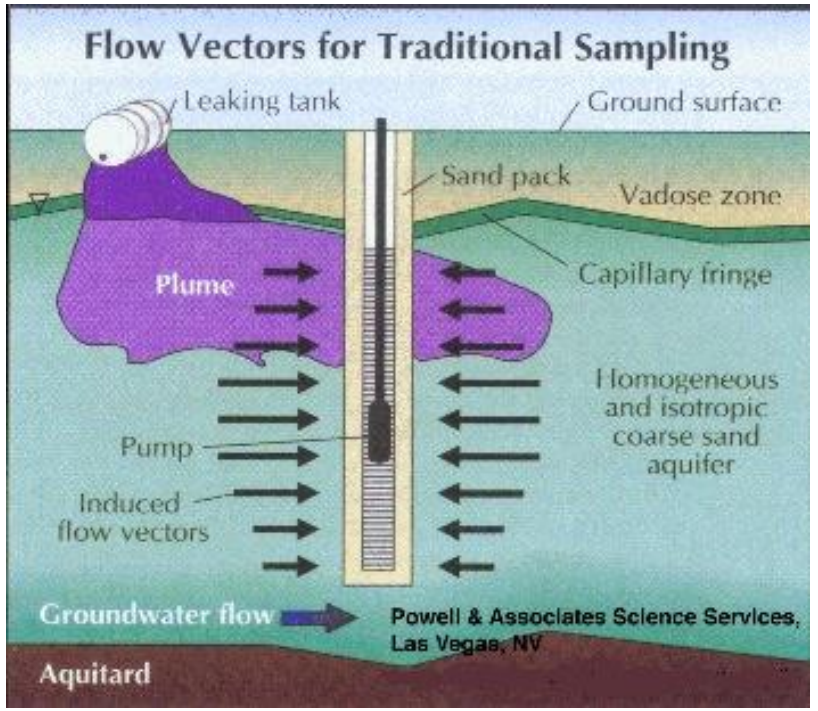


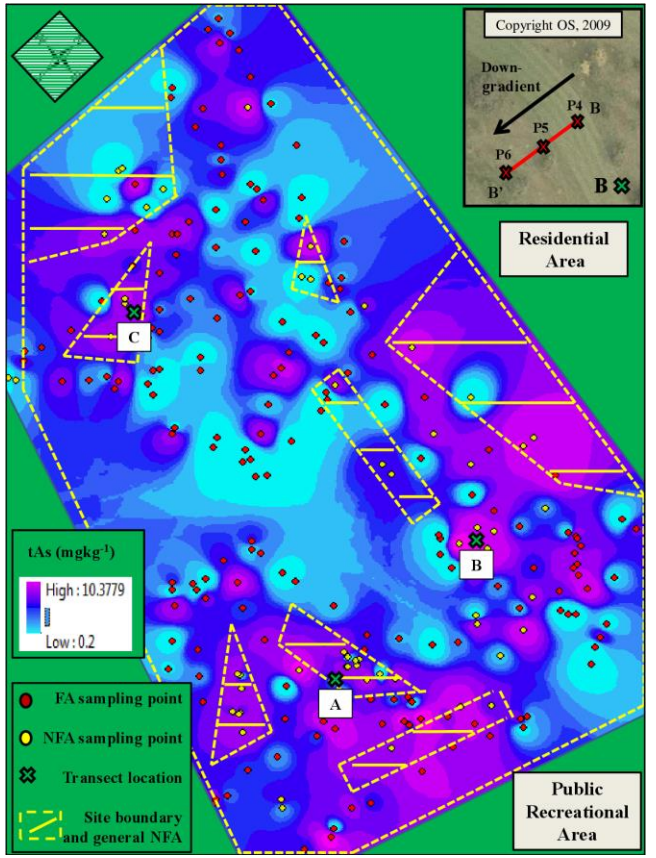


Ground Water & Soil – Regulations & Remediations

- Institutional Controls will be used to prevent human exposure and resolve existing contaminations.



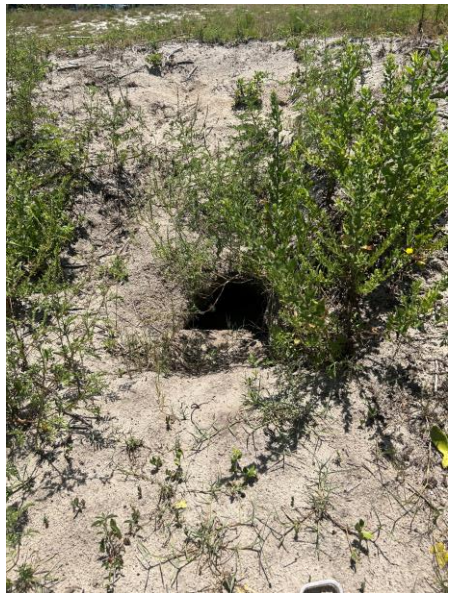




Wildlife Protection

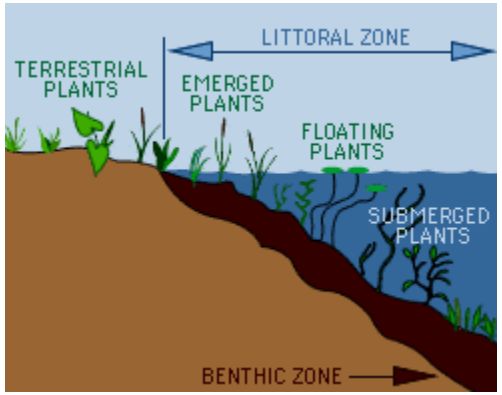
- The State and Federal wildlife agencies have rules and regulations for protecting wildlife.
  - Conservation permitting is required for any potential impacts to protected species.
  - Chapter 68A-27: RULES RELATING TO ENDANGERED OR THREATENED SPECIES
- Our application proposes wetland littoral shelf creation for wading bird habitat, tree and landscape preservation for typical back yard species and native habitat preservation tracts to safely support gopher tortoises.

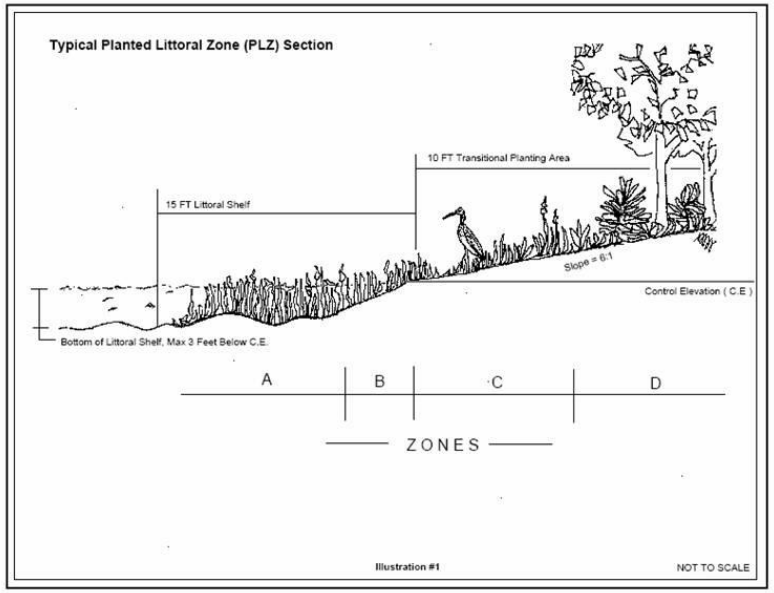
Wildlife: Regulations, testing and protection





Wildlife: Regulations, testing and protection







Tree Protection and Mitigation

- City of Titusville's Tree Protection Ordinance
- All Significant, Specimen and Heritage species to be identified and preserved or mitigated according to City regulations
- Our proposed plan has been designed to preserve existing tree canopy within newly created public open spaces and landscape buffers.
- We intend on exceeding the City's Tree Protection requirements and preserve as many native trees as possible.

Tree Protection and Mitigation









Engineering (Civil)

- Stormwater, Flooding, Historic Water Flow
- Infrastructure (water flow, old pipes, disruption of service)

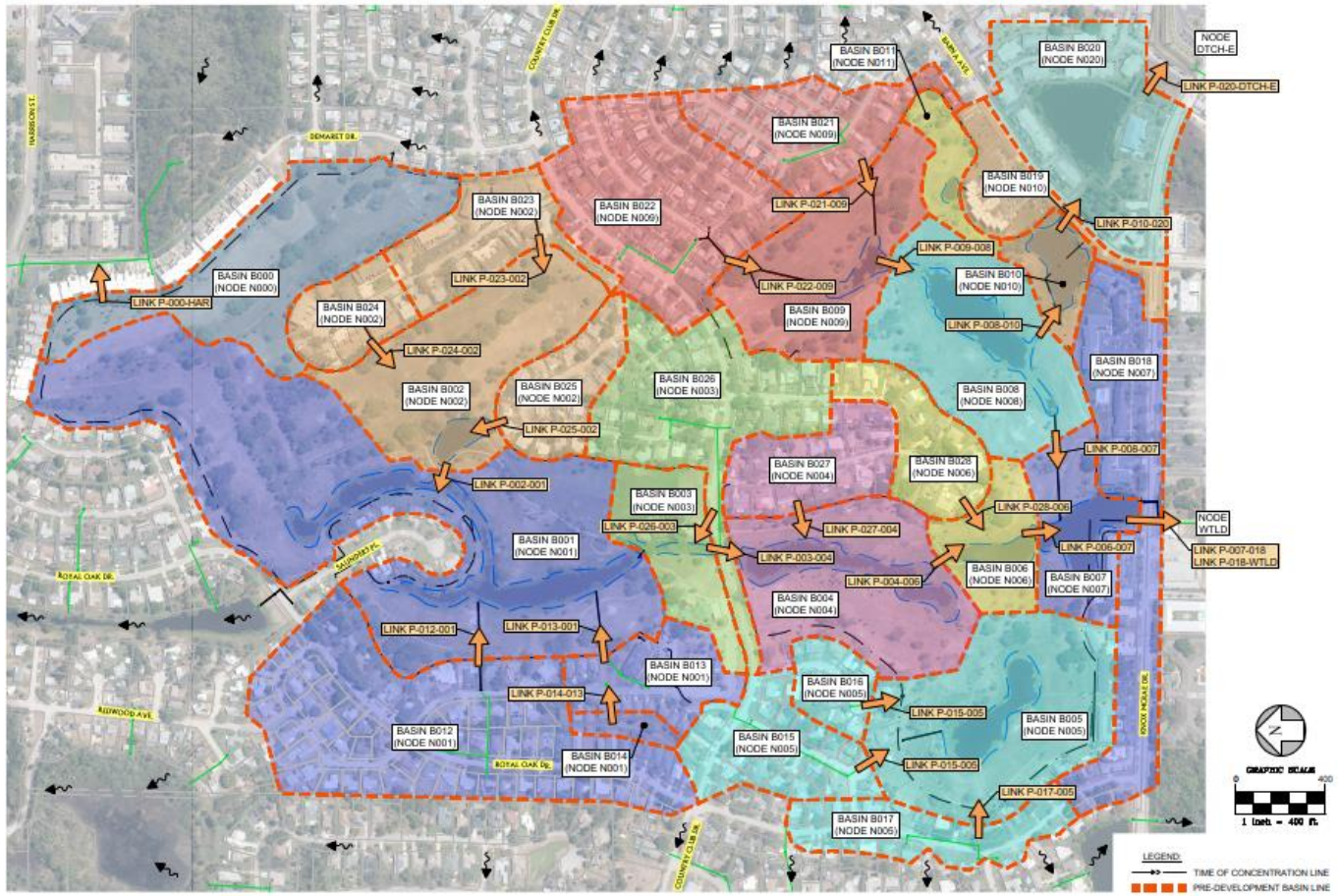
Stormwater Treatment, Storage & Discharge

- All Stormwater requires treatment and a system designed to prevent flooding of adjacent properties. Stormwater is heavily regulated with requirements at the State, Regional and Local level.
  - State: Florida Statutes, Chapter 373
  - Regional: St. John's River Water Management District
  - Local: City of Titusville, Technical Design Manual, Stormwater Management

Stormwater Treatment, Storage & Discharge

- Royal Oak Golf Couse was designed and permitted in early 1960's which pre-dates most of the current regulations for treatment, storage and discharge.
  - Redevelopment will upgrade water treatment, storage and disposal systems to comply with today's standards which have improved dramatically over the past 60 years!
- Golf Courses by nature are designed to hold water and keep the ground water table high to use that water for course irrigation.
  - New lakes will be built to increase storage
  - Littorals will be built to improve treatment
  - New infrastructure will be built to improve discharge
  - All existing and proposed lakes are owned by the property owner & regulated by the Water Management District.

Stormwater Basin Map



Infrastructure

- Disruption of Service: There will be no disruption of service. All connections will be made to mains that will be kept live at all times.
- Water Flow: The plan will improve water flow and water quality by connecting (looping) the existing system in multiple locations to improve flow, pressure and flushing.
- Pipes: All on-site water and sewer systems will be constructed of all new materials meeting current city, state and federal standards.

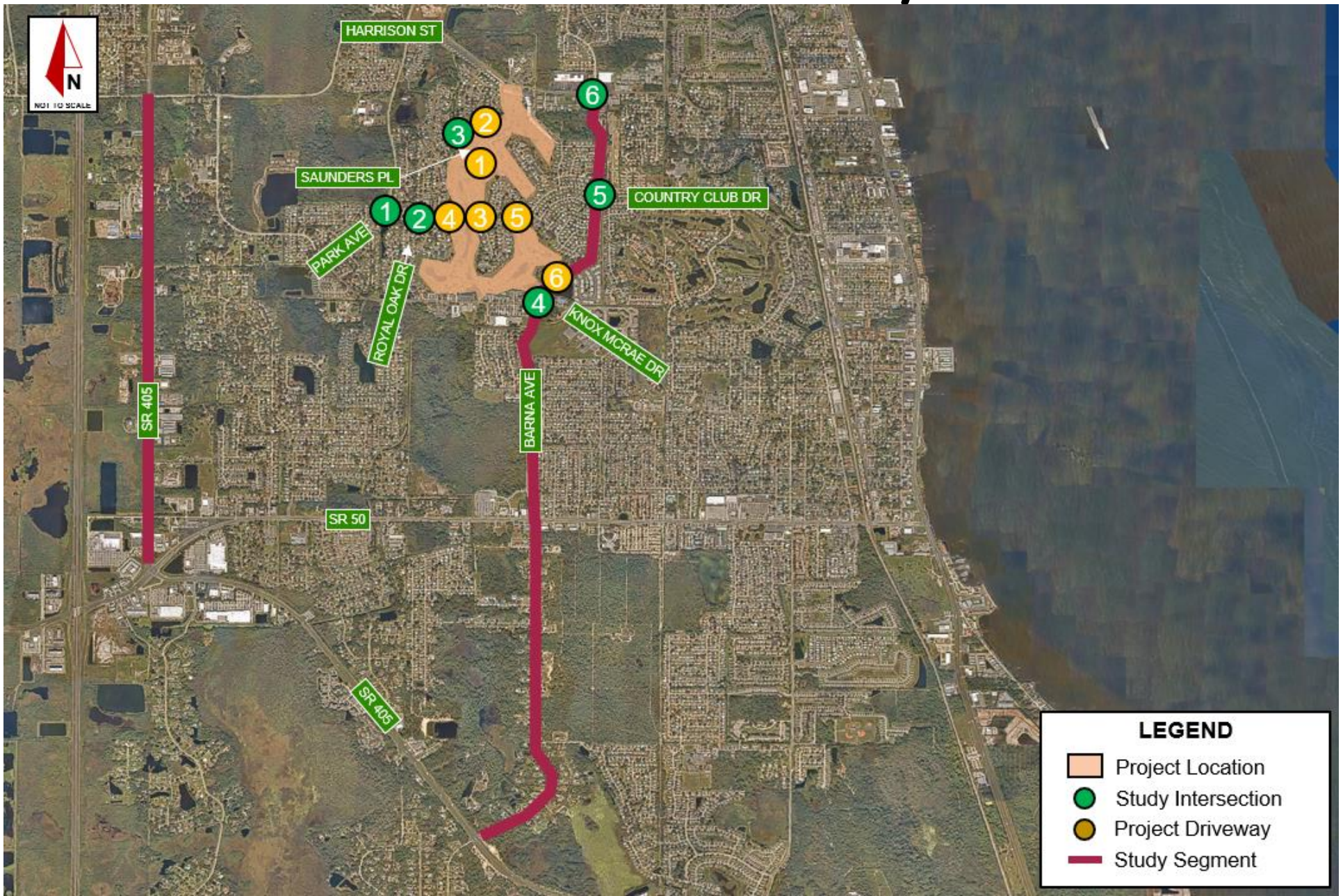
Engineering (Traffic)

- Traffic Congestion
- Secondary Exit (Barna, Knox McRae, Harrison)
- Traffic Light at Country Club & Park
- Traffic Safety (Speeding, Traffic Calming, Pedestrian Crossings)

Traffic Impact Analysis (TIA)

- TIA **Methodology** approved by City of Titusville Staff
- **Study area** includes Barna Avenue and SR 405, six (6) area intersections, project driveways
- **Trip generation** per Institute of Transportation Engineer's (ITE) *Trip Generation Handbook, 11th Edition*
- **Trip distribution** per FDOT District Five's latest adopted regional travel demand model
- **Analysis** performed to assess existing and future operational conditions at study area roadways, intersections, and driveways and measure against code requirements to form recommendations

Site Location & Study Area

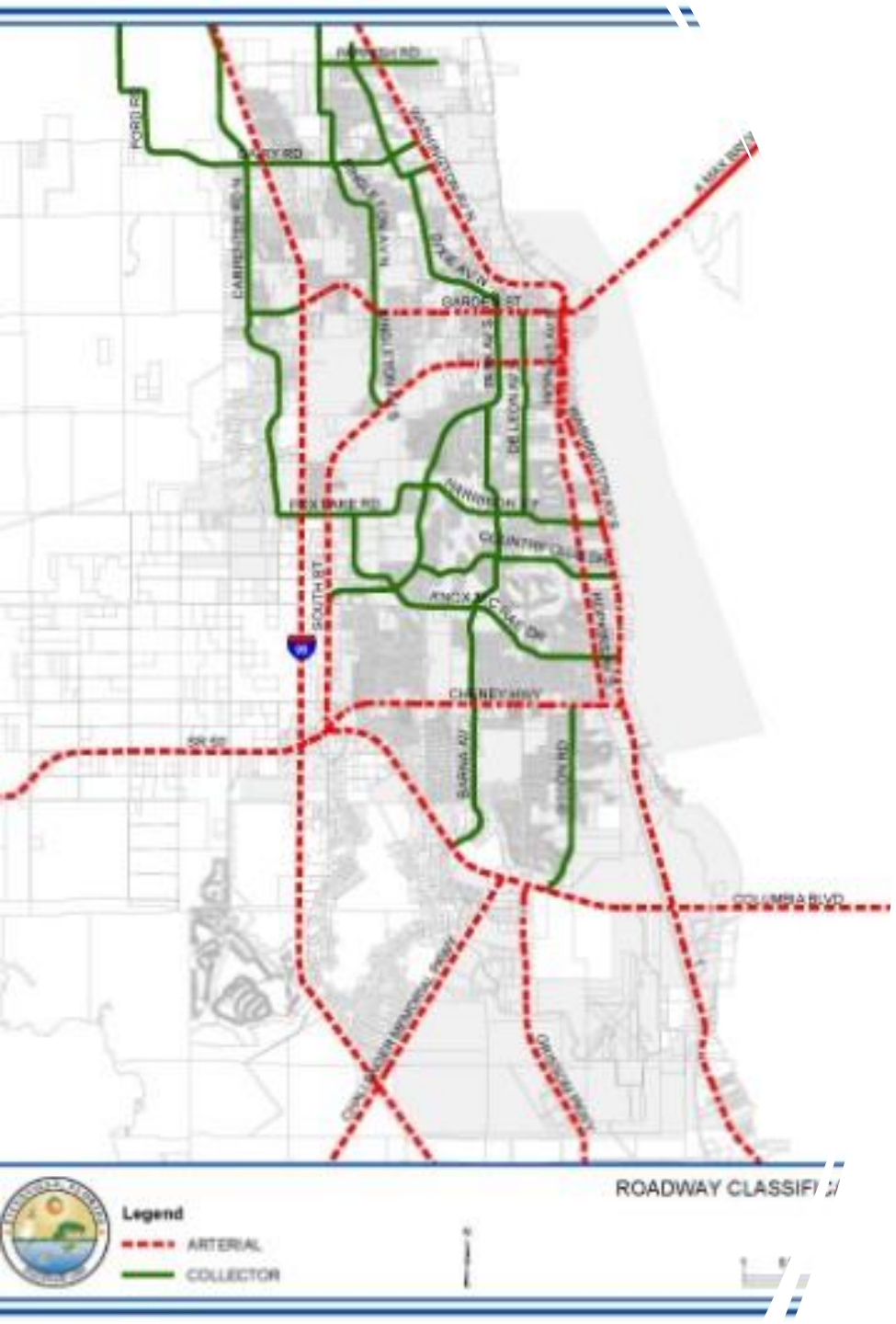


TIA Conclusions

- No transportation deficiencies are identified in the buildout condition as a result of project traffic.

- Project traffic impact is anticipated to be 7% or less of the adopted service volume on area roadways.

- No operational concerns are identified at study area intersections and proposed development driveways. All offsite intersections operate a LOS C or better.



Community Concerns

- Traffic Congestion
  - Under existing conditions, study area intersections operate at LOS C or better. This is acceptable operation per the City of Titusville standards.
  - All offsite intersections are forecast to continue operating at a LOS C or better at project buildout.
  - Project has direct access to two (2) collector streets (Barna & Country Club) and indirect access to a third collector street (Harrison)

Community Concerns

- Signal Control at Country Club Drive & South Park Avenue
  - At buildout, the intersection is shown to operate at acceptable delay in the AM peak and PM peak hours.
  - Further study would be needed to determine if the intersection warrants signalized control in the existing condition at other times of the day.
- Traffic Safety
  - The developer will work with the City to implement appropriate design elements which promote safe and efficient movement of vehicles and pedestrians.
  - Consideration will be given to providing safe crossing opportunities along Country Club Drive.

Traffic Dispersion and Access Locations

Main Access Points

- Harrison Street (via Royal Oak)
- S. Park Ave (Via Country Club)
- Barna Ave (Via Country Club)
- Barna Ave (Direct Connection

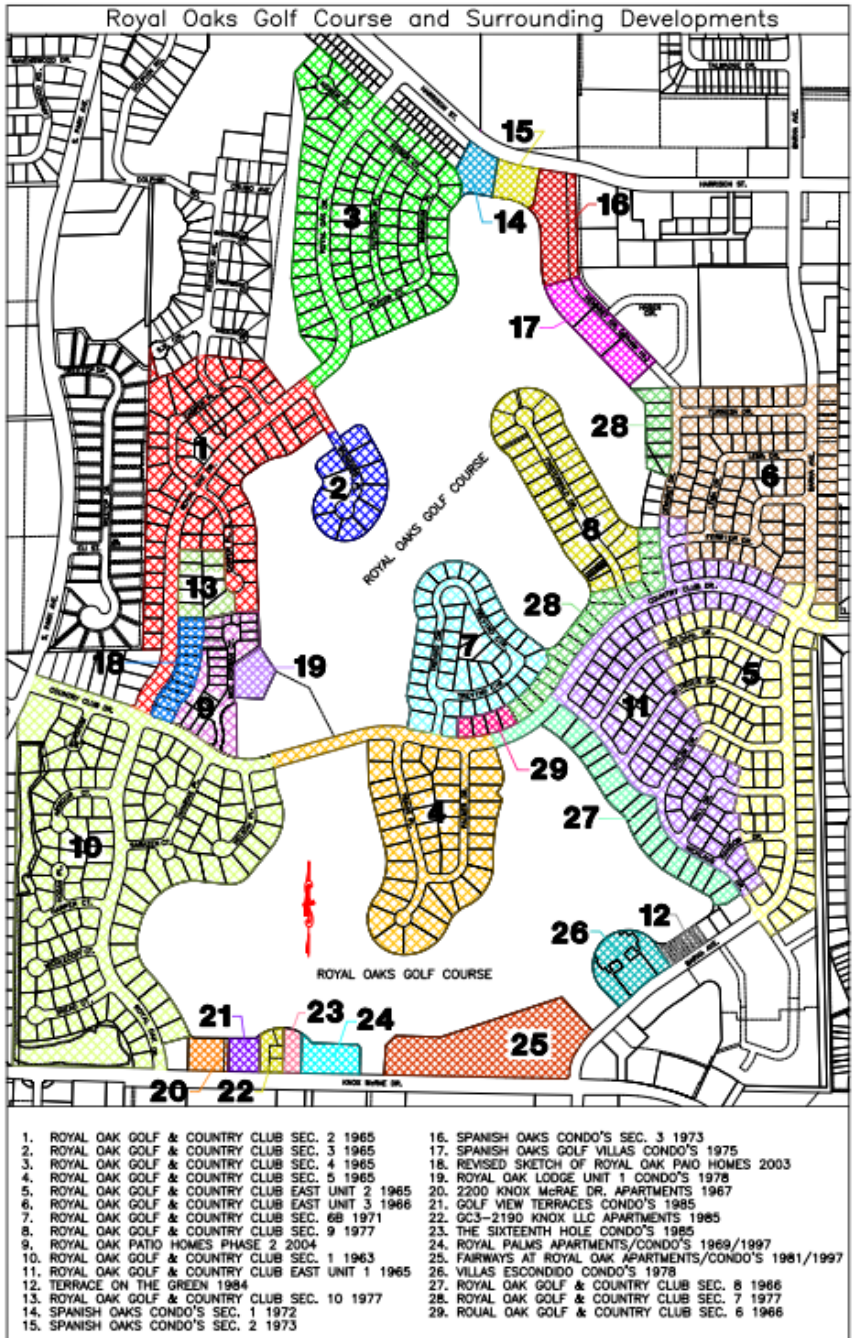


Planning

- Zoning Density Compatibility
- Landscape Buffers
- Property Values
- Housing types, height, setbacks
- No Rental Apartments
- Lack of Green Space, Outdoor Recreation
- Clubhouse, Pool, Café, Community Gathering Spot
- Interconnectivity, Walkability, Greenways
- No Low Income Housing
- Preserve Tree Canopy

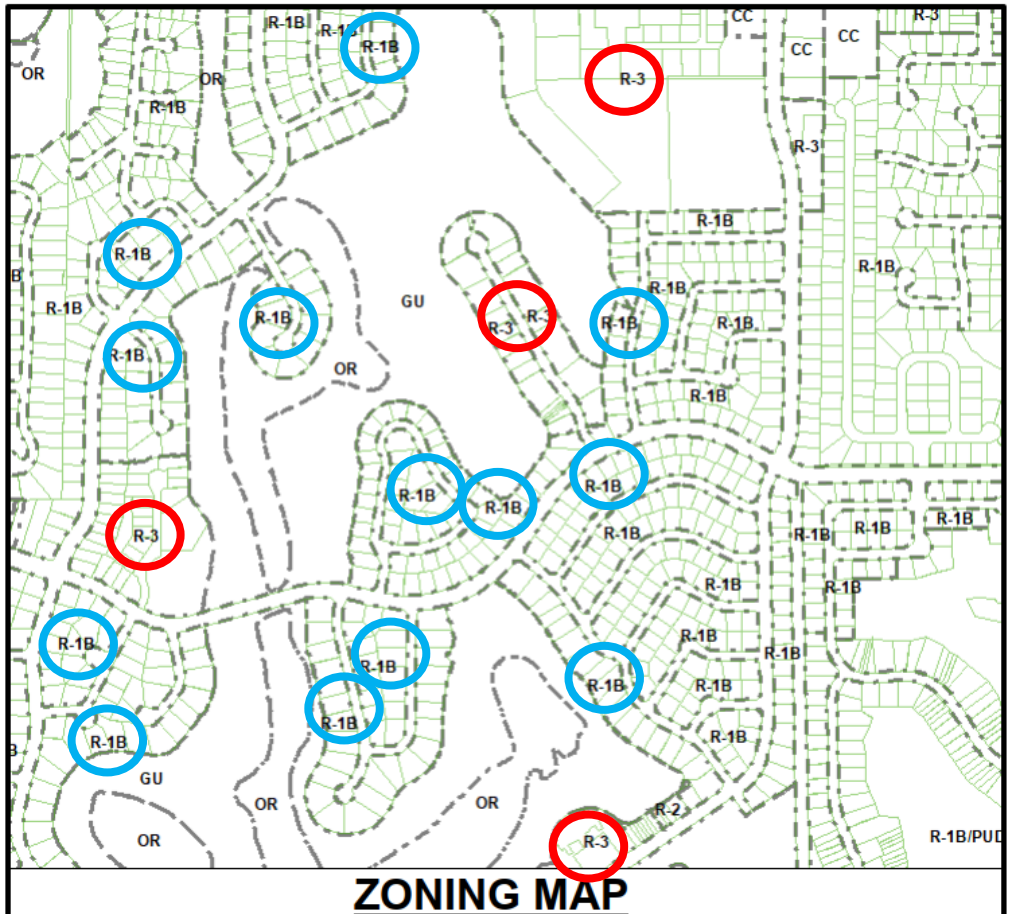
Density Compatibility

- Analyzed 29 surrounding neighborhoods
- Identified location for new single family detached housing
- Identified location for new townhome housing
- Identified location for interconnectivity between neighborhoods
- Identified location for greenway paths and public open spaces
- Identified location for enhanced landscape buffering
- Identified areas for new and expanded waterways



Only two (2) adjacent zonings

- Single Family Medium Density (R-1B)
- Multifamily High Density Residential (R-3)



Single-Family Medium Density (R-1B)

(a) *Purpose*

The Single-Family Medium Density (R-1B) district is designed as a district for the principal use of medium-density single-family dwellings. The purpose of the district is to promote orderly and proper development of single-family residential units together with certain structures and uses that are compatible with property in the district. It is further intended that governmental, religious, recreation and other immediate needs of this district are served while a quality environment is provided for the residents of this designation and City.

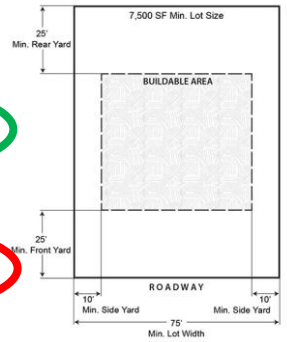
(b) *Use Standards*

See Chapter 28 Article IV and Article V

(c) *Intensity and Dimensional Standards*

Lot area, minimum (sq. ft.)	7,500
Lot width, minimum (ft.)	75
Density, maximum (du/ac)	5.8
Floor area per dwelling unit, minimum (sq. ft.)	1,200
Building coverage, maximum (% of lot area)	35
Lot coverage, maximum (% of lot area)	NA
Height, maximum (ft.)	35
Front yard setback, minimum (ft.)	25
Side corner yard setback, minimum (ft.)	20

Typical Lot Pattern



Multifamily High Density Residential (R-3)

(a) *Purpose*

The Multifamily High Density Residential (R-3) district is intended to allow the development of a variety of housing types at a maximum density of fifteen (15) units per acre. This district is further intended to satisfy the need for a high concentration of population, is located adjacent to arterial or collector streets and is well served by public services and facilities. When adjacent to R-1 zoning districts, the development within the district shall be designed carefully to provide maximum compatibility with adjacent development by proper architectural design, landscaping, screening, and parking.

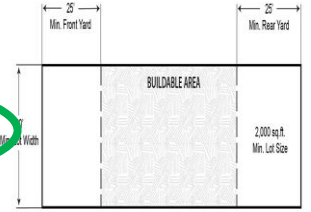
(b) *Use Standards*

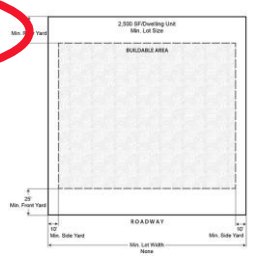
See Chapter 28 Article IV and Article V

(c) *Intensity and Dimensional Standards*

Lot area, minimum (sq. ft.)	Townhomes: 2,000 Multifamily: 2,500 per DU
Lot width, minimum (ft.)	Townhomes: 20
Density, maximum (du/ac)	15
Floor area per dwelling unit, minimum (sq. ft.)	Townhomes: 800
Building coverage, maximum (% of lot area)	50
Lot Coverage, maximum (% of lot area)	NA
Height, maximum (ft.)	35

Typical Lot Pattern





Titusville Residential Zoning Analysis
Property Size 147 Acres

- Single Family Low Density (R-1A) allows 4.3 du/ac
- Single Family Low Density (R- 1B) allows 5.8 du/ac
- Single Family High Density (R-1C) allows 6.7 du/ac

- Our proposed Planned Development (PD) will request 3.74 du/ac

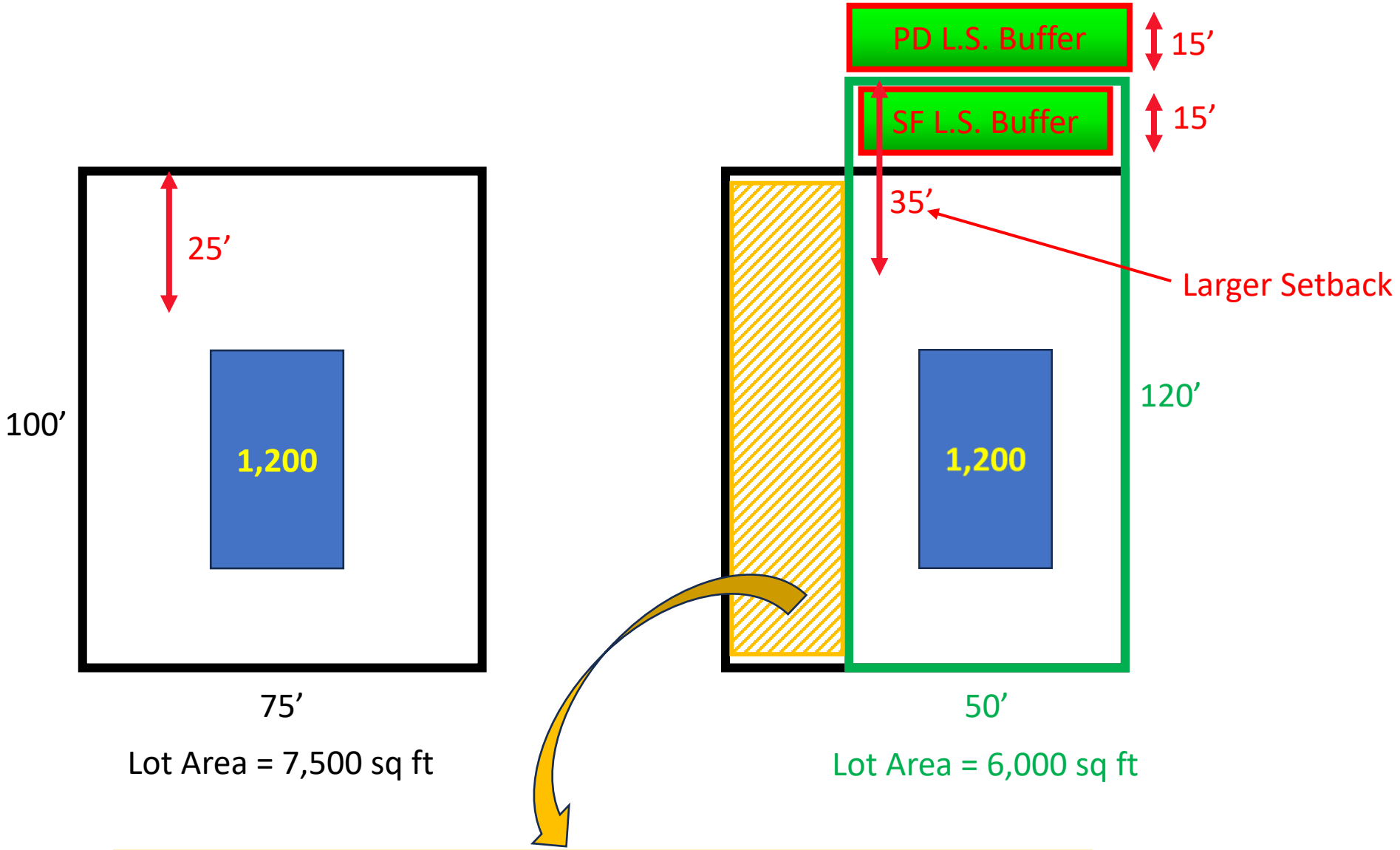
Single Family Lot Size

Single Family Medium Density (R-1B)

- Lot Width 75’
- Lot Depth 100’
- Lot Size 7,500 sq. ft.
- Minimum Floor Area 1,200 sq. ft.
- Maximum Height 35’
- Minimum Rear Yard Setback 25’

Proposed Planned Development (PD) Single Family

- Lot Width 50’
- Lot Depth 120’
- Lot Size 6,000 sq. ft.
- Minimum Floor Area 1,200 sq. ft
- Maximum Height 35’
- Minimum Rear Yard Setback 35’



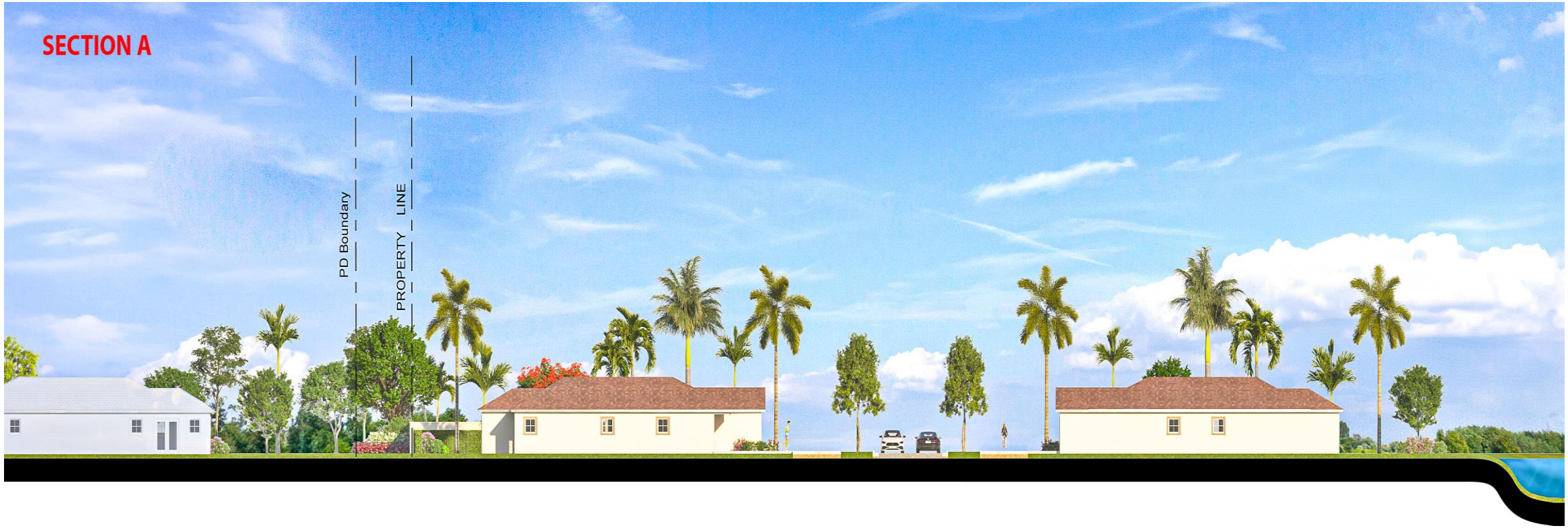
1,500 sq. ft. x 239 SF lots = **over 8 acres** to provide public benefits

Single Family Lot Analysis



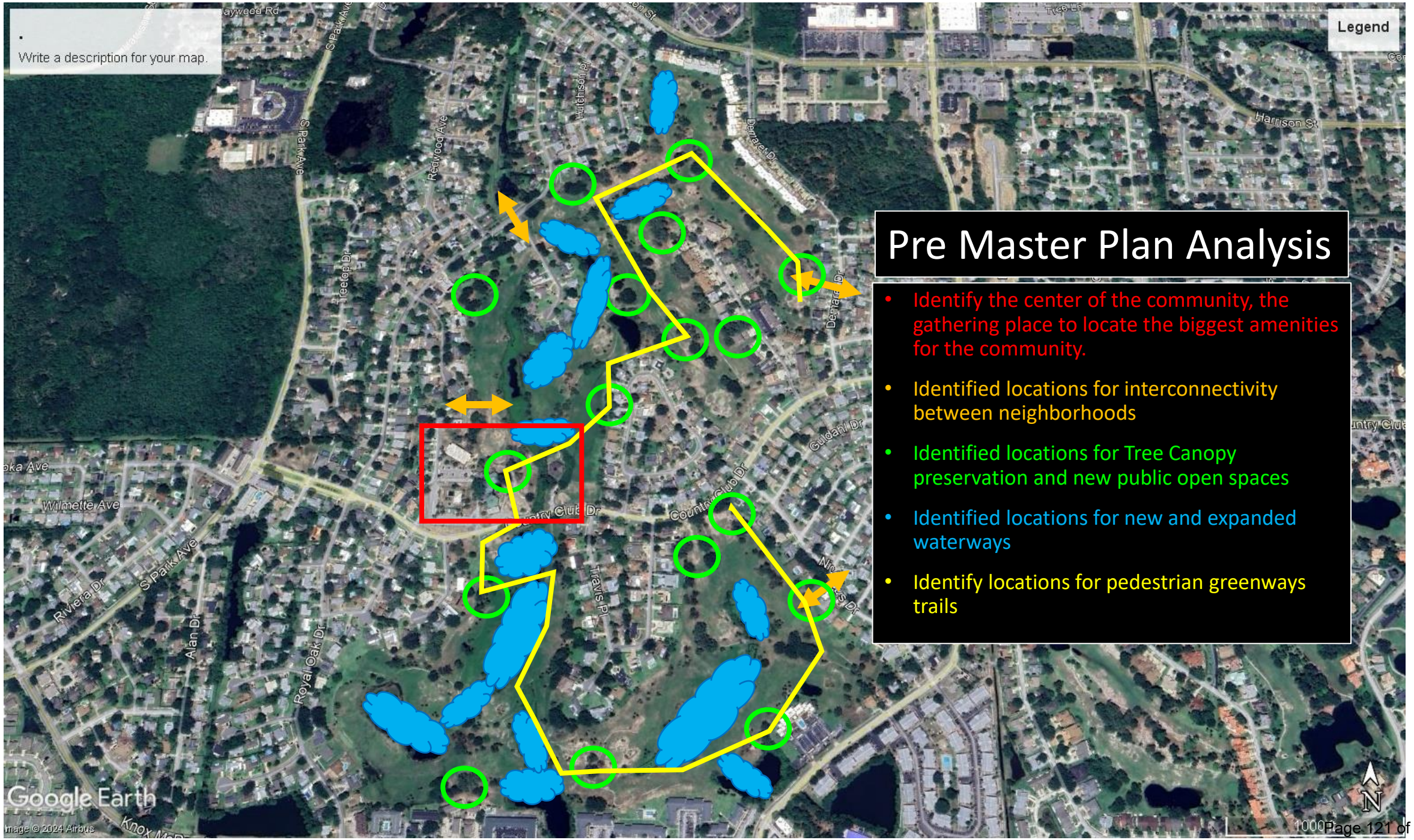
Rendering of proposed Single-Family House

Buffering and Street Cross Sections



Buffering and Street Cross Sections

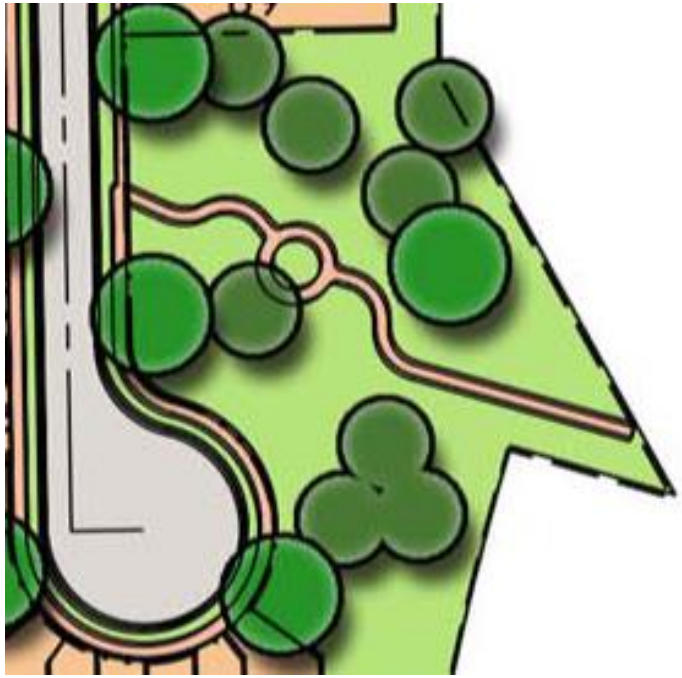



.
Write a description for your map.
Legend
Pre Master Plan Analysis
• Identify the center of the community, the gathering place to locate the biggest amenities for the community.
• Identified locations for interconnectivity between neighborhoods
• Identified locations for Tree Canopy preservation and new public open spaces
• Identified locations for new and expanded waterways
• Identify locations for pedestrian greenways trails
Google Earth
N

Why request a Planned Development (PD)?

- PD's require Ordinances with Conditions of Approval
- Conditions of Approval ensure that promises made are kept
- PD's allow innovative design to help provide more public benefits
- Our Proposed Public Benefits
  - New Community Club House w/ memberships available to neighbors
  - New Central Park – over 1 acre of public open space designed as central gathering spot for entire neighborhood
  - New Green Trail & Public Open Space
    - Over 2 miles of Green Trail Paths available to the public
    - Fifteen (15) pocket parks connected to Green Trail network

Proposed Public Benefit
Green Trail & Public Open Space

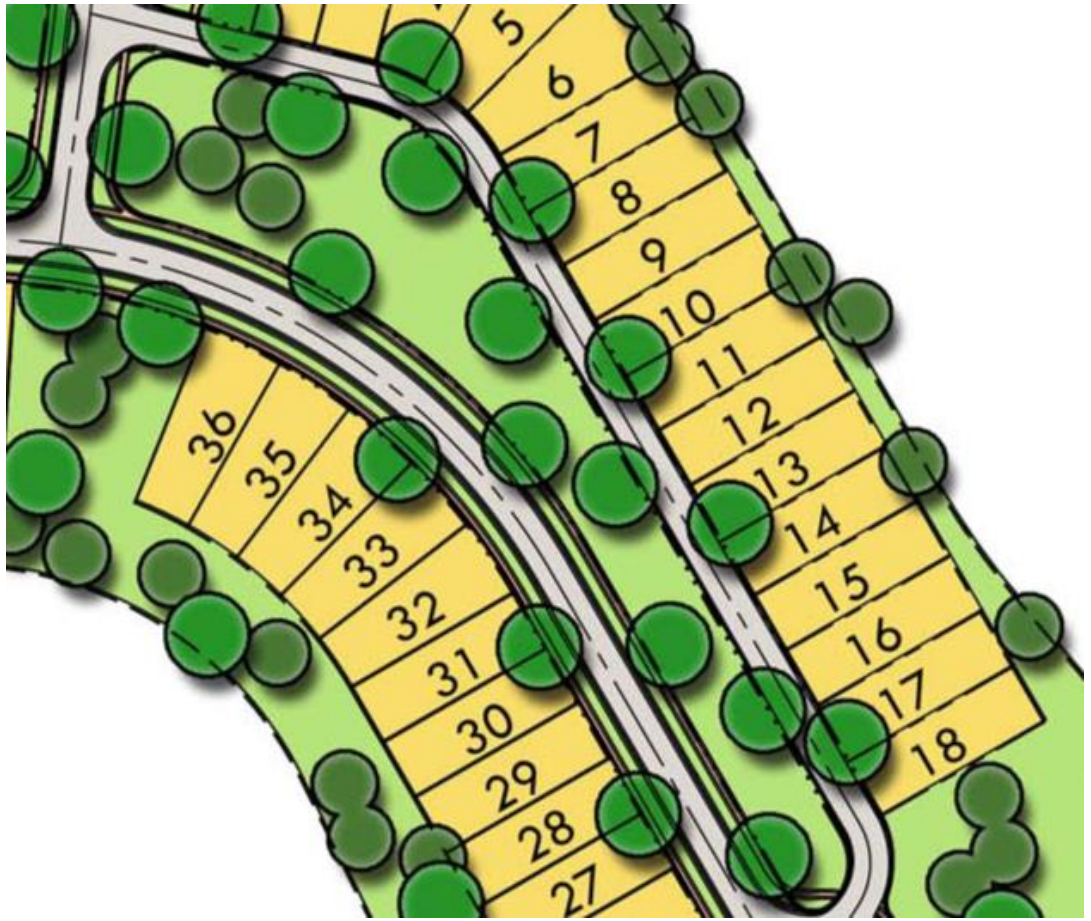


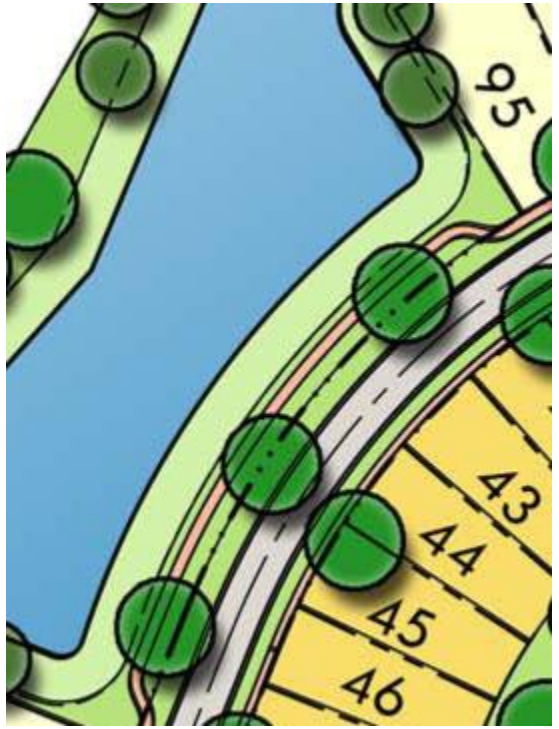




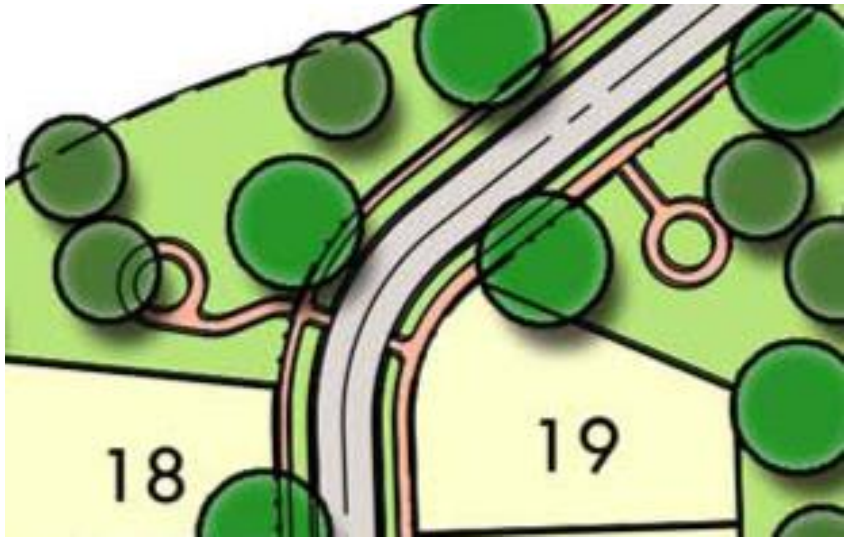
Proposed Public Benefit
Green Trail & Public Open Space







Proposed Public Benefit
Green Trail & Public Open Space



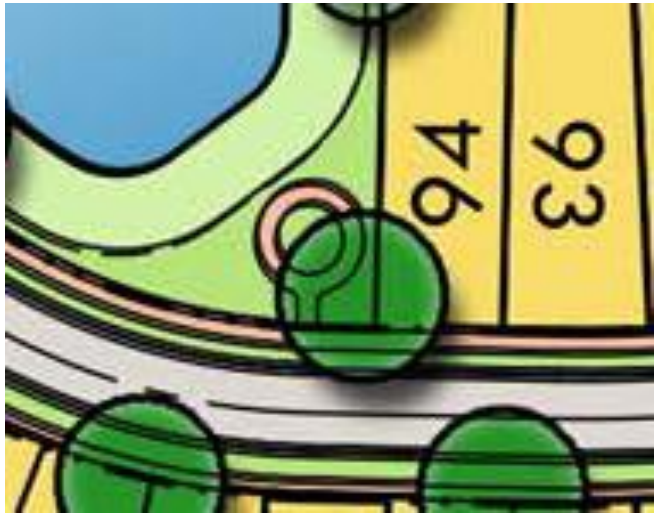




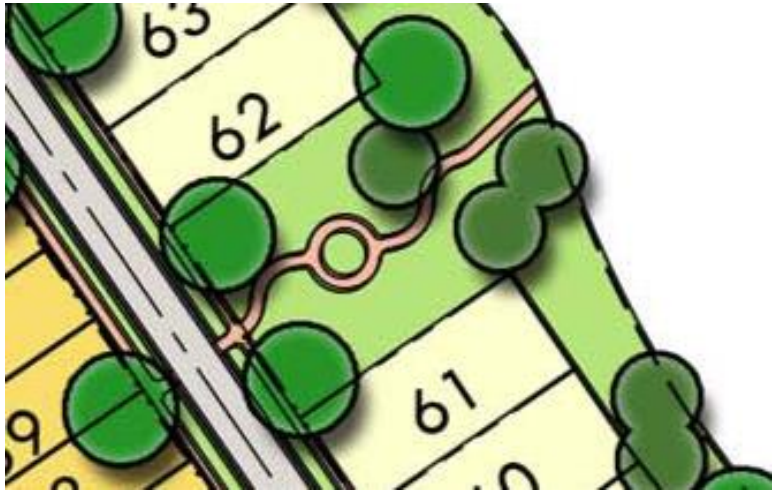
Proposed Public Benefit
Green Trail & Public Open Space







Proposed Public Benefit
Green Trail & Public Open Space







The New Community Gathering Spot
“Central Park” & the “Clubhouse”





“Central Park”

- Large Open Space
- Central Location
- Public Parking
- Programable for community events (4th of July, Easter Egg Hunts, Pumpkin Patch, etc.)



The “Clubhouse”

- Membership Available to Neighborhood
- Pool
- Kids Splash Park
- Pickleball
- Bocce Ball
- Fitness Center
- Café
- Meeting Space
- Card Room





Community Master Plan

- Green Trails Network w/ 15 pocket parks
- Central Park (the community's gathering spot)
- The Clubhouse (the community's fun spot)
- Single Family adjacent to Single Family
- Townhomes adjacent to Multi Family
- Villas adjacent to SF have larger PD Buffer
- Tree Canopy Preservation
- Improved Water Treatment & Drainage
- Improved Traffic Circulation
- Compatible Infill Project
- Promises Protected through Planned Development's Conditions of Approval

SITE DATA:

NORTH:	
SINGLE FAMILY:	95 UNITS
TOWNHOMES:	164 UNITS
VILLAS:	54 UNITS
TOTAL:	313 UNITS
SOUTH:	
SINGLE FAMILY:	144 UNITS
TOWNHOMES:	0 UNITS
VILLAS:	94 UNITS
TOTAL:	238 UNITS
TOTAL:	
SINGLE FAMILY:	239 UNITS
TOWNHOMES:	164 UNITS
VILLAS:	148 UNITS
TOTAL UNITS:	551 UNITS
DENSITY:	3.74 DU/AC



Thank You. Questions?

EXHIBIT G

TaxAcct	OWNER_NAME1 OWNER_NAME2	OWNER_STREET_NAME OWNER_ADDRESS2	OWNER_CITY OWNER_STATE OWNER_ZIP5
Tax Account ID: 2208965	RODRIGUEZ, TANIA RODRIGUEZ, DANY	10042 IVERSON DR	ORLANDO, FL 32832
Tax Account ID: 2208966	RODRIGUEZ, TANIA RODRIGUEZ, DANY	10319 STRATFORD POINTE AVE	ORLANDO, FL 32832
Tax Account ID: 2208968	RODRIGUEZ, TANIA RODRIGUEZ, DANY	10319 STRATFORD POINTE AVE	ORLANDO, FL 32832
Tax Account ID: 2208969	RODRIGUEZ, TANIA RODRIGUEZ, DANY	10319 STRATFORD POINTE AVE	ORLANDO, FL 32832
Tax Account ID: 2208970	RODRIGUEZ, TANIA RODRIGUEZ, DANY	10319 STRATFORD POINTE AVE	ORLANDO, FL 32832
Tax Account ID: 2208971	RODRIGUEZ, TANIA RODRIGUEZ, DANY	10319 STRATFORD POINTE AVE	ORLANDO, FL 32832
Tax Account ID: 2208972	FOSTER, ZENAIDA	3664 BARNA AVE	TITUSVILLE, FL 32780
Tax Account ID: 2208974	JOHNSTON, GAVIN C	3660 BARNA AVE	TITUSVILLE, FL 32780
Tax Account ID: 2208208	DANIEL & BETTY BRITT TRUST	3710 AUSTIN HEALEY LN	MIMS, FL 32754
Tax Account ID: 2208311	JOHNSON, CHARLES E JOHNSON, YUNSIL	3583 BARNA AVE	TITUSVILLE, FL 32780
Tax Account ID: 2208310	JOHNSON, RICHARD RYAN	PO BOX 824	TITUSVILLE, FL 32781
Tax Account ID: 2208287	JOHNSON, THEODORE ROBERT	3569 NICKLAUS DRIVE	TITUSVILLE, FL 32780
Tax Account ID: 2208820	CURRY, AARON B CURRY, JULIA R	3600 NICKLAUS DR	TITUSVILLE, FL 32780
Tax Account ID: 2208821	REYNOLDS, RONALD L REYNOLDS, CHERYL L	3594 NICKLAUS DR	TITUSVILLE, FL 32780
Tax Account ID: 2208368	GWYNN, TONYA RENE	1419 RANSOM DR	TITUSVILLE, FL 32780
Tax Account ID: 2208797	TAPIE, REBEKAH C EARL, DOROTHY J	3535 PALMER DR	TITUSVILLE, FL 32780
Tax Account ID: 2208812	HYATT FAMILY TRUST	3534 PALMER DR	TITUSVILLE, FL 32780
Tax Account ID: 2208365	PANTHER, DAVID PANTHER, KERRI	1418 RANSOM DR	TITUSVILLE, FL 32780
Tax Account ID: 2208806	SVATEK, JASON SVATEK, MICHAEL	3529 TRAVIS PL	TITUSVILLE, FL 32780
Tax Account ID: 2208279	ALFRED L BUMGARNER & JULIA W BUMGARNER REVOCABLE TRUST	1608 WALL DR	TITUSVILLE, FL 32780
Tax Account ID: 2208805	HATOUM, NADER	3507 TRAVIS PL	TITUSVILLE, FL 32780
Tax Account ID: 2208804	PAULINE NELSON REVOCABLE TRUST	3505 TRAVIS PL	TITUSVILLE, FL 32780
Tax Account ID: 2208815	CAMPBELL, JERRY,SR	3510 PALMER DR	TITUSVILLE, FL 32780
Tax Account ID: 2208274	BALL, JAMES E BALL, NORA S	1609 LITTLER DR	TITUSVILLE, FL 32780
Tax Account ID: 2208266	BREEN, CYRIL BREEN, MARCIA	1626 LITTLER DRIVE	TITUSVILLE, FL 32780
Tax Account ID: 2208258	CYNTHIA A SHAMY TRUST	1715 WATROUS DR	TITUSVILLE, FL 32780
Tax Account ID: 2208265	JENKINS, CURTIS MICHAEL SCHROEDER, BRANDI	1620 LITTLER DR	TITUSVILLE, FL 32780

Tax Account ID: 2208259	AUSTIN, DAVID M AUSTIN, KIMBERLY A	1709 WATROUS DR	TITUSVILLE, FL 32780
Tax Account ID: 2208260	FOWLER, HARRY FOWLER, PHYLLIS A	1703 WATROUS DR	TITUSVILLE, FL 32780
Tax Account ID: 2208255	AKPABIO, AKPABIO	1722 WATROUS DR	TITUSVILLE, FL 32780
Tax Account ID: 2208261	MCWHITE, CALVIN E	1621 WATROUS DR	TITUSVILLE, FL 32780
Tax Account ID: 2208254	HPA US1 LLC	120 S RIVERSIDE PLZ, STE 2000	CHICAGO, IL 60606
Tax Account ID: 2208245	DEITER, WILLIAM J HILL, CAROL S	1731 GULDAHL DR	TITUSVILLE, FL 32780
Tax Account ID: 2208246	DURANT, MARION D,LIFE ESTATE	1725 GULDAHL DR	TITUSVILLE, FL 32780
Tax Account ID: 2208242	CARDONE, LORI CARDONE, CHRISTOPHER	1748 GULDAHL DR	TITUSVILLE, FL 32780
Tax Account ID: 2208247	JONES, ASHLEY JONES, COREY	1719 GULDAHL DR	TITUSVILLE, FL 32780
Tax Account ID: 2208222	SHIVEL, CHERYL L	1743 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2208751	HUNTER, NICOLE A	3489 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208724	ACKLIN, JOHN D ACKLIN, DAWN R	3490 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208323	CRM3 PROPERTIES LLC	8 HARRIS CIR	EDGEWATER, FL 32141
Tax Account ID: 2208432	LOPEZ, DIANA	1426 FERRIER DR	TITUSVILLE, FL 32780
Tax Account ID: 2219795	N/A - CONDO COMMON AREA		,
Tax Account ID: 2208426	ALFORD, SHARON E	1509 LEMA DR	TITUSVILLE, FL 32780
Tax Account ID: 2219846	N/A - CONDO COMMON AREA		,
Tax Account ID: 2208569	ROELS, TREVOR W ROELS, MELISSA M	3040 DEMARET DR	TITUSVILLE, FL 32780
Tax Account ID: 2208405	VON ALT, GARY R VON ALT, LYNETTE M	1509 TURNESA DR	TITUSVILLE, FL 32780
Tax Account ID: 2219136	N/A - CONDO COMMON AREA		,
Tax Account ID: 2224294	RICE, LINWOOD V RICE, CHRISTINA	505 INDIAN RIVER AVE	TITUSVILLE, FL 32780
Tax Account ID: 2208967	RODRIGUEZ, TANIA RODRIGUEZ, DANY	10319 STRATFORD POINTE AVE	ORLANDO, FL 32832
Tax Account ID: 2208973	GERVASI, MIRYAM D	4018 S PENINSULA DR	PORT ORANGE, FL 32127
Tax Account ID: 2208788	JOE ANN TABOR TRUST	4540 COLERIDGE AVE	TITUSVILLE, FL 32780
Tax Account ID: 2208789	LACINA, KELLY	3607 TRAVIS PL	TITUSVILLE, FL 32780
Tax Account ID: 2208207	BROWN, SHEILA	3620 BARNA AVE	TITUSVILLE, FL 32780
Tax Account ID: 2208790	BOLEN, DENNIS R	3605 TRAVIS PL	TITUSVILLE, FL 32780
Tax Account ID: 2208787	CHARITAT, DAVID	5720 CLAIBORNE ST	MELBOURNE, FL 32940
Tax Account ID: 2208175	COLDIRON, CLARK COLDIRON, BETH	3600 BARNA AVE	TITUSVILLE, FL 32780
Tax Account ID: 2208786	DUNCAN, HARRY SHERMAN MITCHELL-DUNCAN, LINDA	3600 TRAVIS PL	TITUSVILLE, FL 32780

Tax Account ID: 2208791	MOYER, MARK DAVID MOYER, JACLYN MICHELLE	3595 TRAVIS PL	TITUSVILLE, FL 32780
Tax Account ID: 2208367	RESICAP FLORIDA OWNER LLC	3953 MAPLE AVE, STE 300	DALLAS, TX 75219
Tax Account ID: 2208792	TRAUGER, MICHELLE D TRAUGER, PERRY PURSE	3585 PALMER DR	TITUSVILLE, FL 32780
Tax Account ID: 2208818	MANZO, JAMES V JR LIFE ESTATE	3620 NICKLAUS DR	TITUSVILLE, FL 32780
Tax Account ID: 2208785	SIMON, MARY D SIMON, ANTHONY J	3590 TRAVIS PLACE	TITUSVILLE, FL 32780
Tax Account ID: 2208793	MOYER, ROBERT W MOYER, MARGARET C TRUSTEES	3575 PALMER DR	TITUSVILLE, FL 32780
Tax Account ID: 2208309	MERRICK, LOLA MERRICK, DAVID	PO BOX 1386	TITUSVILLE, FL 32781
Tax Account ID: 2208819	BARGER, CHRISTOPHER J BARGER, ELAINE M	254 MAYS VALLEY RD	HARRIMAN, TN 37748
Tax Account ID: 2208371	CATOZELLA, MELISSA N	3570 BARNA AVE	TITUSVILLE, FL 32780
Tax Account ID: 2208794	JENNINGS, PAUL T	3561 PALMER DR	TITUSVILLE, FL 32780
Tax Account ID: 2208784	COX, ROBERT JR COX, SONIA	3570 TRAVIS PL	TITUSVILLE, FL 32780
Tax Account ID: 2208288	MICKAM, RICHARD E,SR MICKAM, LORETTA K	3563 NICKLAUS DR	TITUSVILLE, FL 32780
Tax Account ID: 2208370	MOORE, PAUL W	3560 BARNA AVE	TITUSVILLE, FL 32780
Tax Account ID: 2208308	ATWELL, COREY B ATWELL, ALEXIS K	3551 BARNA AVE	TITUSVILLE, FL 32780
Tax Account ID: 2208809	SOLIS, LAURIE ELIZABETH	3575 TRAVIS PL	TITUSVILLE, FL 32780
Tax Account ID: 2208810	SHAW, SUSAN SHAW, GREGORY	3550 PALMER DR	TITUSVILLE, FL 32780
Tax Account ID: 2208795	THIGPIN, GARY P THIGPIN, TONI A	3555 PALMER DR	TITUSVILLE, FL 32780
Tax Account ID: 2208822	EDWARD C MCCARTHY & JANET S MCCARTHY REVOCABLE TRUST	3590 NICKLAUS DR	TITUSVILLE, FL 32780
Tax Account ID: 2208289	LINSCOTT, JACQUELINE C	3557 NICKLAUS DR	TITUSVILLE, FL 32780
Tax Account ID: 2208783	TRANTHAM, CHARLES E II	3550 TRAVIS PLACE	TITUSVILLE, FL 32780
Tax Account ID: 2208369	HILL, DAN E HILL, PAMELA S	3550 BARNA AVE	TITUSVILLE, FL 32780
Tax Account ID: 2208823	TRAGESER, CHARLES WILLIAM III	3580 NICKLAUS DRIVE	TITUSVILLE, FL 32780
Tax Account ID: 2208286	ARLB HOLDINGS LLC	386 SANDHILL CV	GENEVA, FL 32732
Tax Account ID: 2208808	BUSCH, ERIK BUSCH, AMBER	3555 TRAVIS PL	TITUSVILLE, FL 32780
Tax Account ID: 2208796	SKILLINGTON, CHARLES R SKILLINGTON, MAUREEN	3545 PALMER DR	TITUSVILLE, FL 32780

Tax Account ID: 2208811	GUINN, ROBERT CHRISTOPHER GUINN, RACHEL	3540 PALMER DR	TITUSVILLE, FL 32780
Tax Account ID: 2208824	BILLY W LITTLEFIELD & PATRICIA E LITTLEFIELD REVOCABLE TRUST	3574 NICKLAUS DR	TITUSVILLE, FL 32780
Tax Account ID: 2208285	DICKERSON, LLOYD DICKERSON, RONDA	1518 RANSOM DR	TITUSVILLE, FL 32780
Tax Account ID: 2208280	WHITTEMORE, ROGER A WHITTEMORE, ARLETTE J	1609 WALL DRIVE	TITUSVILLE, FL 32780
Tax Account ID: 2208782	TAURASI, DAVID L TAURASI, PATRICIA A	3530 TRAVIS PLACE	TITUSVILLE, FL 32780
Tax Account ID: 2208807	GROSS FAMILY TRUST	3535 TRAVIS PL	TITUSVILLE, FL 32780
Tax Account ID: 2208364	EGAN, JEFFREY P EGAN, DARLYNE K	PO BOX 2702	TITUSVILLE, FL 32781
Tax Account ID: 2208366	PEREZ, JAMES D PEREZ, TRACY LISA	1506 RANSOM DR	TITUSVILLE, FL 32780
Tax Account ID: 2208281	JOHNSON, WILLIAM E JOHNSON, TINA J	1603 WALL DR	TITUSVILLE, FL 32780
Tax Account ID: 2208284	SLACK, RICHARD MASON SLACK, ALYSSA KATLYN	1512 RANSOM DR	TITUSVILLE, FL 32780
Tax Account ID: 2208825	PANNING, CURTIS A PANNING, SHIRLEY K LIFE EST	3570 NICKLAUS DR	TITUSVILLE, FL 32780
Tax Account ID: 2208269	NEASON, ERIN B NEASON, MATTHEW J	3535 NICKLAUS DR	TITUSVILLE, FL 32780
Tax Account ID: 2208781	UPTHEGROVE FAMILY TRUST	3508 TRAVIS PL	TITUSVILLE, FL 32780
Tax Account ID: 2208282	WAYNE & LINDA SNOWDEN REVOCABLE TRUST	1517 WALL DR	TITUSVILLE, FL 32780
Tax Account ID: 2208813	OWEN, RANDEL W RITZ-OWEN, MINDY L	3530 PALMER DR	TITUSVILLE, FL 32780
Tax Account ID: 2208798	LEWIS, DANIEL FREDERICK O'ROURKE, KATHLEEN MARY	3525 PALMER DR	TITUSVILLE, FL 32780
Tax Account ID: 2208826	STEVEN B ADAMS REVOCABLE TRUST	3540 NICKLAUS DR	TITUSVILLE, FL 32780
Tax Account ID: 2208361	JOHNS, JAMES R JR	1505 WALL DR	TITUSVILLE, FL 32780
Tax Account ID: 2208270	MCLANE, JAMIE	3529 NICKLAUS DR	TITUSVILLE, FL 32780
Tax Account ID: 2208780	SHAHEEN, ANTHONY J SCHAROUN, CHERYL	3135 S MONACO CIRCLE	DENVER, CO 80222
Tax Account ID: 2208827	STEVEN B ADAMS REVOCABLE TRUST	3540 NICKLAUS DR	TITUSVILLE, FL 32780
Tax Account ID: 2208283	FISHER, ROY A	1511 WALL DRIVE	TITUSVILLE, FL 32780
Tax Account ID: 2208799	FELDMAN, ILYA	3515 PALMER DR	TITUSVILLE, FL 32780
Tax Account ID: 2208814	PERENO, ANGELA D PERENO, GLENN B	3520 PALMER DR	TITUSVILLE, FL 32780
Tax Account ID: 2208776	STEVEN B ADAMS REVOCABLE TRUST	3540 NICKLAUS DR	TITUSVILLE, FL 32780

Tax Account ID: 2208278	MORRIS, JENNIFER B MORRIS, RICHARD H	1602 WALL DR	TITUSVILLE, FL 32780
Tax Account ID: 2208271	CANNILLA, SALVATORE CANNILLA, NANCY LEE	1627 LITTLER DR	TITUSVILLE, FL 32780
Tax Account ID: 2208779	SACHDEV FAMILY TRUST	3504 TRAVIS PL	TITUSVILLE, FL 32780
Tax Account ID: 2208800	WILLIAMSON, MICHAEL C WILLIAMSON, CHRISTI C	3505 PALMER DR	TITUSVILLE, FL 32780
Tax Account ID: 2208272	BROWN, COURTNEY BROWN, ALEXANDER	1621 LITTLER DR	TITUSVILLE, FL 32780
Tax Account ID: 2208277	CLARK, DAVID P	1524 WALL DRIVE	TITUSVILLE, FL 32780
Tax Account ID: 2208268	EICHERT, DAVID C	1702 LITTLER DRIVE	TITUSVILLE, FL 32780
Tax Account ID: 2208775	ZAREFOSS, LARRY K ZAREFOSS, KATHERINE M	3530 NICKLAUS DR	TITUSVILLE, FL 32780
Tax Account ID: 2208803	KERN, ZONA RENE KERN, RAYMOND GEORGE	3501 TRAVIS PLACE	TITUSVILLE, FL 32780
Tax Account ID: 2208778	SACHDEV FAMILY TRUST	3504 TRAVIS PL	TITUSVILLE, FL 32780
Tax Account ID: 2208273	LEON FAMILY REVOCABLE TRUST	1615 LITTLER DR	TITUSVILLE, FL 32780
Tax Account ID: 2208267	ZACKEL, PAUL JOHN ZACKEL, JACQUELINE T	1632 LITTLER DR	TITUSVILLE, FL 32780
Tax Account ID: 2208257	MARTINEZ, RAUL MARTINEZ, DELMA R	1721 WATROUS DR	TITUSVILLE, FL 32780
Tax Account ID: 2208828	YODER, JOHN	3524 NICKLAUS DR	TITUSVILLE, FL 32780
Tax Account ID: 2208816	JOHN EDWARD FITZGERALD III TRUST	3500 PALMER DR	TITUSVILLE, FL 32780
Tax Account ID: 2208801	VIEIRA, ROBIN K	1905 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2208817	VEAUDRY, ELIZABETH F MYERS, JOSEPH G	1965 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2208829	MICHAEL D & ANGELINA M MAGNA TRUST	3520 NICKLAUS DR	TITUSVILLE, FL 32780
Tax Account ID: 2208802	ROSSI, LAWRENCE ANTONIO, ARIES CATHARINE	3495 TRAVIS PL	TITUSVILLE, FL 32780
Tax Account ID: 2208777	HUDSON, GAIL M	3496 TRAVIS PLACE	TITUSVILLE, FL 32780
Tax Account ID: 2208830	MHD REVOCABLE TRUST	3510 NICKLAUS DR	TITUSVILLE, FL 32780
Tax Account ID: 2208256	WYCKOFF, BOBBI J WYCKOFF, KRAIG O	2900 JOLLY ST	TITUSVILLE, FL 32780
Tax Account ID: 2208774	FIELDING, JIMMY C,JR FIELDING, LEIGH ANNE	3500 NICKLAUS DR	TITUSVILLE, FL 32780
Tax Account ID: 2208716	PRICE, CHARLENE S	1880 COUNTRY CLUB DR	TITUSVILLE, FL 32780

Tax Account ID: 2208749	ABERNATHY, JOE H ABERNATHY, YVONNE D	1900 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2208717	LARIVEE, WARREN A,JR LARIVEE, DIANE M	1864 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2208244	PONS, JOLINE G	1737 GULDAHL DR C/O MARJORIE HELEN DOYLE	TITUSVILLE, FL 32780
Tax Account ID: 2208718	STORM, PENELOPE A	1848 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2208720	SELLITO, PAUL DENNIS HIGGINS-SELLITTO, KATHLEEN M	6183 W WOODSIDE CIR	CRYSTAL RIVER, FL 34429
Tax Account ID: 2208773	EDWARD B RADIK & CATHERINE A RADIK REVOCABLE TRUST	3480 NICKLAUS DR	TITUSVILLE, FL 32780
Tax Account ID: 2208719	BERTILUS, SEMEL AUGUSTE, MARIE MIRADELLE	829 QUARTZ TER	WEST PALM BEACH, FL 33413
Tax Account ID: 2208748	PATTERSON, WILLIAM E PATTERSON, INGRID	3442 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208747	BOLKS, ROBERT ANTHONY	3444 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208551	ALLAN & LORELEI SPRAYBERRY TRUST	1816 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2208746	PARKER, ELIZABETH DANIELS SOLOMON	3446 TREVINO CIR, APT 1	TITUSVILLE, FL 32780
Tax Account ID: 2208721	CONFIDENTIAL PURSUANT TO FLORIDA STATUTES	3496 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208243	COPPOCK, LEE A COPPOCK, PATRICIA M	1754 GULDAHL DR	TITUSVILLE, FL 32780
Tax Account ID: 2208253	GILBERT, ROMILLY G GILBERT, GAIL J	1710 WATROUS DR	TITUSVILLE, FL 32780
Tax Account ID: 2208745	MANIRE, DENNIS R MANIRE, CYNTHIA R TRUSTEES	3448 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208552	KELLY, EUGENE B	1800 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2208744	HAUBERT, RALPH E HAUBERT, KERRY	3450 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208220	HOLLAND, DAVID B HOLLAND, LORNA LEE	1755 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2208722	WAKENIGHT, JENNIFER	3494 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208553	NASH, RANDALL L	1784 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2208743	ANDREWS, CHRISTINE	3452 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208750	KUNDID, MARKO KUNDID, LILLIE S	3491 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208221	BAIR, MELINDA K	1749 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2208241	FISHER, MICHELLE	1742 GULDAHL DR	TITUSVILLE, FL 32780

Tax Account ID: 2208723	SMITH, JAMES MORGAN SMITH, JUDITH H LIFE ESTATE	3492 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208248	HAGER, EARL BRADLEY	1713 GULDAHL DR	TITUSVILLE, FL 32780
Tax Account ID: 2208554	HELENA ALLARD & ALBERT ALLARD REVOCABLE TRUST	1768 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2208742	WILLIAMS, DONALD E WILLIAMS, SUSAN R	3454 TREVINO CIR C/O KATHRYN ELAINE WILLIAMS	TITUSVILLE, FL 32780
Tax Account ID: 2208761	SCAMMON, JUANITA C	3451 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208762	DALE & ELIZABETH MILLER REVOCABLE TRUST	3447 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208240	BOYLES, JAMES A BOYLES, SARAH F LIFE ESTATE	1736 GULDAHL DR	TITUSVILLE, FL 32780
Tax Account ID: 2208763	HATTAWAY, JAMES E JR HATTAWAY, JUDY L	PO BOX 2572	TITUSVILLE, FL 32781
Tax Account ID: 2208249	THIBIDEAU, REYNOLD JOSEPH THIBIDEAU, PHYLLIS KENNEDY	1707 GULDAHL DR	TITUSVILLE, FL 32780
Tax Account ID: 2208555	NESTOR, KIMBERLY NESTOR, ALBERTA	1752 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2208760	STEPHEN & SUE KIRSCHMAN TRUST	3457 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208223	O'ROURKE, KEVIN D	2805 SMITH LN	MALABAR, FL 32950
Tax Account ID: 2208741	LUTZ, MARILYN L	3456 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208239	ENGLISH, CHERYL T	1730 GULDAHL DR	TITUSVILLE, FL 32780
Tax Account ID: 2208752	SELLERS, JILL MARIE	3487 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208556	DINGESS, RICHARD LEE DINGESS, BARBARA JEAN	1736 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2208725	WILLIAMSON, MICHAEL C WILLIAMSON, CHRISTI C	3505 PALMER DR	TITUSVILLE, FL 32780
Tax Account ID: 2208759	HARSH, CONNIE HARSH, KEVIN	3459 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208238	STEVENS, ROBERT	1724 GULDAHL DR	TITUSVILLE, FL 32780
Tax Account ID: 2208224	GRANT, KATHERINE WITTEN, VERNON	1731 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2208740	ROMANSKY, GEORGE E ROMANSKY, HEATHER R	3458 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208557	LU, APRIL JENNIFER LU, BETHANY ANN	1720 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2208758	DEITZ, BARBARA K	3461 TREVINO CIRCLE	TITUSVILLE, FL 32780

Tax Account ID: 2208754	NIXON, CECIL E,JR	3485 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208726	JONES, JULIE L	3486 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208739	PORTER, WILLIAM THOMAS PORTER, REBECCA LYNN	3460 TREVINO CIRCLE	TITUSVILLE, FL 32780
Tax Account ID: 2208237	PETERSON, JULIAN M SR PETERSON, KATHERINE	1718 GULDAHL DR	TITUSVILLE, FL 32780
Tax Account ID: 2208225	VAN VELDHUISEN, THOMAS R	1725 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2208558	SONNELITTER, JOHN M SONNELITTER, KATHERINE ANN	1704 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2208738	DANZ, DANIELLE DANZ, KEVIN	3462 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208755	CONFIDENTIAL PURSUANT TO FLORIDA STATUTES	BREVARD COUNTY SHERIFF'S OFFICE 700 PARK AVE S	TITUSVILLE, FL 32780
Tax Account ID: 2208226	EDMONDS, MELVIN D JR	1719 COUNTRY CLUB DRIVE	TITUSVILLE, FL 32780
Tax Account ID: 2208727	ALLEN, BETTY ELAREE	3484 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208737	BOWEN, ASHLEY ELIZABETH	3464 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208559	SINIAKOV, IGOR LIPANOVICH, TATYANA	1688 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2208756	WILLIAMS, F MICHAEL WILLIAMS, LESLIE R	3481 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208728	BURGESS, FRED P	3482 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208757	SPEIGHT, CONNIE	3463 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208560	CHMELY, JEAN G	1672 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2208736	CHANEY, RUSSEL R CHANEY, KAREN	3466 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208230	DANGELO, ROBIN MARIE DANGELO, SCOTT P	1611 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2208561	BREDE, SCOTT BREDE, KATHERINE JINSUN	3191 FINSTERWALD DR	TITUSVILLE, FL 32780
Tax Account ID: 2208729	GABBERT, MARK	2605 RAVENSWOOD DR	TITUSVILLE, FL 32780
Tax Account ID: 2208753	FRENSSEN, EVELYN C	3477 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208735	RICHTER, PAUL S,JR	3468 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208562	LILLIAN V WLLIAMS TRUST	3204 FINSTERWALD DR	TITUSVILLE, FL 32780
Tax Account ID: 2208730	ARBUCKLE, MONICA CHERRY, DAVID	3478 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208695	DIZON LLC	28 SAUNDERS ST NE	ATLANTA, GA 30317
Tax Account ID: 2208734	BROWNING, MICHAEL D BROWNING, PAMELA M	3470 TREVINO CIR	TITUSVILLE, FL 32780

Tax Account ID: 2208701	KIERSTEAD, STEPHANIE	104 MARS CT	INDIALANTIC, FL 32903
Tax Account ID: 2208731	LINGLER, HERSCHEL	1833 SHULER AVE	HAMILTON, OH 45011
Tax Account ID: 2208733	BINDER, SCOTT BINDER, ROSE	3472 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208219	SAMIR & ILHAM ITANI REVOCABLE LIVING TRUST	1614 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2208703	ROBERT E HOWARD CONSTRUCTION INC	106 JULIA STREET	TITUSVILLE, FL 32796
Tax Account ID: 2208732	WILSON, SAMUEL JAMES WILSON, JAMES RICHARD	3474 TREVINO CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208218	ESTEP, DANIEL J ESTEP, PATRICIA DIANA	1608 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2208217	FISHMAN, PATRICIA A	1602 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2208698	HOLLAND, CHRISTOPHER ROBERT HOLLAND, CINDY LIZETH	1127 FULTON CIR	TITUSVILLE, FL 32780
Tax Account ID: 2208211	JIMMY ALIFF & GLORIA ALIFF REVOCABLE TRUST ETHERIDGE, TAMMY L	1615 FERRIER DR	TITUSVILLE, FL 32780
Tax Account ID: 2208436	JIMMY ALIFF & GLORIA ALIFF REVOCABLE TRUST	1609 FERRIER DR	TITUSVILLE, FL 32780
Tax Account ID: 2208438	KIESLING, DIANA H	1515 FERRIER DR	TITUSVILLE, FL 32780
Tax Account ID: 2208437	CLAY, RANDLE B	1603 FERRIER DRIVE	TITUSVILLE, FL 32780
Tax Account ID: 2208210	MCBROOM FAMILY LIVING TRUST	3145 DEMARET DR	TITUSVILLE, FL 32780
Tax Account ID: 2208421	CAHALAN, PATRICK CAHALAN, MARCIA	1637 LEMA DR	TITUSVILLE, FL 32780
Tax Account ID: 2207871	JOHNSTON, CHRISTOPHER ROBIN CABREY, MARTHA	425 HIGHVIEW DR	WAYNE, PA 19087
Tax Account ID: 2208435	JONES, JAMES H	1444 FERRIER DR	TITUSVILLE, FL 32780
Tax Account ID: 2208420	GRUVER, NANCY L	1638 LEMA DR	TITUSVILLE, FL 32780
Tax Account ID: 2208678	WHITE, ARLENE (IN TRUST)	35 CURLING RD BRACEBRIDGE ON P1L 1M6	,
Tax Account ID: 2208422	FRANZ, JON E FRANZ, JENNIFER B	1540 MAGNOLIA AVE	WINTER PARK, FL 32789
Tax Account ID: 2208395	RILEY, JAMES P RILEY, PENELOPE L LIFE ESTATE	3129 DEMARET DR	TITUSVILLE, FL 32780
Tax Account ID: 2207869	ARTEAGA, MICHAEL FOLEY, MELISSA	3110 DEMARET DR	TITUSVILLE, FL 32780
Tax Account ID: 2208419	PERGANTIS, WILLIAM	1632 LEMA DR	TITUSVILLE, FL 32780
Tax Account ID: 2208434	DUGGAN, PETER TIMOTHY	1438 FERRIER DR	TITUSVILLE, FL 32780
Tax Account ID: 2208423	SANDRIDGE, ERYKA L	1625 LEMA DR	TITUSVILLE, FL 32780

Tax Account ID: 2208396	MARCIA E KING REVOCABLE TRUST	3115 DEMARET DR	TITUSVILLE, FL 32780
Tax Account ID: 2207870	RAGWEED REAL ESTATE LLC	1184 WOODRUFF AVE	JACKSONVILLE, FL 32205
Tax Account ID: 2208418	AGUIRRE, KAREN S BULLINGTON, TIMOTHY W	10761 SPRING BROOK LN	ORLANDO, FL 32825
Tax Account ID: 2208433	HORNER, RICHARD D HORNER, PERI S BAKER	1432 FERRIER DR	TITUSVILLE, FL 32780
Tax Account ID: 2208424	JORDAN, GOLDIE I TRUSTEE	1621 LEMA DR	TITUSVILLE, FL 32780
Tax Account ID: 2208397	GALLO, BENITA J GALLO, JAMES L	3101 DEMARET DRIVE	TITUSVILLE, FL 32780
Tax Account ID: 2208605	ALAN F SR IRREVOCABLE TRUST	11 CURREWOOD CIR	ROCHESTER, NY 14618
Tax Account ID: 2208417	JORDAN, LUIS GABRIEL PEREZ TAPANES, JENY MERCEDES PEREZ	1620 LEMA DR	TITUSVILLE, FL 32780
Tax Account ID: 2207853	ABNER FAMILY TRUST	821 INDIAN RIVER AVE	TITUSVILLE, FL 32780
Tax Account ID: 2208425	GEORGE, BARRYMORE S	1515 LEMA DR	TITUSVILLE, FL 32780
Tax Account ID: 2208398	BIELLING, ROBERT L BIELLING, CYNTHIA K LIFE EST	3091 DEMARET DR	TITUSVILLE, FL 32780
Tax Account ID: 2208416	SHOEMAKER, VICKI L	1614 LEMA DR	TITUSVILLE, FL 32780
Tax Account ID: 2208399	MURRAY, KELLIE MURRAY, PATRICIA	3061 DEMARET DR	TITUSVILLE, FL 32780
Tax Account ID: 2208567	BIELLING, DEBORAH A	3080 DEMARET DR	TITUSVILLE, FL 32780
Tax Account ID: 2208400	MOSCOSO, CRISTIAN ANDRES MOSCOSO, MEGAN	3031 DEMARET DR	TITUSVILLE, FL 32780
Tax Account ID: 2208415	CLEMENTS, DANIEL	1608 LEMA DR	TITUSVILLE, FL 32780
Tax Account ID: 2208414	STICKLEY, JAMES	1602 LEMA DR	TITUSVILLE, FL 32780
Tax Account ID: 2208413	MAMLOUK, TILCIA JUDITH	1514 LEMA DR	TITUSVILLE, FL 32780
Tax Account ID: 2208412	VASQUEZ, LUIS A VASQUEZ, SUZANNE M	1508 LEMA DR	TITUSVILLE, FL 32780
Tax Account ID: 2208619	COX, MORRIS KEITH TRUSTEE COX, DONNA H TRUSTEE	2530 JEAN ST	TITUSVILLE, FL 32780
Tax Account ID: 2208401	WIGCHERS, GARY LLOYD WIGCHERS, HELEN CHRISTINE	3011 DEMARET DR	TITUSVILLE, FL 32780
Tax Account ID: 2208402	ADAMO, PATRICIA	1609 TURNESA DR	TITUSVILLE, FL 32780
Tax Account ID: 2208403	LANNY B ZAGORA & CAROLYN J ZAGORA TRUST	1603 TURNESA DR	TITUSVILLE, FL 32780
Tax Account ID: 2208404	BROWN, GLORIA M	1515 TURNESA DR	TITUSVILLE, FL 32780
Tax Account ID: 2208570	MANSFIELD, MICHAEL	3020 DEMARET DR	TITUSVILLE, FL 32780

Tax Account ID: 2208571	PETER J SOVICH JR TRUST	3000 DEMARET DR	TITUSVILLE, FL 32780
	RICHARD M COOKE & ANN A COOKE		
Tax Account ID: 2208572	REVOCABLE TRUST	2980 DEMARET DR	TITUSVILLE, FL 32780
Tax Account ID: 2208387	JANET D DAVIS TRUST	1614 TURNESA DR	TITUSVILLE, FL 32780
Tax Account ID: 2208388	QUINONES, JUAN E,SR	1608 TURNESA DR	TITUSVILLE, FL 32780
	BARTEK, RICHARD WADE BARTEK, DIANNE		
Tax Account ID: 2208389	MARIE	12025 VANE CIR	OMAHA, NE 68142
Tax Account ID: 2208390	JENKINS, CARL E JENKINS, NATASHA C	1514 TURNESA DR	TITUSVILLE, FL 32780
Tax Account ID: 2204467	TRUST #04600 TRUST 0460A	522 S HUNT CLUB BLVD, # 568	APOPKA, FL 32703
Tax Account ID: 2210559	SQTIFL001 LLC	30 N LA SALLE ST, STE 4140	CHICAGO, IL 60602
Tax Account ID: 2210560	HELOW PROPERTIES LTD	7545 CENTURION PKWY #102	JACKSONVILLE, FL 32256
Tax Account ID: 2221590	EXPLORE AND DISCOVER INC	1680 KNOX MCRAE DR	TITUSVILLE, FL 32780
Tax Account ID: 2208092	KREUSSER, MARGARET O TRUSTEE	1461 LA HONDA DR	ESCONDIDO, CA 92027
Tax Account ID: 2220176	N/A - CONDO COMMON AREA		,
Tax Account ID: 2208084	ADONAI HOLDINGS TITUSVILLE LLC	5819 LA BELLE ST	BELLE ISLE, FL 32809
Tax Account ID: 2224874	N/A - CONDO COMMON AREA		0 0, 00000
Tax Account ID: 3037245	MCNAMARA, MARK	8300 CHESTNUT KEY CT, APT 201	ORLANDO, FL 32825
Tax Account ID: 2223503	N/A - CONDO COMMON AREA		0 0, 00000
Tax Account ID: 2220688	N/A - CONDO COMMON AREA		,
Tax Account ID: 2219449	N/A - CONDO COMMON AREA		,
Tax Account ID: 2220646	N/A - CONDO COMMON AREA		,
Tax Account ID: 2220123	N/A - CONDO COMMON AREA		,
Tax Account ID: 2220012	N/A - CONDO COMMON AREA		,
Tax Account ID: 2220201	N/A - CONDO COMMON AREA		,
Tax Account ID: 2219799	N/A - CONDO COMMON AREA		,
Tax Account ID: 2219701	N/A - CONDO COMMON AREA		,
Tax Account ID: 2219767	N/A - CONDO COMMON AREA		,
Tax Account ID: 2219375	N/A - CONDO COMMON AREA		,
Tax Account ID: 2207868	APOLLO GARDENS LLLP	1398 SW 1ST ST, FL 12	MIAMI, FL 33135
Tax Account ID: 2219160	N/A - CONDO COMMON AREA		,
Tax Account ID: 2219607	N/A - CONDO COMMON AREA		,
Tax Account ID: 2219916	N/A - CONDO COMMON AREA		,

Tax Account ID: 2219068	N/A - CONDO COMMON AREA		,
Tax Account ID: 2219721	N/A - CONDO COMMON AREA		,
Tax Account ID: 2219763	N/A - CONDO COMMON AREA		,
Tax Account ID: 2219148	N/A - CONDO COMMON AREA		,
Tax Account ID: 2219745	N/A - CONDO COMMON AREA		,
Tax Account ID: 2219076	N/A - CONDO COMMON AREA		,
Tax Account ID: 2208565	JAMES, LANCE S JAMES, SUEZETT A AITCHESON	3160 DEMARET DR	TITUSVILLE, FL 32780
Tax Account ID: 2208566	TUCKER, ROBERT G TUCKER, RACHEL	3140 DEMARET DR	TITUSVILLE, FL 32780
Tax Account ID: 2219084	N/A - CONDO COMMON AREA		,
Tax Account ID: 2208563	MILLS, TANYA R	1620 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2208564	MCDOUGALL FAMILY TRUST	3180 DEMARET DR	TITUSVILLE, FL 32780
Tax Account ID: 2219896	N/A - CONDO COMMON AREA		,
Tax Account ID: 2207847	TOULON APARTMENTS MS LLC	4706 18TH AVE	BROOKLYN, NY 11204
Tax Account ID: 2219403	N/A - CONDO COMMON AREA		,
Tax Account ID: 2208174	VILLAS ESCONDIDO CONDOMINIUM ASSOCIATION INC	7927 FOXE DR	NIAGARA FALLS ONTARIO L2H 2Y5,
Tax Account ID: 2208699	WILLIAM TERRY HOFFMAN TRUST	4766 LONGBOW DR	TITUSVILLE, FL 32796
Tax Account ID: 2208700	WILLIAM TERRY HOFFMAN TRUST	4766 LONGBOW DR	TITUSVILLE, FL 32796
Tax Account ID: 2210665	HEUKEROTT, ANDREA	PO BOX 2878	ORMOND BEACH, FL 32175
Tax Account ID: 2220958	SUSTAINABLE L&S LLC	3389 SHERIDAN ST, # 640	HOLLYWOOD, FL 33021
Tax Account ID: 2208250	BOWDEN, JONATHAN S	1621 GULDAHL DR	TITUSVILLE, FL 32780
Tax Account ID: 2208229	HENSON, KENNETH L	1617 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2208312	SHAFFER, THOMAS M	#114-137 9812 FALLS RD STE 114	POTOMAC, MD 20854
Tax Account ID: 2208216	JERRY & M CAROLE COPELAND TRUST	1514 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2208231	LINDBERG, JONETTE K	1605 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2207855	BREVARD LAND DEVELOPMENT LLC	19 COURTLAND DR	HUDSON, MA 01749
Tax Account ID: 2208439	GWENDOLYN L HAGAR REVOCABLE TRUST	509 WASHINGTON AVE	CAPE CANAVERAL, FL 32920
Tax Account ID: 2208321	DICKINSON, INGRID	5455 LEE FARM BLVD	CRESTVIEW, FL 32536
Tax Account ID: 2204490	TITUSVILLE PLAZA LLC	626 OLD DIXIE HWY SW	VERO BEACH, FL 32962
Tax Account ID: 2204477	AMERICAN EAGLE TITUSVILLE LLC	3819 HAWK CREST RD	ANN ARBOR, MI 48103
Tax Account ID: 2208322	RILEY, JOHN A RILEY, JOAN E	1712 GULDAHL DR	TITUSVILLE, FL 32780

Tax Account ID: 2208228	WALDEN, IRVIN STANLEY,JR WALDEN, SHARON LEE	1707 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2208227	JOHNSON, EARL P JR	1713 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 3027828			,
Tax Account ID: 2207593	HILL, MICHELLE E	2245 HAZELWOOD CT	TITUSVILLE, FL 32780
Tax Account ID: 2207594	CATARELLI, MARGARET W	2265 HAZELWOOD CT	TITUSVILLE, FL 32780
Tax Account ID: 2207592	BLITCH, DAVID	2225 HAZELWOOD CT	TITUSVILLE, FL 32780
Tax Account ID: 2207591	LOEHNER, JEROME F	2220 HAZELWOOD COURT	TITUSVILLE, FL 32780
Tax Account ID: 2207584	LAVER, SHELBY L LAVER, DAVID S	2245 FRUITWOOD CT	TITUSVILLE, FL 32780
Tax Account ID: 2207585	SRP SUB LLC	PO BOX 4900 C/O INVITATION HOMES / RYAN LLC	SCOTTSDALE, AZ 85261
Tax Account ID: 2208710	PIPER, HEATHER	3165 SAUNDERS PL	TITUSVILLE, FL 32780
Tax Account ID: 2208709	PUCKETT, MARK E PUCKETT, TERESA NELSON	3160 SAUNDERS PL	TITUSVILLE, FL 32780
Tax Account ID: 2208711	JOHNSON, EARL P,JR	3135 SAUNDERS PL	TITUSVILLE, FL 32780
Tax Account ID: 2208708	DENNIS LYNN ADAMSON & TINA MARIE ADAMSON REVOCABLE TRUST	3130 SAUNDERS PL	TITUSVILLE, FL 32780
Tax Account ID: 2208712	JOHNSON, EARL P JR	3135 SAUNDERS PL	TITUSVILLE, FL 32780
Tax Account ID: 2208707	WILLIAM E & MARY L LUCAS TRUST	3100 SAUNDERS PL	TITUSVILLE, FL 32780
Tax Account ID: 2208713	PORCARI, PHILIP F,LIFE ESTATE PORCARI, LARAINE I,LIFE ESTATE	3095 SAUNDERS PL	TITUSVILLE, FL 32780
Tax Account ID: 2208706	GREENE, LUELLA ANN TRUSTEE	3090 SAUNDERS PLACE	TITUSVILLE, FL 32780
Tax Account ID: 2208714	QUEEN, LOIS B	3085 SAUNDERS PL	TITUSVILLE, FL 32780
Tax Account ID: 2208715	HOLMES, CINDI B	3075 SAUNDERS PL	TITUSVILLE, FL 32780
Tax Account ID: 2208764	JOHANSEN, PATRICIA	3305 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2208765	TANKERSLEY, RICHARD B	3295 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2208772	KIERSTEAD, DAVID L KIERSTEAD, HOLLY R	3242 CASPER PLACE S	TITUSVILLE, FL 32780
Tax Account ID: 2207687	JOSE H GONZALEZ REVOCABLE TRUST	8900 SW 112TH ST	MIAMI, FL 33176
Tax Account ID: 2208771	HESS, RICHARD A WAGNER, KRISTIN R	3236 S CASPER PL	TITUSVILLE, FL 32780
Tax Account ID: 2208766	BENZINGER, BARBARA M	3265 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2208770	SPECHT, WILLIAM DAVID SPECHT, DIANA A CHAVES	3230 S CASPER PLACE	TITUSVILLE, FL 32780
Tax Account ID: 2208767	WYKE, MELANIE WYKE, THOMAS	3235 ROYAL OAK DR	TITUSVILLE, FL 32780

Tax Account ID: 2207688	MADGETT, LORI MADGETT, MICHAEL D	3135 S CASPER PL	TITUSVILLE, FL 32780
Tax Account ID: 2208769	FREDERICK, WALLACE J	3124 S CASPER PL	TITUSVILLE, FL 32780
Tax Account ID: 2208768	MORRIS, ADAM ROBB MORRIS, JESSICA ANN	3205 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207689	PATCH, PATRICIA A TRUSTEE	3129 S CASPER PL	TITUSVILLE, FL 32780
Tax Account ID: 2207686	BURKAVAGE FAMILY TRUST	3118 S CASPER PL	TITUSVILLE, FL 32780
Tax Account ID: 2207682	HASSELL, ROBERT A ABBOTT, BRENDA J	3195 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207690	SRP SUB LLC	PO BOX 4900 C/O INVITATION HOMES / RYAN LLC	SCOTTSDALE, AZ 85261
Tax Account ID: 2207683	ALFARO, CARLOS G ALFARO, SHELLY L	3165 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207685	BRACKEN, MARK S LIMA, LARISSA	3112 S CASPER PL	TITUSVILLE, FL 32780
Tax Account ID: 2207691	JONES, ROBERT JONES, CARRIE	3117 S CASPER PL	TITUSVILLE, FL 32780
Tax Account ID: 2207684	CHAPPELL, WYATT	3135 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207692	VIEIRA, ERNEST C	3111 S CASPER PLACE	TITUSVILLE, FL 32780
Tax Account ID: 2207693	DENMAN, MORGAN ASHLEY	3115 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207672	GANOE, SUSAN M A	3085 N CASPER PL	TITUSVILLE, FL 32780
Tax Account ID: 2207694	CLARK, KEITH ALBERT,JR MCCORMICK, MEGAN K	3105 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207695	GARRY L RECK TRUST	3085 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207681	CASTELLANOS, GERMAN CASTELLANOS, ESTELA E	3065 N CASPER PL	TITUSVILLE, FL 32780
Tax Account ID: 2207673	JOHN, EWAN JOHN, RACHAEL	3100 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207696	GUILL, THOMAS V GUILL, GINA M	3065 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207674	STAFFORD, PHILLIP ALAN	3080 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207697	LAIDLEY, MICHAEL S LAIDLEY, NANCY A	10914 SE 293RD ST	AUBURN, WA 98092
Tax Account ID: 2207680	KING, JONATHAN KING, KELLIE	3045 N CASPER PL	TITUSVILLE, FL 32780
Tax Account ID: 2207679	BLACK, STACEY L	3025 CASPER PLACE N	TITUSVILLE, FL 32780
Tax Account ID: 2207700	ZBIEGIEN, ANDREW ZBIEGIEN, EDNA F	3030 SAUNDERS PL	TITUSVILLE, FL 32780
Tax Account ID: 2207698	LUTTER, MICHAEL T LUTTER, KRISTEN L	3025 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207675	JENKINS, LYNN FRANCIS	3060 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207699	ADORNO, ALVIN ADORNO, PAMELA D	3000 SAUNDERS PL	TITUSVILLE, FL 32780
Tax Account ID: 2207676	BUNDY, CALEB THOMAS BUNDY, VANESSA	3040 ROYAL OAK DR	TITUSVILLE, FL 32780

Tax Account ID: 2207678	STANLEY, JAMES T	2995 N CASPER PL	TITUSVILLE, FL 32780
Tax Account ID: 2207677	SCHILL, MORRIS F SCHILL, BARBARA D	2965 N CASPER PLACE	TITUSVILLE, FL 32780
Tax Account ID: 2207648	PERRY, DORIS LIFE ESTATE	3000 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207651	MORRISON, BARTHOLOMEW J MORRISON, SUSAN J	2960 N CASPER PLACE	TITUSVILLE, FL 32780
Tax Account ID: 2207652	WILLIAMSON, BRETT WILLIAMSON, EVAN	2945 REDWOOD AVE	TITUSVILLE, FL 32780
Tax Account ID: 2207650	SHERRILL, SUZETTE M	2950 N CASPER PL	TITUSVILLE, FL 32780
Tax Account ID: 2207649	GLOWACKI, TIMOTHY GLOWACKI, JUDY	2940 N CASPER PL	TITUSVILLE, FL 32780
Tax Account ID: 2207758	CONKLIN FAMILY REVOCABLE TRUST	2920 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207757	ERNST, PATRICK ERNST, MICHELLE	2880 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207756	SEBERRY, JAMES	2850 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207755	PRUITT, KAY EVRITT	2830 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207737	RAGONE, NEIL L RAGONE, DARLA S	2835 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207738	WOODBECK, KENT A WOODBECK, KELLY J	2800 HUTCHINSON PL	TITUSVILLE, FL 32780
Tax Account ID: 2207736	DILTS, LEAH O DILTS, CHRISTOPHER D	2805 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207754	KELLER, LANCE P	818 CMR 445	APO, AE 09046
Tax Account ID: 2207721	HEADLEY, ROBERT T HEADLEY, LAURA C	2795 HUTCHINSON PL	TITUSVILLE, FL 32780
Tax Account ID: 2207739	FALLER, WILLIAM E FALLER, MARY K	1860 ATLANTIC AVE N UNIT B707	COCOA BCH, FL 32931
Tax Account ID: 2207735	FLETCHER, STANLEY GENE FLETCHER, PHYLLIS JEAN	2755 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207753	HURLEY, JAMIE R	2750 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207722	BENSON, THEDA F LIFE ESTATE	2780 MANGRUM PLACE	TITUSVILLE, FL 32780
Tax Account ID: 2207720	WRIGHT, ROBERT E,SR WRIGHT, BETTY J	2755 HUTCHISON PL	TITUSVILLE, FL 32780
Tax Account ID: 2207723	NELSON, SHEILA	2750 MANGRUM PL	TITUSVILLE, FL 32780
Tax Account ID: 2207719	CABLE, NANCY C TRUSTEE	2705 HUTCHISON PL	TITUSVILLE, FL 32780
Tax Account ID: 2207724	STOECKEL, LEAH R	2700 MANGRUM PLACE	TITUSVILLE, FL 32780
Tax Account ID: 2207718	JUDITH ANN BOYCE REVOCABLE TRUST	2030 RUSSELL DR	TITUSVILLE, FL 32796
Tax Account ID: 2207742	KUMP, RICHARD P KUMP, SANFORD E	2660 HUTCHISON PLACE	TITUSVILLE, FL 32780
Tax Account ID: 2207725	CASH, CORY M CASH, CATHERINE M	2670 MANGRUM PL	TITUSVILLE, FL 32780
Tax Account ID: 2207717	DELGRIPPO, DAVID RALLO, KATHERINE	2635 HUTCHISON PL	TITUSVILLE, FL 32780
Tax Account ID: 2207743	CARL & RAMONA STREETMAN TRUST	2630 HUTCHISON PL	TITUSVILLE, FL 32780
Tax Account ID: 2207726	CSONKA, LEE ANN	2650 MANGRUM PLACE	TITUSVILLE, FL 32780

Tax Account ID: 2207716	RAGIN, BRIAN J RAGIN, JANET	2605 HUTCHISON PL	TITUSVILLE, FL 32780
Tax Account ID: 2207744	FORD, FELICE MARIA	PO BOX 1716	TITUSVILLE, FL 32781
Tax Account ID: 2207715	RICHARDSON, ZACHARY RICHARDSON, HOLLY	2565 HUTCHISON PL	TITUSVILLE, FL 32780
Tax Account ID: 2207727	ANJAL, DONALD E,JR ANJAL, SHARON NARDELLA	2600 MANGRUM PL	TITUSVILLE, FL 32780
Tax Account ID: 2207745	REID, THYSIS ANN	2590 HUTCHISON PL	TITUSVILLE, FL 32780
Tax Account ID: 2207714	JEFFREY & KAREN WILSON REVOCABLE TRUST	2535 HUTCHISON PL	TITUSVILLE, FL 32780
Tax Account ID: 2207746	LIUZZI, MICHAEL LIUZZI, JENNELYN	2560 HUTCHISON PL	TITUSVILLE, FL 32780
Tax Account ID: 2204419	CALDWELL, BRAD	2530 HUTCHISON PL	TITUSVILLE, FL 32780
Tax Account ID: 2221591	BYASSEE, ELIZABETH R,LIFE ESTATE	2228 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2221592	LAMPUGNANO, VITO LAMPUGNANO, LINDA	2234 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2222456	CSONKA, HEATHER B	2240 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2222458	MEYER, WILLIAM K MEYER, SUSAN	3409 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2222457	YAO, PETER H YAO, LILY L	2246 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2222460	BOWMAN, RICHARD BOWMAN, DEBRA	3407 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2222461	COLLINS FAMILY TRUST	3405 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2222462	CARRILLO, JOSEPH JAMES CARRILLO, CAROLYN MARY	3403 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2222463	FAST, DARWIN	3401 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2222464	JAY & KAREN SCHLESINGER TRUST	PO BOX 2079	TITUSVILLE, FL 32781
Tax Account ID: 2222465	KYRA MORGAN REVOCABLE TRUST	3397 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2222466	SPARKS, PAUL R GILBREATH, TRACEY NEWELL	3395 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2222580	GALARZA, ANTHONY R DANG GALARZA, NHI NGOC	3375 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2222467	NOLEN, KENNETH NOLEN, ANNETTE LARUE	3355 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2222468	ST AUBIN, ANDREW	3345 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2223630	TANNER, CHARLES E TRUSTEE	3294 MOE NORMAN COURT	TITUSVILLE, FL 32780
Tax Account ID: 2223629	MARTINEZ, ARMANDO M	3284 MOE NORMAN CT	TITUSVILLE, FL 32780

Tax Account ID: 2223628	WHITNEY, MICHAEL S WHITNEY, SARAH E	3274 MOE NORMAN CT	TITUSVILLE, FL 32780
Tax Account ID: 2223627	TISCHLER, ANDREW F TISCHLER, SHEILA K	3264 MOE NORMAN COURT	TITUSVILLE, FL 32780
Tax Account ID: 2223626	UPSHAW, DEREK JOHN UPSHAW, MARY ANN K	3254 MOE NORMAN CT	TITUSVILLE, FL 32780
Tax Account ID: 2223625	GRIFFO, MARK D	3244 MOE NORMAN CT	TITUSVILLE, FL 32780
Tax Account ID: 2223624	AGUILAR, FRANK J AGUILAR, JANIS L PARKS	4830 CLOVER LN	TITUSVILLE, FL 32780
Tax Account ID: 2223635	ROYAL OAK PATIO HOMES PHASE II HOMEOWNERS ASSOCIATION INC	3204 MOE NORMAN CT	TITUSVILLE, FL 32780
Tax Account ID: 2223622	JOHANSEN, HAROLD B JOHANSEN, MICHAEL	3214 MOE NORMAN CT	TITUSVILLE, FL 32780
Tax Account ID: 2223632	CONFIDENTIAL PURSUANT TO FLORIDA STATUTES	PO BOX 1440	ORLANDO, FL 32802
Tax Account ID: 2223634	ROYAL OAK PATIO HOMES PHASE II HOMEOWNERS ASSOCIATION INC	3204 MOE NORMAN CT	TITUSVILLE, FL 32780
Tax Account ID: 2223633	FREDERICK & PATRICIA RENAUD TRUST	3203 MOE NORMAN CT	TITUSVILLE, FL 32780
Tax Account ID: 2223621	COOK, H THOMAS II COOK, JENNIFER L	3204 MOE NORMAN CT	TITUSVILLE, FL 32780
Tax Account ID: 2223636	ROYAL OAK PATIO HOMES PHASE II HOMEOWNERS ASSOCIATION INC	3204 MOE NORMAN CT	TITUSVILLE, FL 32780
Tax Account ID: 2223631	GRIMSHAW, BRANDON GRIMSHAW, EMI	3223 MOE NORMAN CT	TITUSVILLE, FL 32780
Tax Account ID: 2223623	WRIGHT, WAYNE A	3224 MOE NORMAN CT	TITUSVILLE, FL 32780
Tax Account ID: 2219280	N/A - CONDO COMMON AREA		,
Tax Account ID: 2219231	N/A - CONDO COMMON AREA		,
Tax Account ID: 2207606	LATORRE, HEATHER LATORRE, JAMES	3660 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207605	TUCKER, BETH ANN TUCKER, MICHAEL T	3654 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2209201	RIDDLE, ALYCE M	3646 ROYAL OAK DRIVE	TITUSVILLE, FL 32780
Tax Account ID: 2209192	TITUSVILLE, CITY OF	PO BOX 2806	TITUSVILLE, FL 32781
Tax Account ID: 2207647	GRISOFE, ANTONIA M	3675 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2209196	KUNKLE, DAVID B	2335 SNEAD COURT	TITUSVILLE, FL 32780
Tax Account ID: 2209200	HARTLEY, BENJAMIN J HARTLEY, MARGARET	3642 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2209197	CORTIELLA, GLADYS P	2325 SNEAD CT	TITUSVILLE, FL 32780
Tax Account ID: 2207646	TENEDINI, RICHARD S,JR	3641 ROYAL OAK DR	TITUSVILLE, FL 32780

Tax Account ID: 2209198	WALLACE, LAUREN ELIZABETH	2319 SNEAD CT	TITUSVILLE, FL 32780
Tax Account ID: 2209199	LYTLE, BRICE E LYTLE, BETTIE P LIFE ESTATE	3636 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2209219	SCHAIBLE, LARRY R SCHAIBLE, JANET	2336 SNEAD CT	TITUSVILLE, FL 32780
Tax Account ID: 2207645	STREBER, JOHN J STREBER, GIANINE M	3635 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2209218	GIBSON, MARK K GIBSON, GWENDOLYN	2326 SNEAD CT	TITUSVILLE, FL 32780
Tax Account ID: 2209213	BURDINE, MARILYN M	2345 MIDDLECOFF CT	TITUSVILLE, FL 32780
Tax Account ID: 2209217	HAY, THOMAS M HAY, STEPHANIE D	2320 SNEAD CT	TITUSVILLE, FL 32780
Tax Account ID: 2207644	LYTLE, BRADFORD P LYTLE, ANASTASIA M	3631 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2209214	MCLAURIN, RYAN JOHN NEVIASER, LYNDSEY MORGAN	2339 MIDDLECOFF CT	TITUSVILLE, FL 32780
Tax Account ID: 2209215	WILLIAM IRBY MOORE JR TRUST	2331 MIDDLECOFF CT	TITUSVILLE, FL 32780
Tax Account ID: 2209267	MILLER, GORMAN	3621 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2209216	GIAMBANCO, ANTONIO	2323 MIDDLECOFF CT	TITUSVILLE, FL 32780
Tax Account ID: 2209266	ELLINGHOUSE, GENE W	3611 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2209210	KEENEY, JAMES A KENNEY, ANGELA M	2346 MIDDLECOFF CT	TITUSVILLE, FL 32780
Tax Account ID: 2209209	ERSELL S NIXON REVOCABLE TRUST	2340 MIDDLECOFF CT	TITUSVILLE, FL 32780
Tax Account ID: 2209208	CARO, CHARLES R JR LIFE ESTATE	539 S RANCHO VISTA DR	COVINA, CA 91724
Tax Account ID: 2209207	PAPA, SAMUEL A	3604 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2209265	SPEARS, KENNETH J,JR SPEARS, JUDY A	3603 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2209203	TAYLOR, NATHAN G TAYLOR, LISA K	2351 HARPER CT	TITUSVILLE, FL 32780
Tax Account ID: 2209204	O'ROURKE, MICHAEL P O'ROURKE, DOROTHY N	2341 HARPER CT	TITUSVILLE, FL 32780
Tax Account ID: 2209205	PEREZ, ALEJANDRO SCOTT-PEREZ, LASHONDA	2331 HARPER CT	TITUSVILLE, FL 32780
Tax Account ID: 2209206	AVEY, PEGGY S	3558 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2209264	CLARK, THOMAS W CLARK, PATRICIA S	3557 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2209257	CHILDEARS, JAMES HOBBS, PATRICE H	2342 HARPER CT	TITUSVILLE, FL 32780
Tax Account ID: 2209263	SMITH, ANDREW P SMITH, JENNIFER L	3547 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2209251	BUSHNELL, BRIAN A BUSHNELL, NICOLE H	2332 HARPER CT	TITUSVILLE, FL 32780
Tax Account ID: 2209250	BARCELO FAMILY TRUST	3548 ROYAL OAK DR	TITUSVILLE, FL 32780

Tax Account ID: 2209252	SCHUMAN, GARY SCHUMANN, KATHLEEN TRUSTEES	3537 HOGAN PL	TITUSVILLE, FL 32780
Tax Account ID: 2207643	AGNEW, WILLIAM Y JR AGNEW, MARY LEE	3537 ROYAL OAK DRIVE	TITUSVILLE, FL 32780
Tax Account ID: 2209249	HALLAS, NICHOLAS W HALLAS, GLENDA M	3538 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207640	ROMANI, LUIS	2245 SARAZEN CT	TITUSVILLE, FL 32780
Tax Account ID: 2207626	WILLIAMS, RUSSEL P WILLIAMS, KAREN D	3537 NELSON PLACE	TITUSVILLE, FL 32780
Tax Account ID: 2207625	FORD, HARDIE B FORD, BETTY R TRUSTEES	3531 NELSON PL	TITUSVILLE, FL 32780
Tax Account ID: 2209253	LANTRIP, CHRISTOPHER SMITH, AMANDA	3531 HOGAN PL	TITUSVILLE, FL 32780
Tax Account ID: 2207642	CONWAY, NICHOLAS	3531 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2209248	CHHUON, SAVORN POY CHHUON, SAMBO	3532 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207641	RUTTLEDGE, BETTY J LIFE ESTATE	2235 SARAZEN CT	TITUSVILLE, FL 32780
Tax Account ID: 2207639	GRIMSLEY, LANA LEIGH	2271 SARAZEN CT	TITUSVILLE, FL 32780
Tax Account ID: 2207624	ADAMS, ROBERT M ADAMS, LINDA J	3525 NELSON PL	TITUSVILLE, FL 32780
Tax Account ID: 2209247	KELLEY, J DAVID KELLEY, LESLIE RENE	3524 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207623	REDLIEN, ERIN E REDLIEN, DANIEL S	3519 NELSON PL	TITUSVILLE, FL 32780
Tax Account ID: 2207627	RICHARDS, WILLIAM E RICHARDS, ROSE	3536 NELSON PL	TITUSVILLE, FL 32780
Tax Account ID: 2209241	THIELE ENGINEERING 401K TRUST	1640 FORD RD	MIMS, FL 32754
Tax Account ID: 2207638	METZ, JOHN A METZ, SHARON	3519 ZAHARIS PL	TITUSVILLE, FL 32780
Tax Account ID: 2207622	ROSSI HOMES LLC	7233 LAKE ELLENOR DR	ORLANDO, FL 32809
Tax Account ID: 2209262	RAMIREZ, JONNATHAN	2260 SARAZEN CT	TITUSVILLE, FL 32780
Tax Account ID: 2207613	2018-1 IH BORROWER LP	PO BOX 4900 C/O INVITATION HOMES / RYAN LLC	SCOTTSDALE, AZ 85261
Tax Account ID: 2209246	WALTER, JOHN R WALTER, MARY ELLEN	21018 SEAY DR	SUTHERLAND, VA 23885
Tax Account ID: 2209242	KENNEY, JAMES R KENNEY, KATHLEEN M	3799 CEDAR LANE	COLLEGEVILLE, PA 19426
Tax Account ID: 2207629	JILL L STIRLING TRUST	3514 NELSON PL	TITUSVILLE, FL 32780
Tax Account ID: 2207637	LAWSON, KEVIN ELWOOD LAWSON, JOSHUA ELWOOD	3515 ZAHARIS PL	TITUSVILLE, FL 32780
Tax Account ID: 2207628	CONFIDENTIAL PURSUANT TO FLORIDA STATUTES	3520 P.O. BOX 3	TITUSVILLE, FL 32781
Tax Account ID: 2209261	WILLIAMS, REUBEN WILLIAMS, STEFFANY L	3511 ROYAL OAK DR	TITUSVILLE, FL 32780

Tax Account ID: 2207636	CRUZ, JEREMIAS,JR CRUZ, SYLVIA CARDONA	3509 ZAHARIS PL	TITUSVILLE, FL 32780
Tax Account ID: 2207630	CHASE, BRIAN CHASE, JOHANNA	3510 NELSON PL	TITUSVILLE, FL 32780
Tax Account ID: 2207621	LANDRY, RONALD G	3509 NELSON PL	TITUSVILLE, FL 32780
Tax Account ID: 2207614	STOVER, STEVEN STOVER, PHYLLIS	3520 ZAHARIAS PLACE	TITUSVILLE, FL 32780
Tax Account ID: 2209245	MILLER, MICHAEL W	3508 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207615	HARVEY, KEITH HARVEY, JOANNE	3502 ZAHARIS PL	TITUSVILLE, FL 32780
Tax Account ID: 2207635	STAHL, MAYA RENEE STAHL, NICHOLAS R	3501 ZAHARIS PL	TITUSVILLE, FL 32780
Tax Account ID: 2209260	DURCHSLAG, KYLE ALLAN LEE	3503 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207631	TURCOTTE, MICHAEL D	3502 NELSON PL	TITUSVILLE, FL 32780
Tax Account ID: 2207620	WEAVER, STEVEN B	3501 NELSON PL	TITUSVILLE, FL 32780
Tax Account ID: 2207634	ZHU, DONGNI	3439 ZAHARIAS PL	TITUSVILLE, FL 32780
Tax Account ID: 2209259	CHYCOTA FAMILY TRUST	3439 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207632	HORNER, JENNIFER	2221 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2207616	ORTIZ, ALFREDO LUDWIG ORTIZ, BRANDY N	3444 ZAHARIS PL	TITUSVILLE, FL 32780
Tax Account ID: 2207618	WALKER, JOSEPH WALKER, CHRISTINA	3569 MUIRFIELD DR	TITUSVILLE, FL 32780
Tax Account ID: 2207633	BAKER, DAVID PAUL BAKER, JEANINE BETH	3429 ZAHARIS PL	TITUSVILLE, FL 32780
Tax Account ID: 2207612	ZENG, CHENG ZENG, YANNI	1227 FULTON CIR	TITUSVILLE, FL 32780
Tax Account ID: 2207617	PRIOLO, JOSEPH MOYERS, AUDREY N	3442 ZAHARIAS PLACE	TITUSVILLE, FL 32780
Tax Account ID: 2207607	MOORE, MARC MOORE, ROBIN	3340 ZAHARIS PL	TITUSVILLE, FL 32780
Tax Account ID: 2207611	CARTER, KEVIN D CARTER, BRETT A	3427 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207608	BORON, JERRY L BORON, SHERRY L	2235 COUNTY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2207609	ANDREWS, TANYA	2241 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2207610	SMITH, TOBY L SMITH, EUNICE E	2247 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2207740	AVEN, WILLIAM C AVEN, RITA S TRUSTEES	2700 HUTCHISON PLACE	TITUSVILLE, FL 32780
Tax Account ID: 2207734	MANNING, SEAN JOSEPH MANNING, SUCHADA	2705 ROYAL OAK DRIVE	TITUSVILLE, FL 32780
Tax Account ID: 2207741	DUNCAN, KRISTOPHER W	2670 HUTCHISON PL	TITUSVILLE, FL 32780
Tax Account ID: 2205461	MOORE, CHRISTY M	2087 HARRISON ST	TITUSVILLE, FL 32780
Tax Account ID: 2205460	PADMORE, DIANE	2091 HARRISON ST	TITUSVILLE, FL 32780
Tax Account ID: 2205459	ECLAVEA, DAVID	2085 HARRISON ST	TITUSVILLE, FL 32780

Tax Account ID: 2205457	DINARDO, WARREN L DINARDO, MARIANNE	403 CARMINE DR	COCOA BCH, FL 32931
Tax Account ID: 2205458	LEBRON, ISAIAH	2089 HARRISON ST	TITUSVILLE, FL 32780
Tax Account ID: 2205456	FULLER, RODNEY C SOMERS, DAVID J	6120 DEER LN	COCOA, FL 32927
Tax Account ID: 2205455	YURICK, PATRICIA A TRUSTEE	4444 SHERWOOD FOREST DR	TITUSVILLE, FL 32796
Tax Account ID: 2205453	BURKAVAGE FAMILY TRUST	3118 S CASPER PL	TITUSVILLE, FL 32780
Tax Account ID: 2205454	WATTS, TONY A SR	2097 HARRISON ST	TITUSVILLE, FL 32780
Tax Account ID: 2205452	WALCOTT, HUBERT N	2107 HARRISON ST	TITUSVILLE, FL 32780
Tax Account ID: 2205451	FREEMAN, THOMAS EARL	2101 HARRISON ST	TITUSVILLE, FL 32780
Tax Account ID: 2205449	TAMARACAT HOLDINGS LLC	2117 HARRISON ST	TITUSVILLE, FL 32780
Tax Account ID: 2205450	AYERS, MARIA D	2105 HARRISON ST	TITUSVILLE, FL 32780
Tax Account ID: 2205448	TAMARACAT HOLDINGS LLC	2117 HARRISON ST	TITUSVILLE, FL 32780
Tax Account ID: 2205447	THOMSON, JAMES THOMSON, LORI	20735 CAMINO DEL SOL	RIVERSIDE, CA 92508
Tax Account ID: 2205445	KEELING, CRAIG	2119 HARRISON ST	TITUSVILLE, FL 32780
Tax Account ID: 2205446	STALLINGS, DION STALLINGS, ALESHA	1776 CROGHAN DR	MELBOURNE, FL 32940
Tax Account ID: 2205437	ROYAL VILLAS HOMEOWNERS ASSOC INC	2110 S WASHINGTON AVE, STE B	TITUSVILLE, FL 32780
Tax Account ID: 2219365	N/A - CONDO COMMON AREA		,
Tax Account ID: 2219355	N/A - CONDO COMMON AREA		,
Tax Account ID: 2207713	LARSEN, CURTIS	2885 PLAYER CT	TITUSVILLE, FL 32780
Tax Account ID: 2207712	MARCINKO, RAYMOND E FORSTER, DOROTHY M	2865 PLAYER COURT	TITUSVILLE, FL 32780
Tax Account ID: 2207711	KIENER-MORRIS FLORIDA REAL ESTATE TRUST	2743 KENT RD	COLUMBUS, OH 43221
Tax Account ID: 2207710	GARZA, MARIO	2825 PLAYER CT	TITUSVILLE, FL 32780
Tax Account ID: 2207709	FLYNN, KATHLEEN E CANFIELD, RUDOLPH M TRUSTEES	2805 PLAYER COURT	TITUSVILLE, FL 32780
Tax Account ID: 2207708	LITRAS, JOHN N	2785 MANGRUM PL	TITUSVILLE, FL 32780
Tax Account ID: 2207707	WOODLEY, ANTHONY LESLIE WOODLEY, GLORIA MARIE	2755 MANGRUM PL	TITUSVILLE, FL 32780
Tax Account ID: 2207706	BIEGMANN, CHRISTOPHER MICHAE BIEGMANN, AMANDA JEAN	2705 MANGRUM PL	TITUSVILLE, FL 32780

Tax Account ID: 2207705	TOTMAN, PHILLIP M TOTMAN, CARMEN M	2675 MANGRUM PL	TITUSVILLE, FL 32780
Tax Account ID: 2207704	ENGLISH, DAKOTA M CURTIN, ALICIA A	2635 MANGRUM PL	TITUSVILLE, FL 32780
Tax Account ID: 2207703	DESOURDY, ROBERT A HOLMBERG, IRENE A VOLSKY, ALEXANDER VOLSKY, STEPHANIE	2605 MANGRUM PLACE	TITUSVILLE, FL 32780
Tax Account ID: 2207702	MARIE	2595 KEISER CT	TITUSVILLE, FL 32780
Tax Account ID: 2207701	TODMAN, VIRGINIA A	2585 KEISER CT	TITUSVILLE, FL 32780
Tax Account ID: 2204416	FERNANDEZ, SAVANNAH	2535 KEISER CT	TITUSVILLE, FL 32780
Tax Account ID: 2204415	ERMERINS, PAUL T ERMERINS, MARGARET C	1675 N CARPENTER RD	TITUSVILLE, FL 32796
Tax Account ID: 2204414	TABIN, ANGELA PRESTON	2485 KEISER CT	TITUSVILLE, FL 32780
Tax Account ID: 2209068	WALKER, ALEXIS	2312 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2209071	MAGNO, DEBORAH R	3406 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2209067	DEFRATES, WILLIAM A DEFRATES, KAREN M	3404 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2208166	HERNANDEZ, ARNOLD JOSE HUGHES, MELANIE	3402 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207653	HELEN M CASE REVOCABLE TRUST	3400 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207660	RHANDA S SMITH TRUST	1880 JAMES CIR	TITUSVILLE, FL 32780
Tax Account ID: 2207661	LEITH, ERNEST RODGER	3160 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207662	FARNSWORTH, JACKIE D FARNSWORTH, COLLEEN B TRUSTEES	3130 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2207663	SENECAL, KEVIN	1405 EASTVIEW DR	ABERDEEN, NC 28315
Tax Account ID: 2207664	NEGRETE, NARO R NEGRETE, ELIZABETH A	3080 N CASPER PL N	TITUSVILLE, FL 32780
Tax Account ID: 2207665	STEVENSON, PATRICIA M STEVENSON, FRANCIS C	3070 N CASPER PL	TITUSVILLE, FL 32780
Tax Account ID: 2207666	SAILE, KIRK JOHN	3060 N CASPER PL	TITUSVILLE, FL 32780
Tax Account ID: 2207667	MILLER, RYAN C	3050 N CASPER PL	TITUSVILLE, FL 32780
Tax Account ID: 2207670	BURKAVAGE, LESA	3000 CASPER PLACE N	TITUSVILLE, FL 32780
Tax Account ID: 2207669	BYRNE, SUSAN M	3020 CASPER PLACE N	TITUSVILLE, FL 32780
Tax Account ID: 3036086	N/A - CONDO COMMON AREA		,

Tax Account ID: 2220508	N/A - CONDO COMMON AREA		,
Tax Account ID: 2218245	VILLAGE CHARTER HOLDINGS LLC	775 WEST 1200 NORTH, #100	SPRINGVILLE, UT 84663
Tax Account ID: 2218243	VILLAGE CHARTER HOLDINGS LLC	775 WEST 1200 NORTH, #100	SPRINGVILLE, UT 84663
Tax Account ID: 2210669	CHURCH OF GOD LOCAL TRUSTEES	2115 KNOX MCRAE DRIVE	TITUSVILLE, FL 32780
Tax Account ID: 2210668	JLR FLORIDA HOLDINGS LLC	1202 SACRAMENTO ST	DELTONA, FL 32725
Tax Account ID: 2210675	JLR FLORIDA HOLDINGS LLC	1202 SACRAMENTO ST	DELTONA, FL 32725
Tax Account ID: 2218341	FL ROYAL OAKS HOLDINGS LLC	C/O MILLENNIUM MANAGEMENT 10800 BISCAYNE BLVD STE 600	MIAMI, FL 33161
Tax Account ID: 2208172	EXPLORE & DISCOVER INC	1418 GLENEAGLES WAY	ROCKLEDGE, FL 32955
Tax Account ID: 2224872	BARNA INVESTMENTS INC	402 HIGH POINT DR #101	COCOA, FL 32926
Tax Account ID: 2224873	SHUTTLE PROPERTIES OF BREVARD INC	PO BOX 410517	MELBOURNE, FL 32941
Tax Account ID: 2223348	SUAREZ-RIVAS, ALEJANDRO	17051 NE 35TH AVE, APT 101	NORTH MIAMI BEACH, FL 33160
Tax Account ID: 2223349	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223350	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223351	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223352	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223353	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223354	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223355	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223410	YOUNG, DIANE	3645 BARNA AVE, UNIT 20D	TITUSVILLE, FL 32780
Tax Account ID: 2223411	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223320	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931

Tax Account ID: 2223321	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223322	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223323	MCCLARY, MICHAEL	19132 ANNE LN	CUPERTINO, CA 95014
Tax Account ID: 2223324	KNIGHT, PATRICE D KNIGHT, DONALD W	3645 BARNA AVE #1F	TITUSVILLE, FL 32780
Tax Account ID: 2223325	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223326	MC CLARY, MICHAEL E	19132 ANNE LN	CUPERTINO, CA 95014
Tax Account ID: 2223327	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223328	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223329	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223330	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223331	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223332	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223333	MC CLARY, MICHAEL	19132 ANNE LN	CUPERTINO, CA 95014
Tax Account ID: 2223334	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223335	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223336	ESO EQUITY GROUP LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223337	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223338	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931

Tax Account ID: 2223339	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223340	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223341	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223342	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223343	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223344	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223345	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223346	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223347	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223356	MC CLARY, MICHAEL	19132 ANNE LANE	CUPERTINO, CA 95014
Tax Account ID: 2223357	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223358	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223359	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223360	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223361	LITTLE, JONATHAN N LITTLE, CARMEN Y	3645 BARNA AVE #8-C	TITUSVILLE, FL 32780
Tax Account ID: 2223362	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223363	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223364	SHATUSKY, DAVID W	2965 GUINEVERE DR	TITUSVILLE, FL 32780

Tax Account ID: 2223365	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223366	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223367	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223368	GRIFFITH, VICTORIA DECKER GRIFFITH, VICTORIA D	44790 ASHLAR TER, APT 200	ASHBURN, VA 20147
Tax Account ID: 2223369	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223370	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223371	KING, ALTHEA TRACY	3645 BARNA AVE, UNIT 10A	TITUSVILLE, FL 32780
Tax Account ID: 2223372	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223373	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223374	YOUNG, DIANE	3645 BARNA AVE, UNIT 20D	TITUSVILLE, FL 32780
Tax Account ID: 2223375	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223376	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223377	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223378	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223379	SIRAVO, MICHAEL A III SIRAVO, CATHERINE	38 PARRY DR	HAINESPORT, NJ 08036
Tax Account ID: 2223380	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223381	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223382	RC LIGHTHOUSE 4 LLC	PO BOX 656	TITUSVILLE, FL 32781

Tax Account ID: 2223383	PRIDGEN, JANEE	2365 SYKES CREEK DR	MERRITT ISLAND, FL 32953
Tax Account ID: 2223384	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223385	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223386	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223387	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223388	JONES, JANA E MENDOZA, OMAR	PO BOX 1371	WINDSOR, CA 95492
Tax Account ID: 2223389	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223390	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223391	MC CLARY, MICHAEL E	19132 ANNE LANE	CUPERTINO, CA 95014
Tax Account ID: 2223392	RC LIGHTHOUSE 4 LLC	7575 TURKEY POINT DR	TITUSVILLE, FL 32780
Tax Account ID: 2223393	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223394	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223395	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223396	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223397	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223398	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223399	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223400	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931

Tax Account ID: 2223401	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223402	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223403	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223404	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223405	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223406	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223407	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223408	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223409	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223412	ESO EQUITY GROUP LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223413	ESO EQUITY GROUP LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223414	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223415	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223416	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223417	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223418	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931

Tax Account ID: 2223419	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223476	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223477	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223478	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223479	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223480	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223481	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223420	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223421	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223422	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223423	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223424	RIVERS, STEVEN BLANCHARD, BRENDA J	4475 STUART AVE	TITUSVILLE, FL 32780
Tax Account ID: 2223425	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223426	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223427	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223428	YOUNG, DIANE C	3645 BARNA AVE, UNIT 20D	TITUSVILLE, FL 32780
Tax Account ID: 2223429	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931

Tax Account ID: 2223430	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223431	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223432	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223433	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223434	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223435	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223436	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223437	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223438	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223439	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223440	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223441	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223442	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223443	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223444	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223445	ESO EQUITY GROUP LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931

Tax Account ID: 2223446	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223447	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223448	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223449	GLENN A SMITH REVOCABLE TRUST	2800 NE 10TH TER	WILTON MANORS, FL 33334
Tax Account ID: 2223450	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223451	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223452	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223453	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223454	MC CLARY, MICHAEL E	19132 ANNE LN	CUPERTINO, CA 95014
Tax Account ID: 2223455	ROZIER, MARK	4030 CITRUS BLVD	COCOA, FL 32926
Tax Account ID: 2223456	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223457	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223458	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223459	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223460	ESO EQUITY GROUP LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223461	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223462	HOSTLER, AARON B	3645 BARNA AVE, UNIT 26B	TITUSVILLE, FL 32780
Tax Account ID: 2223463	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931

Tax Account ID: 2223464	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223465	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223466	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223467	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223468	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223469	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223470	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223471	REDIGAN, NANCY FORBES, LEIGHANN	3645 BARNA AVE, UNIT 27E	TITUSVILLE, FL 32780
Tax Account ID: 2223472	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223473	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223474	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223475	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223482	MCCLARY, MICHAEL E	19132 ANNE LN	CUPERTINO, CA 95014
Tax Account ID: 2223483	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223484	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223485	MCCLARY, MICHAEL E	19132 ANNE LN	CUPERTINO, CA 95014
Tax Account ID: 2223486	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223488	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931

Tax Account ID: 2223489	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223490	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223491	MC CLARY, MICHAEL E	19132 ANNE LANE	CUPERTINO, CA 95014
Tax Account ID: 2223492	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223493	ESO EQUITY GROUP LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223494	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223495	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223496	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223497	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223498	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223499	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223500	MC CLARY, MICHAEL MC CLARY, PATRICIA	19132 ANNE LANE	CUPERTINO, CA 95014
Tax Account ID: 2223501	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2223502	TITUSCO HOLDINGS LLC	150 COCOA ISLES BLVD, STE 202	COCOA BEACH, FL 32931
Tax Account ID: 2218888	SMITH, JACQUELINE L	16 KLINE AVE	N VERSAILLES, PA 15137
Tax Account ID: 2218889	DOHERTY, SUSAN LIFE ESTATE	1880 KNOX MC RAE DR UNIT 212D	TITUSVILLE, FL 32780
Tax Account ID: 2218850	QUEITA J WILLISON TRUST	2505 CHESTERFIELD CT	TITUSVILLE, FL 32780
Tax Account ID: 2218851	AMERICAN DREAM HAUS LLC	1110 SW 28TH ST	CAPE CORAL, FL 33914
Tax Account ID: 2218852	WENANT, DIANA WENANT, HERBERT	1860 KNOX MCRAE DR, UNIT 103A	TITUSVILLE, FL 32780

Tax Account ID: 2218853	TOMBS, CHARLES L JR	3236 WRIGHTER LAKE RD	THOMPSON, PA 18465
Tax Account ID: 2218854	CHAMBERS, MONTE R	2415 FRIDAY RD	COCOA, FL 32926
Tax Account ID: 2218855	BARTLETT, GARY M BARTLETT, PATRICIA PALOMBO	11343 ASHBROOK RD NW	CANAL WINCHESTER, OH 43110
Tax Account ID: 2218856	HASTINGS, ROLFE HASTINGS, PATRICIA	1860 KNOX MCRAE DR, UNIT 203A	TITUSVILLE, FL 32780
Tax Account ID: 2218857	ELSIE M CLARK IRREVOCABLE TRUST	534 TANGLEWOOD TRL	CUYAHOGA FALLS, OH 44223
Tax Account ID: 2218858	RICHARD L HARRIS REVOCABLE TRUST	4390 CLAGUE RD	NORTH OLMSTED, OH 44070
Tax Account ID: 2218859	POSEY, NANCY A	580 BELLA VISTA DR	TITUSVILLE, FL 32780
Tax Account ID: 2218860	BETTENCOURT, PHILIP	80 FISHER RD, UNIT 13	CUMBERLAND, RI 02864
Tax Account ID: 2218861	ORTO, PAULA	1870 KNOX MCRAE DR, UNIT B104	TITUSVILLE, FL 32780
Tax Account ID: 2218862	SEELEY, KATHERINE M	1870 KNOX MCRAE DR, UNIT 201B	TITUSVILLE, FL 32780
Tax Account ID: 2218863	SMITH, PAUL D SMITH, MARGARET J	710 EASTMAN STREET	WEST MIFFLIN, PA 15122
Tax Account ID: 2218864	PERKINS, CLARENCE C PERKINS, VIVIAN M	24660 THORNDYKE ST	SOUTHFIELD, MI 48033
Tax Account ID: 2218865	MASIEWICZ, JOHN P	PO BOX 731	ELLICOTTVILLE, NY 14731
Tax Account ID: 2218866	RBL CAPITAL LLC	1201 N ORANGE ST, STE 750	WILMINGTON, DE 19801
Tax Account ID: 2218867	WHYMAN, CANDY S	1880 KNOX MCRAE DR, UNIT 102C	TITUSVILLE, FL 32780
Tax Account ID: 2218868	POPELMAYER, BARBARA M POPELMAYER, JAMES	4585 WINDFALL RD	MEDINA, OH 44256
Tax Account ID: 2218869	STANO, COREY P	1880 KNOX MCRAE DR, UNIT 104C	TITUSVILLE, FL 32780
Tax Account ID: 2218870	SANDERS, KELLY B	1880 KNOX MCRAE DR, UNIT 201C	TITUSVILLE, FL 32780
Tax Account ID: 2218871	LOPEZ, LUIS	1880 KNOX MC RAE DR UNIT C202	TITUSVILLE, FL 32780
Tax Account ID: 2218872	MARCELLA BAKER WELLS REVOCABLE TRUST	1880 KNOX MCRAE DR, UNIT 203C	TITUSVILLE, FL 32780
Tax Account ID: 2218873	HEBERT, DEBORAH	1880 KNOX MCRAE DR, UNIT 204C	TITUSVILLE, FL 32780

Tax Account ID: 2218874	WARWEG, WILLIAM R SCHWIETERS, ROGER H TRUSTEES	1880 KNOX MCRAE DR, UNIT D105	TITUSVILLE, FL 32780
Tax Account ID: 2218875	SCHWIETERS, NANCY C TRUSTEES	11511 MILINDA SHORES RD	CROSSLAKE, MN 56442
Tax Account ID: 2218876	MARILYNN BOYLE SCHRADER FAMILY TRUST	1880 KNOX MCRAE DR, UNIT 107D	TITUSVILLE, FL 32780
Tax Account ID: 2218877	RC LIGHTHOUSE 5 LLC	7575 TURKEY POINT DR	TITUSVILLE, FL 32780
Tax Account ID: 2218878	KNOX 109D TRUST	3225 MCLEOD DR, # 777	LAS VEGAS, NV 89121
Tax Account ID: 2218879	SARAH P HANSON REVOCABLE TRUST	1880 KNOX MCRAE DR, UNIT 110D	TITUSVILLE, FL 32780
Tax Account ID: 2218880	GARATI, ALBERT C	1880 KNOX MCRAE DR, UNIT 111D	TITUSVILLE, FL 32780
Tax Account ID: 2218881	HEBERT, JEREMY M	1880 KNOX MCRAE DR, UNIT 204C	TITUSVILLE, FL 32780
Tax Account ID: 2218882	JAMES, TIMOTHY R	1880 KNOX MCRAE DR, UNIT 205D	TITUSVILLE, FL 32780
Tax Account ID: 2218883	RUDZIAK, MICHAEL J RUDZIAK, MONA E	501 WEST CANEEL DRIVE	TECUMSEH, MI 49286
Tax Account ID: 2218884	TREW, ALICIA M TREW, MICHELE RENEE	6390 BANKS AVE	COCOA, FL 32927
Tax Account ID: 2218885	MORALES, ARNOLD R MORALES, ALLISON L	1880 KNOX MCRAE DR, UNIT 208D	TITUSVILLE, FL 32780
Tax Account ID: 2218886	BELTON, CHARLOTTE	1880 KNOX MCRAE DR, UNIT 209D	TITUSVILLE, FL 32780
Tax Account ID: 2218887	GRAFF, RICHARD C GRAFF, MARLYS C TRUSTEES	34745 MADELINE TRL, UNIT 6 PO BOX 125	BAYFIELD, WI 54814
Tax Account ID: 2218890	SHEEHAN, PATRICK Q	11309 GOLD ARBOR	PLYMOUTH, MI 48170
Tax Account ID: 2218891	SEELEY, STEPHANIE RENEE	1880 KNOX MC RAE DR APT 114E	TITUSVILLE, FL 32780
Tax Account ID: 2218892	HIGGINS, JOHN R HIGGINS, MARY J	8365 HOLLY HILL CT	EDEN, NY 14057
Tax Account ID: 2218893	SEIDLER, ANNMARIE HUDSON, JOE L	1880 KNOX MCRAE DR, UNIT E116	TITUSVILLE, FL 32780
Tax Account ID: 2218894	SIBAJA, JACQUELINE	2531 COUNTRY CLUB DR	TITUSVILLE, FL 32780
Tax Account ID: 2218895	PUGSLEY, MICHAEL E	2134 EDEN EVANS CENTER RD	EDEN, NY 14057
Tax Account ID: 2218896	RESTINA, ROSEMARY MICHELLE	6304 GATEWOOD DR	MENTOR, OH 44060

Tax Account ID: 2218897	HANNAN, GRETCHEN	1226 STONEBRIDGE DR	WILLOUGHBY, OH 44094
Tax Account ID: 2218898	SEIDLER, ANNMARIE HUDSON, JOE L	1890 KNOX MCRAE DR, UNIT 101F	TITUSVILLE, FL 32780
Tax Account ID: 2218899	BURBA, MARILYN J	1890 KNOX MCRAE DR, UNIT 102F	TITUSVILLE, FL 32780
Tax Account ID: 2218900	CHRISTY, WALTER L	1890 KNOX MCRAE DR, UNIT 103F	TITUSVILLE, FL 32780
Tax Account ID: 2218901	STICKLER, CORTINA M	1890 KNOX MCRAE DR, UNIT 104F	TITUSVILLE, FL 32780
Tax Account ID: 2218902	CHRISTY, JEANNE HANSEN, JOY A M	2647 WHITE OAK LN	TITUSVILLE, FL 32780
Tax Account ID: 2218903	CLEMONS, GARY DALE	1890 KNOX MCRAE DR, UNIT F106	TITUSVILLE, FL 32780
Tax Account ID: 2218904	HENDERSON, LISA L	1890 KNOX MCRAE DR, UNIT 107F	TITUSVILLE, FL 32780
Tax Account ID: 2218905	SOCKRIDER, RANDY D	1890 KNOX MCRAE DR, UNIT 108F	TITUSVILLE, FL 32780
Tax Account ID: 2218906	SIDLER, SYLVIA C	115 UNDERWOOD HILL RD	MURPHY, NC 28906
Tax Account ID: 2218907	RICHARD L HARRIS REVOCABLE TRUST	18875 RIVERSOUTH TRCE, UNIT 9	FAIRVIEW PARK, OH 44126
Tax Account ID: 2218908	OWENS, LORI G REARDON, JESSICA M	1008 ANSLEY CT	LONDON, OH 43140
Tax Account ID: 2218909	LUGO, EDDA B	4564 HELENA DR	TITUSVILLE, FL 32780
Tax Account ID: 2218910	RICHARD L HARRIS REVOCABLE TRUST	4390 CLAGUE RD	NORTH OLMSTED, OH 44070
Tax Account ID: 2218911	BLEDSOE, MATTHEW CHARLES, MARISSA D	1890 KNOX MCRAE DR, UNIT 202F	TITUSVILLE, FL 32780
Tax Account ID: 2218912	SAEGER, KRISTEN JOY	1890 KNOX MCRAE DR, UNIT 203F	TITUSVILLE, FL 32780
Tax Account ID: 2218913	SALOMON, ROGER	1890 KNOX MCRAE DR, UNIT 204F	TITUSVILLE, FL 32780
Tax Account ID: 2218914	ERNEST C DAUNTER & JOANNE MARIE DAUNTER REVOCABLE LIVING TRUST	4261 TIMOTHY DR	MERRITT ISLAND, FL 32953
Tax Account ID: 2218915	GPST INVESTMENTS LLC	3270 SUNTREE BLVD, STE 129	MELBOURNE, FL 32940
Tax Account ID: 2218916	NANCY KATHERINE HAUPTLE MACINNIS REVOCABLE TRUST	1890 KNOX MCRAE DR, UNIT 207F	TITUSVILLE, FL 32780

Tax Account ID: 2218917	HACKER, SHERI A	423 GIMBER CT	INDIANAPOLIS, IN 46225
Tax Account ID: 2218918	RECK, MILTON	1890 KNOX MCRAE DR, UNIT 209F	TITUSVILLE, FL 32780
Tax Account ID: 2218919	REEDER, JACQUETTA	1890 KNOX MCRAE DR, UNIT F210	TITUSVILLE, FL 32780
Tax Account ID: 2218920	HEAMAN, MARGARET JILL HEAMAN, DONALD W	1890 KNOX MC RAE DR #F-211	TITUSVILLE, FL 32780
Tax Account ID: 2218921	RICHARD L HARRIS REVOCABLE TRUST	4390 CLAGUE RD	NORTH OLMSTED, OH 44070
Tax Account ID: 2218922	BLAKE, ILA	1900 KNOX MCRAE DR, UNIT 101G	TITUSVILLE, FL 32780
Tax Account ID: 2218923	JOHNSON, CAMILLE MARIE LOUISE	1900 KNOX MCRAE DR, UNIT 102G	TITUSVILLE, FL 32780
Tax Account ID: 2218924	ROBINSON, BETH	1900 KNOX MCRAE DR, UNIT 103G	TITUSVILLE, FL 32780
Tax Account ID: 2218925	MERRIMAN, ROBIN D	1900 KNOX MCRAE DR, #104G	TITUSVILLE, FL 32780
Tax Account ID: 2218926	RICHARDSON, DEBORAH A	1900 KNOX MCRAE DR, UNIT 105G	TITUSVILLE, FL 32780
Tax Account ID: 2218927	EASTERS, ALICIA	1900 KNOX MCRAE DR, UNIT 106G	TITUSVILLE, FL 32780
Tax Account ID: 2218928	MORRISON, NANCI L	1900 KNOX MCRAE DR, #107G	TITUSVILLE, FL 32780
Tax Account ID: 2218929	SIMMONS, JOHN SIMMONS, WENDY	9350 PRIEM RD	STRONGSVILLE, OH 44149
Tax Account ID: 2218930	CIPO, KATHY R	6781 KIRKWOOD DR	MENTOR, OH 44060
Tax Account ID: 2218931	RICHARD A & FRANCES K MINGUS TRUST	2870 NIGHT HERON DR	MIMS, FL 32754
Tax Account ID: 2218932	BANKERT, RICHARD BANKERT, JACQUELINE	392 OLD ASHLEY LOOP	PAWLEYS ISLAND, SC 29585
Tax Account ID: 2218933	OWENS, JEFFREY C	1900 KNOX MCRAE DR, UNIT 204G	TITUSVILLE, FL 32780
Tax Account ID: 2218934	MIDDAUGH, ROY E TRUSTEE	1900 KNOX MC RAE DR #205G	TITUSVILLE, FL 32780
Tax Account ID: 2218935	IULA, VALERIO M IULA, ALISA M	6 STEPHANIE CIR	WOBURN, MA 01801
Tax Account ID: 2218936	COOPER, CHARLES B	1900 KNOX MCRAE DR, UNIT 207G	TITUSVILLE, FL 32780
Tax Account ID: 2218937	KOUSSONMBUS, DONNA KOUSSONMBUS, RANDY	1900 KNOX MCRAE DR, UNIT G208	TITUSVILLE, FL 32780

Tax Account ID: 2218938	OTANO, LUIS G PEREZ, YOLANDA	4636 ALFRED ST	COCOA, FL 32927
Tax Account ID: 2218939	SPELLMAN, MICHAEL P	1900 KNOX MCRAE DR, UNIT 110H	TITUSVILLE, FL 32780
Tax Account ID: 2218940	PENNI GEBER TRUST	1900 KNOX MCRAE DR, UNIT 111H	TITUSVILLE, FL 32780
Tax Account ID: 2218941	PRENDERGAST, LORI J PRENDERGAST, PATRICK A	648 MONROE AVE	CAPE CHARLES, VA 23310
Tax Account ID: 2218942	PERMAN, RICHARD A	2862 EPP BIVINGS DR	TITUSVILLE, FL 32796
Tax Account ID: 2218943	MEOLA, PAUL KELLY-MEOLA, NORA	102 COSTA LOOP	AUBURNDALE, FL 33823
Tax Account ID: 2218944	MANGONE, DON	1900 KNOX MCRAE DR, UNIT 211H	TITUSVILLE, FL 32780
Tax Account ID: 2218945	HAMILTON, JEAN	1900 KNOX MC RAE DR #212-H	TITUSVILLE, FL 32780
Tax Account ID: 2208193	GRAND REALTY INVESTMENT LLC	333 SOUTH PATRICK DR, APT 14	SATELLITE BEACH, FL 32937
Tax Account ID: 2208194	KENNETH C TAUER LIVING TRUST	26 FAIRWAY DR	COCOA BEACH, FL 32931
Tax Account ID: 2208195	NIXON, PAUL JOHN RICHARD	1 CRAGGS ROAD RD BOND HOUSE	CHESTERFIELD, S446B
Tax Account ID: 2208196	MICHAEL D & ANGELINA M MAGNA TRUST	3520 NICKLAUS DR	TITUSVILLE, FL 32780
Tax Account ID: 2208197	PUGEAU, DONALD	6522 ABACO DR	APOLLO BEACH, FL 33572
Tax Account ID: 2208198	SERVICE, MARTIN SERVICE, PATRICIA	30 KILDONAN CRESCENT	WATERDOWN ONTARIO L8B 0K3,
Tax Account ID: 2208199	MULLER, ROBERT	3680 BARNA AVE, UNIT 223	TITUSVILLE, FL 32780
Tax Account ID: 2208200	ABUNDANTIA LLC	26 FAIRWAY DR	COCOA BEACH, FL 32931
Tax Account ID: 2208177	VILLAS ESCONDIDO CONDO ASSOC	3680 BARNA AVE	TITUSVILLE, FL 32780
Tax Account ID: 2208178	PATRICE LEA GRACE FAMILY TRUST	12409 MATTHEWS LN	SAINT LOUIS, MO 63127
Tax Account ID: 2208179	MERZA, JOHN MERZA, CHRISTINE	3680 BARNA AVE UNIT 108	TITUSVILLE, FL 32780
Tax Account ID: 2208180	MOORE, LINDA KAREN MOORE, JESSICA FRANCINE	18 SENATOR DR	ST CATHARINES, ON L2S 3T3,
Tax Account ID: 2208181	COCHRANE, GRAHAM HUGH COCHRANE, TERESA	7927 FOXE DR	NIAGARA FALLS, ON L2H 2
Tax Account ID: 2208182	MICHAEL D & ANGELINA M MAGNA TRUST	3520 NICKLAUS DR	TITUSVILLE, FL 32780
Tax Account ID: 2208183	MAGNA, ANGELINA M MAGNA, MICHAEL D TRUSTEE	3520 NICKLAUS DRIVE	TITUSVILLE, FL 32780
Tax Account ID: 2208184	MARILYN C HUNT TRUST	602 - 965 INVERHOUSE DR	MISSISSAUGA, ON L5J 4B4,

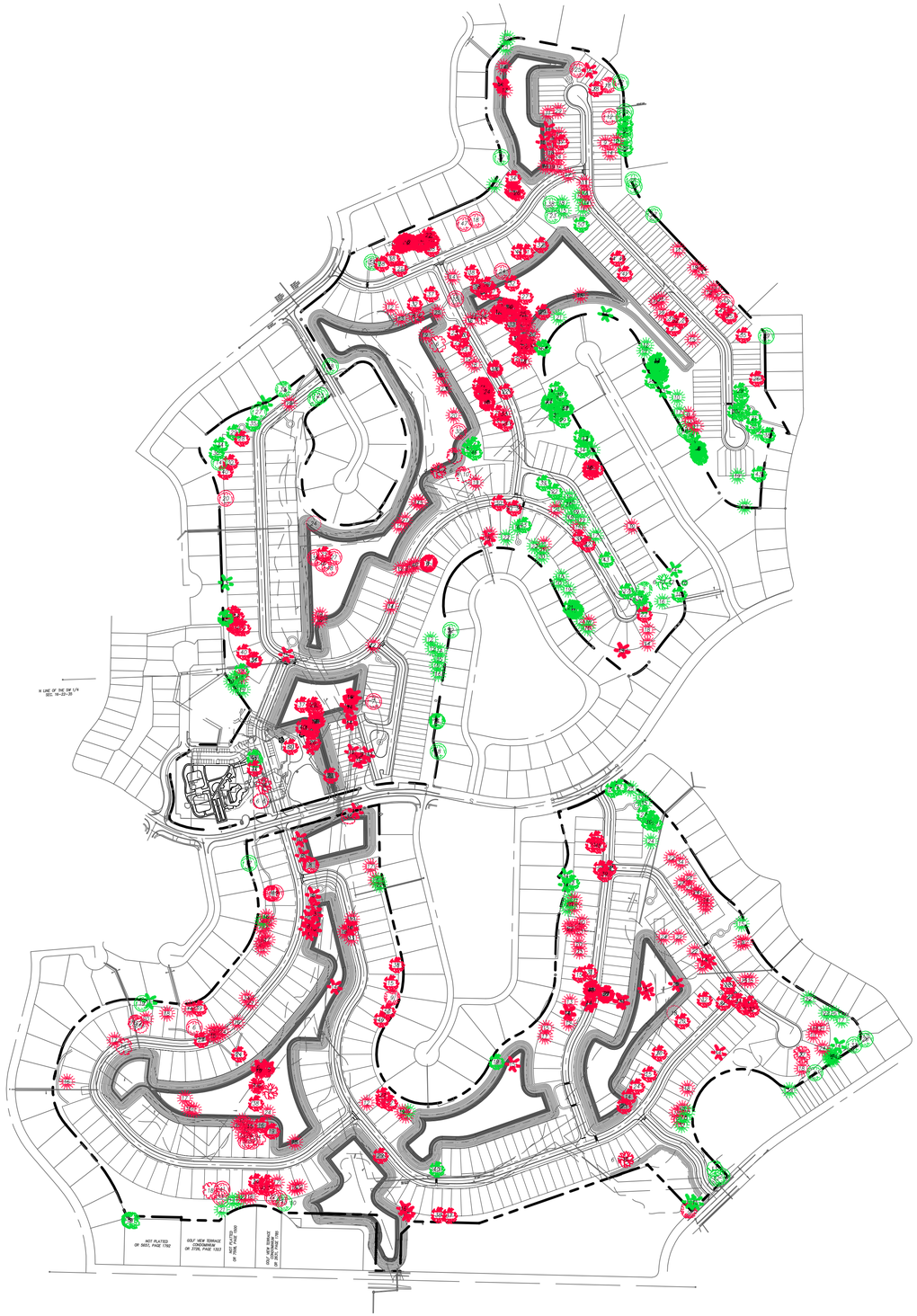
Tax Account ID: 2208185	NEAL, A DAVID NEAL, TERESA M	2370 WALKER CT NIAGARA FALLS ON L2J 0A2	,
Tax Account ID: 2208186	ROBINSON, JAMES A ROBINSON, BETTY	671 NIAGARA ST #207	ST CATHARINES ONTARIO L2M 3R4,
Tax Account ID: 2208187	NETLAND, BRUCE N NETLAND, JANET D	5403 CENTRAL PL	DULUTH, MN 55807
Tax Account ID: 2208188	ALONSOS LIVING TRUST	64 HILL TOP LN	ROCKLEDGE, FL 32955
Tax Account ID: 2208189	RIVET, EDWARD ANTHONY RIVET, LINDA MARIE PEAL	30 WOODINGTON PLACE WELLAND ON L3C 2J2	,
Tax Account ID: 2208190	ENGLAND, RICHARD A JR ENGLAND, DAWN M TRUSTEES	3680 BARNA AVE UNIT 214	TITUSVILLE, FL 32780
Tax Account ID: 2208191	WOOD, ALLEN MICHAEL A	885 WILLIAMSBURG DR	TITUSVILLE, FL 32780
Tax Account ID: 2208192	BRANDT, DAVID WILLIAM BRANDT, CHERYL MARIE	3680 BARNA AVE, UNIT 106	TITUSVILLE, FL 32780
Tax Account ID: 2208201	BAUM, BRIAN W BAUM, CHARLENE G	1462 MARGARET CRES PENETANGUISHENE ON L9M 2B3	,
Tax Account ID: 2208202	REDDICK, NICOLE T	3680 BARNA AVE, # 226	TITUSVILLE, FL 32780
Tax Account ID: 2208203	ROBBINS, BARRY L D ROBBINS, MICHELINE	164 HILLSDALE RD	WELLAND, ON L3C 7M4,
Tax Account ID: 2208204	MAMBELLA, ANN ELIZABETH SHPAK, SCOTT ANDREW	18013 C HWY 41	CLOYNE K0H 1KO, ON
Tax Account ID: 2208205	DENAPOLI, MARK ANTHONY DENAPOLI, MELODY ANNE	28 LAURIER TRAIL WELLAND ON L3C OH2	,
Tax Account ID: 2208206	JARRELL, JOHN EDWARD JARRELL, JACQUELINE M	31-178 SCOTT ST ST CATHARINES ONTARIO L2N 6Y5	,
Tax Account ID: 2218946	MURRAY, JOAN L MURRAY, TRACEY L	7060 COLONIAL LN	HUGHESVILLE, MD 20637
Tax Account ID: 2218947	DAMAS, KELDY C DURANAY, INES	9 FARLEY DR	WEST HAVERSTRAW, NY 10993
Tax Account ID: 2218948	PIGEON, VALARIE	2170 KNOX MCRAE DR	TITUSVILLE, FL 32780
Tax Account ID: 2218949	PANFIL, JAMES J PANFIL, BEVERLY SUE	2170 KNOX MC RAE DRIVE #4	TITUSVILLE, FL 32780
Tax Account ID: 2218950	RBL CAPITAL LLC	1201 N ORANGE ST, STE 750	WILMINGTON, DE 19801
Tax Account ID: 2218951	MOYER, GARY L	2721 CRESCENT DRIVE	ENDICOTT, NY 13760
Tax Account ID: 2218952	WALLACE, NATHANIEL	3685 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2218953	ITARES MELBOURNE GROUP LLC	3270 SUNTREE BLVD, STE 129	MELBOURNE, FL 32940

Tax Account ID: 2218954	AQ LIGHTHOUSE LLC	PO BOX 656 C/O LIGHTHOUSE	TITUSVILLE, FL 32781
Tax Account ID: 2218955	URBI INVESTMENTS GROUP LLC	3270 SUNTREE BLVD, STE 129	MELBOURNE, FL 32940
Tax Account ID: 2218956	RC LIGHTHOUSE 3 LLC	7575 TURKEY POINT DR	TITUSVILLE, FL 32780
Tax Account ID: 2218957	SHEARIN, W LEE	8470 RIDGEWOOD AVE #403	CAPE CANAVERAL, FL 32920
Tax Account ID: 2218958	RBL CAPITAL LLC	1201 N ORANGE ST, STE 750	WILMINGTON, DE 19801
Tax Account ID: 2218959	COATS, SYLVIA E	270 TROMLEY STREET	INKSTER, MI 48141
Tax Account ID: 2218960	MATTHEUS, JAMES E	7339 WINDOVER WAY	TITUSVILLE, FL 32780
Tax Account ID: 2218961	SLOAN, SAMUEL COLT	2170 KNOX MCRAE DR, UNIT 16	TITUSVILLE, FL 32780
Tax Account ID: 2218962	SCHEU, PAUL F JR	44 TOLLAND AVE, APT 57	STAFFORD SPRINGS, CT 06076
Tax Account ID: 2218963	RC LIGHTHOUSE 2 LLC	PO BOX 656	TITUSVILLE, FL 32781
Tax Account ID: 2218964	WALLACE, NATHANIEL	3685 ROYAL OAK DRIVE	TITUSVILLE, FL 32780
Tax Account ID: 2218965	HAIRSTON, BRITTANY R BLUMFIELD, JONATHAN	2170 KNOX MCRAE DR, UNIT 20	TITUSVILLE, FL 32780
Tax Account ID: 2218966	HOLLINGSWORTH, DONNA PATRICIA	7308 BLAIRTON WAY	JACKSONVILLE, FL 32222
Tax Account ID: 2218967	KNOX MCRAE 22 TRUST	3225 MCLEOD DR, # 777	LAS VEGAS, NV 89121
Tax Account ID: 2218968	JOMALKA FL INC	PO BOX 4014	EVERETT, WA 98204
Tax Account ID: 2218969	SPACE COAST RENTALS LLC	900 PALM ST, # 1	COCOA, FL 32927
Tax Account ID: 2218970	WALLACE, NATHANIEL CALM WATER INVESTMENTS LLC	3685 ROYAL OAKS DR	TITUSVILLE, FL 32780
Tax Account ID: 2218971	FANMOR LLC	3270 SUNTREE BLVD, STE 129	MELBOURNE, FL 32940
Tax Account ID: 2218972	WALLACE, NATHANIEL	3685 ROYAL OAK DR	TITUSVILLE, FL 32780
Tax Account ID: 2218973	SIMONS, MARIA I	3555 SABLE PALM LN, # 7I	TITUSVILLE, FL 32780
Tax Account ID: 2218974	DELATORRE, CINDY DELATORE, WILLIAM	1371 BLUE SPRUCE CT	WINTER SPRINGS, FL 32708
Tax Account ID: 2218975	BENTLEY, THEODORE C	16420 SE MCGILLIVRAY BLVD, # 103, PMB 195	VANCOUVER, WA 98683
Tax Account ID: 2218976	UNITED EXCEL INVESTMENT INC	8255 N WICKHAM RD, STE 101B	MELBOURNE, FL 32940
Tax Account ID: 2218977	ARGUELLES, BRANDON LEE ARGUELLES, YESSIKA VANIA	1534 ELF STONE DR	CASSELBERRY, FL 32707
Tax Account ID: 2218978	TILLMAN, TERRY	2051 N ATLANTIC AVE	COCOA BEACH, FL 32931
Tax Account ID: 2218979	GETT ENTERPRISES INC	3575 BURKHOLM RD	MIMS, FL 32754
Tax Account ID: 2218980	DE LA TORRE, WILLIAM JOSEPH DE LA TORRE, CINDY MARIE	1371 BLUE SPURCE CT	WINTER SPRINGS, FL 32708

Tax Account ID: 2218981	REITON REAL ESTATE LLC	3270 SUNTREE BLVD, STE 129	MELBOURNE, FL 32940
Tax Account ID: 2218982	BECKLEY, ADA	2170 KNOX MCRAE DR, UNIT 37	TITUSVILLE, FL 32780
Tax Account ID: 2218983	LAWRENCE M JARKA & RHONDA M JARKA TRUST	902 BROMPTON CIR	BOLINGBROOK, IL 60440
Tax Account ID: 2218984	UNITED EXCEL INVESTMENT INC	8255 N WICKHAM RD, STE 101B	MELBOURNE, FL 32940
Tax Account ID: 2218985	DORE-BLAIR FAMILY TRUST	260 BAYTREE DR	MELBOURNE, FL 32940
Tax Account ID: 2218986	PENA DE LUGO, ANNETTE ALTAGRACIA	2036 SW 159TH AVE	MIRAMAR, FL 33027
Tax Account ID: 2218987	RC LIGHTHOUSE 5 LLC	7575 TURKEY POINT DR	TITUSVILLE, FL 32780
Tax Account ID: 2208110	ALFRED W BUCKLEY LIVING TRUST CHERYL H BUCKLEY LIVING TRUST	1842 SUMMERTIME TRL, #17	LAFAYETTE, IN 47909
Tax Account ID: 2208111	ALFRED W BUCKLEY LIVING TRUST CHERYL H BUCKLEY LIVING TRUST	1842 SUMMERTIME TRL, #17	LAFAYETTE, IN 47909
Tax Account ID: 2208112	ALFRED W BUCKLEY LIVING TRUST CHERYL H BUCKLEY LIVING TRUST	1842 SUMMERTIME TRL, #17	LAFAYETTE, IN 47909
Tax Account ID: 2208113	ALFRED W BUCKLEY LIVING TRUST CHERYL H BUCKLEY LIVING TRUST	1842 SUMMERTIME TRL, #17	LAFAYETTE, IN 47909
Tax Account ID: 2208114	ALFRED W BUCKLEY LIVING TRUST CHERYL H BUCKLEY LIVING TRUST	1842 SUMMERTIME TRL, #17	LAFAYETTE, IN 47909
Tax Account ID: 2208115	ALFRED W BUCKLEY LIVING TRUST CHERYL H BUCKLEY LIVING TRUST	1842 SUMMERTIME TRL, #17	LAFAYETTE, IN 47909
Tax Account ID: 2208116	ALFRED W BUCKLEY LIVING TRUST CHERYL H BUCKLEY LIVING TRUST	1842 SUMMERTIME TRL, #17	LAFAYETTE, IN 47909
Tax Account ID: 2208117	ALFRED W BUCKLEY LIVING TRUST CHERYL H BUCKLEY LIVING TRUST	1842 SUMMERTIME TRL, #17	LAFAYETTE, IN 47909
Tax Account ID: 2208118	ALFRED W BUCKLEY LIVING TRUST CHERYL H BUCKLEY LIVING TRUST	1842 SUMMERTIME TRL, #17	LAFAYETTE, IN 47909
Tax Account ID: 2208119	ALFRED W BUCKLEY LIVING TRUST CHERYL H BUCKLEY LIVING TRUST	1842 SUMMERTIME TRL, #17	LAFAYETTE, IN 47909
Tax Account ID: 2208120	ALFRED W BUCKLEY LIVING TRUST CHERYL H BUCKLEY LIVING TRUST	1842 SUMMERTIME TRL, #17	LAFAYETTE, IN 47909
Tax Account ID: 2207927	PHILLIPS, GERARD L	1755 HARRISON ST, APT 125	TITUSVILLE, FL 32780
Tax Account ID: 2207928	CARDONE, FELICIA M ACCARDI, MICHELE	1755 HARRISON STREET #126	TITUSVILLE, FL 32780

Tax Account ID: 2207929	NOLEN, DAVID W NOLEN, BEVERLY J	510 BELLEVIEW RD	ROCK HILL, SC 29730
Tax Account ID: 2207930	ALGERMISSEN, JOHN R	1755 HARRISON ST, APT 128	TITUSVILLE, FL 32780
Tax Account ID: 2207931	HILL, HANNA	1755 HARRISON ST, APT 129	TITUSVILLE, FL 32780
Tax Account ID: 2207932	SPERA, JACQUELYN	1755 HARRISON ST #225	TITUSVILLE, FL 32780
Tax Account ID: 2207933	IBARRA, FERNANDO	1755 HARRISON ST, APT 226	TITUSVILLE, FL 32780
Tax Account ID: 2207934	ASHFIELD, STEVEN M	1755 HARRISON ST, APT 227	TITUSVILLE, FL 32780
Tax Account ID: 2207935	SLICK, KIMBERLY	216 SCOTT RD	PITTSBURGH, PA 15239
Tax Account ID: 2207936	SOTO, JOSE R	1755 HARRISON ST #229	TITUSVILLE, FL 32780
Tax Account ID: 2207937	MCMAHON, COLIN E	1735 HARRISON ST, APT 130	TITUSVILLE, FL 32780
Tax Account ID: 2207938	NICHOLSON, JOSHUA NICHOLSON, BERNADETTE	841 SPANISH CAY DR	MERRITT ISLAND, FL 32952
Tax Account ID: 2207939	FOSTER, THERESA ARLENE NELSON, AMY FOSTER	1735 HARRISON ST, 132	TITUSVILLE, FL 32780
Tax Account ID: 2207940	NOLEN, BEVERLY MC COLLUM, DONALD JR	750 SUMTER AVE	ROCK HILL, SC 29730
Tax Account ID: 2207941	KOHOL, DORENE	1735 HARRISON ST, APT 134	TITUSVILLE, FL 32780
Tax Account ID: 2207942	WINTLING, GLENN E	1735 HARRISON ST, APT 230	TITUSVILLE, FL 32780
Tax Account ID: 2207943	GIL, JULIA ANGELICA PULIDO	7615 NW 70TH AVE	TAMARAC, FL 33321
Tax Account ID: 2207944	SCHARLAU, CARY	1735 HARRISON ST #232	TITUSVILLE, FL 32780
Tax Account ID: 2207945	ROONEY, ANNE	29 PEACH HILL CT	RAMSEY, NJ 07446
Tax Account ID: 2207946	EDGECOMB, KEITH A	1735 HARRISON ST #234	TITUSVILLE, FL 32780
Tax Account ID: 2207947	SMITH, STEPHEN G SMITH, KENTEN R,JR	1715 HARRISON ST, APT 135	TITUSVILLE, FL 32780
Tax Account ID: 2207948	HAGGARD FAMILY TRUST	1715 HARRISON ST, APT 136	TITUSVILLE, FL 32780
Tax Account ID: 2207949	GODDARD, BRUNILDA TORRES	1715 HARRISON ST, APT 137	TITUSVILLE, FL 32780
Tax Account ID: 2207950	BERGLUND, NILS KENNETH BERGLUND, LENA MARIA	ALGSTIGEN 45	13936 VARMDO,
Tax Account ID: 2207951	GREENE, BARRETT VAUGHN	1715 HARRISON ST, APT 235	TITUSVILLE, FL 32780
Tax Account ID: 2207952	BIGGI, JOSEPH L BIGGI, THERESA M	1715 HARRISON ST #236	TITUSVILLE, FL 32780
Tax Account ID: 2207953	JONGSMA, DARRYL L	291 3RD ST	HARRISON, SD 57344
Tax Account ID: 2207954	AMERIONE PROPERTIES LLC	801 NORTHPOINT PKWY, STE 141	WEST PALM BEACH, FL 33407
Tax Account ID: 2207955	ANTORCHA, RAMIRO J,JR ANTORCHA, TRACY	1695 HARRISON ST, APT 139	TITUSVILLE, FL 32780

Tax Account ID: 2207957	SIEBERT, JUDY SIEBERT, GLENN	9731 TOWNLINE DR	SISTER BAY, WI 54234
Tax Account ID: 2207958	MICHAEL J & DEBORAH A FOSTER TRUST	1695 HARRISON ST, APT 141	TITUSVILLE, FL 32780
Tax Account ID: 2207959	LYNCH, MARY PAT	1695 HARRISON ST, APT 142	TITUSVILLE, FL 32780
Tax Account ID: 2207960	LANE, BILLY FERGUSON, CYNTHIA	1695 HARRISON ST, APT 239	TITUSVILLE, FL 32780
Tax Account ID: 2207961	SOARES, KRISTINE M	1695 HARRISON ST, APT 240	TITUSVILLE, FL 32780
Tax Account ID: 2207962	MORGAN, ROBERT WILLIAM	1695 HARRISON ST, 241	TITUSVILLE , FL 32780
Tax Account ID: 2207963	RC LIGHTHOUSE 2 LLC	PO BOX 656	TITUSVILLE, FL 32781
Tax Account ID: 2207911	RAY, SARAH G	1745 HARRISON ST	TITUSVILLE, FL 32780
Tax Account ID: 2207912	HALL, MELISSA	1745 HARRISON ST, APT 118	TITUSVILLE, FL 32780
Tax Account ID: 2207913	MORETTO, NATHAN GREGORY	1745 HARRISON ST, APT 119	TITUSVILLE, FL 32780
Tax Account ID: 2207914	BEUKENKAMP, RENEE M	1745 HARRISON ST, APT 120	TITUSVILLE, FL 32780
Tax Account ID: 2207915	MARK, DAVID E JR MARK, CONSTANCE Z	1745 HARRISON ST #217	TITUSVILLE, FL 32780
Tax Account ID: 2207916	HEFELFINGER, KATHERINE P HEFELFINGER, MICHELLE	1745 HARRISON ST, APT 218	TITUSVILLE, FL 32780
Tax Account ID: 2207917	MUCK, ALAN MUCK, PATRICIA	12428 BARONE DR	SILVER CREEK, NY 14136
Tax Account ID: 2207919	BALDWIN, CINNAMON SMITH WADE, JAKE DAVIS	1725 HARRISON ST, APT 121	TITUSVILLE, FL 32780
Tax Account ID: 2207920	RIGERMAN, CAROLYN M	1725 HARRISON ST, APT 122	TITUSVILLE, FL 32780
Tax Account ID: 2207921	LEIBELL, CLARK E	1725 HARRISON ST, APT 123	TITUSVILLE, FL 32780
Tax Account ID: 2207922	KOCH, LILLIAN	1725 HARRISON ST, #124	TITUSVILLE, FL 32780
Tax Account ID: 2207923	CUGNO, SEBASTIAN CUGNO, A SUSAN	300 HAZEL AVE	GARWOOD, NJ 07027
Tax Account ID: 2207924	MARINO, JOSEPH FRANK MARINO, JULIE ANNE	W 7666 STACEY LN	WHITEWATER, WI 53190



NOTE:
TREES IN RED TO BE REMOVED
TREES IN GREEN TO BE SAVED

LIBRA design group

P.O. Box 547368, Orlando, FL 32854-7368
Tel (407) 649-1828 Fax (407) 479-3279
Landscape Architecture & Planning
www.libradesigngroup.com

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Florida License LC26000253

OWNER

Lake Mary, Florida

ISSUED

DATE:	FOR:
2023.08.04	TREE MITIGATION / CANOPY COVERAGE
2025.04.03	DEVELOPMENT PLAN
2025.05.27	DEVELOPMENT PLAN

GEMINI LAKES

Titusville, Florida

Brian Davis

Digitally signed by Brian Davis
Date: 2025.05.27 15:00:28 -04'00'

Brian F. Davis LA0000935

SCALE

NORTH

0

NOT TO SCALE

JOB NO.:	22125
DESIGNED BY:	BFD
DRAWN BY:	
CHECKED BY:	BFD
PROJECT APPROVAL:	

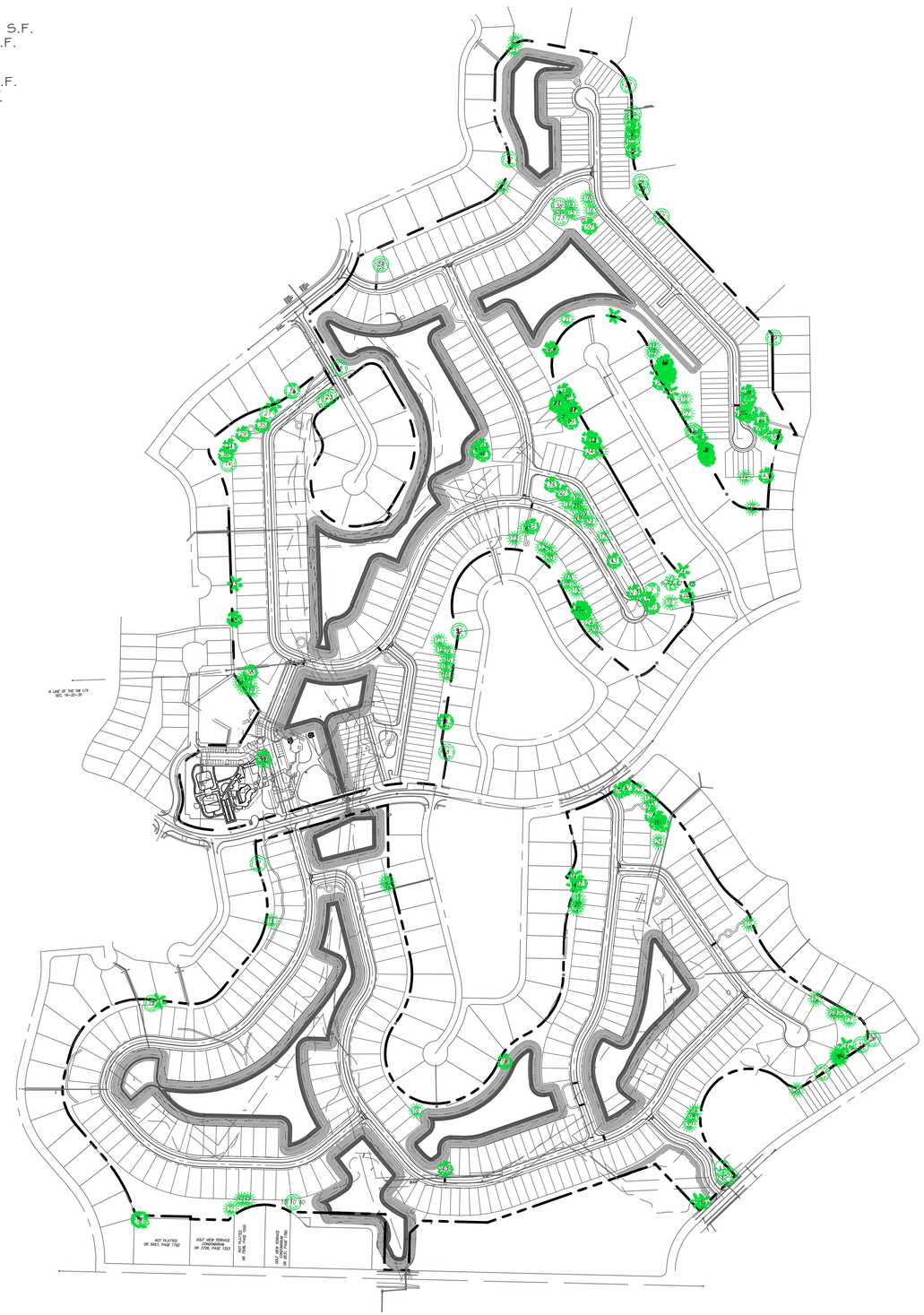
TITLE

OVERALL TREE REMOVAL AND SAVE PLAN

SHEET NO.

TR-00

NORTH PARCEL AREA	3,385,858.9938 S.F.
RESIDENTIAL SUBDIVISION CANOPY AREA	846,464.7485 S.F.
25% AS A PERCENTAGE OF DEVELOPMENT AREA	
SOUTH PARCEL AREA	3,023,295.0554 S.F.
RESIDENTAIL SUBDIVISION CANOPY AREA	755,823.7639 S.F.
25% AS A PERCENTAGE OF DEVELOPMENT AREA	
TOTAL RESIDENTIAL SUBDIVISION CANOPY AREA	1,602,288.512 S.F.
TOTAL PROPOSED SUBDIVISION CANOPY AREA	1,913,510.00 S.F
358 BALD CYPRESS AT 308 S.F.	110,264 S.F.
538 LIVE OAKS AT 3108 S.F.	1,672,104 S.F.
173 SLASH PINE AT 726 S.F.	125,598 S.F.
84 LITTLE GEM MAGNOLIA AT 66 S.F.	5,544 S.F.
TOTAL REQUIRED PRESERVED CANOPY AREA	961,373 S.F.
15% AS A PERCENTAGE OF DEVELOPMENT AREA	
TOTAL PRESERVED CANOPY AREA.	755,360 S.F.



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OWNER

Lake Mary, Florida

ISSUED

DATE:	FOR:
2023.08.04	TREE MITIGATION / CANOPY COVERAGE
2025.04.03	DEVELOPMENT PLAN
2025.05.27	DEVELOPMENT PLAN

GEMINI LAKES

Titusville, Florida

STATE OF FLORIDA — BRIAN F. DAVIS — LA0000935 — REGISTERED LANDSCAPE ARCHITECT

Brian F. Davis LA0000935

SCALE

NORTH

0

NOT TO SCALE

JOB NO.:	22125
DESIGNED BY:	BFD
DRAWN BY:	
CHECKED BY:	BFD
PROJECT APPROVAL:	

TITLE

OVERALL TREE REMOVAL AND SAVE PLAN

SHEET NO.

TR-01

9503	711617.8	1542476	19.752	PA	10			10196	713211.7	1542259	23.57	PINE	22																						
9505	711629.6	1542410	18.257	PA	8			10198	713202.2	1542264	25.631	PINE	24				13315	712835.7	1541853	23.539	OALI	22												
9509	711661.5	1542373	16.72	CH	8			10387	711581.5	1542845	35.492	OALI	60				13316	712839.7	1541853	23.539	OALI	22												
9514	711670	1542254	18.401	PA	8			10471	711464.1	1542629	30.449	CE	6	6	6	6	13317	712842.2	1541857	23.539	OALI	21												
9516	711669.9	1542252	18.416	PA	10			10502	711475.5	1542691	34.285	CA	16				13318	712843.3	1541861	23.539	OALI	22												
9517	711672.7	1542204	17.96	PA	8			10642	711437.5	1542759	37.627	OALI	32				13319	712838.1	1541861	23.539	OALI	20												
9519	711679.3	1542179	18.127	PA	8			10645	711886.2	1542815	20.244	PAPER	9	13			13320	712697.5	1541827	24.203	PINE	13												
9523	711650.2	1542162	18.699	PA	10			10662	711914	1543026	18.616	OALA	7				13323	712769.8	1541817	22.419	TREE2	10	8											
9525	711643.5	1542115	18.271	PA	9			10816	711828.8	1543046	18.243	PA	14				13324	712771.6	1541817	22.419	PA	17												
9526	711657.5	1542101	20.695	PA	6			10818	711820.3	1543044	18.251	PA	14				13325	712773.8	1541815	22.419	PA	14												
9528	711673.9	1542120	20.798	PA	10			10837	711697.3	1543351	19.877	PINE	18				13326	712775.2	1541823	22.265	PA	14												
9529	711674.7	1542118	20.798	PA	10			10838	711700.2	1543372	19.877	PINE	18				13327	712898.3	1541826	21.474	PA	15												
9531	711653.9	1542129	19.302	PA	8			10878	711755	1543602	19.188	OALA	27				13328	712897.6	1541831	21.474	PA	14												
9557	711375.1	1541617	24.716	OALI	24			10879	711739.3	1543559	19.188	OALA	48				13329	712905.2	1541828	21.405	PA	14												
9571	711291.3	1541695	25.446	PINE	9			10881	711714.2	1543614	18.821	OALI	21				13330	712693.3	1541742	25.287	PINE	12												
9573	711311.3	1541707	25.149	PINE	24			10883	711710.7	1543577	18.607	OALA	46				13331	712687.4	1541782	25.072	PA	14												
9575	711286.1	1541710	25.587	PINE	10			10884	711680.8	1543599	18.607	OALA	36				13332	712688.4	1541786	25.072	PA	15												
9577	711266.7	1541707	26.319	PINE	12			10886	712021.5	1543554	19.472	PINE	12				13333	712690.6	1541781	25.072	PA	16												
9579	711274	1541691	25.714	PINE	15			10887	712049.3	1543558	19.472	PINE	21				13334	712603.2	1541723	22.31	PINE	15												
9581	711198.1	1541725	25.915	OALA	6			10889	712065.4	1543566	19.651	PINE	14				13335	712598.3	1541688	22.862	PINE	17												
9590	711370	1541744	23.267	PINE	16			10890	712081.7	1543573	19.651	PINE	10				13336	712468.1	1541577	26.487	PA	15												
9592	711422.7	1541824	21.445	PINE	21			10892	712134.7	1543582	19.859	CH	7				13389	713227.6	1541970	21.397	PINE	27												
9594	711407.1	1541841	20.98	PINE	24			10893	712129.6	1543577	19.859	CH	6				13390	713250.7	1541986	23.176	PA	14												
9596	711470.3	1542039	22.372	PINE	18			10894	712130.2	1543576	19.859	CH	9				13391	713234.8	1541994	23.176	PA	14												
9597	711465.3	1542057	22.372	PINE	21			10897	711982.9	1543406	21.338	PINE	14				13392	713195.3	1542029	22.583	PINE	22												
9599	711474.1	1542070	22.427	PINE	16			10899	711911.9	1543251	19.387	PINE	12				13393	713131.4	1542086	23.189	PINE	21												
9600	711489.6	1542075	22.427	PINE	17			10901	712015.7	1543727	18.899	PINE	11				13394	713072.3	1542086	22.651	PINE	24												
9602	711467.8	1542121	22.291	PINE	13			10903	712038	1543750	19.323	PINE	27				13395	712735.6	1542108	23.031	PINE	23												
9603	711483.8	1542131	22.291	PINE	19			10942	712065.1	1543823	19.971	PINE	22				13396	712727.5	1542128	23.031	PINE	13												
9605	711495.5	1542149	21.9	PINE	17			10943	712099.7	1543820	19.971	PINE	15				13397	712695.7	1542128	23.031	PINE	21												
9607	711485.6	1542167	21.9	PINE	16			11004	712377.4	1543693	18.802	PINE	6				13398	712699.6	1542119	23.031	PINE	22												
9636	711504.2	1542261	21.07	CH	8			11006	712368.6	1543677	19.13	PA	15				13399	712744.3	1542146	21.969	PINE	20												
9638	711522.2	1542261	19.961	OALA	19			11037	712172.4	1543947	20.223	CA	4	5	5	6	13402	712716.3	1542231	21.979	PINE	21												
9686	711224.9	1541675	25.326	OALI	24			11039	712235.2	1544008	22.333	CHE	7				13403	712715	1542206	21.979	PINE	17												
9698	711215.6	1541801	28.678	OALI	39			11057	712321.7	1543800	19.687	PINE	19				13408	712801.1	1542478	26.317	OALI	20												
9711	711089.1	1541780	24.23	PINE	18			11059	712269.7	1543934	20.193	CHE	8	10			13409	712788.2	1542455	26.082	OALI	21												
9713	711004.4	1541759	22.566	PINE	20			11061	712412.9	1543819	21.376	OALI	30				13410	712810.1	1542451	25.09	OALI	45												
9715	710981.6	1541732	21.282	TREE1	6	6		11063	712473.5	1543798	23.628	OALI	30	36			13411	712819.3	1542360	22.111	OALI	27												
9716	710983	1541733	21.282	TREE1	6			11087	712593.2	1543654	23.809	PINE	11				13412	712851.3	1542360	22.111	OALI	32												
9718	710965.3	1541742	22.38	TREE1	7	12		11116	712772.4	1543343	25.33	PINE	10				13413	712835.5	1542337	22.111	OALI	39												
9719	710962.7	1541744	22.38	CHE	6			11139	712906.5	1543231	25.805	PA	14				13485	713139.1	1542384	23.368	PINE	34												
9726	710915.9	1541648	19.539	OA	14			11141	712903.1	1543229	25.346	PA	15				13486	713102.6	1542402	23.368	PINE	22												
9728	710879.3	1541674	20.176	PINE	17			11147	712641.5	1543793	24.378	PINE	21				13487	713172.1	1542320	23.787	PINE	22												
9740	710890.2	1541508	22.366	PINE	16			11156	712730.6	1543721	23.684	PINE	15				13488	713173.8	1542283	23.787	PINE	24												
9789	711264	1541073	19.556	OA	18			11159	712734.9	1543676	24.839	OALI	34				13489	713142.9	1542301	23.787	PINE	27												
9791	711309.3	1541078	18.91	OALA	41			11161	712767.6	1543654	23.606	OALI	32				13580	711741.3	1542731	23.169	OALI	23												
9792	711301.7	1541048	18.91	OALA	33			11173	712993.4	1543373	25.748	OALI	22				13614	711833.9	1543047	17.702	PA	14												
9799	711395.1	1541047	23.006	PINE	22			12568	712921.3	1541196	22.924	CA	6	6	6	6	13615	711829.9	1543047	17.702	PA	14												
9801	711421.7	1541050	26.635	PINE	18			12569	712920.6	1541198	22.924	CA	10				13616	711824.3	1543045	17.702	PA	14												
9809	711536.3	1541041	29.072	OALA	20			13011	711816.5	1542568	19.395	OAWA	35				13617	711821.2	1543036	17.702	PA	14												
9810	711510.2	1541049	29.072	OALA	22			13012	711841.2	1542589	19.968	PA	14				13619	711808.8	1543013	17.251	PA	14												
9812	711527.2	1541106	30.349	PINE	17			13018	711901.7	1542367	20.166	PINE	17				13620	711808.7	1543008	17.251	PA	14												
9814	711484.9	1541105	29.992	OALI	26			13019	711922	1542313	19.351	PINE	24				13621	711819.2	1543004	17.251	PA	14												
9816	711487.1	1541083	30.092	OALI	27			13029	711826.9	1542157	17.562	PINE	16				13626	711818.1	1542949	18.053	PA	14												
9817	711461.9	1541088	30.092	OALI	36			13031	711822.6	1542126	18.283	PINE	21				13627	711818	1542942	18.053	PA	14												
9819	711443	1541109	27.466	OALI	24			13032	711819.3	1542126	18.283	PA	15				13634	711845.6	1542790	18.887	PA	15												
9860	711177.3	1541804	26.466	TREE1	7			13033	711820.4	1542122	18.283	PA	16				13635	711854.7	1542790	18.887	PA	15												
9861	711180.6	1541798	26.466	PINE	14			13036	711798.6	1542106	19.328	PINE	16				13636	711854.8	1542808	18.887	TREE2	12												
9867	711507.1	1541310	25.077	OALI	19			13037	711824.3	1542082	21.072	PINE	23				13637	711851	1542815	18.887	TREE2	14	7											
9869	711466	1541335	23.811	OALI	16			13041	711757	1541886	19.289	PA	14				13644	711827	1542824	18.519	PAPER	15												
9871	711450.3	1541288	23.515	OA	24			13061	711488	1541566	19.145	PA	15				13653	711661.2	1542844	28.273	PA	14												
9873	711428.1	1541271	21.583	OALA	32			13062	711485.8	1541558	19.145	PA	16				13654	711670.5	1542863	28.273	OALI	26												
9874	711405	1541270	21.583	OALA	30			13063	711483.8	1541558	19.145	CA	7				13655	711665	1542907	27.761	OALI	21												
9875	711418.6	1541293	21.583	OALA	24			13064	711484.3	1541556	19.145	CA	6	6			13656	711661	1542916	27.761	OALI	16												
9877	711391.7	1541294	19.615	PINE	13			13065	711461	1541561	19.145	PA	16				13657	711653.7	1542922	27.761	OALI	14												
9879	711374	1541335	19.522	PINE	19			13067	711455.5	1541562	22.407	PA	14				13658	711651.7	1542919	27.761	OALI	15												
9881	711389.8	1541352	21.68	PINE	15			13068	711457.6	1541557	22.407	PA	15				13659	711631.2	1542923	26.958	OALI	40												
9883	711402.8	1541337	21.499	PINE	12			13069	711455.8	1541552	22.407	PA	15				13660	711626.7	1543013	24.115	OALI	37												
9885	711407.1	1541316	20.743	PINE	12			13070	711452.8	1541565	22.407	TREE	6				13688	711682.7	1542986	29.61	OALI	25												
9887	711421.5	1541330	23.13	PINE	15			13071	711445.7	1541490	26.335	PA	14				13689	711677.9	1542999	29.61	OALI	28												
9908	711196.2	1541395	18.927	PINE	11			13072	711446.4	1541494	26.335	PINE	14				13670	711672	1543013	28.722	OALI	29												
9910	711176.9	1541399	19.212	PINE	15			13073	711447.9	1541492	26.335	CA	7	6			13671	711688.2	1542950	29.983	OALI	21												
9912	711160.9	1541442	21.2	PINE	17			13074	711500.4	1541468	28.537	CA	7				13672	711683	1542948	29.983	OALI	19												
9914	711600	1541266	22.469	PINE	18			13075	711442.6	1541422	26.055	OALI	38				13673	711678	1542946	29.983	OALI	12												
9945	712912.9	1541411	20.984	OALI	23			13076	711490.8	1541385	26.069	PINE	24				13696	711563.5	1543212	20.863	PA	15												
9947	712930.3	1541447	21.806	OALI	14			13105	712041.8	1541373	25.852	PINE	10				13705	711434	1543191	27.709	OALI	35												
9952	712963.8	1541489	24.489	OALI	24			13107	712028	1541388	23.89	PINE	19				13706	711436.8	1543193	27.709	OALI	34												
9954	713012.6	1541538	23.462	OALI	15			13108	711977.5	1541423	20.598	OALI	42				13707	711395.2	1543223	27.709	OALI	40												
9959	713052.8	1541621	22.221	OALI	36			13109	711951.3	1541434	19.207	OALI	30				13711	711386.3	1543125	27.474	PINE	16												
9961	713166.3	1541481	23.27	PINE	18			13110	711950.1	1541453	18.622	OALI	27				13751	711380.3	1543319	25.083	OALI	30												
9963	713146.6	1541402	22.855	PINE	18			13111	711886.9	1541424	18.622	PINE	12				13752	711368	1543320	25.083	OALI	34												
9965	713132	1541357	21.431	PINE	21			13112	711943.3	1541756	22.264	OALI	46				13753	711355.6	1543329	25.083	OALI	18												
10001	713172.2	1540993	21.223	MAG	7			13113	711968.7	1541789	22.943	OALI	50				13754	711344.7	1543348	24.413	OALI	27												
10007	713123.9	1541384	24.122	PINE	15			13114	711987.2	1541844	24.531	MAG	9				13755	711351.7	1543377	24.413	OALI	21												
10011	713290.9	1541624	22.387	PA	14			13115	711982.6	1541902	23.398	OALI	15				13756	711364.6	1543368	24.413	OALI	34												
10042	713144.9	1541750	23.967	OALI	20			13116	712004.8	1541974	21.033	OALI	38				13851	711323.6	1543837	19.66	OALA	20												
10044	713114.7	1541782	21.697	TREE2	18			13163	711598.9	1541084	22.719	PINE	16				13854	711320.7	1543944	18.995	OALI	40												
10046	713233.4	1541836	23.544	OALI	32			13164	711598.9	1541084	22.719	PINE	16				13855	711341	1543981	18.801	OALI	30												
10048	713308.5	1541823	22.333	OALI	42			13165	711618.2	1541089	20.018	PINE	22				13860	711386.2	1544076	18.811	OALI	28												
10049	713338.2	1541846	22.333	OALI	24			13182	711940.1	1541212	21.399	OALI	29				13888	711577.4	1544217	21.424	PINE	19												
10055	713327.1	1541895	22.066	OALI	28			13196	712042.4	1540979	20.22	PA	14				13975	711945.9	1544774	22.055	OALI	38												
10057	713413.7	1541820	24.271	OALI	32			13199	712048.5	1540988	21.026	PA	14				13976	711986.9	1544795	22.055	OALI	38												
10058	713393.9	1541807	24.271	OALI	30			13200	712034.4	1541001	21.371	PA	16				13977	712018.1	1544754	23.111	OALI	21												
10059	713369	1541830	24.271	OALI	31			13227	712172.3	1540976	27.701	OALI	38				13982	711982.1	1544600	22.427	PINE	12												
10061	713422.4	1541797	21.959	OALI	32			13228	712215.5	1540973	27.758	OALI	37				14006	712023.4	1544555	19.079	PINE	13												
10063	713419.2	1541912	22.657	PINE	15			13292	713120.3	1541898	19.774	PA	15				14057	712252	1544105	20.267	OALA	30												
10064	713395.3	1541912	22.657	PINE	15			13302	713004.4	1541863	20.874	PA	16				14058	712233.4	1544168	20.891	PINE	20												
10068	713623.7	1541561	22.99	PINE	18			13303	712997.8	1541878	20.874	PA	15				14059	712194.1	1544274	21.629	PINE	23												
10070	713624.6	1541616	22.329	PINE	27			13304	712732.4	1542056	23.624	PINE	20				14060	712181.2	1544329	22.893	PINE	15												
10071	713622.9	1541617	22.329	OA	7			13305	712736.1	1542028	23.624	PINE	25				14061	712123.5	1544490	22.289	PINE	9												
10111	713704.8	1541641	22.772	PINE	24			13306	712774.6	1541946	24.431	OALI	31				14062	712086.2	1544566	19.767	CA	8	6											
10113	713670	1541696	22.92	PINE	17			13307	712735.8	1541935	24.431	OALI	15				14063	712076.4	1544613	19.653	OALI	32												
10115	713678.6	1541720	23.261	PINE	19			13308	712788	1541884	24.258	OALI	17				14064	712141.6	1544653	22.065	OALI	37												
10117	713702.8	1541721	24.05	PINE	21			13309	712789.6	1541879	24.258	OALI	22				14076	712016.1	1544849	23.315	OALI	18												
10177	713398.2	1542066	23.993	PINE	27			13310	712785.2	1541881	24.258	OALI	21				14077	712017.3	1544850	23.315	SB	10												
10178	713379.8	1542062	23.993	PINE	17			13311	712787.1	1541882	24.034	OALI	21				14078	712020.2	1544849	23.315	CA	11												
10190	713238.1	1542208	24.607	PINE	17			13312	712778.6	1541880	24.034	OALI	21				14079	712022.8	1544846	23.315	OALI	21												
10192	713240.6	1542221	25.338	PINE	18			13313	712780.4	1541876	24.034	OALI	21				14080	712026.4	1544858	24.567	OALI	16												
10194	713241.5	1542235	25.241	PINE	14			13314	712783.6	1541874	24.034	OALI	18				14081	712028.6	1544859	24.567	OALI	13												
14082	712033.8	1544860	24.567	OALI	10																														
14083	712035.2	1544867	24.567	OALI	12																														
14084	712039.3	1544861	24.567	OALI	16																														
14085	712036.2	1544851	24.567	OALI	20																														
14086	712046.8	1544856	24.567	OALI	12																														
14087	712049.1	1544862	24.567	OALI	16																														
14088	712062.3	1544859	25.936	OALI	27																														
14089	712068.2	1544858	26.388	OALI	15																														
14090	712095.3	1544860	26.388	OALI	11																														
14091	712095.6	1544851	26.388	OALI	13																														
14092	712109.2	1544857	27.592	OALI	17																														
14093	712110.3	1544861	27.592	OALI	17																														
14094	712101.8	1544861	27.592	OALI	14																														
14095	712119.4	1544872	27.512	OALI	18																														
14096	712126.8	1544860	27.512	OALI	24																														
14097	712145.6	1544834	26.292	OALI	38																														
14098	712145.2	1544871	27.446	OALI	22																														
14099	712141.5	1544872	27.446	OALI	15																														
14100	712132.9	1544889	27.423	OALI	22																														
14119	712275.6	1544935	26.35	OALA	47																														
14120	712322.9	1544949	26.916	OALA	18																														
14134	712464.9	1545072	26.828	OALI	22																														
14135	712470.8	1545067	26.828	OALI	24																														
14136	712472.5	1545063	26.828	OALI	20																														
14137	712485.8	1545057	26.828	OALI	26																														
14138	712499.8	1545116	24.839	OALI	34																														
14174	712423.8	1545480	21.127	PA	14																														
14175	712427.1	1545481	21.127	PA	16																														
14176	712422.8	1545487	21.815	PA	15																														
14177	712419.1	1545490	21.815	PA	14																														
14178	712438.4	1545467	22.433	PINE	13																														
14190	712433.1	1545561	21.555	PINE	14																														
14230	712729.1	1545549	22.137	OALA	25																														
14231	712799.9	1545472	21.447	OALI	38																														
14232	712850.1	1545486	21.879	MAG	18																														
14233	712774.2	1545545	21.511	PA	15																														
14249	712857.9	1545361	22.382	OALA	12																														
14263	712881.8	1545263	21.531	PINE	12																														
14269	712858.2	1545217	23.245	PINE	14																														
14270	712838	1545257	23.245	PINE	9																														
14296	713128.7	1544830	23.405	PINE	11																														
14302	713219.6	1544741	22.521	PINE	13																														
14303	713197.2	1544758	22.521	PINE	18																														
14320	713282.9	1544652	23.84	PINE	9																														
14321	713271.6	1544674	23.84	PINE	11																														
14322	713254.7	1544660	23.84	PINE	12																														
14323	713320.3	1544621	24.488	OALA	35																														
14324	713306.3	1544587	24.488	OALI	43																														
14325	713333.6	1544565	24.488	OALI	35																														
14337	713388.6	1544489	25.996	OALI	35																														
14354	713442.2	1544315	27.474	OALI	26																														
14486	713200.7	1544125	24.895	PINE	11																														
14488	713175.9	1544146	24.895	PINE	12																														
14489	713169.4	1544172	24.252	PINE

9606	711469.9	1542150	21.9	PINE	16			13482	713035.2	1542538	22.594	OALI	28	14656	712677.5	1544199	25.626	OALI	22				
9721	711017.9	1541828	22.186	PA	16			13483	713011.7	1542544	22.594	OALI	36	14657	712681.3	1544197	25.626	OALI	19				
9723	710989.9	1541820	21.914	OALA	19			13484	713020.7	1542468	22.999	PINE	24	14660	712641.6	1544169	23.972	OALI	21				
9783	710937.6	1540956	20.61	CH	8			13704	711383.9	1543146	27.709	OALI	36	14661	712668.2	1544150	23.972	OALI	29				
9784	710943.3	1540955	20.61	OA	9			13712	711381.2	1543101	27.474	PINE	14	14667	712740.8	1544084	27.33	OALI	12				
9785	710947.2	1540953	20.61	OA	9			13713	711361	1543120	27.474	PINE	14	14668	712760	1544071	30.286	OALI	14				
9794	711308	1540997	19.756	PINE	21			13714	711363.1	1543084	26.843	PINE	16	14669	712758.9	1544076	30.286	OALI	13				
9796	711349.4	1541033	21.506	PINE	17			13715	711345.9	1543106	26.843	PINE	19	14670	712787.3	1544030	29.744	PINE	26				
9798	711375.1	1541033	23.006	PINE	17			13716	711390.8	1543073	27.291	PINE	19	14676	712745.4	1544030	26.403	OALI	34				
9807	711557.4	1541024	26.126	OALA	10	10	10	13757	711320.7	1543361	24.413	OALI	24	14722	712741.2	1544931	22.55	OALI	50				
9966	713155.5	1541366	21.431	PINE	18			13758	711320.9	1543353	24.413	PA	16	14727	712750	1544996	23.183	PINE	16				
9967	713143.3	1541335	21.431	PINE	32			13816	711322.4	1543501	23.772	PA	15	14729	712737.6	1545043	23.105	PINE	16				
9991	713275.4	1541161	18.421	OAWA	13			13856	711297.4	1543981	19.432	OALA	14	14747	712622	1545013	22.974	OALA	38				
9995	713304.5	1541130	19.155	OALA	21			13857	711285.2	1544019	19.432	OALI	36	14748	712629.5	1544966	22.435	OALA	23				
9996	713283.7	1541123	19.155	OALA	12			13858	711301.5	1544050	19.563	OALI	34	14749	712672.3	1544986	22.084	PINE	15				
10003	713174.5	1541028	19.178	PA	14			13859	711355.4	1544101	19.09	OALI	29	14750	712665.3	1545017	22.729	PINE	18				
10005	713199.3	1541026	20.004	PA	15			13867	711432.4	1544137	18.47	OALI	35	17537	711416.5	1542380	26.316	OALA	17				
10009	713166.2	1541389	21.385	PINE	18			13868	711454.9	1544183	18.552	OALA	27	20361	713155.2	1543500	28.728	GUM	16				
10066	713574.1	1541474	22.904	PINE	30			13869	711478.8	1544217	18.868	PA	14	20372	713132.7	1543454	29.006	OALI	10				
10073	713675.7	1541543	21.863	OALA	6			13873	711552.3	1544272	19.454	MAG	33	20385	713086	1543425	27.13	PINE	16				
10078	713739.3	1541597	22.499	PINE	21			13933	711683.2	1544237	25.088	OALA	17	20387	713072.2	1543503	27.393	OA	6	12	12		
10079	713744.9	1541597	22.499	PINE	6			13934	711700.7	1544248	25.088	OALA	23	20396	713113.7	1543552	28.916	PA	14				
10080	713736.5	1541603	22.499	PINE	17			13973	711741.3	1544365	23.229	OALA	38										
10082	713735.7	1541621	22.759	PINE	17			13974	711907.4	1544780	21.214	OALA	34										
10083	713738.6	1541607	22.759	PINE	16			14129	712395.7	1545090	25.405	PINE	32										
10084	713745.6	1541615	22.759	PINE	18			14145	712423	1545200	24.964	OALA	37										
10086	713751.6	1541608	23.007	PINE	24			14195	712440.2	1545639	21.654	PINE	15										
10099	713831.9	1541654	23.6	OALA	33			14208	712448.8	1545673	23.138	PINE	29										
10104	713876.6	1541678	23.691	OALA	26			14250	712899.7	1545498	21.356	OALA	27										
10109	713768	1541652	22.514	PA	14			14256	712918.6	1545380	20.882	OALA	39										
10119	713782.4	1541754	22.66	PINE	17			14257	712912.6	1545357	20.882	OALA	31										
10121	713749.7	1541781	22.88	PINE	26			14258	712917.2	1545332	21.384	OALI	30										
10123	713720.6	1541781	22.979	PINE	22			14259	712913.3	1545309	21.384	OALI	30										
10125	713649.5	1541839	22.822	PINE	22			14260	712916.4	1545288	21.336	OALA	33										
10180	713382.7	1542138	22.835	PINE	15			14261	712913.6	1545260	21.336	OALA	20										
10617	711436.1	1542802	34.388	OALI	48			14262	712916.4	1545234	21.531	OALI	29										
10620	711441.5	1542794	33.848	OAWA	16			14276	712948.6	1545109	21.17	OALA	28										
10765	712171.5	1542827	20.249	OALA	18			14277	712953.9	1545082	21.17	OALA	39										
10776	712166	1542949	20.033	CH	14			14283	713032	1544971	21.912	OALA	27										
10790	712172.3	1543136	19.029	PINE	16			14342	713481.2	1544485	24.504	OALA	39										
10792	712166.1	1543170	18.825	PINE	16			14379	713485.5	1544089	27.454	OALI	38										
10797	712178	1543194	19.268	PINE	15			14380	713449.1	1544101	27.206	PINE	19										
10804	712178	1543229	19.102	PINE	14			14381	713427.8	1544127	26.749	OALI	22										
10806	712150.5	1543237	19.104	PINE	12			14382	713431.6	1544157	26.749	OALI	21										
10808	712140.7	1543273	18.963	PINE	12			14383	713384.7	1544196	26.354	OALI	27										
10810	712221.6	1543311	19.607	OALA	32			14384	713376.6	1544177	26.784	OALI	34										
11041	712308.8	1544052	20.593	OALI	24			14385	713355	1544184	26.784	OALI	30										
11042	712293.7	1544034	20.593	OALI	30			14386	713379.8	1544245	26.897	OALI	54										
11043	712315.4	1544021	20.593	OALI	46			14387	713376.9	1544267	26.897	OALI	29										
11065	712512	1543731	25.097	OALI	43			14415	713450.3	1543934	28.354	OALI	43										
11066	712488	1543722	25.097	PINE	16			14433	713395.6	1543804	25.945	PINE	19										
11068	712443.4	1543681	24.503	PINE	22			14434	713366.3	1543926	25.728	PINE	19										
11089	712584.6	1543631	23.681	PINE	21			14459	713215.9	1544001	24.058	OALI	19										
11091	712556.3	1543646	23.625	PINE	22			14460	713214.9	1544005	24.058	OALI	24										
11093	712585	1543606	24.005	PINE	20			14461	713206.9	1544016	23.992	OALI	15										
11098	712662.5	1543524	24.787	PINE	15			14462	713205	1544025	23.992	OALI	15										
11099	712653	1543500	24.787	PINE	10			14463	713209.1	1544025	23.992	OALI	19										
11101	712691.2	1543473	25.571	PINE	19			14464	713206.8	1544026	23.992	OALI	13										
11104	712713.9	1543399	26.324	OALI	11			14465	713210.3	1544025	23.992	PA	16										
11105	712719.4	1543398	26.324	OALI	11			14466	713213.7	1544031	23.992	PA	15										
11106	712715	1543395	26.324	OALI	10			14467	713202.8	1544037	23.992	PA	14										
11107	712720.4	1543390	26.324	OALI	17			14468	713210.2	1544036	23.992	PA	16										
11108	712714.8	1543389	26.324	OALI	10			14469	713206.7	1544036	23.992	OALI	18										
11109	712711.9	1543386	26.324	OALI	14			14473	713191.6	1544066	26.581	PA	14										
11110	712697.6	1543402	26.324	OALI	21			14474	713181.6	1544089	26.836	OALI	18										
11114	712743.7	1543344	25.208	PINE	24			14476	713165.2	1544106	27.546	OALA	15										
11118	712768.6	1543319	24.482	PINE	16			14477	713156.8	1544112	27.546	OALA	12										
11143	712591	1543899	25.26	OALI	33			14490	713133.1	1544182	25.821	PINE	17										
11144	712636.4	1543865	25.26	OALI	22			14500	713125.6	1544240	24.329	PINE	10										
11146	712655	1543821	24.378	PINE	17			14501	713068.7	1544267	25.275	PA	15										
11149	712695.8	1543843	23.512	PINE	16			14511	713024.7	1544308	26.71	OALI	19										
11150	712706.5	1543821	23.512	PINE	15			14512	713015.2	1544343	26.71	PA	16										
11151	712689.5	1543813	23.512	PINE	21			14513	713058.1	1544327	24.553	OALI	18										
11153	712723	1543783	24.699	PINE	19			14514	713054.6	1544339	24.553	OALI	17										
11154	712700.6	1543762	24.699	PINE	19			14515	713057.7	1544341	24.553	OALI	24										
11157	712747.4	1543751	23.684	PINE	19			14516	713060	1544351	24.553	OALI	18										
11162	712800.2	1543688	23.606	PINE	17			14517	713052.4	1544353	24.553	OALI	17										
11164	712841.2	1543593	23.982	OALI	43			14518	713049.7	1544349	24.553	OALI	8										
11166	712923	1543467	24.648	OALI	27			14519	713045.3	1544355	24.287	OALI	12										
11168	712993.7	1543472	25.41	MAG	7			14520	713042	1544367	24.287	OALI	9										
11170	712993.6	1543410	25.733	OALI	30			14521	713036.2	1544376	24.287	OALI	18										
11171	712976.6	1543438	25.733	OALI	35			14522	713036	1544380	23.863	OALI	14										
13020	711931.8	1542310	18.77	PINE	17			14523	713044.9	1544383	23.863	OALI	14										
13021	711937	1542294	18.948	PINE	22			14524	713043.3	1544378	23.863	OALI	17										
13106	712051.3	1541390	25.824	PINE	16			14525	713047.5	1544385	23.305	OALI	14										
13215	712165.5	1541158	28.741	OALI	40			14526	713047.5	1544389	23.305	OALI	12										
13337	712403.5	1541588	26.761	OALI	19			14547	712994.9	1544427	23.597	PINE	19										
13400	712689.1	1542200	22.196	PINE	22			14548	713001.9	1544448	23.597	PINE	12										
13401	712698.1	1542237	21.979	PINE	13			14585	712838.1	1544573	24.423	PA	14										
13404	712696.2	1542217	21.979	PINE	20			14604	712652.5	1544560	29.175	PINE	21										
13405	712703.5	1542303	22.341	OALI	33			14624	712588.8	1544440	30.06	OALI	23										
13406	712681.1	1542329	23.797	PA	14			14625	712583.6	1544435	30.06	PA	16										
13407	712680.3	1542294	22.756	PA	14			14645	712641.1	1544272	24.604	OALI	31										
13475	712865.6	1542674	27.919	OALI	34			14646	712655.6	1544251	24.604	OALI	30										
13476	712893.3	1542685	27.919	OALI	37			14648	712610	1544216	23.492	OALI	23										
13477	712940.3	1542678	26.365	PINE	25			14649	712612.4	1544221	23.492	OALI	23										
13478	712981.3	1542640	25.027	PINE	17			14650	712614.8	1544227	23.492	OALI	23										
13479	712995.5	1542621	25.027	PINE	15			14651	712642.5	1544193	23.492	OALI	17										
13480	713020.9	1542560	23.693	OALI	48			14652	712642.5	1544181	23.492	OALI	21										
13481	712992.8	1542574	23.693	OALI	27			14655	712675	1544193	25.626	OALI	21										

76	PINE	64	4864
19	PA	132	2508
30	OALA	1256	37680
2	CH	316	632
121	OA	1256	151976
2	OAWA	500	1000
87	OALI	6360	553320
2	MAG	964	1928
1	GUM	1452	1452
		CANOPY S.F.	755,360

LIBRA design group

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OWNER

Lake Mary, Florida

ISSUED

DATE:	FOR:
2023.08.04	TREE MITIGATION / CANOPY COVERAGE
2025.04.03	DEVELOPMENT PLAN
2025.05.27	DEVELOPMENT PLAN

GEMINI LAKES

Titusville, Florida

STATE OF FLORIDA · BRIAN F. DAVIS · LA0000935 · REGISTERED LANDSCAPE ARCHITECT

Brian F. Davis LA0000935

SCALE

JOB NO.: 22125

DESIGNED BY: BFD

DRAWN BY:

CHECKED BY: BFD

PROJECT APPROVAL: _____

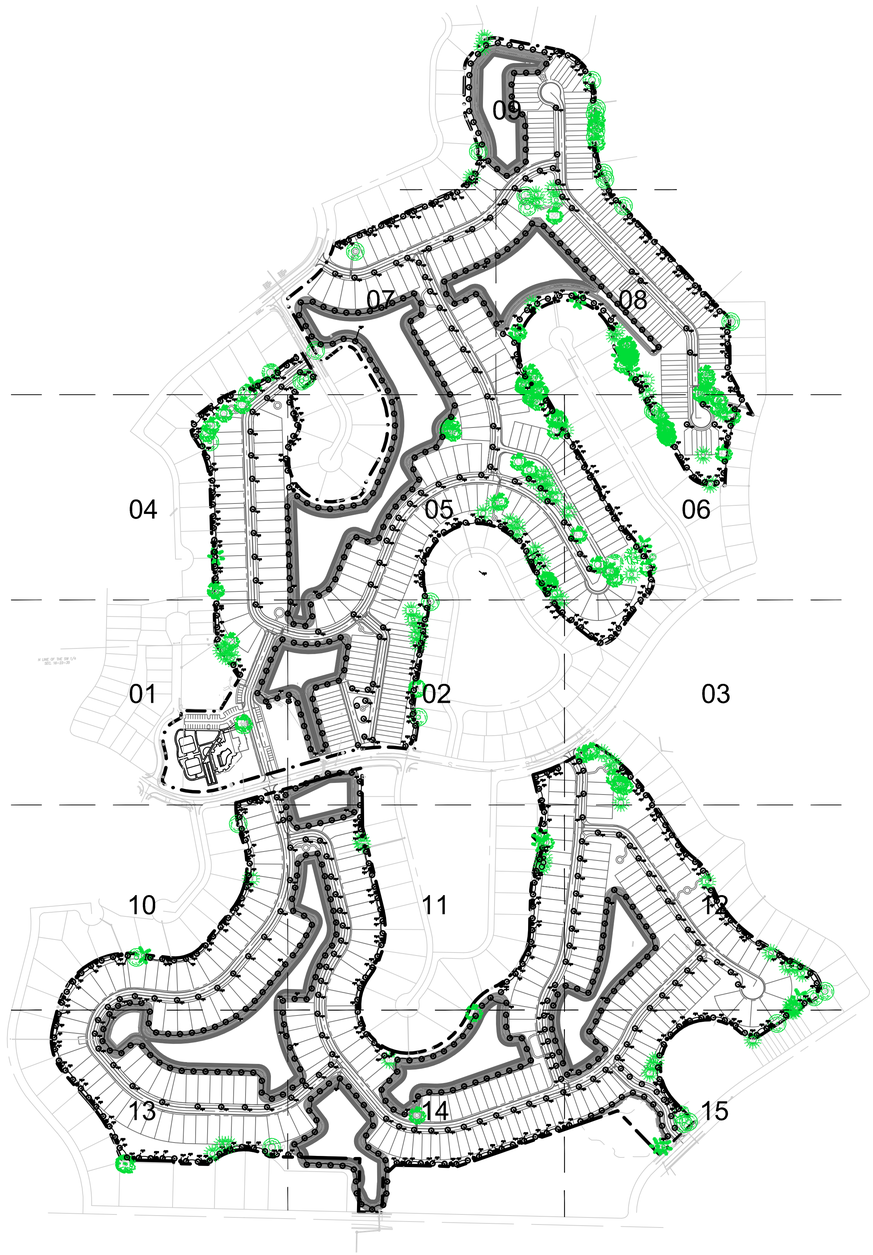
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TREE
SAVED
SCHEDULE

SHEET NO.

TR-03

NORTH PARCEL AREA	3,385,858.9938 S.F.
RESIDENTIAL SUBDIVISION CANOPY AREA 25% AS A PERCENTAGE OF DEVELOPMENT AREA	846,464.7485 S.F.
SOUTH PARCEL AREA	3,023,295.0554 S.F.
RESIDENTAIL SUBDIVISION CANOPY AREA 25% AS A PERCENTAGE OF DEVELOPMENT AREA	755,823.7639 S.F.
TOTAL RESIDENTIAL SUBDIVISION CANOPY AREA	1,602,288.512 S.F.
TOTAL PROPOSED SUBDIVISION CANOPY AREA	1,913,510.00 S.F



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GEMINI LAKES

Titusville, Florida

STATE OF FLORIDA
BRIAN F. DAVIS
LA0000935
REGISTERED LANDSCAPE ARCHITECT

Brian F. Davis LA0000935

SCALE

NORTH

0 300 600

1" = 300'

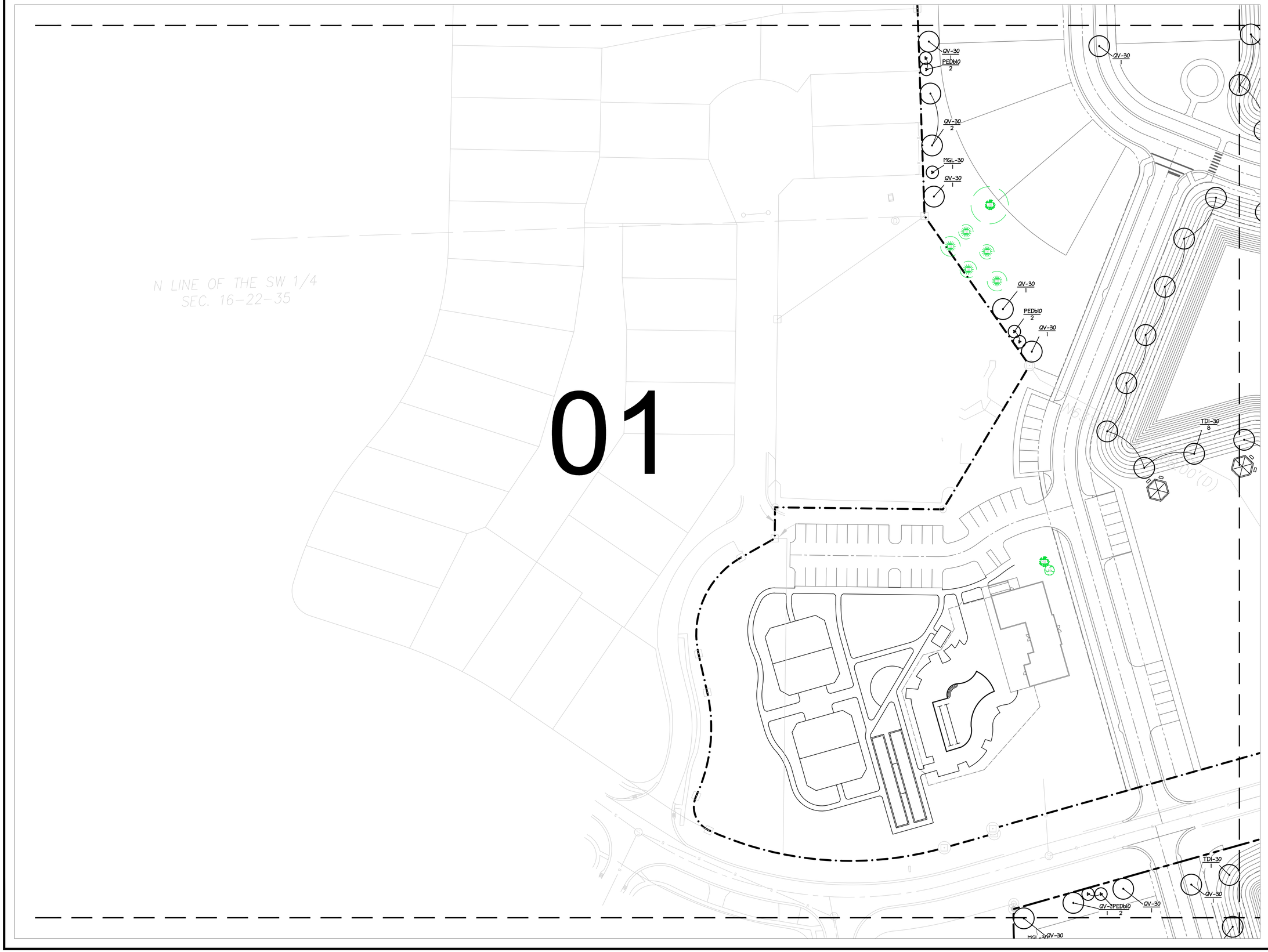
JOB NO.:	22125
DESIGNED BY:	BFD
DRAWN BY:	
CHECKED BY:	BFD
PROJECT APPROVAL:	_____

TITLE

OVERALL
SHEET
PLAN

SHEET NO.

LA-00



01

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GEMINI LAKES

Titusville, Florida

STATE OF FLORIDA
BRIAN F. DAVIS
LA0000935
REGISTERED LANDSCAPE ARCHITECT

Brian F. Davis LA0000935

SCALE

NORTH

0 40 80
1" = 40'

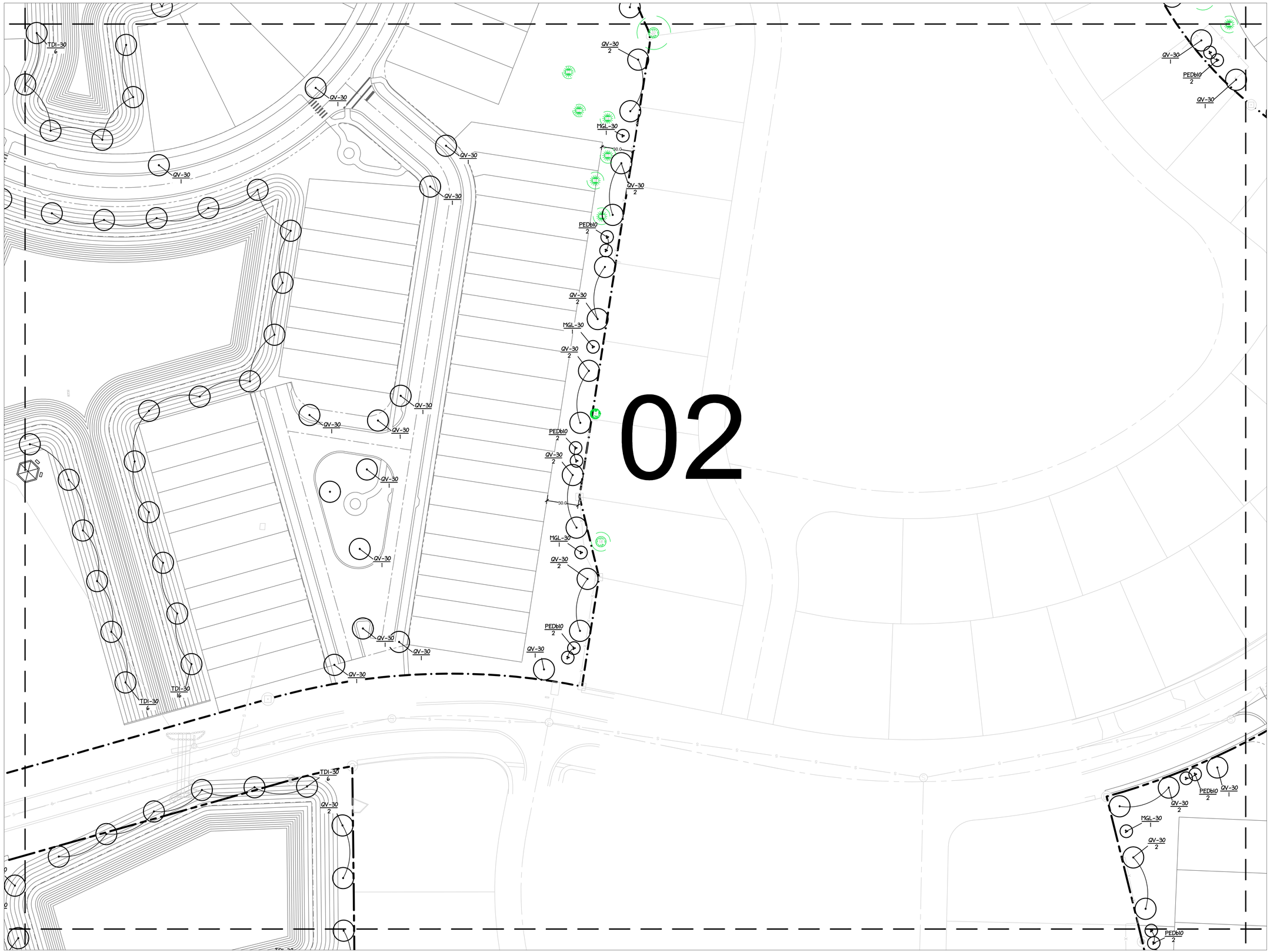
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DESIGNED BY:	BFD
DRAWN BY:	
CHECKED BY:	BFD
PROJECT APPROVAL:	_____

TITLE

LANDSCAPE PLAN

SHEET NO.

LA-01



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GEMINI LAKES

Titusville, Florida

STATE OF FLORIDA
BRIAN F. DAVIS
LA0000935
REGISTERED LANDSCAPE ARCHITECT

Brian F. Davis LA0000935

SCALE

NORTH

0 40 80

1" = 40'

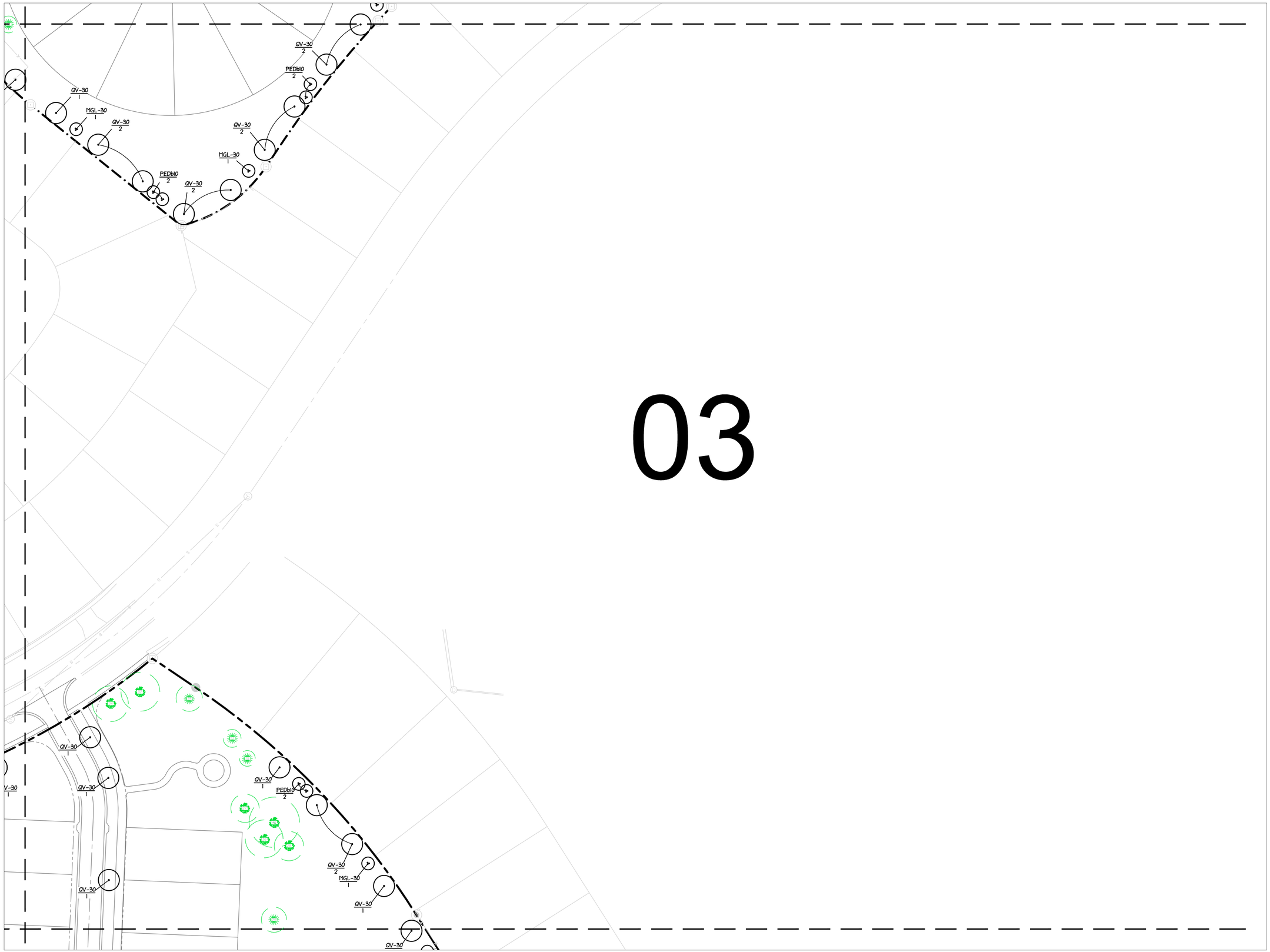
JOB NO.:	22125
DESIGNED BY:	BFD
DRAWN BY:	
CHECKED BY:	BFD
PROJECT APPROVAL:	

TITLE

LANDSCAPE PLAN

SHEET NO.

LA-02



03

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2025.05.27	DEVELOPMENT PLAN

GEMINI LAKES

Titusville, Florida

STATE OF FLORIDA — BRIAN F. DAVIS — LA0000935 — REGISTERED LANDSCAPE ARCHITECT

Brian F. Davis LA0000935

SCALE

NORTH

0 40 80

1" = 40'

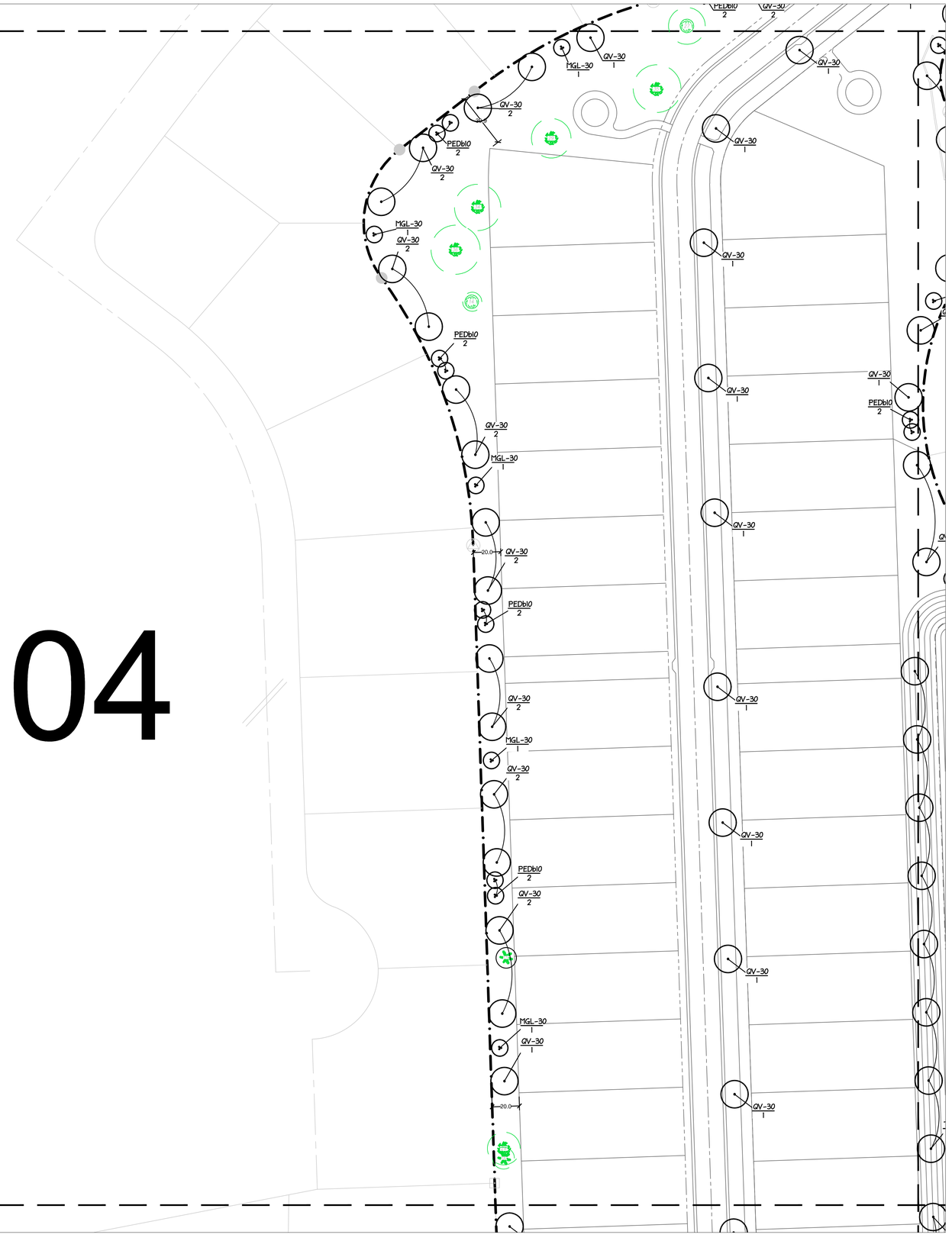
JOB NO.:	22125
DESIGNED BY:	BFD
DRAWN BY:	
CHECKED BY:	BFD
PROJECT APPROVAL:	_____

TITLE

LANDSCAPE PLAN

SHEET NO.

LA-03



04

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GEMINI LAKES

Titusville, Florida

STATE OF FLORIDA
REGISTERED LANDSCAPE ARCHITECT
BRIAN F. DAVIS
LA0000935

Brian F. Davis LA0000935

SCALE

NORTH

0 40 80
1" = 40'

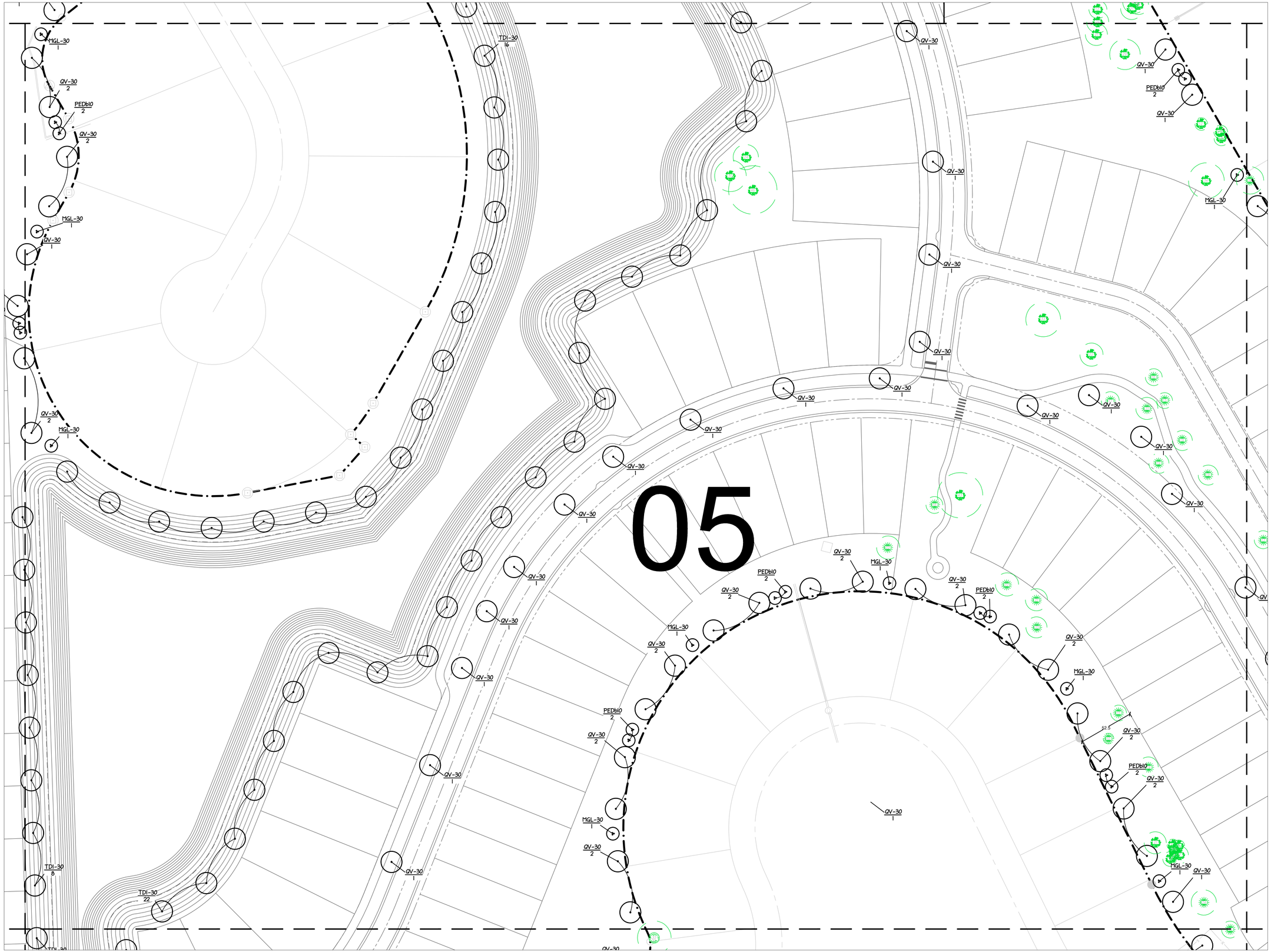
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CHECKED BY:	BFD
PROJECT APPROVAL:	_____

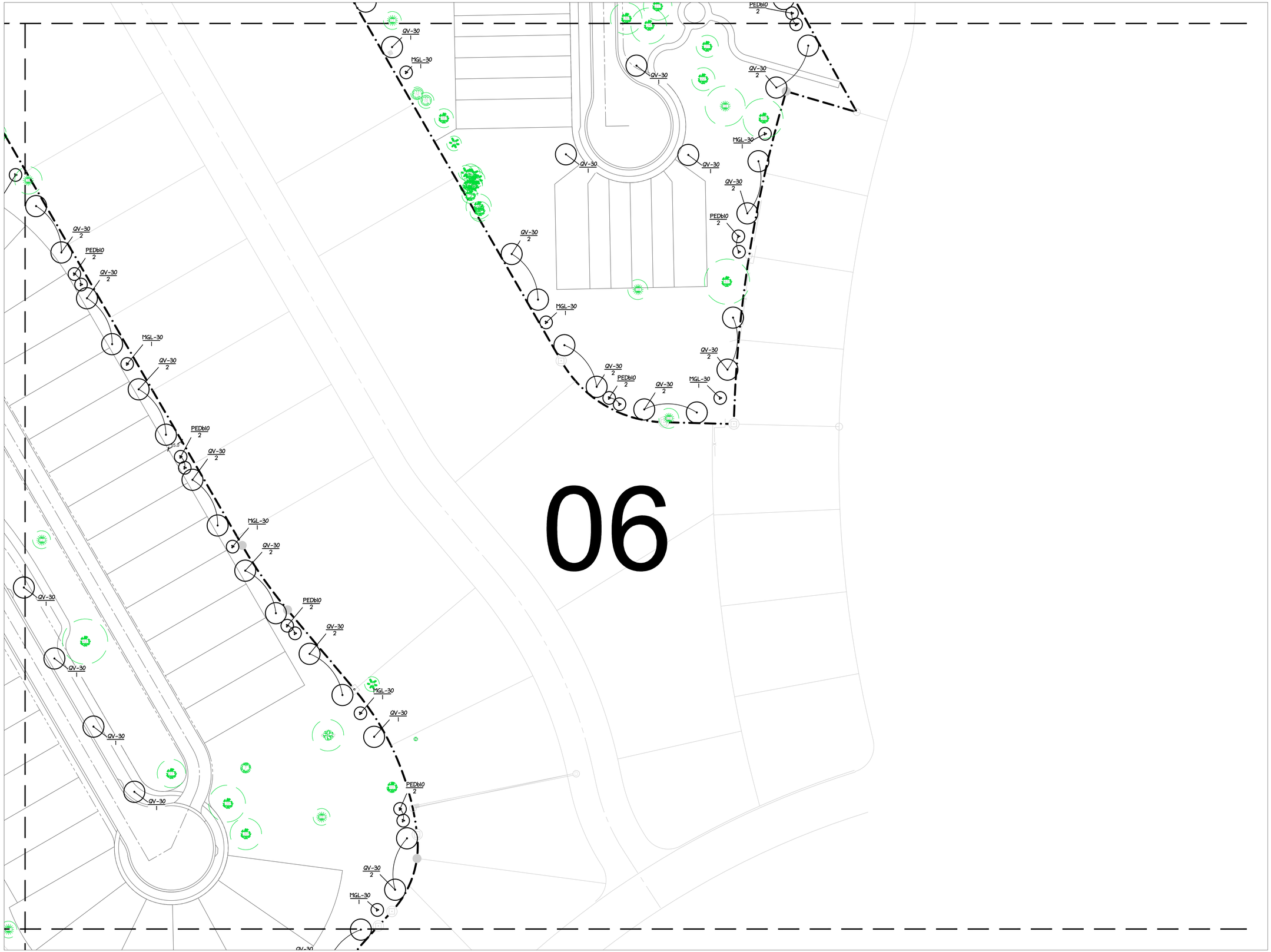
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LANDSCAPE PLAN

SHEET NO.

LA-04


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QV-30
2
PEDbl0
2
QV-30
2
MGL-30
1
QV-30
1
QV-30
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MGL-30
1
TDI-30
8
TDI-30
22
TDI-30
16
QV-30
1
QV-30
1
QV-30
1



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GEMINI LAKES

Titusville, Florida

STATE OF FLORIDA
BRIAN F. DAVIS
LA0000935
REGISTERED LANDSCAPE ARCHITECT

Brian F. Davis LA0000935

SCALE

NORTH

0 40 80

1" = 40'

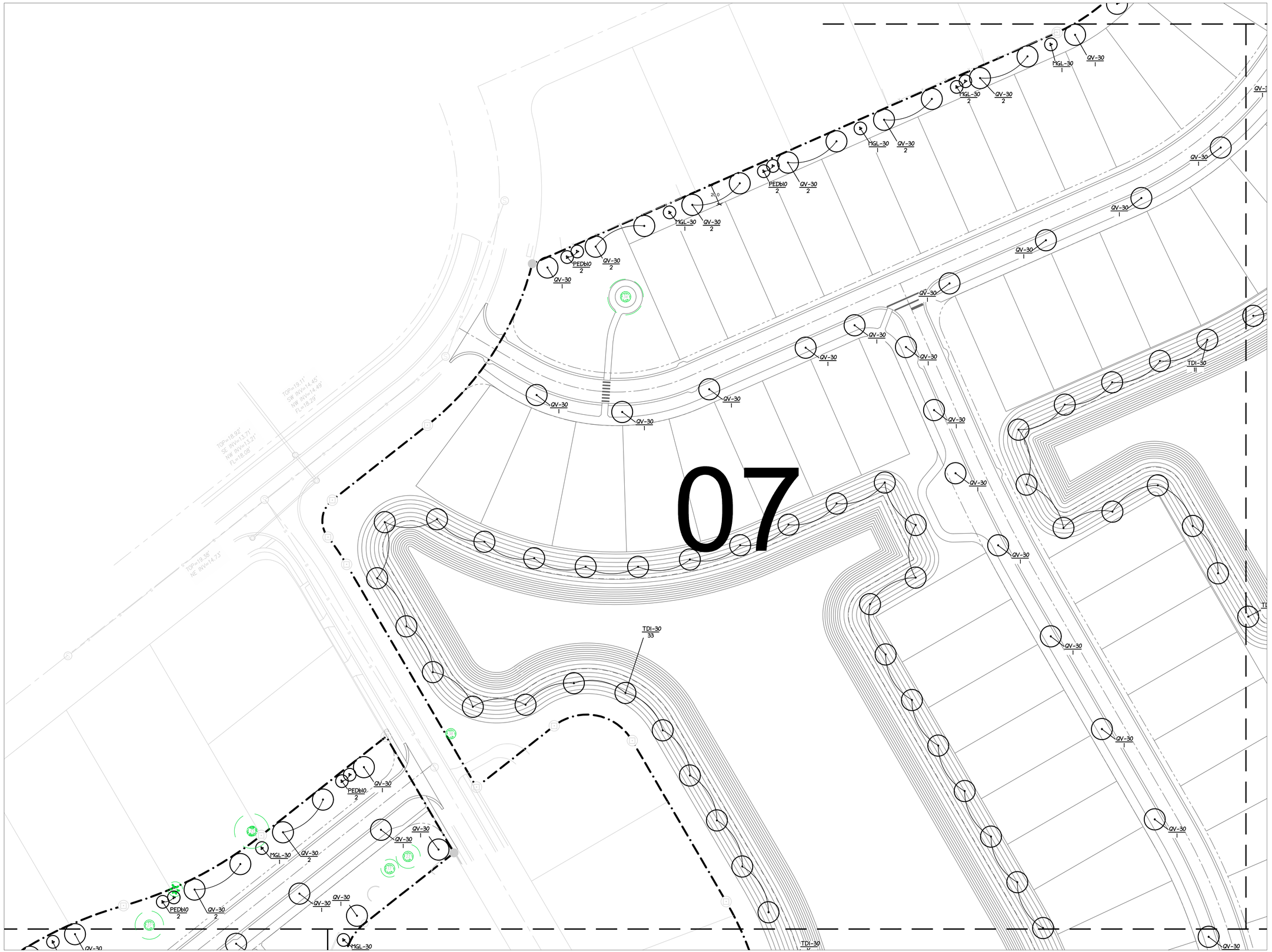
JOB NO.:	22125
DESIGNED BY:	BFD
DRAWN BY:	
CHECKED BY:	BFD
PROJECT APPROVAL:	

TITLE

LANDSCAPE PLAN

SHEET NO.

LA-06



07

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GEMINI LAKES

Titusville, Florida

STATE OF FLORIDA · BRIAN F. DAVIS · LA0000935 · REGISTERED LANDSCAPE ARCHITECT

Brian F. Davis LA0000935

SCALE

NORTH

0 40 80

1" = 40'

JOB NO.:	22125
DESIGNED BY:	BFD
DRAWN BY:	
CHECKED BY:	BFD
PROJECT APPROVAL:	

TITLE

LANDSCAPE PLAN

SHEET NO.

LA-07

08

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GEMINI LAKES

Titusville, Florida

STATE OF FLORIDA · BRIAN F. DAVIS · LA0000935 · REGISTERED LANDSCAPE ARCHITECT

Brian F. Davis LA0000935

SCALE

NORTH

0 40 80

1" = 40'

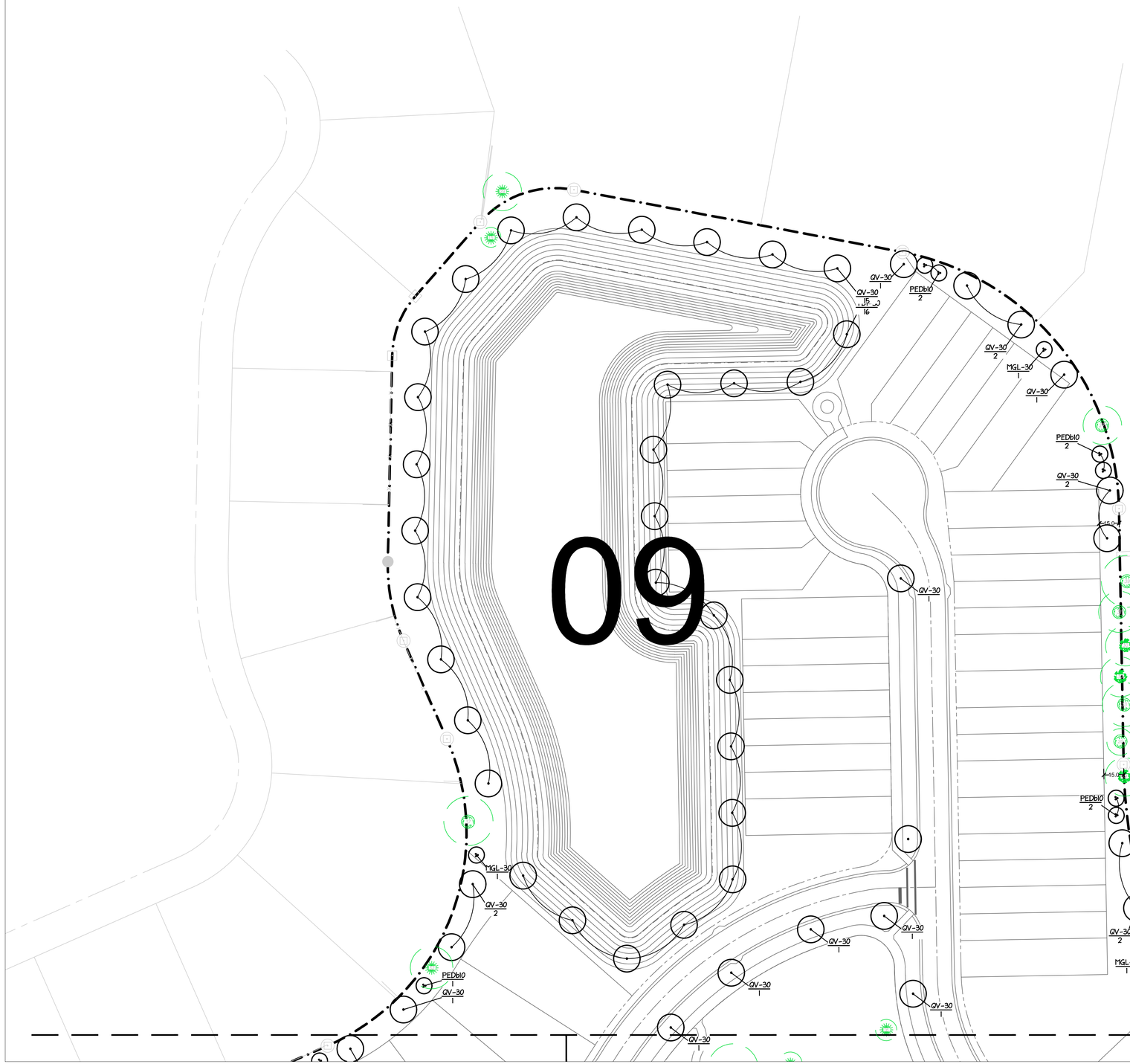
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DESIGNED BY:	BFD
DRAWN BY:	
CHECKED BY:	BFD
PROJECT APPROVAL:	

TITLE

LANDSCAPE PLAN

SHEET NO.

LA-08



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GEMINI LAKES

Titusville, Florida

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Brian F. Davis LA0000935

SCALE

NORTH

0 40 80

1" = 40'

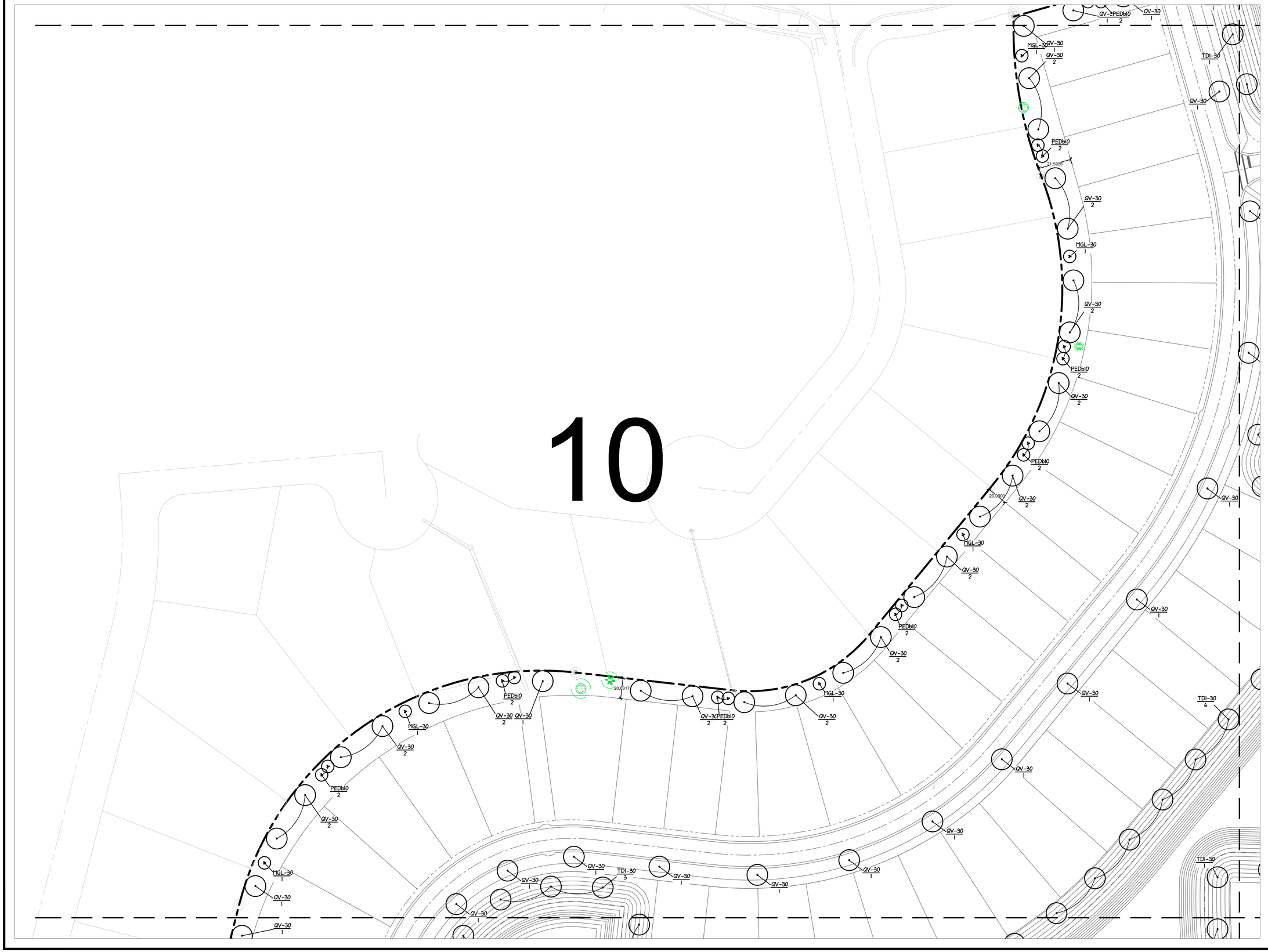
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DESIGNED BY:	BFD
DRAWN BY:	
CHECKED BY:	BFD
PROJECT APPROVAL:	

TITLE

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GEMINI LAKES

Titusville, Florida

STATE OF FLORIDA
BRIAN F. DAVIS
LA0000935
REGISTERED LANDSCAPE ARCHITECT

Brian F. Davis LA0000935

SCALE

NORTH

0 40 80

1" = 40'

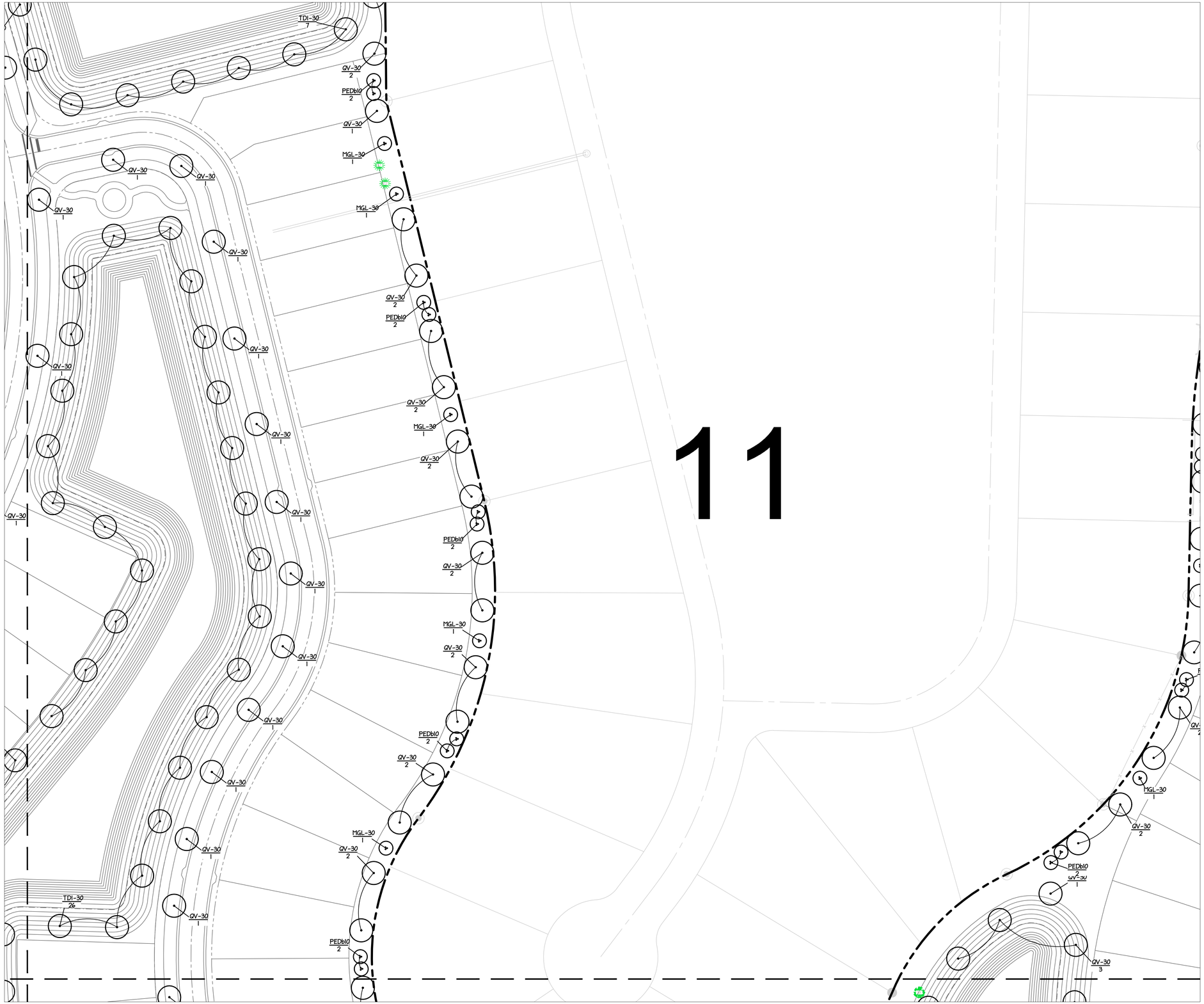
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DESIGNED BY:	BFD
DRAWN BY:	
CHECKED BY:	BFD
PROJECT APPROVAL:	

TITLE

LANDSCAPE PLAN

SHEET NO.

LA-10



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GEMINI LAKES

Titusville, Florida

STATE OF FLORIDA
BRIAN F. DAVIS
LA0000935
REGISTERED LANDSCAPE ARCHITECT

Brian F. Davis LA0000935

SCALE

NORTH

0 40 80

1" = 40'

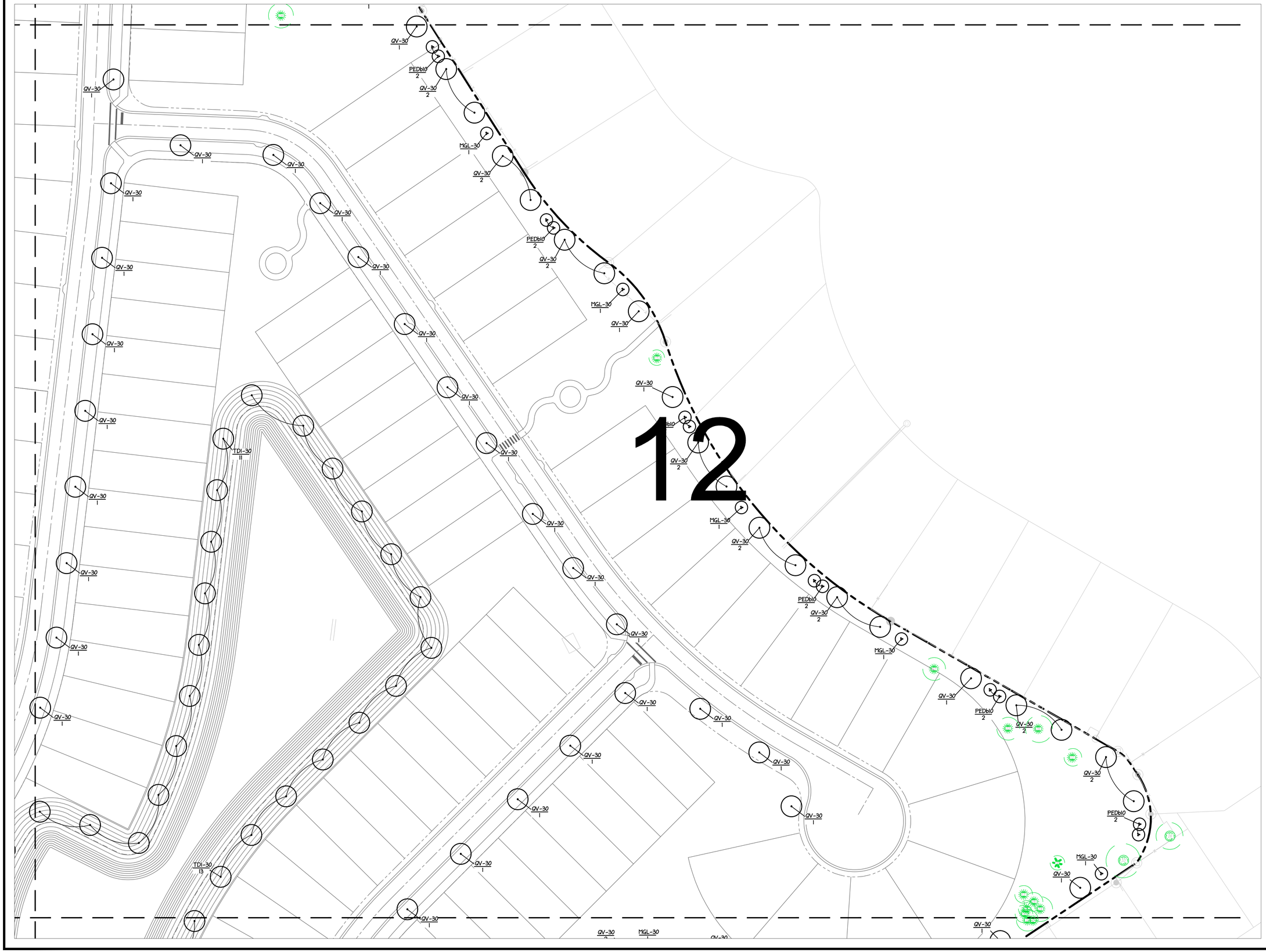
JOB NO.:	22125
DESIGNED BY:	BFD
DRAWN BY:	
CHECKED BY:	BFD
PROJECT APPROVAL:	

TITLE

LANDSCAPE PLAN

SHEET NO.

LA-11



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GEMINI LAKES

Titusville, Florida

STATE OF FLORIDA
BRIAN F. DAVIS
LA0000935
REGISTERED LANDSCAPE ARCHITECT

Brian F. Davis LA0000935

SCALE

NORTH

0 40 80

1" = 40'

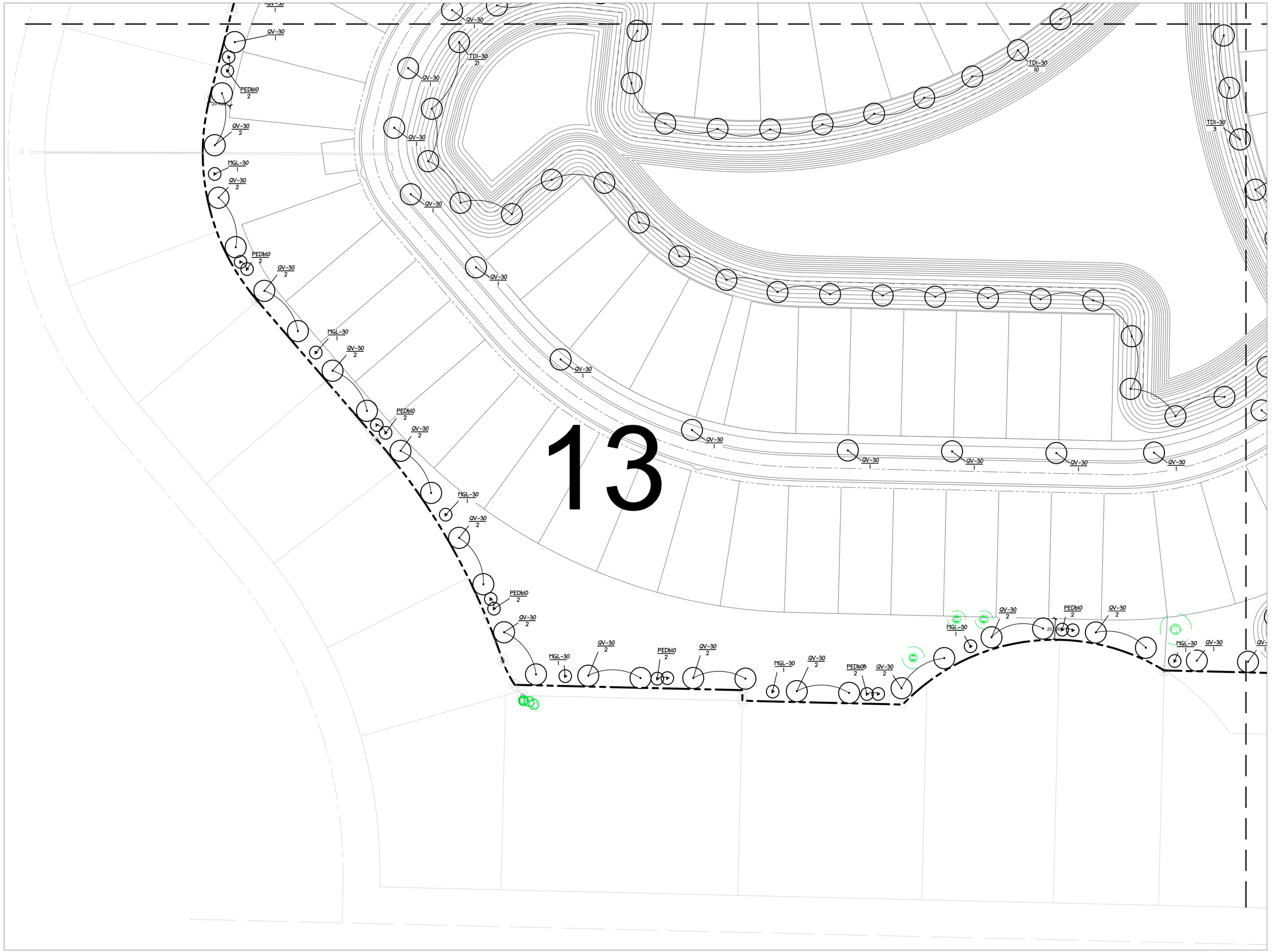
JOB NO.:	22125
DESIGNED BY:	BFD
DRAWN BY:	
CHECKED BY:	BFD
PROJECT APPROVAL:	_____

TITLE

LANDSCAPE PLAN

SHEET NO.

LA-12



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GEMINI LAKES

Titusville, Florida

STATE OF FLORIDA · BRIAN F. DAVIS · REGISTERED LANDSCAPE ARCHITECT · LA0000935

Brian F. Davis LA0000935

SCALE

NORTH

0 40 80

1" = 40'

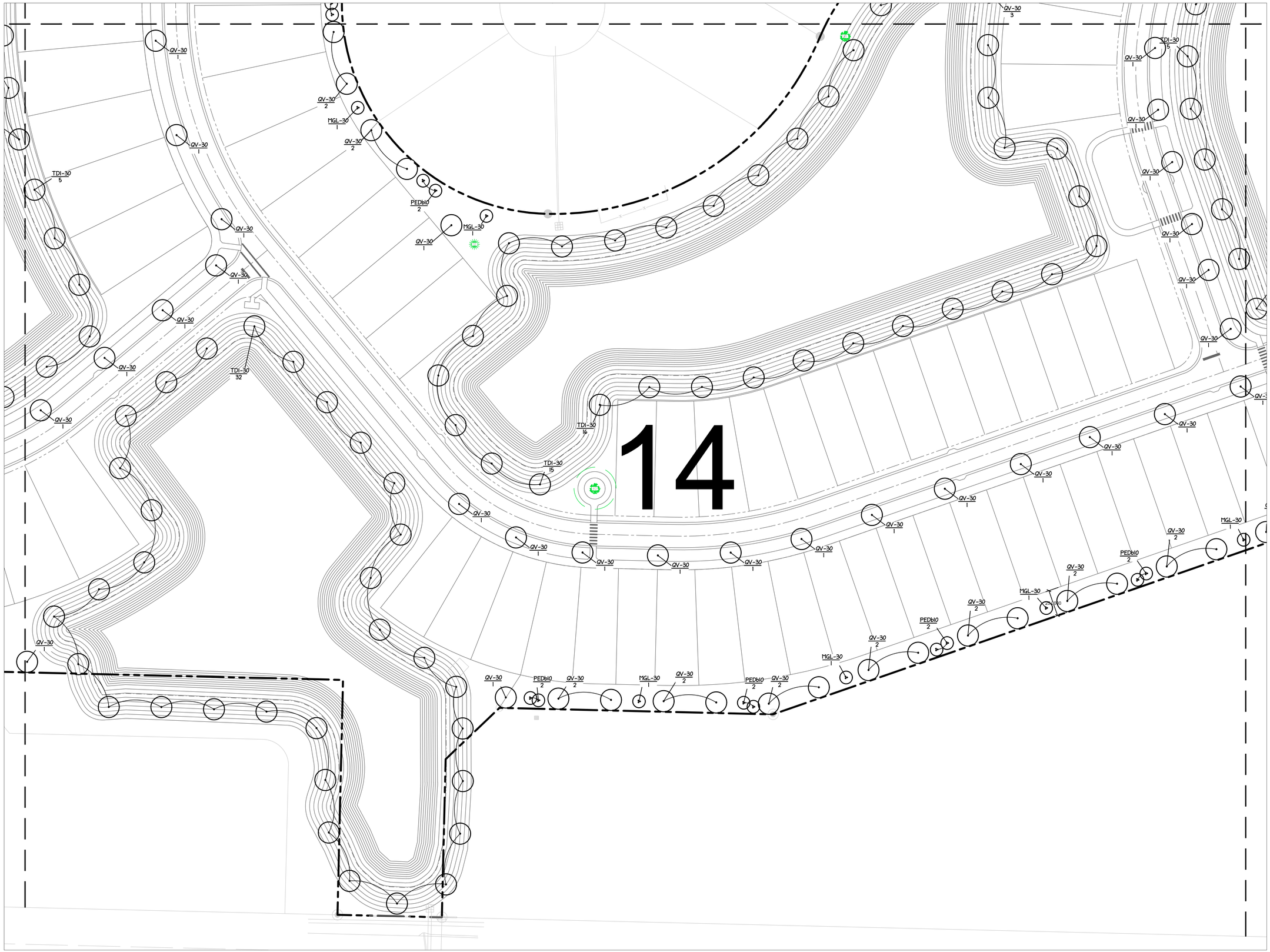
JOB NO.:	22125
DESIGNED BY:	BFD
DRAWN BY:	
CHECKED BY:	BFD
PROJECT APPROVAL:	_____

TITLE

LANDSCAPE PLAN

SHEET NO.

LA-13



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GEMINI LAKES

Titusville, Florida

STATE OF FLORIDA — BRIAN F. DAVIS — REGISTERED LANDSCAPE ARCHITECT — LA0000935

Brian F. Davis LA0000935

SCALE

NORTH

0 40 80

1" = 40'

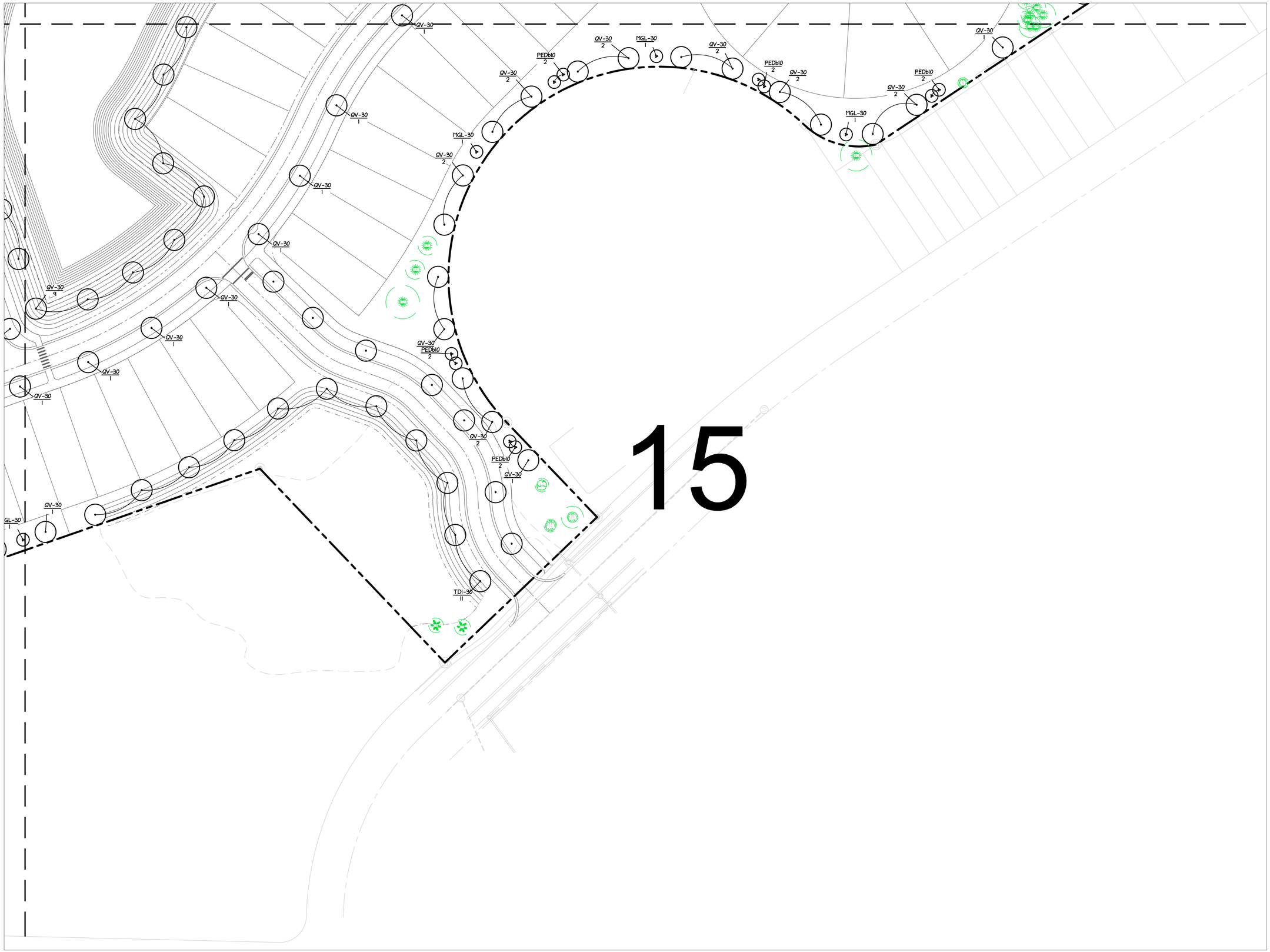
JOB NO.:	22125
DESIGNED BY:	BFD
DRAWN BY:	
CHECKED BY:	BFD
PROJECT APPROVAL:	_____

TITLE

LANDSCAPE PLAN

SHEET NO.

LA-14



15

LIBRA
design group
P.O. Box 547368, Orlando, FL 32854-7368
Tel (407) 649-1828 Fax (407) 479-3279
Landscape Architecture & Planning
www.libradesigngroup.com

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Florida License LC26600253

OWNER

Lake Mary, Florida

ISSUED

DATE:	FOR:
2023.08.04	TREE MITIGATION / CANOPY COVERAGE
2025.04.03	DEVELOPMENT PLAN
2025.05.27	DEVELOPMENT PLAN

GEMINI LAKES

Titusville, Florida

STATE OF FLORIDA
BRIAN F. DAVIS
REGISTERED LANDSCAPE ARCHITECT
LA0000935

Brian F. Davis LA0000935

SCALE

NORTH

0 40 80

1" = 40'

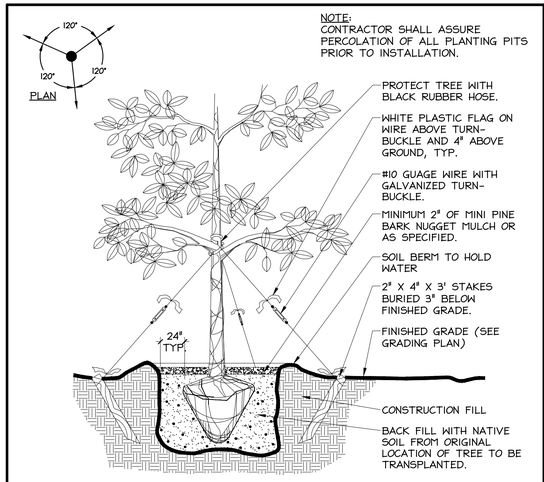
JOB NO.:	22125
DESIGNED BY:	BFD
DRAWN BY:	
CHECKED BY:	BFD
PROJECT APPROVAL:	_____

TITLE

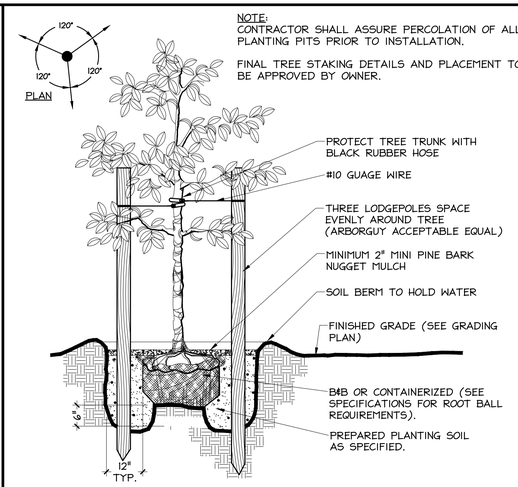
LANDSCAPE PLAN

SHEET NO.

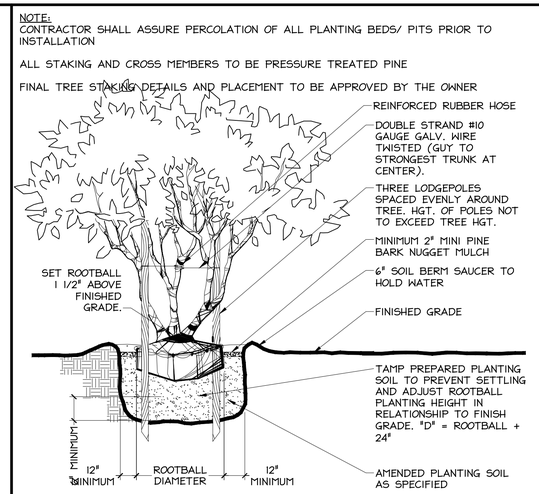
LA-15



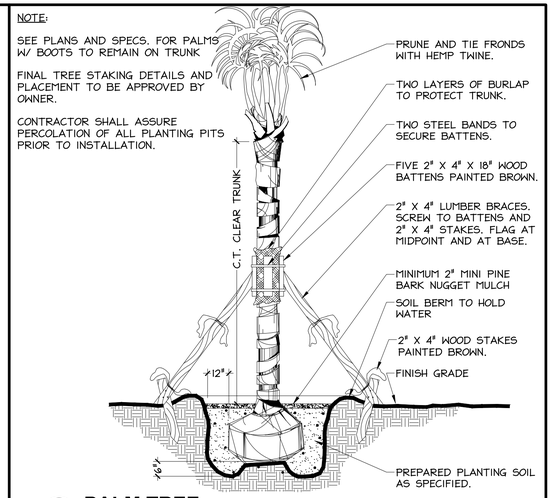
1 LARGE TREE
PLANTING DETAIL — SCALE: NONE



2 SMALL TREE
PLANTING DETAIL — SCALE: NONE



3 MULTI-TRUNK TREE
PLANTING DETAIL — SCALE: NONE

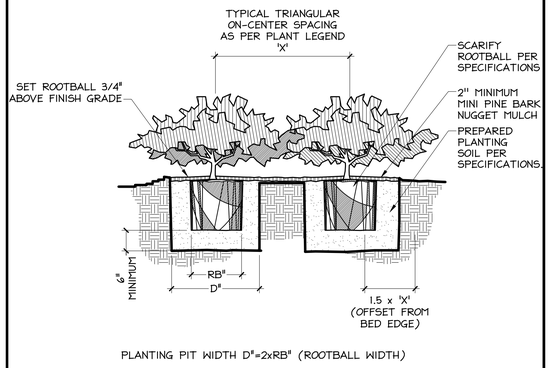


4 PALM TREE
PLANTING DETAIL — SCALE: NONE

NOTE:

CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING BEDS/PITS PRIOR TO INSTALLATION.

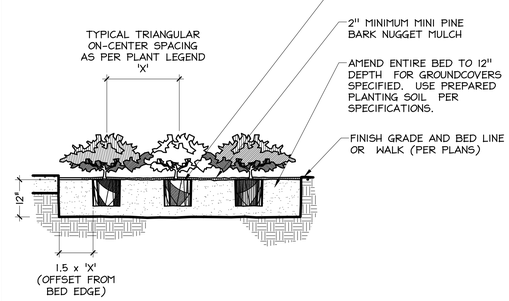
AZALEAS SHALL BE PLANTED 2" HIGH WITH SOIL MOUNDING UP TO TOP OF ROOT BALL.



5 TYPICAL SHRUB
PLANTING DETAIL — SCALE: NONE

NOTE:

CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING BEDS/PITS PRIOR TO INSTALLATION.



6 TYPICAL GROUNDCOVER
PLANTING DETAIL — SCALE: NONE

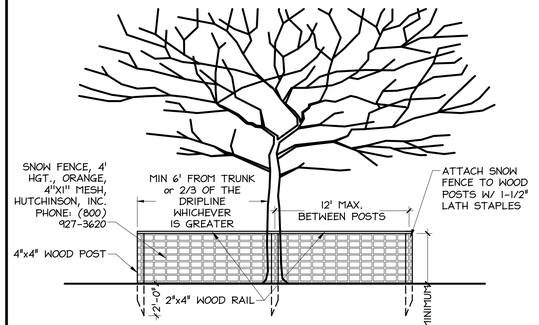
NOTE:

TREE BARRIERS TO BE IN PLACE BEFORE ANY EQUIPMENT INCLUDING DEMOLITION IS ON SITE OR MATERIALS ARE STORED.

TREES AND CLUSTER OF TREES SHALL BE MARKED AND PHYSICALLY PROTECTED FROM PARKING, STORAGE OF MATERIALS AND SECONDARY UTILITY LINE LOCATIONS.

EXISTING TREES TO REMAIN SHALL BE PROTECTED FROM ALL CONSTRUCTION PROCESSES OF THE DEVELOPMENT.

BARRIERS TO REMAIN IN PLACE UNTIL ALL PAVING, CONSTRUCTION AND HEAVY EQUIPMENT IS OUT OF AREA.



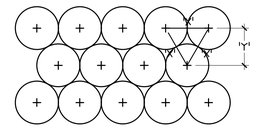
7 TREE PROTECTION BARRACADE
SCALE: NONE

NOTE:

ALL SHRUBS & GROUNDCOVER MASSES SHALL USE TRIANGULAR SPACING EXCEPT WHERE NOTED.

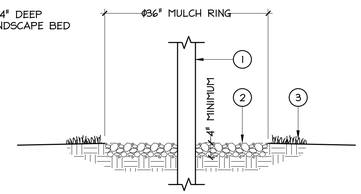
REFER TO PLANT LIST FOR INDIVIDUAL PLANT SPACING 'X'.

'Y' = 'X' x 0.87



8 TYPIAL PLANT SPACING
PLANTING DETAIL — SCALE: NONE

NOTE:
1 POST
2 MULCH MIN 4" DEEP
3 SOD OR LANDSCAPE BED



9 TYPICAL LIGHT OR SIGN POST AT SOD
SCALE: NONE

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Florida License LC26000253

OWNER

Lake Mary, Florida

ISSUED

DATE:	FOR:
2023.08.04	TREE MITIGATION / CANOPY COVERAGE
2025.04.03	DEVELOPMENT PLAN
2025.05.27	DEVELOPMENT PLAN

GEMINI LAKES

Titusville, Florida

STATE OF FLORIDA — BRIAN F. DAVIS — LA0000935 — REGISTERED LANDSCAPE ARCHITECT

Brian F. Davis LA0000935

SCALE

JOB NO.:	22125
DESIGNED BY:	BFD
DRAWN BY:	HH
CHECKED BY:	BFD
PROJECT APPROVAL:	

TITLE

LANDSCAPE DETAILS & SCHEDULE

SHEET NO.

LD-01

GENERAL LANDSCAPE NOTES

The work consists of the provision of all materials and work as called for on the landscape plans, specifications and as herein specified. This work shall include, but is not limited to, the supplying of all plant materials specified, the furnishing of all labor, equipment, water, electricity, equipment and all materials called for and in performing all operations in connection with the landscape installation. Further, the work shall include maintaining of all plants and planting areas until final acceptance by the owner and fulfilling all guarantee provisions. The landscape contractor shall assign a qualified project manager and field supervisor to work directly with the Landscape Architect and supervise the work at all times through final owner acceptance.

All installation of plant material shall comply with applicable jurisdictional codes. The contractor is responsible for obtaining all permits associated with their work.

All on-site existing conditions including surface and subsurface utilities, grades, dimensions and soil conditions shall be verified by the landscape contractor before construction begins. The landscape contractor shall become familiar with all plans prepared by others that affect the landscape and irrigation work. Any discrepancies shall be brought to the attention of the Landscape Architect.

Every possible safeguard shall be taken to protect building surfaces, equipment, furnishings and existing planting areas to remain including lawn. The contractor is responsible for any damage or injury to person or property that may occur as a result of negligence in the execution of the contractor's work.

The contractor shall interface with other work being performed by other contractors. It will be necessary for the contractor to coordinate and schedule activities, where necessary, with other contractors and their subcontractors. The landscape contractor shall insure that their work does not impact established or projected drainage patterns.

Prior to planting installation, the contractor shall confirm the availability of all the specified plant materials and make arrangements with the Landscape Architect to review and mutually field tag agreed upon plant materials at least 2 weeks prior to procurement and delivery to the job site. Representative samples of shrubs and groundcover to be provided to the Landscape Architect by the landscape contractor in lieu of field visits.

All plant material shall meet or exceed the requirements for FLORIDA #1 quality in accordance with the grades and standards for nursery plants published by the State of FLORIDA, Department of Agriculture, current edition.

All plant material sizes specified are minimum sizes. All container and tree caliper sizes are minimum. Container or caliper size may be increased if necessary to provide overall plant size specified.

The landscape contractor shall provide any specified b&b trees from a 'Roots Plus' nursery source. Contact the Roots Plus Growers Association at (800) 837-4011 or visit www.rootsplusgrowers.org for the names of member nurseries. All other trees to be container grown or as specified.

All plant material shall be subject to approval at the job site by the Landscape Architect prior to installation. When delivered plant material does not comply with the requirements, the Landscape Architect reserves the right to reject such plants and require the landscape contractor to replace rejected work and continue specified maintenance until reinspected and found to be acceptable. The landscape contractor shall remove rejected plants and materials from the planting site within 48 hours and replace with acceptable materials.

No plant substitutions will be permitted without prior written approval from the Landscape Architect. If specified plant materials are not available, identify the extent and quantity in writing together with a recommended substitution that meets or exceeds the initial requirement.

The landscape contractor shall be responsible for removing existing vegetation as required and preparing planting areas prior to installation of plant materials.

The landscape contractor shall test project soils to verify that the soils on-site are acceptable for proper growth of plant materials and adequate drainage in plant beds and planters. The landscape contractor shall coordinate the location, and procurement of existing on-site soil samples with the Landscape Architect. Representative samples shall be submitted to a certified testing laboratory for analysis. The findings, together with recommendations for amending the soils shall be reviewed and approved by the owner and Landscape Architect prior to delivery and installation of plant materials at the job.

The landscape contractor shall insure adequate vertical drainage in all plant beds and planters. If necessary to insure drainage, vertical drilling through hardpan and compacted fill shall be performed by the contractor.

All planting beds shall be staked in accordance with the plans and approved by the Landscape Architect prior to planting. The landscape contractor shall provide stakes or irrigation flags to locate the edges of all shrub and groundcover plant beds and individual trees and palms. The contractor shall field stake the location of all plant bed outlines and individual trees and obtain the Landscape Architect's approval prior to delivery and installation of the plant material. If existing conditions do not allow the design to be laid out as shown, notify the Landscape Architect immediately.

All proposed trees shall be installed either entirely in or entirely out of planting beds. Planting bed outlines shall not be obstructed and shall be smooth and flowing. If trees are located outside planting beds in sod areas, maintain a minimum 3' wide offset to allow for mowers to maneuver.

The plant quantities showed on the landscape contract documents are for the convenience of the landscape contractor. The landscape contractor is responsible for verifying all quantities and reporting any discrepancies to the Landscape Architect for clarification prior to contract award and commencement of work.

The landscape contractor shall verify the extent of sod work in the field. The contractor shall be responsible for providing grass sod in the areas shown on the plan in sufficient quantity to provide full coverage. Additional sod required will be adjusted based on a square footage unit price. Areas to be sodded shall be amended per soils report to provide required nutrients and soil ph of between 6.0 and 7.0.

The contractor shall be responsible for providing plants, spaced as specified in the plant list. When installing shrubs in planting beds, spacing of material shall take precedence over quantity of materials indicated for planting areas. The contractor shall notify the Landscape Architect immediately if such situations arise. Shrub and groundcover spacing is generally indicated on the plant list for all 'mass plantings'. Accent shrubs and trees that are not part of mass plantings shall be spaced as shown on the plans.

The landscape contractor shall be responsible for the stability and plumb condition of all installed plant materials and replacing any damaged plant material. With plants of equal kind, size and condition at no additional cost to the owner. No chains or cables shall be used when installing plant materials. It shall be the contractor's responsibility to prevent plants and trees from falling or being blown over, and to replace all plants which are damaged due to inadequate guying or staking, at no additional cost to the owner. The contractor shall remove all staking materials the end of the warranty period and dispose offsite.

All planting beds shall be top-dressed with a 3" layer of mulch as specified. All trees shall have a 3" thick mulch ring placed around the base of the trunk. The landscape scope of work includes mulching as an integral part the project and not as a separate cost or works item.

All plant materials shall receive adequate watering by the landscape contractor as required until the landscape irrigation system is fully operational and until final acceptance by owner.

All existing plant beds to remain within the construction limit line shall be left undisturbed. Existing trees to remain, as noted on the drawings, shall be left undisturbed and protected by wooden barricades erected at the perimeter of the tree drip line (s). No vehicle shall traverse this area nor shall any storage of materials or equipment be permitted within the area of the tree dripline(s). Any existing plant beds or trees damaged by construction activity shall be replaced by the responsible party at their own expense.

No trees shall be planted within designated utility corridors, public right of way (without right of way utilization permit) nor any plants located within four feet (4') of any swale centerline identified on the drawings. Field adjust as necessary and review adjustments with the Landscape Architect prior to installation.

The contractor shall be responsible for providing effective traffic control and removal of all debris and excavated backfill off-site on a daily basis at no additional cost to the owner.

Refer to the Landscape Specifications for additional requirements.

FINE GRADING NOTES

3.2 PLACEMENT OF FINE GRADE MATERIALS

A. Clear subgrade of stones larger than 3 inches in any dimension, and of concrete, wood, construction debris, and other deleterious matter. Excavate to a depth of 12 inches all areas that have received lime, or become saturated with oil, gasoline, or bituminous products and backfill with clean earth.

B. Import topsoil directly to site of deposition or stockpile new topsoil on site in quantity needed to produce the required depth after spreading. Protect topsoil piles from erosion with tarpaulins and limit boards.

C. Spread topsoil to a minimum settled depth of 2 to 3 inches and feather smoothly into finished grade at edges so as to blend with adjacent ground shapes.

D. Take precautions to keep the topsoil friable and porous. Do not handle or work topsoil when it is excessively wet, or during a rainfall. Do not place topsoil on any subgrade that has not been loosened, tilled, or graded for drainage. Loosen and till the full depth of the topsoil and re-till any areas that become unduly compacted by vehicular movement

3.3 FINE GRADING

A. The Contractor shall be responsible for minor adjustments to the finished subgrade if such treatment is required if Landscape areas do not have a minimum 2 percent slope for drainage, in the opinion of the Owner, and/or Landscape Architect.

B. Hand rake the surface, removing all clods and undesirable material greater than one half inch (1/2") from ground surface. Fill all low spots with specified materials and cut irregularities to the acceptance of the Landscape Architect.

C. An acceptable fine grade area shall be free from depressions greater than 6 inches over any given space of 25 feet except at grade transitions, which shall be gradual and even.

D. During the finished grading operations, all swales and additional swales that may be required to drain areas shall be finished. In general, all grade adjustments shall be made so there are no areas that will have standing water.

E. To prevent excessive weed growth in the lawn areas, the Contractor should be prepared to immediately install the lawn upon the completed and acceptable finished grade.

F. Landscape areas shall have a minimum 2 percent slope for drainage.

3.4 CLEAN UP AND PROTECTION

A. After completion of fine grading and topsoil operations, do not drive trucks or other heavy equipment over finished areas.

B. Upon completion of the work, remove all debris and excess material from the site so that the area is left neat and clean.

C. Separate recyclable materials produced during site clearing from other non-recyclable materials. Store or stockpile without intermixing, and transport to appropriate recycling facilities.

D. Protect the finished area throughout the remainder of the construction activities.

Large Trees

Symbol	Qty 04/03/25	Common Name	Latin Name	Size	Additional Spec	Space	Native	Drought Tolerant	Florida Friendly
PEDb08	2	Slash Pine	Pinus elliotti densa	B&B; 8'x4'; 1¼" Cal.; Full;	Nursery-Grown	A.S.	Yes	Yes	Yes
PEDb10	171	Slash Pine	Pinus elliotti densa	B&B; 10'x4'; 1¾" Cal.; Full;	Nursery-Grown	A.S.	Yes	Yes	Yes
QV-30	538	Live Oak	Quercus virginiana	30-Gal.; 12'x5'; 2½" Cal.;	4' C.S.T.	A.S.	Yes	Yes	Yes
TDI-30	358	Bald Cypress	Taxodium distichum	30-Gal.; 10'x5'; 2½" Cal.; Full		A.S.	Yes	Yes	Yes

Medium & Small Trees

Symbol	Qty	Common Name	Latin Name	Size	Additional Spec	Space	Native	Drought Tolerant	Florida Friendly
MGL-30	84	Little Gem Southern Magnolia	Magnolia grandiflora 'Little Gem'	30 Gal; 8'x4'; 2½" Cal.; 2' C.T.;	Full	A.S.	Yes	Yes	Yes

Plant List Notes

Quantities (Qty), if shown above, are presented as a courtesy and shall not be relied upon for the purposes of estimating, bidding or purchasing of labor and/or materials. Sod & Mulch quantities represent square feet.

Any interested party shall derive actual quantities by performing a thorough and complete review of the Landscape Plan(s) with adequate consideration given to all information in the Plant List above excluding quantities.

In the event of a discrepancy between the plant list and plan count, the plans shall control.

01 CODE MINIMUM LANDSCAPE SCHEDULE

LIBRA design group
P.O. Box 547368, Orlando, FL 32854-7368
Tel (407) 649-1828 Fax (407) 479-3279
Landscape Architecture & Planning
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OWNER

Lake Mary, Florida

ISSUED

DATE:	FOR:
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2025.04.03	DEVELOPMENT PLAN
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GEMINI LAKES

Titusville, Florida

STATE OF FLORIDA · BRIAN F. DAVIS · LA0000935 · REGISTERED LANDSCAPE ARCHITECT

Brian F. Davis LA0000935

SCALE

JOB NO.:	22125
DESIGNED BY:	BFD
DRAWN BY:	HH
CHECKED BY:	BFD
PROJECT APPROVAL:	

TITLE

LANDSCAPE SCHEDULE & NOTES

SHEET NO.

LD-02

BOUNDARY & TOPOGRAPHIC SURVEY

LEGAL DESCRIPTION:

PARCEL NO. 1:

A PART OF THE SOUTHWEST 1/4 OF SECTION 16, TOWNSHIP 22 SOUTH, RANGE 35 EAST, BREVARD COUNTY, FLORIDA, DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHWEST CORNER OF SAID SOUTHWEST 1/4 OF SECTION 16; RUN THENCE NORTH 86 DEGREES 51'10" EAST ALONG THE NORTH LINE OF SAID SOUTHWEST 1/4, A DISTANCE OF 648.98 FEET TO A POINT ON THE BOUNDARY OF ROYAL OAK GOLF AND COUNTRY CLUB, GOLF COURSE GROUNDS AS DESCRIBED IN OFFICIAL RECORDS BOOK 1163, PAGE 517, OF THE PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA; THENCE SOUTH 36 DEGREES 14'16" EAST (SOUTH 35 DEGREES 57'27" EAST., DEED) ALONG SAID BOUNDARY, 176.03 FEET TO THE POINT OF BEGINNING OF LANDS HEREIN DESCRIBED; THENCE SOUTH 29 DEGREES 51'40" WEST, 161.79 FEET; THENCE SOUTH 89 DEGREES 32'33" WEST, 161.72 FEET; THENCE SOUTH 00 DEGREES 27'27" EAST, 30.00 FEET; THENCE NORTH 89 DEGREES 32'33" EAST, 11.84 FEET; THENCE SOUTH 00 DEGREES 27'27" EAST, 305.28 FEET TA POINT ON THE ARC OF A CIRCULAR CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 330.00 FEET AT WHICH POINT THE TANGENT BEARS SOUTH 79 DEGREES 08'36" EAST, SAID POINT ALSO BEING ON THE NORTHERLY RIGHT-OF-WAY LINE OF COUNTRY CLUB DRIVE (A 70.00 FOOT RIGHT OF WAY); THENCE RUN EASTERLY ALONG SAID RIGHT-OF-WAY LINE THE FOLLOWING FOUR COURSES AND DISTANCES; EASTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 27 DEGREES 51'24", A DISTANCE OF 160.44 FEET TO THE POINT OF TANGENCY OF SAID CURVE; NORTH 73 DEGREES 00'00" EAST, 50.00 FEET; THENCE NORTH 17 DEGREES 00'00" WEST, 5.00 FEET; NORTH 73 DEGREES 00'00" EAST, 390.04 FEET TO A POINT ON THE AFORESAID BOUNDARY OF THE ROYAL OAK GOLF AND COUNTRY CLUB, GOLF COURSE GROUNDS; THENCE RUN NORTHWESTERLY ALONG SAID BOUNDARY THE FOLLOWING THREE COURSES AND DISTANCES; NORTH 34 DEGREES 002'12" WEST, 275.41 FEET; NORTH 63 DEGREES 27'27" WEST, 208.00 FEET; NORTH 36 DEGREES 14'16" WEST, 16.93 FEET TO THE POINT OF BEGINNING.

TOGETHER WITH A NON-EXCLUSIVE DRAINAGE EASEMENT, BEING A PART OF THE SOUTHWEST 1/4 AND A PART OF THE NORTHWEST 1/4 OF SECTION 16, TOWNSHIP 22 SOUTH, RANGE 35 EAST, BREVARD COUNTY, FLORIDA, SAID EASEMENT BEING A STRIP OF LAND 10.00 FEET IN WIDTH, THE CENTERLINE OF WHICH IS DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHWEST CORNER OF SAID SOUTHWEST 1/4 OF SECTION 16; RUN THENCE NORTH 86 DEGREES 51'10" EAST ALONG THE NORTH LINE OF SAID SOUTHWEST 1/4, A DISTANCE OF 648.98 FEET TO A POINT ON THE BOUNDARY OF ROYAL OAK GOLF AND COUNTRY CLUB, GOLF COURSE GROUNDS, AS DESCRIBED IN OFFICIAL RECORDS BOOK 1163, PAGE 517, OF THE PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA; THENCE RUN SOUTH 36 DEGREES 14'16" EAST (SOUTH 35 DEGREES 57'27" EAST, DEED) ALONG SAID BOUNDARY, 176.03 FEET; THENCE SOUTH 29 DEGREES 51'40" WEST, 161.79 FEET; THENCE SOUTH 89 DEGREES 32'33" WEST, 46.01 FEET TO THE POINT OF BEGINNING OF THE CENTERLINE HEREIN DESCRIBED; RUN THENCE NORTH 08 DEGREES 12'05" EAST, 66.05 FEET; THENCE NORTH 60 DEGREES 23'19" WEST, 215.38 FEET; THENCE NORTH 10 DEGREES 21'31" EAST, 109.24 FEET; THENCE NORTH 82 DEGREES 07'25" EAST, 485.00 FEET, MORE OR LESS TO A POINT ON THE CENTERLINE OF AN EXISTING 40.00 FOOT DRAINAGE EASEMENT AS DESCRIBED IN OFFICIAL RECORDS BOOK 659, PAGE 536, OF THE PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA, AND THE END OF THE CENTERLINE HEREIN DESCRIBED.

TOGETHER WITH A NON-EXCLUSIVE WATER LINE EASEMENT, BEING A PART OF THE SOUTHWEST 1/4 OF SECTION 16, TOWNSHIP 22 SOUTH, RANGE 35 EAST, BREVARD COUNTY, FLORIDA; SAID EASEMENT BEING A STRIP OF LAND 10.00 FEET IN WIDTH, THE CENTERLINE OF WHICH IS DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHWEST CORNER OF SAID SOUTHWEST 1/4 OF SECTION 16; RUN THENCE NORTH 86 DEGREES 51'10" EAST ALONG THE NORTH LINE OF SAID SOUTHWEST 1/4, A DISTANCE OF 648.98 FEET TO A POINT ON THE BOUNDARY OF ROYAL OAK GOLF AND COUNTRY CLUB, GOLF COURSE GROUNDS, AS DESCRIBED IN OFFICIAL RECORDS BOOK 1163, PAGE 517, OF THE PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA; THENCE RUN SOUTH 36 DEGREES 14'16" EAST (SOUTH 35 DEGREES 57'27" EAST, DEED) ALONG SAID GOLF COURSE BOUNDARY, 176.03 FEET; THENCE SOUTH 29 DEGREES 51'40" WEST, 113.35 FEET TO THE POINT OF BEGINNING OF THE CENTERLINE HEREIN DESCRIBED; THENCE NORTH 60 DEGREES 23'19" WEST, 272.43 FEET; THENCE NORTH 10 DEGREES 21'31" EAST, 92.69 FEET TO A POINT, 5.00 FEET (BY RIGHT ANGLE MEASUREMENT) SOUTH OF THE AFOREMENTIONED NORTH LINE OF THE SOUTHWEST 1/4 OF SECTION 16; THENCE SOUTH 86 DEGREES 51'10" WEST, PARALLEL WITH SAID NORTH LINE OF THE SOUTHWEST 1/4, 285.88 FEET TO A POINT ON THE EASTERLY RIGHT-OF-WAY LINE OF ROYAL OAK DRIVE (AN 80.00 FOOT RIGHT OF WAY) AND THE END OF THE CENTERLINE HEREIN DESCRIBED.

PARCEL NO. 2:

A PART OF SECTION 16, TOWNSHIP 22 SOUTH, RANGE 35 EAST, BREVARD COUNTY, FLORIDA, DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTHWEST CORNER OF THE NORTHWEST 1/4 OF SAID SECTION 16; THENCE NORTH 86 DEGREES 51'10" EAST ALONG THE SOUTH LINE OF SAID NORTHWEST 1/4, A DISTANCE OF 648.98 FEET TO THE POINT OF BEGINNING OF LANDS HEREIN DESCRIBED; THENCE RUN NORTH 03 DEGREES 08'50" WEST, 200.00 FEET TO THE SOUTHEAST CORNER OF LOT 1, BLOCK 39, ROYAL OAK GOLF AND COUNTRY CLUB, SECTION NO. 2, AS RECORDED IN PLAT BOOK 19, PAGE 149; OF THE PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA; THENCE RUN ALONG THE BOUNDARY OF SAID ROYAL OAK GOLF AND COUNTRY CLUB, SECTION NO. 2, THE FOLLOWING 8 COURSES AND DISTANCES; NORTH 03 DEGREES 08'50" WEST, 467.37 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE WESTERLY, HAVING A RADIUS OF 355.00 FEET AND A CENTRAL ANGLE OF 33 DEGREES 55'06" NORTHERLY ALONG THE ARC OF SAID CURVE, 210.16 FEET TO THE POINT OF REVERSE CURVATURE OF A CIRCULAR CURVE CONCAVE EASTERLY, HAVING A RADIUS OF 68.28 FEET AND A CENTRAL ANGLE OF 87 DEGREES 33'56", NORTHERLY ALONG THE ARC OF SAID CURVE, 104.35 FEET TO THE POINT OF TANGENCY OF SAID CURVE; NORTH 50 DEGREES 30'00" EAST, 69.33 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE SOUTHEASTERLY, HAVING A RADIUS OF 372.50 FEET AND A CENTRAL ANGLE OF 22 DEGREES 45'00"; NORTHEASTERLY ALONG THE ARC OF SAID CURVE, 147.91 FEET TO THE POINT OF REVERSE CURVATURE OF A CIRCULAR CURVE CONCAVE NORTHWESTERLY, HAVING A RADIUS OF 372.50 FEET AND A CENTRAL ANGLE OF 22 DEGREES 45'00"; NORTHEASTERLY ALONG THE ARC OF SAID CURVE, 147.91 FEET TO THE POINT OF TANGENCY OF SAID CURVE; THENCE NORTH 50 DEGREES 30'00" EAST, 150.00 FEET; THENCE SOUTH 31 DEGREES 30'00" EAST, 64.00 FEET TO A POINT ON THE BOUNDARY OF ROYAL OAK GOLF AND COUNTRY CLUB, SECTION NO. 3 AS RECORDED IN PLAT BOOK 20, PAGE 42, OF SAID PUBLIC RECORDS; RUN THENCE ALONG THE SAID BOUNDARY THE FOLLOWING THIRTEEN COURSES AND DISTANCES; SOUTH 31 DEGREES 30'00" EAST, 64.00 FEET; SOUTH 50 DEGREES 30'00" WEST, 108.01 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE EASTERLY, HAVING A RADIUS OF 50.00 FEET AND A CENTRAL ANGLE OF 82 DEGREES 00'00"; SOUTHERLY ALONG THE ARC OF SAID CURVE, 43.46 FEET TO THE POINT OF TANGENCY; SOUTH 31 DEGREES 30'00" EAST, 96.50 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE WESTERLY, HAVING A RADIUS OF 70.00 FEET AND A CENTRAL ANGLE OF 60 DEGREES 00'00"; SOUTHERLY ALONG THE ARC OF SAID CURVE, 73.30 FEET TO THE POINT OF TANGENCY; SOUTH 28 DEGREES 30'00" WEST, 30.71 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 175.00 FEET AND A CENTRAL ANGLE OF 180 DEGREES 00'00", SOUTHERLY, EASTERLY AND NORTHERLYALONG THE ARC OF SAID CURVE, 549.78 FEET TO THE POINT OF TANGENCY; NORTH 28 DEGREES 30'00" EAST, 100.00 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE WESTERLY, HAVING A RADIUS OF 300.00 FEET AND A CENTRAL ANGLE OF 60 DEGREES 00'00", NORTHERLY ALONG THE ARC OF SAID CURVE, 173.21 FEET TO THE POINT OF TANGENCY; NORTH 31 DEGREES 30'00" WEST, 177.04 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE SOUTHERLY, HAVING A RADIUS OF 50.00 FEET AND A CENTRAL ANGLE OF 98 DEGREES 00'00"; WESTERLY ALONG THE ARC OF SAID CURVE, 85.52 FEET TO THE POINT OF TANGENCY; SOUTH 50 DEGREES 30'00" WEST, 93.95 FEET; NORTH 31 DEGREES 30'00" WEST, 20.85 FEET TO A POINT ON THE AFORESAID BOUNDARY OF ROYAL OAK GOLF AND COUNTRY CLUB, SECTION NO. 2; THENCE NORTHWESTERLY ALONG SAID BOUNDARY THE FOLLOWING THREE COURSES AND DISTANCES; NORTH 31 DEGREES 30'00" WEST, 224.14 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE SOUTHWESTERLY, HAVING A RADIUS OF 225.00 FEET AND A CENTRAL ANGLE OF 08 DEGREES 00'00"; THENCE NORTHWESTERLY ALONG THE ARC OF SAID CURVE, 31.42 FEET TO THE POINT OF REVERSE CURVATURE OF A CIRCULAR CURVE CONCAVE EASTERLY, HAVING A RADIUS OF 25.00 FEET AND A CENTRAL ANGLE OF 90 DEGREES 00'00"; NORTHERLY ALONG THE ARC OF SAID CURVE, 39.27 FEET TO THE POINT OF TANGENCY, SAID POINT BEING ON THE BOUNDARY OF ROYAL OAK GOLF AND COUNTRY CLUB, SECTION NO. 4, AS RECORDED IN PLAT BOOK 20, PAGE 83, OF THE AFORESAID PUBLIC RECORDS; THENCE NORTHEASTERLY AND NORTHERLY ALONG SAID BOUNDARY THE FOLLOWING NINE COURSES AND DISTANCES; NORTH 50 DEGREES 30'00" EAST, 115.00 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE NORTHWESTERLY, HAVING A RADIUS OF 285.00 FEET AND A CENTRAL ANGLE OF 37 DEGREES 37'05"; NORTHEASTERLY ALONG THE ARC OF SAID CURVE, 187.12 FEET; NORTH 65 DEGREES 00'00" EAST, 545.06 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE WESTERLY, HAVING A RADIUS OF 175.00 FEET AND A CENTRAL ANGLE OF 90 DEGREES 00'00" NORTHERLY ALONG THE ARC OF SAID CURVE, 274.89 FEET TO THE POINT OF TANGENCY; THENCE NORTH 25 DEGREES 00'00" WEST, 80.69 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE EASTERLY, HAVING A RADIUS OF 140.00 FEET AND A CENTRAL ANGLE OF 25 DEGREES 00'00"; NORTHERLY ALONG THE ARC OF SAID CURVE, 61.09 FEET TO THE POINT OF TANGENCY; NORTH, 155.00 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE SOUTHEASTERLY, HAVING A RADIUS OF 70.00 FEET AND A CENTRAL ANGLE OF 40 DEGREES 00'00"; NORTHEASTERLY ALONG THE ARC OF SAID CURVE, 48.87 FEET TO THE POINT OF TANGENCY; NORTH 40 DEGREES 00'00" EAST, 74.13 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE SOUTHERLY, HAVING A RADIUS OF 75.00 FEET AND A CENTRAL ANGLE OF 59 DEGREES 30'00"; RUN THENCE EASTERLY ALONG THE ARC OF SAID CURVE, 77.89 FEET TO THE POINT OF TANGENCY; THENCE RUN SOUTH 80 DEGREES 30'00" EAST, 251.56 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE SOUTHWESTERLY, HAVING A RADIUS OF 200.00 FEET AND A CENTRAL ANGLE OF 78 DEGREES 13'33"; THENCE SOUTHEASTERLY ALONG THE ARC OF SAID CURVE, 273.06 FEET TO THE POINT OF TANGENCY; THENCE SOUTH 02 DEGREES 16'26" EAST, PARALLEL WITH AND 200.00 FEET (BY RIGHT ANGLE MEASUREMENT) WEST OF THE EAST LINE OF THE AFORESAID NORTHWEST 1/4 OF SECTION 16, A DISTANCE OF 192.59 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 400.00 FEET AND A CENTRAL ANGLE OF 42 DEGREES 25'19"; THENCE SOUTHEASTERLY ALONG THE ARC OF SAID CURVE, 296.16 FEET TO THE POINT OF TANGENCY; THENCE SOUTH 44 DEGREES 41'45" EAST, 654.70 FEET; THENCE SOUTH 01 DEGREE 53'37" EAST, 231.43 FEET; THENCE SOUTH 31 DEGREES 25'16" EAST, 86.20 FEET;

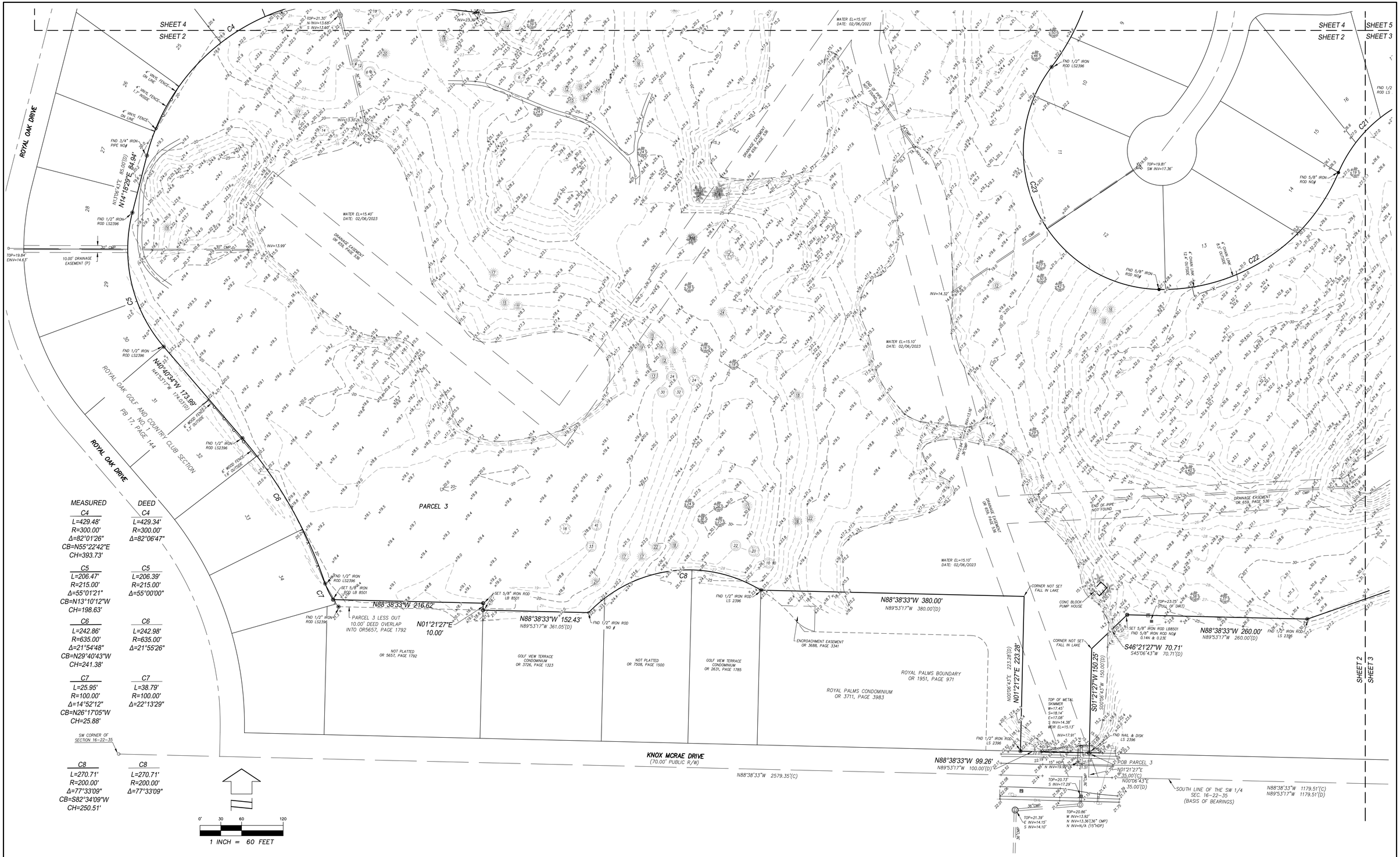
THENCE SOUTH 11 DEGREES 32'01" WEST, 160.33 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE EASTERLY HAVING A RADIUS OF 1225.00 FEET; THENCE SOUTHERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 11 DEGREES 15'00", A DISTANCE OF 240.53 FEET; THENCE NORTH 89 DEGREES 42'59" WEST, 20.00 FEET TO A POINT ON THE BOUNDARY OF ROYAL OAK GOLF AND COUNTRY CLUB, SECTION NINE, AS RECORDED IN PLAT BOOK 24, PAGE 147, OF THE AFORESAID PUBLIC RECORDS; THENCE RUN ALONG SAID BOUNDARY THE FOLLOWING EIGHT COURSES AND DISTANCES; NORTH 89 DEGREES 42'59" WEST, 46.48 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 114.98 FEET AND A CENTRAL ANGLE OF 58 DEGREES 27'59"; NORTHWESTERLY ALONG THE ARC OF SAID CURVE, 117.33 FEET TO THE POINT OF TANGENCY; NORTH 31 DEGREES 15'00" WEST, 601.52 FEET TO A POINT ON THE ARC OF A CIRCULAR CURVE CONCAVE SOUTHEASTERLY, HAVING A RADIUS OF 200.00 FEET AND A CENTRAL ANGLE OF 237 DEGREES 54'36", AT WHICH POINT THE TANGENT BEARS NORTH 02 DEGREES 17'42" WEST, NORTHWESTERLY, SOUTHWESTERLY AND SOUTHEASTERLY ALONG THE ARC OF SAID CURVE, 830.46 FEET; SOUTH 31 DEGREES 15'00" EAST, 601.52 F ET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 427.23 FEET AND A CENTRAL ANGLE OF 10 DEGREES 03'00"; SOUTHEASTERLY ALONG THE ARC OF SAID CURVE, 74.94 FEET TO THE POINT OF TANGENCY; SOUTH 41 DEGREES 18'00" EAST, 98.91 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE SOUTHWESTERLY, HAYING A RADIUS OF 260.00 FEET; SOUTHEASTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 27 DEGREES 56'58", A DISTANCE OF 126.83 FEET TO A POINT ON THE BOUNDARY OF ROYAL OAK GOLF AND COUNTRY CLUB, SECTION SEVEN, AS RECORDED IN PLAT BOOK 24, PAGE 145, OF THE AFORESAID PUBLIC RECORDS; RUN THENCE SOUTHWESTERLY ALONG SAID BOUNDARY THE FOLLOWING SIX COURSES AND DISTANCES; CONTINUE SOUTHEASTERLY ALONG THE ARC OF THE LAST MENTIONED CURVE THROUGH A CENTRAL ANGLE OF 05 DEGREES 33'02", A DISTANCE OF 25.19 FEET TO THE POINT OF COMPOUND CURVATURE OF A CIRCULAR CURVE CONCAVE WESTERLY, HAVING A RADIUS OF 91.82 FEET AND A CENTRAL ANGLE OF 49 DEGREES 33'02"; SOUTHERLY ALONG THE ARC OF SAID CURVE, 79.41 FEET TO THE POINT OF TANGENCY; SOUTH 41 DEGREES 45'00" WEST 18.85 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE SOUTHEASTERLY, HAVING A RADIUS OF 960.00 FEET AND A CENTRAL ANGLE OF 09 DEGREES 15'00"; SOUTHWESTERLY ALONG THE ARC OF SAID CURVE, 154.99 FEET TO THE POINT OF TANGENCY; SOUTH 32 DEGREES 30'00" WEST, 20.00 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE NORTHWESTERLY, HAVING A RADIUS OF 134.13 FEET AND A CENTRAL ANGLE OF 42 DEGREES 57'27"; SOUTHWESTERLY ALONG THE ARC OF SAID CURVE, 100.56 FEET TO A POINT ON THE BOUNDARY OF ROYAL OAK GOLF AND COUNTRY CLUB, SECTION SIX-B, AS RECORDED IN PLAT BOOK 23, PAGE 84, OF THE AFORESAID PUBLIC RECORDS; THENCE ALONG SAID BOUNDARY THE FOLLOWING EIGHT COURSES AND DISTANCES; NORTH 52 DEGREES 33'16" WEST, 183.49 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 350.00 FEET AND A CENTRAL ANGLE OF 25 DEGREES 10'00" NORTHWESTERLY ALONG THE ARC OF SAID CURVE, 153.73 FEET TO THE POINT OF TANGENCY; NORTH 27 DEGREES 23'16" WEST, 169.82 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE SOUTHEASTERLY, HAVING A RADIUS OF 225.00 FEET AND A CENTRAL ANGLE OF 180 DEGREES 00'00"; NORTHWESTERLY, SOUTHWESTERLY, AND SOUTHEASTERLY ALONG THE ARC OF SAID CURVE, 706.86 FEET TO THE POINT OF REVERSE CURVATURE OF A CIRCULAR CURVE CONCAVE WESTERLY, HAVING A RADIUS OF 27.75 FEET AND A CENTRAL ANGLE OF 34 DEGREES 55'00"; SOUTHERLY ALONG THE ARC OF SAID CURVE, 16.91 FEET TO THE POINT OF TANGENCY; SOUTH 07 DEGREES 31'33" WEST, 434.74 FEET; SOUTH 14 DEGREES 55'58" EAST, 78.53 FEET; SOUTH 07 DEGREES 31'44" WEST, 105.10 FEET TO A POINT ON THE NORTHERLY RIGHT-OF WAY LINE OF COUNTRY CLUB DRIVE (AN 80.00 FOOT RIGHT OF WAY), SAID POINT BEING ON THE ARC OF A CIRCULAR CURVE CONCAVE SOUTHERLY, HAVING A RADIUS OF 640.00 FEET AND A CENTRAL ANGLE OF 27 DEGREES 00'00" AT WHICH POINT THE TANGENT BEARS NORTH 80 DEGREES 00'00" WEST; THENCE WESTERLY ALONG SAID NORTHERLY RIGHT OF WAY LINE THE FOLLOWING TWO COURSES AND DISTANCES; WESTERLY ALONG THE ARC OF SAID CURVE, 301.59 FEET TO THE POINT OF TANGENCY; SOUTH 73 DEGREES 00'00" WEST, 96.61 FEET; THENCE RUN NORTH 34 DEGREES 02'12" WEST, 275.41 FEET; THENCE NORTH 63 DEGREES 27'27" WEST, 208.00 FEET; THENCE NORTH 36 DEGREES 14'16" WEST (NORTH 35 DEGREES 57'27" WEST, DEED), 192.96 FEET. (192.35 FEET, DEED), TO THE POINT OF BEGINNING.

LESS AND EXCEPT LANDS DESCRIBED IN OFFICIAL RECORDS BOOK 809 PAGE 559

PARCEL NO 3:

A PART OF THE SOUTH 1/2 OF SECTION 16, AND A PART OF SECTION 17, TOWNSHIP 22 SOUTH, RANGE 35 EAST, BREVARD COUNTY, FLORIDA, DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTHEAST CORNER OF THE SOUTHWEST 1/4 OF SAID SECTION 16, RUN THENCE NORTH 89 DEGREES 53'17" WEST, ALONG THE SOUTH LINE OF SAID SOUTHWEST 1/4 OF SECTION 16, A DISTANCE OF 1179.51 FEET; THENCE NORTH 00 DEGREES 06'43" EAST, 35.00 FEET TO THE POINT OF BEGINNING; THENCE RUN NORTH 89 DEGREES 53'17" WEST ALONG THE NORTH RIGHT-OF-WAY LINE OF KNOX MORAE DRIVE, 100.00 FEET; THENCE NORTH 00 DEGREES 06'43" EAST, 223.28 FEET; THENCE NORTH 89 DEGREES 53'17" WEST, 380.00 FEET TO A POINT ON THE ARC OF A CIRCULAR CURVE CONCAVE SOUTHERLY HAVING A RADIUS OF 200.00 FEET AT WHICH POINT THE TANGENT BEARS NORTH 59 DEGREES 54'01" WEST; THENCE WESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 77 DEGREES 33'09", A DISTANCE OF 270.71 FEET; THENCE NORTH 89 DEGREES 53'17" WEST, 361.05 FEET TO A POINT ON THE ARC OF A CIRCULAR CURVE CONCAVE NORTHEASTERLY HAVING A RADIUS OF 100.00 FEET, AT WHICH POINT THE TANGENT BEARS NORTH 42 DEGREES 11'20" WEST; THENCE NORTHWESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 22 DEGREES 13'29", A DISTANCE OF 38.79 FEET TO A POINT ON THE EAST LINE OF LOT 34, BLOCK B, ROYAL OAK GOLF AND COUNTRY CLUB, SECTION ONE, RECORDED IN PLAT BOOK 17, PAGE 144, OF THE PUBLIC RECORDS OF BREVARD COUNTY, FLORIDA, SAID POINT BEING THE POINT OF REVERSE CURVATURE OF A CIRCULAR CURVE CONCAVE WESTERLY, HAVING A RADIUS OF 635.00 FEET AND A CENTRAL ANGLE OF 21 DEGREES 55'26"; THENCE ALONG THE EAST LINE OF SAID BLOCK B, THE FOLLOWING TEN COURSES AND DISTANCES; NORTHERLY ALONG THE ARC OF SAID CURVE, 242.98 FEET TO THE POINT OF TANGENCY OF SAID CURVE; THENCE NORTH 41 DEGREES 53'17" WEST, 174.03 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE EASTERLY, HAVING A RADIUS OF 215.00 FEET AND A CENTRAL ANGLE OF 55 DEGREES 00'00"; THENCE NORTHERLY ALONG THE ARC OF SAID CURVE, 206.39 FEET TO THE POINT OF TANGENCY OF SAID CURVE; THENCE NORTH 13 DEGREES 06'43" EAST, 85.00 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE SOUTHEASTERLY, HAVING A RADIUS OF 300.00 FEET AND A CENTRAL ANGLE OF 82 DEGREES 06'47"; THENCE NORTHEASTERLY ALONG THE ARC OF SAID CURVE, 429.94 FEET TO THE POINT OF TANGENCY OF SAID CURVE; THENCE SOUTH 84 DEGREES 46'30" EAST, 151.39 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 150.00 FEET AND A CENTRAL ANGLE OF 56 DEGREES 53'30"; THENCE NORTHEASTERLY ALONG THE ARC OF SAID CURVE, 148.94 FEET TO THE POINT OF TANGENCY OF SAID CURVE; THENCE NORTH 38 DEGREES 20'00" EAST, 184.22 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE WESTERLY, HAVING A RADIUS OF 300.00 FEET AND A CENTRAL ANGLE OF 60 DEGREES 42'36"; THENCE NORTHERLY ALONG THE ARC OF SAID CURVE, 317.88 FEET TO THE POINT OF REVERSE CURVATURE OF A CIRCULAR CURVE CONCAVE EASTERLY, HAVING A RADIUS OF 400.00 FEET; THENCE NORTHERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 22 DEGREES 36'26", A DISTANCE OF 157.82 FEET TO A POINT ON THE SOUTH RIGHT-OF-WAY LINE OF COUNTRY CLUB DRIVE; THENCE NORTH 73 DEGREES 00'00" EAST ALONG SAID RIGHT-OF-WAY LINE, 488.24 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE SOUTHERLY, HAVING A RADIUS OF 560.00 FEET; THENCE EASTERLY ALONG THE ARC OF SAID CURVE, THROUGH A CENTRAL ANGLE OF 06 DEGREES 07'16", A DISTANCE OF 59.83 FEET; THENCE ALONG THE BOUNDARY OF ROYAL OAK GOLF AND COUNTRY CLUB, SECTION FIVE, RECORDED IN PLAT BOOK 21, PAGE 44, OF SAID PUBLIC RECORDS, THE FOLLOWING THIRTEEN COURSES AND DISTANCES; SOUTH 01 DEGREE 52'25" EAST, 247.32 FEET; SOUTH 15 DEGREES 00'00" EAST, 360.00 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE WESTERLY, HAVING A RADIUS OF 328.68 FEET AND A CENTRAL ANGLE OF 51 DEGREES 00'00"; THENCE SOUTHERLY ALONG THE ARC OF SAID CURVE, 292.56 FEET TO THE POINT OF REVERSE CURVATURE OF A CIRCULAR CURVE CONCAVE NORTHEASTERLY, HAVING A RADIUS OF 200.00 FEET AND A CENTRAL ANGLE OF 126 DEGREES 00'00"; THENCE SOUTHEASTERLY ALONG THE ARC OF SAID CURVE, 439.82 FEET TO THE POINT OF COMPOUND CURVATURE OF A CIRCULAR CURVE CONCAVE NORTHWESTERLY, HAVING A RADIUS OF 275.00 FEET AND A CENTRAL ANGLE OF 68 DEGREES 26'15"; THENCE NORTHEASTERLY ALONG THE ARC OF SAID CURVE, 328.48 FEET TO THE POINT OF REVERSE CURVATURE OF A CIRCULAR CURVE CONCAVE SOUTHEASTERLY, HAVING A RADIUS OF 200.00 FEET AND A CENTRAL ANGLE OF 42 DEGREES 08'46"; THENCE NORTHEASTERLY ALONG THE ARC OF SAID CURVE, 147.12 FEET TO THE POINT OF REVERSE CURVATURE OF A CIRCULAR CURVE CONCAVE NORTHWESTERLY, HAVING A RADIUS OF 275.00 FEET AND A CENTRAL ANGLE OF 63 DEGREES 42'3 I "; THENCE NORTHEASTERLY ALONG THE ARC OF SAID CURVE, 305.78 FEET TO THE POINT OF TANGENCY OF SAID CURVE; THENCE NORTH, 131.80 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE EASTERLY, HAVING A RADIUS OF 600.00 FEET AND A CENTRAL ANGLE OF 14 DEGREES 00'00"; THENCE NORTHERLY ALONG THE ARC OF SAID CURVE, 146.60 FEET TO THE POINT OF TANGENCY OF SAID CURVE; THENCE NORTH 14 DEGREES 00'00" EAST, 84.81 FEET; THENCE NORTH 45 DEGREES 07'18" WEST, 48.14 FEET TO A POINT ON THE ARC OF A CIRCULAR CURVE CONCAVE WESTERLY, HAVING A RADIUS OF 125.00 FEET, AT WHICH POINT THE TANGENT BEARS NORTH 44 DEGREES 52'42" EAST; THENCE NORTHERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 59 DEGREES 39'01", A DISTANCE OF 130.14 FEET; THENCE NORTH 14 DEGREES 51'05" WEST, 142.08 FEET TO A POINT ON SAID SOUTHERLY RIGHT OF WAY LINE OF COUNTRY CLUB DRIVE, SAID POINT LYING ON THE ARC OF SAID CURVE CONCAVE NORTHERLY, HAVING A RADIUS OF 690.00 FEET AND WHOSE TANGENT BEARS NORTH 73 DEGREES 10'07" EAST; THENCE EASTERLY ALONG THE ARC OF SAID CURVE, THROUGH A CENTRAL ANGLE OF 23 DEGREES 49'10", A DISTANCE OF 286.85 FEET; THENCE ALONG THE WESTERLY BOUNDARY OF ROYAL OAK GOLF AND COUNTRY CLUB, SECTION EIGHT, RECORDED IN PLAT BOOK 20, PAGE 135, OF SAID PUBLIC RECORDS THE FOLLOWING TEN COURSES AND DISTANCES; SOUTH 57 DEGREES 30'00" EAST, 49.62 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE SOUTHWESTERLY, HAVING A RADIUS OF 725.00 FEET AND A CENTRAL ANGLE OF 24 DEGREES 00'00"; THENCE SOUTHERLY ALONG THE ARC OF SAID CURVE, 303.69 FEET TO THE POINT OF TANGENCY OF SAID CURVE; THENCE SOUTH 33 DEGREES 30'00" EAST, 184.16 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE EASTERLY, HAVING A RADIUS OF 315.00 FEET AND A CENTRAL ANGLE OF 21 DEGREES 44'49"; THENCE SOUTHERLY ALONG THE ARC OF SAID CURVE, 119.56 FEET TO THE POINT OF REVERSE CURVATURE OF A CIRCULAR CURVE CONCAVE WESTERLY, HAVING A RADIUS OF 150.00 FEET AND A CENTRAL ANGLE OF 36 DEGREES 29'55"; THENCE SOUTHERLY ALONG THE ARC OF SAID CURVE, 95.55 FEET TO THE POINT OF REVERSE CURVATURE OF A CIRCULAR CURVE CONCAVE EASTERLY, HAVING A RADIUS OF 475.00 FEET AND A CENTRAL ANGLE OF 42 DEGREES 38'23", THENCE SOUTHERLY ALONG THE ARC OF SAID CURVE, 353.50 FEET TO THE POINT OF TANGENCY OF SAID CURVE; THENCE SOUTH 61 DEGREES 23'17" EAT, 252.33 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE WESTERLY, HAVING A RADIUS OF 35.00 FEET AND A CENTRAL ANGLE OF 26 DEGREES 30'00"; THENCE SOUTHERLY ALONG THE ARC OF SAID CURVE, 16.19 FEET TO THE POINT OF TANGENCY OF SAID CURVE; THENCE SOUTH 34 DEGREES 53'17" EAST, 13.61 FEET TO THE POINT OF CURVATURE OF A CIRCULAR CURVE CONCAVE NORTHWESTERLY, HAVING A RADIUS OF 75.00 FEET; THENCE SOUTHWESTERLY ALONG THE ARC OF SAID CURVE, THROUGH A CENTRAL ANGLE OF 30 DEGREES 57'50", A DISTANCE OF 40.53 FEET TO THE SOUTHWEST CORNER OF LOT 14, BLOCK 18, OF THE AFORESAID PLAT; THENCE CONTINUE ALONG THE ARC OF SAID CURVE, THROUGH A CENTRAL ANGLE OF 59 DEGREES 02'10", A DISTANCE OF 77.28 FEET TO THE POINT OF TANGENCY OF SAID CURVE;. THENCE SOUTH 55 DEGREES 06'43" WEST, 248.48 FEET TO THE POINT OF CURVATURE OF A CIRCULAR



MEASURED	DEED
C4	C4
L=429.48'	L=429.34'
R=300.00'	R=300.00'
Δ=82°01'26"	Δ=82°06'47"
CB=N55°22'42"E	
CH=393.73'	
C5	C5
L=206.47'	L=206.39'
R=215.00'	R=215.00'
Δ=55°01'21"	Δ=55°00'00"
CB=N13°10'12"W	
CH=198.63'	
C6	C6
L=242.86'	L=242.98'
R=635.00'	R=635.00'
Δ=21°54'48"	Δ=21°55'26"
CB=N29°40'43"W	
CH=241.38'	
C7	C7
L=25.95'	L=38.79'
R=100.00'	R=100.00'
Δ=14°52'12"	Δ=22°13'29"
CB=N26°17'05"W	
CH=25.88'	
C8	C8
L=270.71'	L=270.71'
R=200.00'	R=200.00'
Δ=77°33'09"	Δ=77°33'09"
CB=S82°34'09"W	
CH=250.51'	

REVISIONS

FB/PG	DATE	DRAWN	REVISION	CKD

DONLEY CONSULTING GROUP, LLC
210 PARKTOWNE BOULEVARD SUITE 1
EDGEWATER, FLORIDA 32132
PHONE: 407.947.4552
WWW.DONLEYCONSULTING.COM
CERTIFICATE OF AUTHORIZATION NO. LB 8501

GEMINI LAKES

SECTION 16, TOWNSHIP 22 SOUTH, RANGE 35 EAST

BREVARD COUNTY, FLORIDA

BOUNDARY & TOPOGRAPHIC SURVEY for:

TOULON APARTMENTS MS, LLC

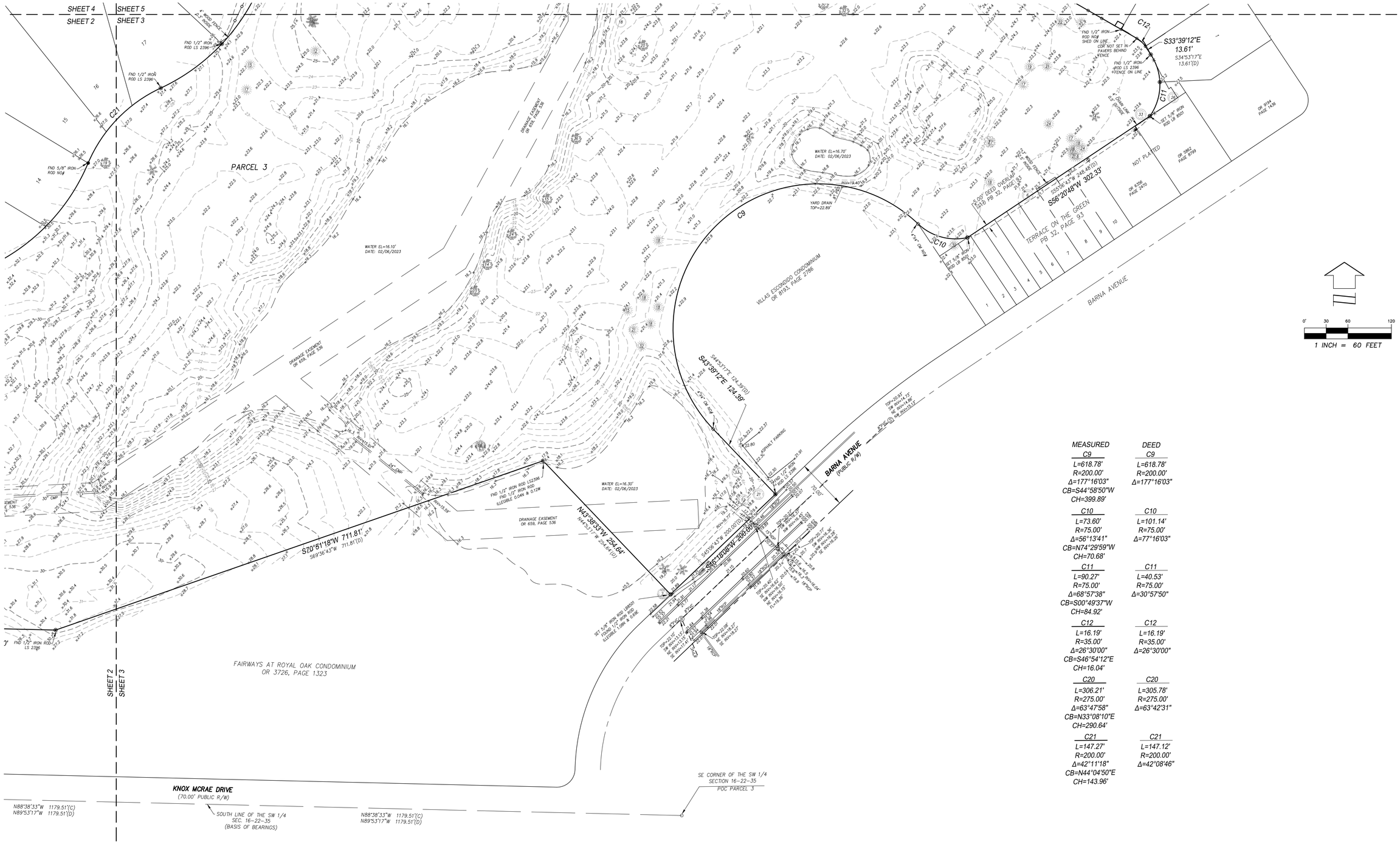
FB/PG	FIELD DATE
BREVCO / FB 1&2	03/26/2025

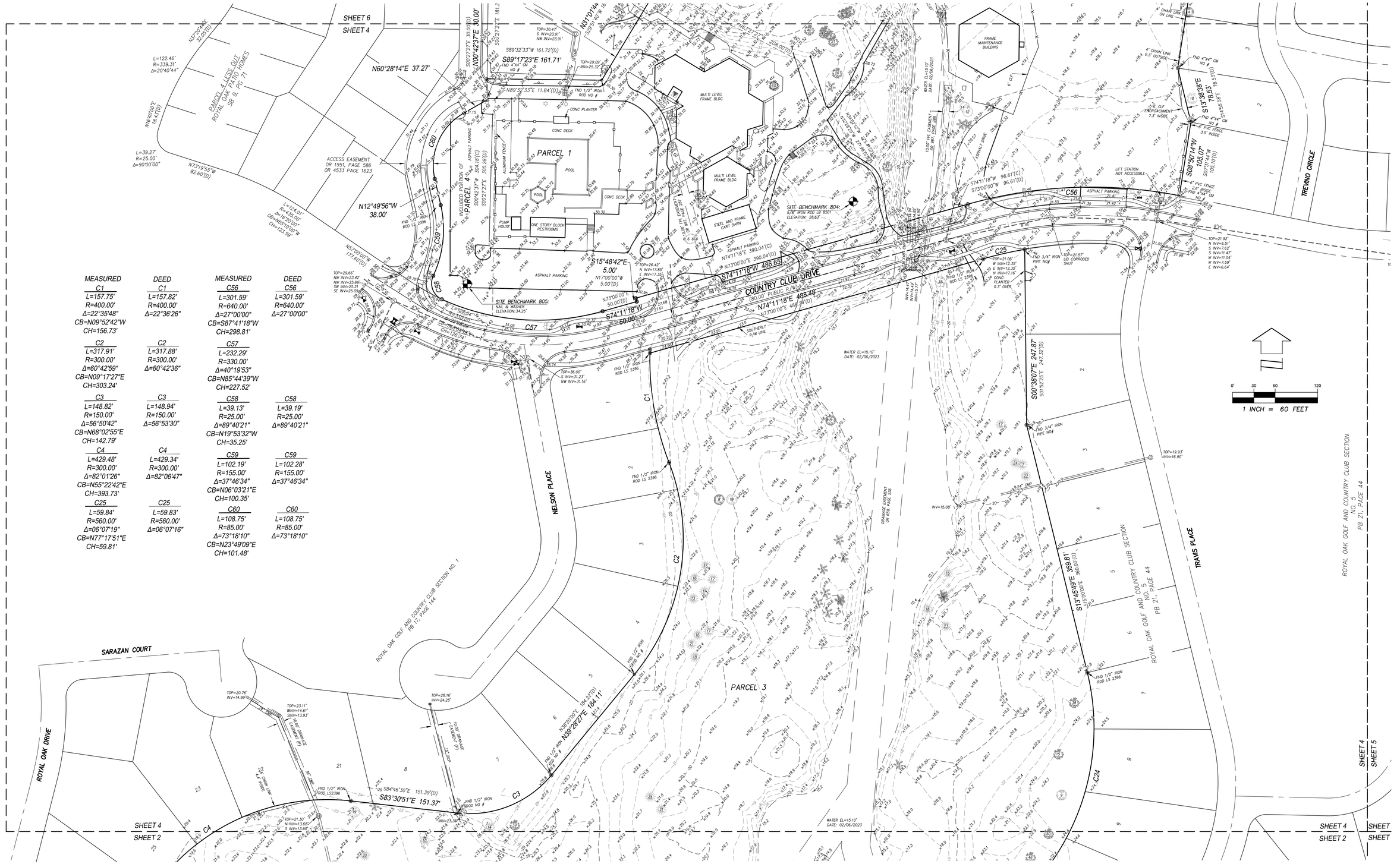
DRAWING DATE	BY	APPROVED
03/29/2025	WDD	WDD

PROJECT NO. 104.002

SCALE 1"=60'

2 OF 9


SHEET 4
SHEET 2
SHEET 5
SHEET 3
SHEET 2
SHEET 3
PARCEL 3
FND 1/2" IRON ROD NO#
FND 1/2" IRON ROD LS 2396
FND 5/8" IRON ROD NO#
FND 1/2" IRON ROD LS 2396
SET 5/8" IRON ROD LB 8501
SET 5/8" IRON ROD & DISK LB 8501
FOUND 1/2" IRON ROD & DISK LB 8501
FND 1/2" IRON ROD LS 2396 ILLEGIBLE 0.04W & 0.12W
SET 5/8" IRON ROD & DISK LB 8501 FOUND 1/2" IRON ROD ILLEGIBLE 1.08W & 0.62E
FND 1/2" IRON ROD LS 2396
FND 1/2" IRON ROD NO# SHED ON LINE
CONC NOT SET IN PAVERS BEHIND FENCE
FND 1/2" IRON ROD LS 2396 FENCE ON LINE
4" WOOD FENCE
EDGE OF ASPHALT
EDGE OF PAVEMENT
EDGE OF GRAVEL
EDGE OF DRIVE
EDGE OF WOOD DECK
EDGE OF CONCRETE
EDGE OF PAVERS
EDGE OF BRICK
EDGE OF WOOD DECK
EDGE OF WOOD FENCE
EDGE OF CHAIN LINK FENCE
EDGE OF BRICK PAVERS
EDGE OF CONCRETE PAVERS
EDGE OF CONCRETE WALK
EDGE OF CONCRETE DRIVE
EDGE OF CONCRETE PAD
EDGE OF CONCRETE CURB
EDGE OF CONCRETE
EDGE OF WOOD



MEASURED	DEED	MEASURED	DEED
C1	C1	C56	C56
L=157.75'	L=157.82'	L=301.59'	L=301.59'
R=400.00'	R=400.00'	R=640.00'	R=640.00'
Δ=22°35'48"	Δ=22°36'26"	Δ=27°00'00"	Δ=27°00'00"
CB=N09°52'42"W		CB=S87°41'18"W	
CH=156.73'		CH=298.81'	
C2	C2	C57	
L=317.91'	L=317.88'	L=232.29'	
R=300.00'	R=300.00'	R=330.00'	
Δ=60°42'59"	Δ=60°42'36"	Δ=40°19'53"	
CB=N09°17'27"E		CB=N85°44'39"W	
CH=303.24'		CH=227.52'	
C3	C3	C58	C58
L=148.82'	L=148.94'	L=39.13'	L=39.19'
R=150.00'	R=150.00'	R=25.00'	R=25.00'
Δ=56°50'42"	Δ=56°53'30"	Δ=89°40'21"	Δ=89°40'21"
CB=N68°02'55"E		CB=N19°53'32"W	
CH=142.79'		CH=35.25'	
C4	C4	C59	C59
L=429.48'	L=429.34'	L=102.19'	L=102.28'
R=300.00'	R=300.00'	R=155.00'	R=155.00'
Δ=82°01'26"	Δ=82°06'47"	Δ=37°46'34"	Δ=37°46'34"
CB=N55°22'42"E		CB=N06°03'21"E	
CH=393.73'		CH=100.35'	
C25	C25	C60	C60
L=59.84'	L=59.83'	L=108.75'	L=108.75'
R=560.00'	R=560.00'	R=85.00'	R=85.00'
Δ=06°07'19"	Δ=06°07'16"	Δ=73°18'10"	Δ=73°18'10"
CB=N77°17'51"E		CB=N23°49'09"E	
CH=59.81'		CH=101.48'	

REVISIONS				
FB/PG	DATE	DRAWN	REVISION	CKD

DONLEY CONSULTING GROUP, LLC
210 PARKTOWNE BOULEVARD SUITE 1
EDGEWATER, FLORIDA 32132
PHONE: 407.947.4552
WWW.DONLEYCONSULTING.COM
CERTIFICATE OF AUTHORIZATION NO. LB 8501

GEMINI LAKES

SECTION 16, TOWNSHIP 22 SOUTH, RANGE 35 EAST

BREVARD COUNTY, FLORIDA

BOUNDARY & TOPOGRAPHIC SURVEY for:

TOULON APARTMENTS MS, LLC

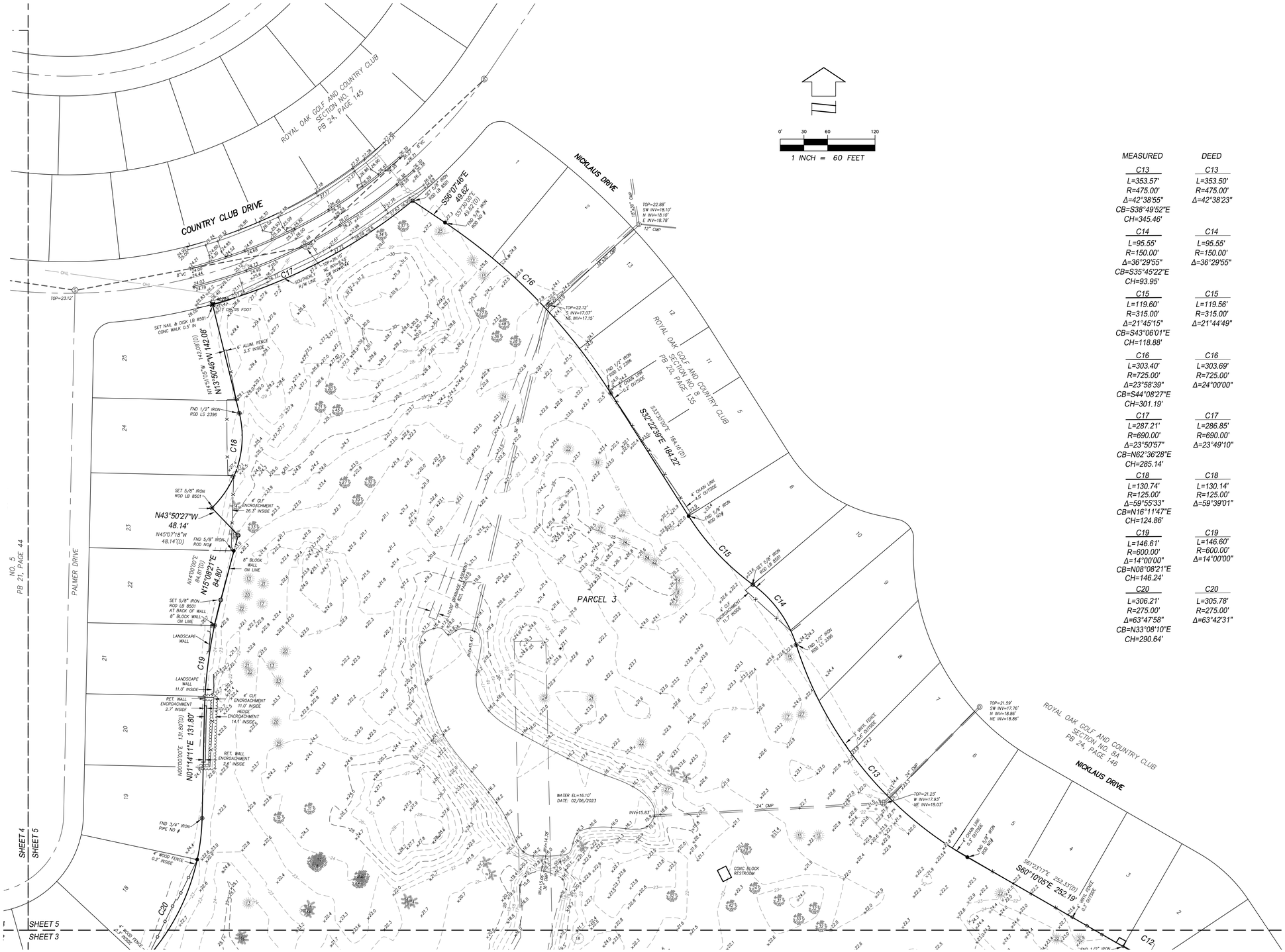
FB/PG	FIELD DATE
BREVCO / FB 1&2	03/26/2025

DRAWING DATE	BY	APPROVED
03/29/2025	WDD	WDD

PROJECT NO. 104.002

SCALE 1"=60'

4 OF 9



MEASURED	DEED
C13	C13
L=353.57'	L=353.50'
R=475.00'	R=475.00'
Δ=42°38'55"	Δ=42°38'23"
CB=S38°49'52"E	
CH=345.46'	
C14	C14
L=95.55'	L=95.55'
R=150.00'	R=150.00'
Δ=36°29'55"	Δ=36°29'55"
CB=S35°45'22"E	
CH=93.95'	
C15	C15
L=119.60'	L=119.56'
R=315.00'	R=315.00'
Δ=21°45'15"	Δ=21°44'49"
CB=S43°06'01"E	
CH=118.88'	
C16	C16
L=303.40'	L=303.69'
R=725.00'	R=725.00'
Δ=23°58'39"	Δ=24°00'00"
CB=S44°08'27"E	
CH=301.19'	
C17	C17
L=287.21'	L=286.85'
R=690.00'	R=690.00'
Δ=23°50'57"	Δ=23°49'10"
CB=N62°36'28"E	
CH=285.14'	
C18	C18
L=130.74'	L=130.14'
R=125.00'	R=125.00'
Δ=59°55'33"	Δ=59°39'01"
CB=N16°11'47"E	
CH=124.86'	
C19	C19
L=146.61'	L=146.60'
R=600.00'	R=600.00'
Δ=14°00'00"	Δ=14°00'00"
CB=N09°08'21"E	
CH=146.24'	
C20	C20
L=306.21'	L=305.78'
R=275.00'	R=275.00'
Δ=63°47'58"	Δ=63°42'31"
CB=N33°08'10"E	
CH=290.64'	

REVISIONS				
FB/PG	DATE	DRAWN	REVISION	CKD

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GEMINI LAKES

SECTION 16, TOWNSHIP 22 SOUTH, RANGE 35 EAST

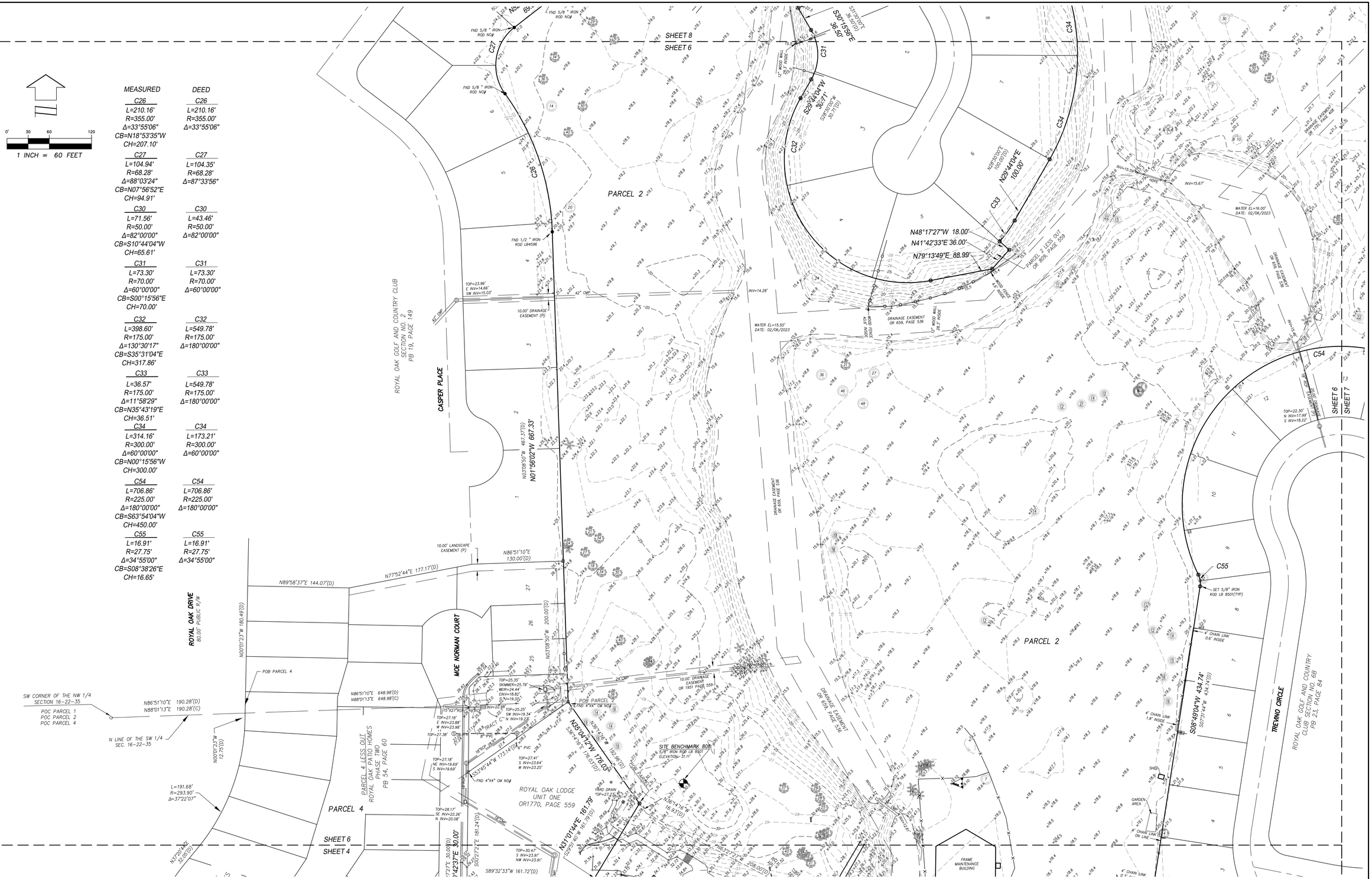
BREVARD COUNTY, FLORIDA

BOUNDARY & TOPOGRAPHIC SURVEY for:

TOULON APARTMENTS MS, LLC

FB/PG	FIELD DATE	PROJECT NO.
BREVCO / FB 1&2	03/26/2025	104.002
DRAWING DATE	BY / APPROVED	SCALE
03/29/2025	WDD / WDD	1"=60'

5 OF 9



MEASURED	DEED
C26	C26
L=210.16'	L=210.16'
R=355.00'	R=355.00'
Δ=33°55'06"	Δ=33°55'06"
CB=N18°53'35"W	
CH=207.10'	
C27	C27
L=104.94'	L=104.35'
R=68.28'	R=68.28'
Δ=88°03'24"	Δ=87°33'56"
CB=N07°56'52"E	
CH=94.91'	
C30	C30
L=71.56'	L=43.46'
R=50.00'	R=50.00'
Δ=82°00'00"	Δ=82°00'00"
CB=S10°44'04"W	
CH=65.61'	
C31	C31
L=73.30'	L=73.30'
R=70.00'	R=70.00'
Δ=60°00'00"	Δ=60°00'00"
CB=S00°15'56"E	
CH=70.00'	
C32	C32
L=398.60'	L=549.78'
R=175.00'	R=175.00'
Δ=130°30'17"	Δ=180°00'00"
CB=S35°31'04"E	
CH=317.86'	
C33	C33
L=36.57'	L=549.78'
R=175.00'	R=175.00'
Δ=11°58'29"	Δ=180°00'00"
CB=N35°43'19"E	
CH=36.51'	
C34	C34
L=314.16'	L=173.21'
R=300.00'	R=300.00'
Δ=60°00'00"	Δ=60°00'00"
CB=N00°15'56"W	
CH=300.00'	
C54	C54
L=706.86'	L=706.86'
R=225.00'	R=225.00'
Δ=180°00'00"	Δ=180°00'00"
CB=S63°54'04"W	
CH=450.00'	
C55	C55
L=16.91'	L=16.91'
R=27.75'	R=27.75'
Δ=34°55'00"	Δ=34°55'00"
CB=S08°38'26"E	
CH=16.65'	

REVISIONS				
FB/PG	DATE	DRAWN	REVISION	CKD

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GEMINI LAKES

SECTION 16, TOWNSHIP 22 SOUTH, RANGE 35 EAST

BREVARD COUNTY, FLORIDA

BOUNDARY & TOPOGRAPHIC SURVEY for:

TOULON APARTMENTS MS, LLC

FB/PG	FIELD DATE
BREVCO / FB 1&2	03/26/2025

DRAWING DATE	BY	APPROVED
03/29/2025	WDD	WDD

PROJECT NO. 104.002

SCALE 1"=60'

6 OF 9



MEASURED	DEED
C48	C48
L=74.94'	L=74.94'
R=427.23'	R=427.23'
Δ=10°03'00"	Δ=10°03'00"
CB=S35°05'09"E	
CH=74.84'	
C49	C49
L=126.83'	L=126.83'
R=260.00'	R=260.00'
Δ=27°56'58"	Δ=27°56'58"
CB=S26°08'10"E	
CH=125.58'	
C50	C50
L=79.41'	L=79.41'
R=91.82'	R=91.82'
Δ=49°33'02"	Δ=49°33'02"
CB=S18°09'52"W	
CH=76.96'	
C51	C51
L=154.98'	L=154.99'
R=960.00'	R=960.00'
Δ=09°15'00"	Δ=09°15'00"
CB=S38°00'28"W	
CH=154.81'	
C52	C52
L=100.56'	L=100.56'
R=134.13'	R=134.13'
Δ=42°57'27"	Δ=42°57'27"
CB=S55°16'06"W	
CH=98.23'	
C53	C53
L=153.73'	L=153.73'
R=350.00'	R=350.00'
Δ=25°10'00"	Δ=25°10'00"
CB=N38°40'56"W	
CH=152.50'	
C54	C54
L=706.86'	L=706.86'
R=225.00'	R=225.00'
Δ=180°00'00"	Δ=180°00'00"
CB=S63°54'04"W	
CH=450.00'	
C61	C61
L=25.19'	L=25.19'
R=260.00'	R=260.00'
Δ=05°33'02"	Δ=05°33'02"
CB=S09°23'10"E	
CH=25.18'	

REVISIONS				
FB/PG	DATE	DRAWN	REVISION	CKD

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SECTION 16, TOWNSHIP 22 SOUTH, RANGE 35 EAST

BREVARD COUNTY, FLORIDA

BOUNDARY & TOPOGRAPHIC SURVEY for:

TOULON APARTMENTS MS, LLC

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BREVCO / FB 1&2	03/26/2025	104.002
DRAWING DATE	BY	APPROVED
03/29/2025	WDD	WDD

SCALE 1"=60'

7 OF 9

MEASURED	DEED	MEASURED	DEED
C27	C27	C37	C37
L=104.94'	L=104.35'	L=39.27'	L=39.27'
R=68.28'	R=68.28'	R=25.00'	R=25.00'
Δ=88°03'24"	Δ=87°33'56"	Δ=90°00'00"	Δ=90°00'00"
CB=N07°56'52"E		CB=N06°44'04"E	
CH=94.91'		CH=35.36'	
C28	C28	C38	C38
L=147.91'	L=147.91'	L=186.25'	L=187.12'
R=372.50'	R=372.50'	R=285.00'	R=285.00'
Δ=22°45'00"	Δ=22°45'00"	Δ=37°26'33"	Δ=37°37'05"
CB=N63°06'34"E		CB=N33°00'48"E	
CH=146.94'		CH=182.95'	
C29	C29	C39	C39
L=147.91'	L=147.91'	L=274.89'	L=274.89'
R=372.50'	R=372.50'	R=175.00'	R=175.00'
Δ=22°45'00"	Δ=22°45'00"	Δ=90°00'00"	Δ=90°00'00"
CB=N62°58'22"E		CB=N21°13'46"E	
CH=146.94'		CH=247.49'	
C30	C30	C47	C47
L=71.56'	L=43.46'	L=830.46'	L=830.46'
R=50.00'	R=50.00'	R=200.00'	R=200.00'
Δ=82°00'00"	Δ=82°00'00"	Δ=237°54'36"	Δ=237°54'36"
CB=S10°44'04"W		CB=S59°56'23"W	
CH=65.61'		CH=350.00'	
C31	C31		
L=73.30'	L=73.30'		
R=70.00'	R=70.00'		
Δ=60°00'00"	Δ=60°00'00"		
CB=S00°15'56"E			
CH=70.00'			
C34	C34		
L=314.16'	L=173.21'		
R=300.00'	R=300.00'		
Δ=60°00'00"	Δ=60°00'00"		
CB=N00°15'56"W			
CH=300.00'			
C35	C35		
L=85.52'	L=85.52'		
R=50.00'	R=50.00'		
Δ=98°00'00"	Δ=98°00'00"		
CB=N79°15'56"W			
CH=75.47'			
C36	C36		
L=31.42'	L=31.42'		
R=225.00'	R=225.00'		
Δ=08°00'00"	Δ=08°00'00"		
CB=N34°15'56"W			
CH=31.39'			

0' 30' 60' 120'

1 INCH = 60 FEET

SHEET 9
SHEET 8

PLAYER COURT

ROYAL OAK GOLF AND COUNTRY CLUB SECTION NO. 4 PB 20, PAGE 83

N66°12'57"E 544.95'
N65°00'00"E 545.06'(D)

FENCE 0.4' OUTSIDE

4" CHAIN LINK 0.6' OUTSIDE

SET 5/8" IRON ROD LB 8501 FENCE 0.7' OUT

C39

CONC. BLOCK RESTROOM

N51°44'04"E 115.00'

C37

SITE BENCHMARK 806:
5/8" IRON ROD LB 8501
ELEVATION: 25.50'

C36

WATER EL=15.50'
DATE: 02/06/2023

CONC BLOCK PUMP HOUSE

RECLAIMED WATER PUMP STATION

FINISH FLOOR ELEV=20.56'

DRIVEWAY ENCROACHMENT 20.0' INSIDE

DRIVEWAY EASEMENT OR ACCESS

SET 5/8" IRON ROD LB 8501

N00°15'56"W 244.99'

S00°15'56"E 128.01'

S51°44'04"W 93.96'
S50°00'00"W 93.96'(D)

C35

N00°15'56"W 177.04'
N01°30'00"W 177.04'(D)

ROYAL OAK GOLF AND COUNTRY CLUB SECTION NO. 3 PB 20, PAGE 42

SAUNDERS PLACE

S51°44'04"W 108.01'
S51°30'00"W 108.01'(D)

C30

FND 1/2" IRON ROD LB4386

S00°15'56"E 36.50'
S01°30'00"E 36.50'(D)

C31

C34

ROYAL OAK DRIVE

N50°30'00"E 150.00'(D)

N51°35'52"E 151.35'

S50°30'00"W 64.00'(D)

C29

C28

N50°30'00"E 69.33'(D)

N52°08'18"E 69.34'

FND 5/8" IRON ROD NO#

SET 5/8" IRON ROD LB 8501

C27

SHEET 8
SHEET 6

INV=13.20'

TOP=19.11'
SE INV=14.45'
SW INV=14.48'
FLOWLINE

TOP=18.54'
SE INV=13.21'
NW INV=13.26'
FLOWLINE

TOP=19.34'
SE INV=12.96'
SW INV=12.96'
FLOWLINE

TOP=19.38'
NE INV=14.27'

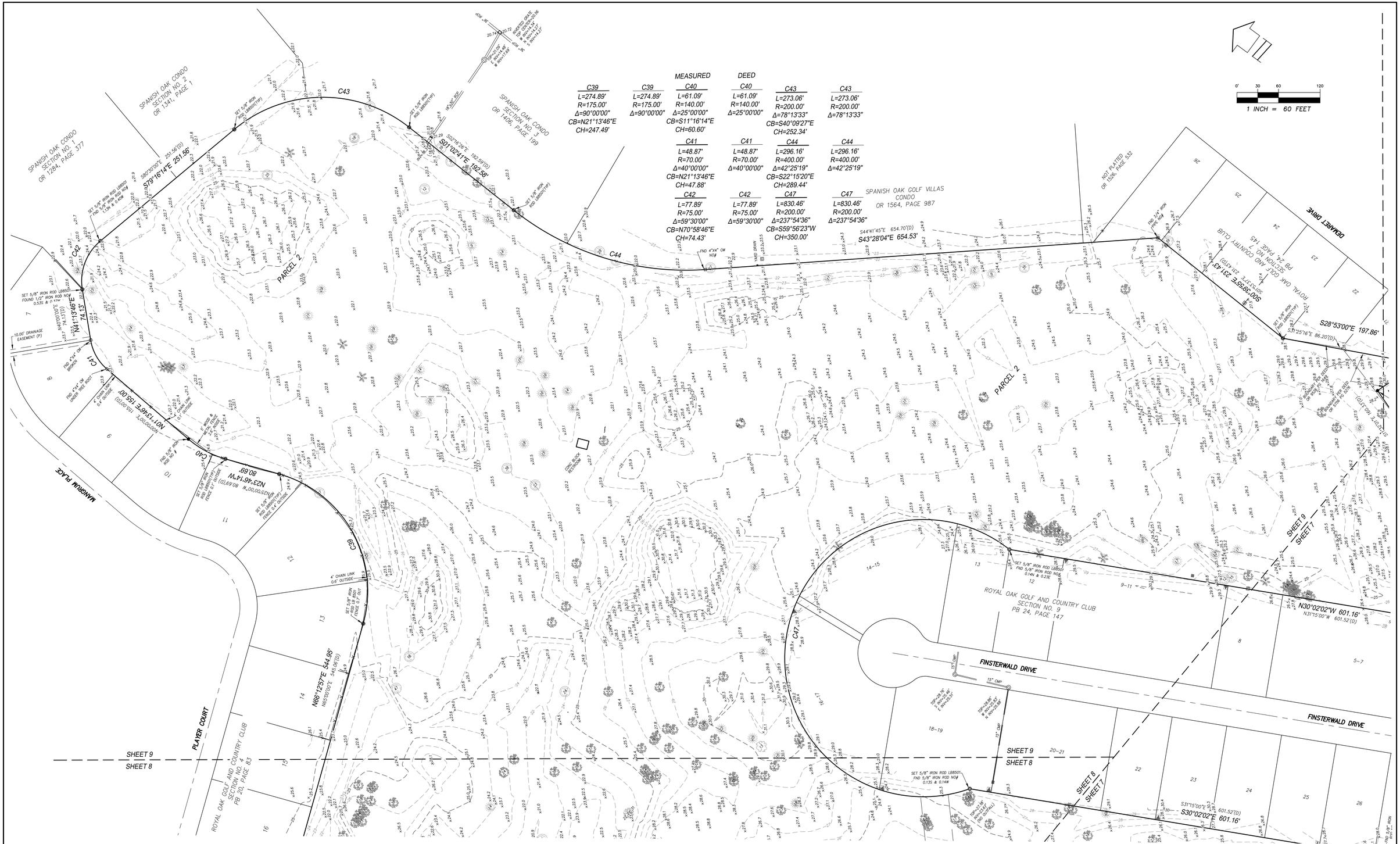
TOP=20.11'
NE INV=14.27'

TOP=20.24'

TOP=20.20'
NE INV=14.27'

TOP=20.20'
NE INV=14.27'

TOP=20.20'
NE INV=14.27



REVISIONS				
FB/PG	DATE	DRAWN	REVISION	CKD

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GEMINI LAKES

SECTION 16, TOWNSHIP 22 SOUTH, RANGE 35 EAST

BREVARD COUNTY, FLORIDA

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TOULON APARTMENTS MS, LLC

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BREVCO / FB 1&2	03/26/2025	104.002
DRAWING DATE	BY / APPROVED	SCALE
03/29/2025	WDD / WDD	1"=60'

9 OF 9

School Board of Brevard County
2700 Judge Fran Jamieson Way • Viera, FL 32940-6699
Dr. Mark J. Rendell, Ed.D., Superintendent

October 3, 2025

Mr. Brad Parrish, AICP
Community Development Director
City of Titusville
555 S. Washington Ave.
Titusville, Florida 32781

RE: Proposed Royal Oaks PD (Gemini Lakes) Development
School Impact Analysis – Capacity Determination CD-2025-17

Dear Mr. Parrish,

We received a completed *School Facility Planning & Concurrency Application* for the referenced development. The subject property is Tax Account 2207847 (Parcel ID: 22-35-16-00-6) containing approximately 149 acres north and south of Country Club Drive in The City of Titusville, Brevard County, Florida. The proposed development includes five hundred fifty-one (551) single-family homes. The proposed development falls within two elementary school boundaries: Apollo and Coquina. The School Impact Analysis of this proposed development has been reviewed assuming approximately half the number of proposed homes will be north of Country Club Drive and half south; therefore, evenly dividing the number of elementary students between the Apollo and Coquina elementary schools attendance boundaries. The following information is provided for your use.

The calculations used to analyze the prospective student impact are consistent with the methodology outlined in Section 13.2 and Amended Appendix "A"-School District Student Generation Multiplier (approved April 11, 2022) of the Interlocal Agreement for Public School Facility Planning & School Concurrency (ILA-2014). The following capacity analysis is performed using capacities/projected students as shown in years 2025-26 to 2029-30 of the Brevard County Public Schools Financially Feasible Plan for School Years 2024-25 to 2029-30 which is attached for reference.

Single-Family Homes	551		
Students Generated	**Student Generation Rates**	**Calculated Students Generated**	**Rounded Number of Students Generated**
Elementary	0.24	132.24	132
Middle	0.07	38.57	39
High	0.12	66.12	66
Total	0.43		**237**

Planning & Project Management
Facilities Services
Phone: (321) 633-1000 x11418 • FAX: (321) 633-4646

An Equal Opportunity Employer

FISH Capacity (including relocatable classrooms) from the Financially Feasible Plan (FFP) Data and Analysis for School Years 2025-26 to 2029-30

School	2025-26	2026-27	2027-28	2028-29	2029-30
Apollo	902	902	902	902	902
Coquina	711	711	711	711	711
Jackson	660	660	660	660	660
Titusville	1,801	1,801	1,801	1,801	1,801

Projected Student Membership

School	2025-26	2026-27	2027-28	2028-29	2029-30
Apollo	579	550	518	494	480
Coquina	472	464	474	468	473
Jackson	465	454	446	434	411
Titusville	1,260	1,206	1,160	1,141	1,104

Students Generated by Newly Issued SCADL Reservations Since FFP

School	2025-26	2026-27	2027-28	2028-29	2029-30
Apollo	-	-	-	-	-
Coquina	-	-	-	-	-
Jackson	-	-	-	-	-
Titusville	-	-	-	-	-

Cumulative Students Generated by Proposed Development

School	2025-26	2026-27	2027-28	2028-29	2029-30
Apollo	13	26	40	53	66
Coquina	13	26	40	53	66
Jackson	8	15	23	31	39
Titusville	13	26	40	53	66

Total Projected Student Membership (includes Cumulative Impact of Proposed Development)

School	2025-26	2026-27	2027-28	2028-29	2029-30
Apollo	592	576	558	547	546
Coquina	485	490	514	521	539
Jackson	473	469	469	465	450
Titusville	1,273	1,232	1,200	1,194	1,170

Projected Available Capacity = FISH Capacity - Total Projected Student Membership

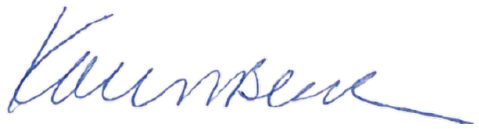
School	2025-26	2026-27	2027-28	2028-29	2029-30
Apollo	310	326	344	355	356
Coquina	226	221	197	190	172
Jackson	187	191	191	195	210
Titusville	528	569	601	607	631

At this time, Apollo and Coquina Elementary, Jackson Middle School and Titusville High School are projected to have enough capacity for the total of projected and potential students from the Royal Oaks PD (Gemini Lakes) development.

This is a **non-binding** review; a *Concurrency Determination* must be performed by the School District prior to a Final Development Order and the issuance of a Concurrency Evaluation Finding of Nondeficiency by the Local Government.

We appreciate the opportunity to review this proposed project. Please let us know if you require additional information.

Sincerely,



Karen M. Black, AICP
Manager – Facilities Planning & Intergovernmental Coordination
Planning & Project Management, Facilities Services

Enclosure: *Brevard County Public Schools Financially Feasible Plan for School Years 2024-2025 to 2029-30*

Copy: Susan Hann, P.E., AICP, Assistant Superintendent of Facility Services
File CD-2025-17

David G. Lindemann, AICP, Director of Planning & Project Management, Facilities Services
File CD-2025-17

Royal Oaks PD (Gemini Lakes) Location Map

Brevard Public Schools

N

Legend

Schools

TYPE

- ELEMENTARY
- MIDDLE
- JR SR HIGH
- HIGH
- CHARTER
- parcels

Royal Oaks PD (Gemini Lakes)
CD-2025-17
551 Single-Family Homes

Titusville High School

Apollo Elementary School

Andrew Jackson Middle

Coquina Elementary School

Schools Affected by Development:
Apollo Elementary School
Coquina Elementary School
Andrew Jackson Middle School
Titusville High School

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap contributors, and the GIS User Community

Planning & Project Management
Drawn By: Karen Black

0 0.17 0.35 0.7 1.05 1.4
Miles

Brevard County Public Schools
Financially Feasible Plan To Maintain Utilization Rates Lower than the 100% Level of Service
Data and Analysis for School Years 2024-25 to 2029-30

Summary	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30
Highest Utilization Elementary Schools:	105%	99%	100%	100%	100%	100%
Highest Utilization Middle Schools:	83%	100%	99%	97%	97%	99%
Highest Utilization Jr / Sr High Schools:	81%	81%	80%	80%	77%	75%
Highest Utilization High Schools:	95%	97%	98%	100%	99%	100%

				School Year 2024-25			School Year 2025-26			School Year 2026-27			School Year 2027-28			School Year 2028-29			School Year 2029-30		
School	Type	Grades	Utilization Factor	FISH Capacity	10/14/24 Member-ship	Total Capacity Utilization	Future FISH Capacity	Student Projection	Total Capacity Utilization	Future FISH Capacity	Student Projection	Total Capacity Utilization	Future FISH Capacity	Student Projection	Total Capacity Utilization	Future FISH Capacity	Student Projection	Total Capacity Utilization	Future FISH Capacity	Student Projection	Total Capacity Utilization
Elementary School Concurrency Service Areas																					
Allen	Elementary	PK-6	100%	751	620	83%	751	635	85%	751	650	87%	751	680	91%	751	695	93%	751	710	95%
Andersen	Elementary	K-6	100%	757	481	64%	757	457	60%	757	455	60%	757	419	55%	757	401	53%	757	390	52%
Apollo	Elementary	K-6	100%	902	596	66%	902	579	64%	902	550	61%	902	518	57%	902	494	55%	902	480	53%
Atlantis	Elementary	PK-6	100%	739	653	88%	739	632	86%	739	613	83%	739	599	81%	739	590	80%	739	578	78%
Audubon	Elementary	PK-6	100%	761	415	55%	761	420	55%	761	422	55%	761	413	54%	761	398	52%	761	386	51%
Cambridge	Elementary	PK-6	100%	787	477	61%	787	491	62%	787	507	64%	787	538	68%	787	556	71%	787	566	72%
Cape View	Elementary	PK-6	100%	570	273	48%	570	263	46%	570	264	46%	570	279	49%	570	277	49%	570	276	48%
Carroll	Elementary	K-6	100%	751	636	85%	751	624	83%	751	607	81%	751	576	77%	751	546	73%	751	488	65%
Challenger 7	Elementary	PK-6	100%	573	431	75%	573	408	71%	573	393	69%	573	360	63%	573	345	60%	573	346	60%
Columbia	Elementary	PK-6	100%	751	573	76%	751	638	85%	751	682	91%	751	732	97%	795	792	100%	839	836	100%
Coquina	Elementary	K-6	100%	711	465	65%	711	472	66%	711	464	65%	711	474	67%	711	468	66%	711	473	67%
Creel	Elementary	PK-6	100%	1,114	540	48%	1,114	536	48%	1,114	531	48%	1,114	530	48%	1,114	511	46%	1,114	509	46%
Croton	Elementary	PK-6	100%	795	464	58%	795	451	57%	795	470	59%	795	469	59%	795	482	61%	795	488	61%
Discovery	Elementary	PK-6	100%	980	680	69%	980	716	73%	980	752	77%	980	789	81%	980	791	81%	980	809	83%
Endeavour	Elementary	PK-6	100%	968	744	77%	968	751	78%	968	750	77%	968	766	79%	968	729	75%	968	708	73%
Enterprise	Elementary	K-6	100%	729	597	82%	729	585	80%	729	563	77%	729	557	76%	729	557	76%	729	554	76%
Fairglen	Elementary	PK-6	100%	789	466	59%	789	460	58%	789	470	60%	789	464	59%	789	463	59%	789	451	57%
Gemini	Elementary	K-6	100%	711	410	58%	711	401	56%	711	374	53%	711	349	49%	711	332	47%	711	309	43%
Golfview	Elementary	PK-6	100%	777	448	58%	777	474	61%	777	480	62%	777	490	63%	777	500	64%	777	517	67%
Harbor City	Elementary	PK-6	100%	629	390	62%	629	399	63%	629	428	68%	629	452	72%	629	464	74%	629	458	73%
Holland	Elementary	PK-6	100%	605	444	73%	605	416	69%	605	408	67%	605	379	63%	605	364	60%	605	351	58%
Imperial Estates	Elementary	K-6	100%	729	607	83%	729	628	86%	729	607	83%	729	598	82%	729	574	79%	729	562	77%
Indialantic	Elementary	K-6	100%	798	664	83%	798	646	81%	798	641	80%	798	599	75%	798	606	76%	798	584	73%
Jupiter	Elementary	PK-6	100%	930	856	92%	974	946	97%	1,018	979	96%	1,062	1,048	99%	1,106	1,059	96%	1,150	1,149	100%
Lockmar	Elementary	PK-6	100%	892	573	64%	892	567	64%	892	585	66%	892	586	66%	892	591	66%	892	595	67%
Longleaf	Elementary	PK-6	100%	790	579	73%	790	562	71%	790	549	69%	790	524	66%	790	528	67%	790	535	68%
Manatee	Elementary	K-6	100%	998	910	91%	998	900	90%	998	930	93%	998	941	94%	998	932	93%	998	887	89%
McAuliffe	Elementary	PK-6	100%	838	687	82%	838	705	84%	838	726	87%	838	745	89%	838	765	91%	838	777	93%
Meadowlane Intermediate	Elementary	3-6	100%	1,004	778	77%	1,004	764	76%	1,004	742	74%	1,004	712	71%	1,004	704	70%	1,004	708	71%
Meadowlane Primary	Elementary	K-6	100%	824	604	73%	824	553	67%	824	565	69%	824	596	72%	824	598	73%	824	591	72%
Mila	Elementary	PK-6	100%	707	382	54%	707	384	54%	707	377	53%	707	367	52%	707	329	47%	707	319	45%
Mims	Elementary	PK-6	100%	725	395	54%	725	420	58%	725	442	61%	725	443	61%	725	460	63%	725	476	66%
Oak Park	Elementary	PK-6	100%	968	473	49%	968	472	49%	968	490	51%	968	480	50%	968	482	50%	968	495	51%
Ocean Breeze	Elementary	PK-6	100%	654	499	76%	654	488	75%	654	463	71%	654	448	69%	654	418	64%	654	395	60%
Palm Bay Elem	Elementary	PK-6	100%	983	583	59%	983	585	60%	983	601	61%	983	605	62%	983	591	60%	983	587	60%
Pinewood	Elementary	PK-6	100%	613	501	82%	613	519	85%	613	535	87%	613	537	88%	613	541	88%	613	551	90%
Port Malabar	Elementary	PK-6	100%	852	628	74%	852	662	78%	852	679	80%	852	725	85%	852	797	94%	852	820	96%
Quest	Elementary	PK-6	100%	932	690	74%	932	675	72%	932	674	72%	932	662	71%	932	637	68%	932	630	68%
Riviera	Elementary	PK-6	100%	733	721	98%	777	765	98%	821	814	99%	887	883	100%	931	911	98%	931	900	97%
Roosevelt	Elementary	K-6	100%	599	275	46%	599	295	49%	599	294	49%	599	294	49%	599	305	51%	599	314	52%
Sabal	Elementary	PK-6	100%	785	493	63%	785	495	63%	785	499	64%	785	501	64%	785	476	61%	785	457	58%
Saturn	Elementary	PK-6	100%	998	622	62%	998	634	64%	998	633	63%	998	622	62%	998	600	60%	998	579	58%
Sea Park	Elementary	PK-6	100%	461	308	67%	461	308	67%	461	313	68%	461	310	67%	461	305	66%	461	301	65%
Sherwood	Elementary	PK-6	100%	609	494	81%	609	511	84%	609	520	85%	609	522	86%	609	522	86%	609	532	87%
Sunrise	Elementary	PK-6	100%	957	907	95%	1,001	984	98%	1,045	1,029	98%	1,133	1,120	99%	1,243	1,236	99%	1,353	1,338	99%
Suntree	Elementary	K-6	100%	755	585	77%	755	574	76%	755	555	74%	755	532	70%	755	530	70%	755	536	71%
Surfside	Elementary	K-6	100%	541	404	75%	541	412	76%	541	410	76%	541	392	72%	541	391	72%	541	390	72%
Tropical	Elementary	K-6	100%	910	569	63%	910	550	60%	910	540	59%	910	532	58%	910	498	55%	910	490	54%
Turner	Elementary	PK-6	100%	874	599	69%	874	669	77%	874	768	88%	896	871	97%	1,006	988	98%	1,072	1,065	99%
University Park	Elementary	PK-6	100%	811	529	65%	811	548	68%	811	612	75%	811	647	80%	811	649	80%	811	665	82%
Viera Elem	Elementary	K-6	100%	1,030	885	86%	1,030	960	93%	1,030	979	95%	1,030	997	97%	1,030	1,001	97%	1,030	1,002	97%
Westside	Elementary	K-6	100%	941	984	105%	1,051	1,041	99%	1,117	1,112	100%	1,227	1,208	98%	1,337	1,296	97%	1,425	1,411	99%
Williams	Elementary	PK-6	100%	715	436	61%	715	395	55%	715	387	54%	715	371	52%	715	353	49%	715	329	46%
Elementary Totals				**42,106**	**30,023**		**42,348**	**30,425**		**42,546**	**30,883**		**42,876**	**31,251**		**43,338**	**31,428**		**43,690**	**31,653**	

School	Type	Grades	Utilization Factor	School Year 2024-25			School Year 2025-26			School Year 2026-27			School Year 2027-28			School Year 2028-29			School Year 2029-30		
				FISH Capacity	10/14/24 Member-ship	Total Capacity Utilization	Future FISH Capacity	Student Projection	Total Capacity Utilization	Future FISH Capacity	Student Projection	Total Capacity Utilization	Future FISH Capacity	Student Projection	Total Capacity Utilization	Future FISH Capacity	Student Projection	Total Capacity Utilization	Future FISH Capacity	Student Projection	Total Capacity Utilization
Middle School Concurrency Service Areas																				
Central	Middle	7-8	90%	1,514	1,058	70%	1,514	1,063	70%	1,514	1,048	69%	1,514	1,101	73%	1,514	1,161	77%	1,514	1,158	76%
DeLaura	Middle	7-8	90%	960	548	57%	960	440	46%	960	419	44%	960	446	46%	960	430	45%	960	411	43%
Hoover	Middle	7-8	90%	680	473	70%	680	465	68%	680	451	66%	680	480	71%	680	490	72%	680	486	71%
Jackson	Middle	7-8	90%	660	505	77%	660	465	70%	660	454	69%	660	446	68%	660	434	66%	660	411	62%
Jefferson	Middle	7-8	90%	873	479	55%	873	481	55%	873	450	52%	873	437	50%	873	513	59%	873	528	60%
Johnson	Middle	7-8	90%	1,064	577	54%	1,064	602	57%	1,064	633	59%	1,064	682	64%	1,064	718	67%	1,064	696	65%
Kennedy	Middle	7-8	90%	869	449	52%	869	355	41%	869	327	38%	869	362	42%	869	368	42%	869	348	40%
Madison	Middle	7-8	90%	781	446	57%	781	431	55%	781	412	53%	781	463	59%	781	482	62%	781	436	56%
McNair	Middle	7-8	90%	616	262	43%	616	259	42%	616	258	42%	616	282	46%	616	324	53%	616	322	52%
Southwest	Middle	7-8	90%	1,281	1,001	78%	1,281	1,046	82%	1,281	1,073	84%	1,281	1,224	96%	1,439	1,403	97%	1,459	1,448	99%
Stone	Middle	7-8	90%	1,076	556	52%	1,076	523	49%	1,076	584	54%	1,076	612	57%	1,076	651	61%	1,076	786	73%
Viera Middle	Middle	7-8	90%	896	742	83%	955	954	100%	955	943	99%	955	925	97%	955	903	95%	955	898	94%
Middle Totals				**11,270**	**7,096**		**11,329**	**7,084**		**11,329**	**7,052**		**11,329**	**7,460**		**11,487**	**7,877**		**11,507**	**7,928**	
Junior / Senior High School Concurrency Service Areas																					
Cocoa	Jr / Sr High	PK, 7-12	90%	2,085	1,435	69%	2,085	1,371	66%	2,085	1,320	63%	2,085	1,270	61%	2,085	1,306	63%	2,085	1,317	63%
Cocoa Beach	Jr / Sr High	7-12	90%	1,464	1,049	72%	1,464	982	67%	1,464	966	66%	1,464	912	62%	1,464	894	61%	1,464	859	59%
Space Coast	Jr / Sr High	7-12	90%	1,852	1,505	81%	1,852	1,500	81%	1,852	1,482	80%	1,852	1,476	80%	1,852	1,433	77%	1,852	1,382	75%
Jr / Sr High Totals				**5,401**	**3,989**		**5,401**	**3,853**		**5,401**	**3,768**		**5,401**	**3,658**		**5,401**	**3,633**		**5,401**	**3,558**	
Senior High School Concurrency Service Areas																					
Astronaut	High	9-12	95%	1,451	1,054	73%	1,451	1,047	72%	1,451	1,034	71%	1,451	984	68%	1,451	953	66%	1,451	970	67%
Bayside	High	9-12	95%	2,358	2,126	90%	2,358	2,173	92%	2,358	2,304	98%	2,429	2,427	100%	2,572	2,554	99%	2,786	2,784	100%
Eau Gallie	High	PK, 9-12	95%	2,211	1,400	63%	2,211	1,416	64%	2,211	1,429	65%	2,211	1,446	65%	2,211	1,530	69%	2,211	1,588	72%
Heritage	High	9-12	95%	2,314	1,992	86%	2,314	1,969	85%	2,314	1,979	86%	2,314	1,922	83%	2,314	1,923	83%	2,314	1,969	85%
Melbourne	High	9-12	95%	2,370	2,210	93%	2,370	2,202	93%	2,370	2,199	93%	2,370	2,214	93%	2,370	2,218	94%	2,370	2,309	97%
Merritt Island	High	PK, 9-12	95%	1,966	1,445	73%	1,966	1,328	68%	1,966	1,272	65%	1,966	1,231	63%	1,966	1,149	58%	1,966	1,135	58%
Palm Bay	High	PK, 9-12	95%	2,642	1,366	52%	2,642	1,326	50%	2,642	1,307	49%	2,642	1,325	50%	2,642	1,410	53%	2,642	1,435	54%
Rockledge	High	9-12	95%	1,836	1,577	86%	1,836	1,579	86%	1,836	1,592	87%	1,836	1,555	85%	1,836	1,526	83%	1,836	1,560	85%
Satellite	High	PK, 9-12	95%	1,551	1,436	93%	1,551	1,373	89%	1,551	1,317	85%	1,551	1,232	79%	1,551	1,213	78%	1,551	1,178	76%
Titusville	High	9-12	95%	1,801	1,277	71%	1,801	1,260	70%	1,801	1,206	67%	1,801	1,160	64%	1,801	1,141	63%	1,801	1,104	61%
Viera	High	PK, 9-12	95%	2,461	2,333	95%	2,461	2,379	97%	2,461	2,375	97%	2,461	2,422	98%	2,461	2,421	98%	2,461	2,435	99%
High Totals				**22,961**	**18,216**		**22,961**	**18,052**		**22,961**	**18,014**		**23,032**	**17,918**		**23,175**	**18,038**		**23,389**	**18,467**	
Schools of Choice (Not Concurrency Service Areas)																					
Freedom 7	Elementary	K-6	100%	475	408	86%	475	414	87%	475	414	87%	475	414	87%	475	414	87%	475	414	87%
Stevenson	Elementary	K-6	100%	569	481	85%	569	486	85%	569	486	85%	569	486	85%	569	486	85%	569	486	85%
South Lake	Elementary	K-6	100%	639	469	73%	639	496	78%	639	496	78%	639	496	78%	639	496	78%	639	496	78%
West Melbourne	Elementary	K-6	100%	654	605	93%	760	625	82%	760	625	82%	760	625	82%	760	625	82%	760	625	82%
Edgewood	Jr / Sr High	7-12	90%	1,077	940	87%	1,077	945	88%	1,077	945	88%	1,077	945	88%	1,077	945	88%	1,077	945	88%
West Shore	Jr / Sr High	7-12	90%	1,264	947	75%	1,264	945	75%	1,264	945	75%	1,264	945	75%	1,264	945	75%	1,264	945	75%
Schools of Choice				**4,678**	**3,850**		**4,784**	**3,911**		**4,784**	**3,911**		**4,784**	**3,911**		**4,784**	**3,911**		**4,784**	**3,911**	
Brevard Totals				**86,416**	**63,174**		**86,823**	**63,325**		**87,021**	**63,628**		**87,422**	**64,198**		**88,185**	**64,887**		**88,771**	**65,517**	

Notes

1. FISH Capacity is the sum of the factored permanent capacity and the factored relocatable capacity. Permanent and relocatable capacities for 2024-25 are reported from the FISH database as of November 13, 2024.
2. Student Membership is reported from the Fall Final Membership Count (10/14/2024).
3. Davis Demographics SchoolSite Enrollment Forecasting Extension for ArcGIS estimates future student populations by analyzing the following data:
   - Development Projections from Brevard County Local Government Jurisdictions
   - Brevard County School Concurrency Student Generation Multipliers (SGM)
   - Fall Membership student addresses and corresponding concurrency service areas
   - Student Mobility Rates / Cohort Survival Rates
   - Brevard County Birth rates by zip code
4. Davis Demographics estimates are then adjusted using the following factors:
   - PK (Pre-Kindengarten) and AH (daycare for students with infants) enrollment number are assumed to be constant
   - Current From/To attendance patterns are assumed to remain constant.
   - Nongeocoded student addresses are assumed to continue in their attendance schools.
   - Charter School Growth.
5. In order to maintain utilization rates lower than the 100% Level of Service, Permanent Capacity and Relocatable Classrooms are assumed to add future student stations as necessary.
6. If student projections are accurate, the school board could add additional classroom capacity, implement attendance boundary changes, or add relocatable classrooms. A south area elementary school is planned for the future growth, but the exact timing hasn't been established.
   If only relocatable classrooms are used for the next 5 years, the following changes would be needed to accommodate projected growth. These schools are being analyzed for the best options to accommodate additional students.
   - Primary relocatable classrooms (Grades K-3) = 18 student stations, Intermediate (Grades 4-8) relocatable classrooms = 22 student stations, and High School (Grades 9-12) relocatable classrooms = 25 student stations
   For school year 2025-26, a total of 13 intermediate classrooms are projected for Jupiter (2), Riviera (2), Sunrise (2), and Westside (4) Elementary Schools and Viera Middle School (3).
   For school year 2026-27, a total of 9 intermediate classrooms are projected for Jupiter (2), Riviera (2), Sunrise (2), and Westside (3) Elementary Schools.
   For school year 2027-28, a total of 15 intermediate classrooms are projected for Jupiter (2), Riviera (3), Sunrise (4), Turner (1) and Westside (5) Elementary Schools and 3 High School relocatable classrooms are proposed for Bayside High School.
   For school year 2028-29, a total of 29 intermediate classrooms are projected for Columbia (2), Jupiter (2), Riviera (2), Sunrise (5), Turner (5), and Westside (5) Elementary Schools, Southwest Middle School (8) and 6 High School relocatable classrooms are proposed for Bayside High Schoo
   For school year 2029-30, a total of 17 intermediate classrooms are projected for Columbia (2), Jupiter (2), Sunrise (5), Turner (3), and Westside (4) Elementary Schools, Southwest Middle School (1) and 9 High School relocatable classrooms are proposed for Bayside.
9. A classroom addition is planned to open at West Melbourne School of Science for 2025-26. The factored capacity is adjusted for the proposed 106 student stations.

Florida Environmental Consulting, Inc.

Environmental Impact Report

For:

Gemini Lakes



Prepared for:

MBV Engineering, Inc.
1250 W. Eau Gallie Blvd, Suite H
Melbourne, FL 32935

3/24/2025

Timothy E. Maslin, C.E.S. / C.E.C.
Certification #77283

FEC Job #22-200

1835 20th Street • Vero Beach, Florida 32960
Phone: 772-299-4791 • Fax: 772-778-3617 • E-mail: TimM@FL-Env.com

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1.0 Executive Summary

Gemini Lakes:

- is one parcel along Country Club Drive in Titusville, Florida.
- consists of 149.67 acres of partially improved land.
- has a Golf Course property use designation.
- has been in use as a golf course since the 1960's, at which time the property was cleared, excavated, and graded.
- is currently proposed for residential land development improvements.
- contains mostly disturbed excessively drained sandy soils.
- is at an elevation of approximately 25 ft.
- is not in a floodplain except for the onsite stormwater retention ponds which are in flood zones AE-18.7 and AE-19.7
- supports remnant native live oaks, laurel oaks, slash pines and cabbage palms.
- does support the gopher tortoise.
- may support the eastern indigo snake and American alligator.
- does support the sandhill crane and may support various wading birds.
- does not contain jurisdictional wetlands, nor Waters of the United States, but does support numerous stormwater retention ponds.
- land development improvements unless properly planned and permitted may cause adverse environmental impacts to native trees and protected species.
    - Tree preservation is recommended as best practical.
    - A formal gopher tortoise survey and relocation permitting is recommended prior to any proposed site work along with the standard protection measures for the eastern indigo snake.
    - A site inspection for crane and wading bird nests as well as alligators is recommended prior to any proposed site work.

Environmental Impact Report

1.1 Objective

In March of 2025 Environmental Specialists from ***Florida Environmental Consulting Inc***. provided this environmental impact study for the **Gemini Lakes** property. The objective of this study was to assess and report on the baseline environmental condition of the subject site as well as to discuss how developing this site may impact the environment.

1.2 Introduction

The subject site is **Parcel ID 22-35-16-00-6** and is in section 16 of township 22, range 35 of **Brevard County, Florida**. More specifically, the parcel is along Country Club Drive in the **City of Titusville**. The parcel sums 149.67 acres of partially improved land with a golf course land use designation at 28°34'38.3"N 80°49'35.5"W. This parcel has been in use as a golf course since the 1960's, at which time the property was cleared, excavated, and graded for such use. The parcel is currently abandoned and proposed for residential land development improvements. Please see the maps and other reference materials in the appendix of this report.

1.3 Materials and Methods

The site assessment included preliminary research of the site and surrounding area to determine what type of ecological community to expect as well as what types of individual flora and fauna may be found on site. This preliminary research included; Geographic Information Systems (GIS) Mapping, aerial interpretation, Florida Department of Environmental Protection (FDEP) Environmental Resource Analysis, and assessing the potential for species and habitats listed by the City, County, Saint Johns River Water Management District (SJRWMD), Florida Natural Areas Inventory (FNAI), Florida Fish and Wildlife Conservation Commission (FWC), and the U.S. Fish and Wildlife Service (FWS).

The site assessment also included traversing and observing communities adjacent to and within the site. During the site assessment community types, vegetation, wildlife, and other pertinent observations were noted.

1.4 Soils

According to the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) the parcel contains 6 major soil types more specifically described as:

Soil 4, *Candler fine sand*, characterized as excessively drained sand with a water table typically more than 80 inches below the surface with no typical frequency of ponding or flooding, totaling 1.22 acres.

Soil 5, *Candler-Urban land complex*, characterized as excessively drained sand with a water table typically more than 80 inches below the surface with no typical frequency of ponding or flooding, totaling 6.59 acres.

Soil 10, *Canaveral-Urban land complex*, characterized as moderately well drained sand with a water table typically 30-60 inches below the surface with no typical frequency of ponding or flooding, totaling 1.74 acres.

Soil 28, *Immokalee sand, 0 to 2 percent slopes*, characterized as poorly drained sand with a water table typically 6-18 inches below the surface with no typical frequency of ponding or flooding, totaling 0.19 acres.

Soil 45, *Paola-Urban land complex, 0 to 8 percent slopes*, characterized as excessively drained sand with a water table typically more than 80 inches below the surface with no typical frequency of ponding or flooding, totaling 1.66 acres.

Soil 52, *Quartzipsamments, smoothed*, characterized as excessively drained sand with a water table typically 24-60 inches below the surface with no typical frequency of ponding or flooding, totaling 120.64 acres.

As mentioned above, the parcel has been in use as a golf course since the 1960's when the site was cleared, excavated, and graded. As such it should be noted that these soils are disturbed. Please see the soils map in the appendix of this report for the general location of these soils.

1.5 Hydrology

The parcel is in hydrologic basin 18, the *St. Johns River (Canaveral Marshes to Wekiva)* basin, and the United States Geological Survey (USGS) Topographic Map in the Appendix shows the area as varying in topography, with stormwater runoff sheet flowing towards the onsite stormwater retention ponds. Using the North American Vertical Datum of 1983 (NAD83) the natural ground grade is at an elevation of approximately 25 feet and according to the Flood Hazard Map in the Appendix, except for the onsite stormwater retention ponds that are in flood zones AE-18.7 and AE-19.7, this property is not in a flood zone.

Based on the apparent lack of a permanent downstream direct connection to Waters of the United States, onsite stormwater retention ponds should not be considered Waters of the United States.

1.6 Flora

As noted in the introduction the parcel totals approximately 149.67 acres of partially developed land. As such the Cooperative Land Cover Classification for 130.42-acre majority of the parcel is considered 182132, *Golf Courses*. The remaining 19.25 acres would be considered 3220, *Artificial Impoundments*/*Reservoirs*. Please see the Aerial LULC Map and Site Photos in the Appendix.

The majority of the parcel was cleared, excavated, and graded in the 1960s and has since been routinely maintained and supports mostly miscellaneous golf course grasses and forbs.

However, the parcel does still supports some remnant native live oaks (*Quercus virginiana*), laurel oaks (*Quercus laurifolia*), cabbage palms (*Sabal palmetto*), slash pines (*Pinus elliottii*), muscadine grape (*Vitis rotundifolia*), as well as invasive Brazilian pepper (*Schinus terebinthifolius*), and devil's pothos *(Epipremnum aureum*).

Additionally, there was some native hydrophytic vegetation present in and along the onsite stormwater retention ponds which include some red maples (*Acer rubrum*), cattails (*Typha spp*.), swamp fern (*Blechnum serrulatum*), primrose willow (*Ludwiga spp*.), as well as other miscellaneous grasses and forbs.

No species of flora was observed on site listed by the County, Florida Natural Areas Inventory, Florida Fish and Wildlife Conservation Commission, or U.S. Fish and Wildlife Service, as Endangered, Threatened, or a Species of Special Concern.

Please see the Cooperative Land Cover Classification Map and Site Photos in the appendix of this report.

1.7 Fauna

Similarly, to the flora, the fauna was found somewhat limited due to historic use but included red-shouldered hawks (*Buteo lineatus*), blue jays (*Cyanocitta cristata*), mockingbird (*Mimus polyglottos*), cardinals (*Cardinalis cardinalis*), white ibis (*Eudocimus albus*), sandhill cranes (*Grus canadensis*), swallowtail kites (*Elanoides forficatus*), ants (*Formicidae spp*.), swallowtail butterflies (*Papilio polyxenes*), spiders (*Arachnida spp*.), and bees (*Apidae spp.*), as well as exotic brown anoles (*Anolis sagrei*).

Additionally, there were multiple potentially occupied gopher tortoise (*Gopherus polyphemus*) burrows observed throughout the site, specifically on the higher elevation mounds and sand traps. The gopher tortoise is a species listed by the FWC and is protected along with their burrows.

No other species of fauna listed by the County, Florida Natural Areas Inventory, Florida Fish and Wildlife Conservation Commission, or U.S. Fish and Wildlife Service, as Endangered, Threatened, or a Species of Special Concern, was observed on site. Specifically, the site does

not contain a scrub jay territory nor habitat, and is over one mile from the nearest known scrub jay territory.

Please see the Site Photos in the Appendix of this report.

1.8 Wetlands

Based on topography and aerial interpolation in conjunction with the soils survey publication, and given the existing stormwater retention ponds, wetlands were not suspected and this was confirmed in the field.

There are, however, numerous onsite ponds throughout the golf course that were excavated for stormwater retention and for golf course fill material. These stormwater retention ponds are exempt from the wetland and natural surface water criteria in F.A.C. 373.414 pursuant to F.A.C. 62-340.700(2)(B). Specifically, this grants an exemption from the application of state water quality standards set forth in F.A.C. 373.414 to works, impoundments, reservoirs, and other water courses in use for stormwater treatment constructed before a permit was required, as is the case for the onsite ponds.

Further, based on the lack of wetlands and permanent downstream hydrologic connections, Waters of the United States are not present onsite. Please see the National Wetland Inventory Map in the Appendix of this report.

1.9 Summary and Discussion

In summary, the **Gemini Lakes** property is one parcel along Country Club Drive in Titusville, Florida, that consists of 149.67 acres of partially improved land. The parcel has a Golf Course land use designation and has been in use as a golf course since the 1960's, at which time it was cleared, excavated, and graded for such use. Currently, the parcel is proposed for residential land development improvements. The parcel contains mostly disturbed excessively drained sandy soils, at an elevation of approximately 25 feet, and is generally not in the floodplain except for the onsite stormwater retention ponds which are in flood zones AE-18.7 and AE-19.7. The parcel also supports some remnant native live oaks, laurel oaks, slash pines and cabbage palms and the protected gopher tortoise. Conversely, the parcel does not contain jurisdictional wetlands, nor Waters of the United States.

For discussion, as stated above the parcel does contain some remnant native live oaks, laurel oaks, slash pines and cabbage palms, some of which are beautiful old growth trees, and though these trees may be cleared with a permit, micro-site-planning should be utilized in an effort to save such trees as best practical. Canopy preservation regulations may not be applicable to a golf course, however removal of native trees 14 inches and greater may require preservation or mitigation.

Also, this parcel does support the gopher tortoise. Any proposed impacts within 25' of a gopher tortoise burrow will require special permitting from the FWC, as well as the relocation of any tortoise found along with associated mitigation fees. Further, based on potential co-habitation, the incorporation of standard protection measures for the eastern indigo snake may also be applicable. If suitable habitat is left undisturbed after site planning, some tortoises may remain on site. Gopher tortoises may be surveyed any time, however, gopher tortoise permitting, mitigation, and relocation should be initiated at least 90 days prior to any future site work activity including bush-hogging and geotechnical work requiring clearing.

Additionally, based on the future potential of encountering these species nesting, a seasonal site inspection for sandhill crane and wading bird nests, as well as alligators will also be required prior to any proposed future site work to ensure these species are not impacted.

Finally, this parcel does support numerous stormwater retention ponds that do not qualify as wetlands, nor Waters of the United States. While impacts to such man-made ponds will not require State mitigation, the establishment of the seasonal high water line elevation, or alternatively the delineation via the location of the top-of-bank, of these ponds will be required during the planning and engineering process to maintain flood plain management and ensure treatment of future runoff.

1.10 Conclusion and Recommendations

In conclusion, land development improvements to the **Gemini Lakes** parcel, unless properly planned and permitted, may cause adverse environmental impacts to native trees and protected species.

As such during the planning and design phase of this potential land development project, canopy tree preservation is recommended as best practical. Additionally, a gopher tortoise survey, permitting, and relocation is recommended at least 90 days prior to any additional future clearing, grading, or construction commencement along with incorporating the standard protection measures for the eastern indigo snake. Similarly, a site inspection for sandhill crane and wading bird nests as well as alligators is recommended prior to any proposed future site work.

Please contact Florida Environmental Consulting, Inc. with any questions or comments regarding this report or for any additional specific consulting.

1.11 Qualifications of Individual Preparing Report

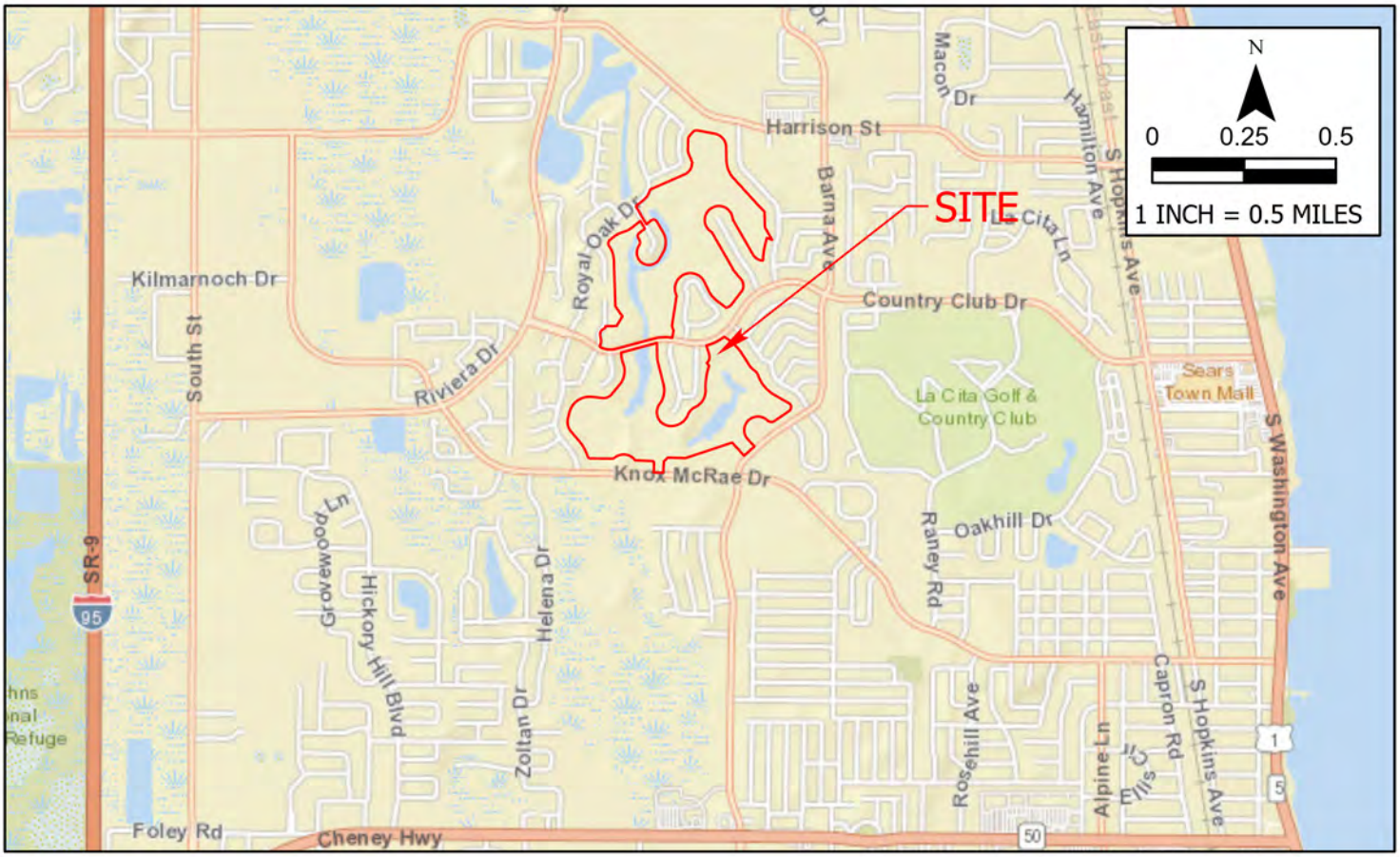
Florida Environmental Consulting is a Florida registered environmental consulting firm, the person who prepared this report is the president of the company, and his signature and seal on the cover of this document demonstrate that he is in responsible charge of the information provided. He is a Certified Environmental Consultant and Environmental Specialist. Additionally, he has a Bachelor of Science in Environmental Science from the University of

Florida with a minor in Natural Resource Management, along with 25 years of experience. Finally, he is a member of the National Association of Environmental Professionals, and the Environmental Assessment Association where a code of ethics and personal commitment to quality work is upheld.

3.0 Appendix

3.1 Location Map
3.2 Soils Map
3.3 Topographic Map
3.4 Flood Map
3.5 Cooperative Land Cover Classification Map
3.6 National Wetland Inventory Map
3.7 LIDAR
3.8 Scrub Jay
3.9 Historic Aerials
3.10 Site Photos





LOCATION	GEMINI LAKES	Florida Environmental Consulting, Inc.	JOB NO. FEC-22-200 DESIGNED DRAWN CHECKED DATE SCALE	Revisions	Date



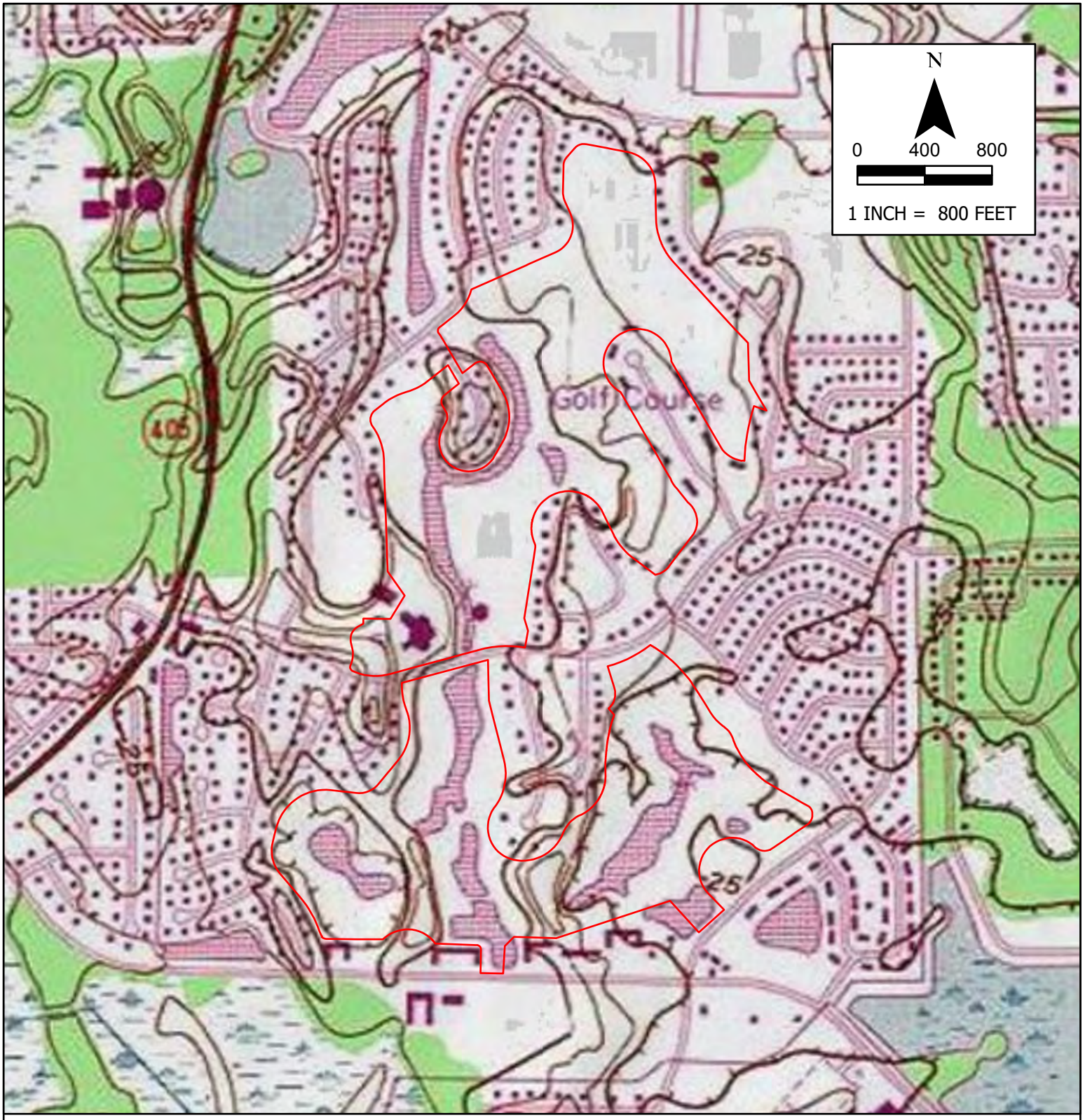
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- Subject Site 149.67

Florida Soils

- Anclote sand
- Anclote sand, depressional
- Canaveral-Urban land complex 1.74 Acres
- Candler fine sand 1.22 Acres
- Candler-Urban land complex 6.59 Acres
- Cocoa sand
- Copeland-Bradenton-Wabasso complex, limestone substratum
- Everglades mucky peat, drained
- Immokalee sand 0.19 Acres
- Myakka sand
- Myakka-Urban land complex
- Paola fine sand, 0 to 5 percent slopes
- Paola fine sand, 5 to 12 percent slopes
- Paola-Urban land complex, 0 to 8 percent slopes 1.66 Acres
- Pomello sand
- Pomello-Urban land complex
- Pompano sand
- Quartzipsamments, smoothed 120.64 Acres
- Satellite sand
- Tavares fine sand
- Terra Ceia muck, frequently flooded
- Tomoka muck, drained
- Tomoka muck, undrained
- Wabasso sand
- Water

SOILS	GEMINI LAKES	Florida Environmental Consulting, Inc. 1835 20th Street• Vero Beach, Florida 32960 • 772-299-4791 • TimM@FL-Env.com	JOB NO. FEC-22-200 DESIGNED DRAWN CHECKED DATE March 2024 SCALE	Revisions / Date



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TOPOGRAPHIC	GEMINI LAKES	Florida Environmental Consulting, Inc. 1835 20th Street• Vero Beach, Florida 32960 • 772-299-4791 • TimM@FL-Env.com	JOB NO. FEC-22-200 DESIGNED DRAWN CHECKED DATE March 2024 SCALE	Revisions / Date



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TOPOGRAPHIC	GEMINI LAKES	Florida Environmental Consulting, Inc. 1835 20th Street• Vero Beach, Florida 32960 • 772-299-4791 • TimM@FL-Env.com	JOB NO. FEC-22-200 DESIGNED DRAWN CHECKED DATE March 2024 SCALE	Revisions / Date



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SFHA / Flood Zone Boundary

FLOOD HAZARD	GEMINI LAKES	Florida Environmental Consulting, Inc. 1835 20th Street• Vero Beach, Florida 32960 • 772-299-4791 • TimM@FL-Env.com	JOB NO. FEC-22-200 DESIGNED DRAWN CHECKED DATE March 2024 SCALE	Revisions / Date



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- Subject Site 149.67

Florida Cooperative Land Cover

- Artificial Impoundment/Reservoir 19.25 Acres
- Commercial and Services
- Cypress
- Golf courses 130.42 Acres
- High Intensity Urban
- Institutional
- Marshes
- Mixed Hardwood-Coniferous
- Mixed Hardwood-Coniferous Swamps
- Mixed Scrub-Shrub Wetland
- Mixed Wetland Hardwoods
- Residential, High Density > 5 Dwelling Units/AC
- Residential, Low Density
- Residential, Med. Density - 2-5 Dwelling Units/AC
- Rural Open
- Scrub
- Transportation
- Urban Open Forested
- Urban Open Land
- Wet Prairie

FLORIDA COOPERATIVE LAND COVER CLASSIFICATION

GEMINI LAKES

Florida Environmental Consulting, Inc.
1835 20th Street• Vero Beach, Florida 32960 • 772-299-4791 • TimM@FL-Env.com

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Florida Wetlands

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Riverine

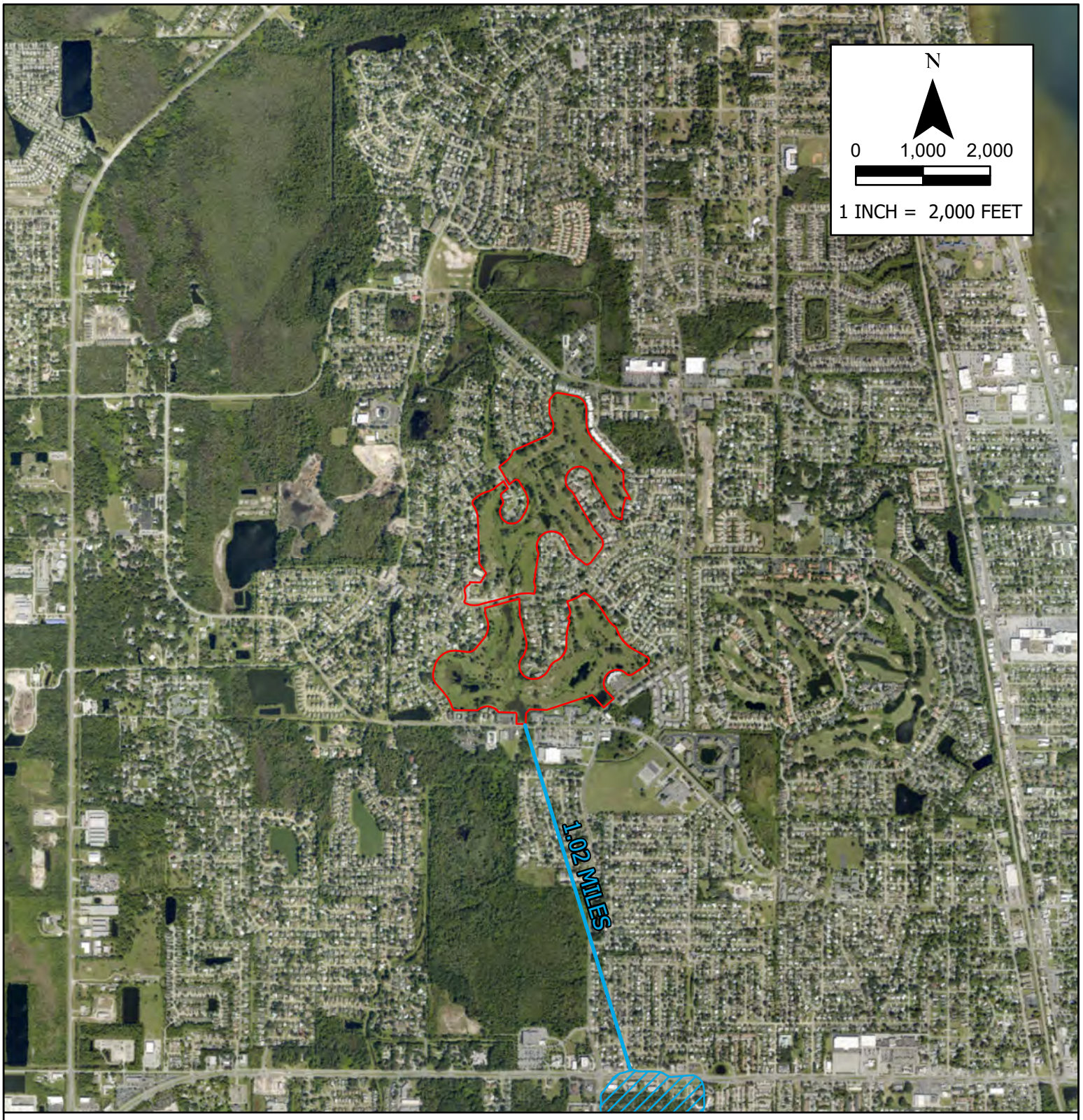
NATIONAL WETLAND INVENTORY	GEMINI LAKES	Florida Environmental Consulting, Inc. 1835 20th Street• Vero Beach, Florida 32960 • 772-299-4791 • TimM@FL-Env.com	JOB NO. FEC-22-200 DESIGNED DRAWN CHECKED DATE March 2024 SCALE	Revisions / Date



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LIDAR	GEMINI LAKES	Florida Environmental Consulting, Inc. 1835 20th Street• Vero Beach, Florida 32960 • 772-299-4791 • TimM@FL-Env.com	JOB NO. FEC-22-200 DESIGNED DRAWN CHECKED DATE March 2024 SCALE	Revisions / Date

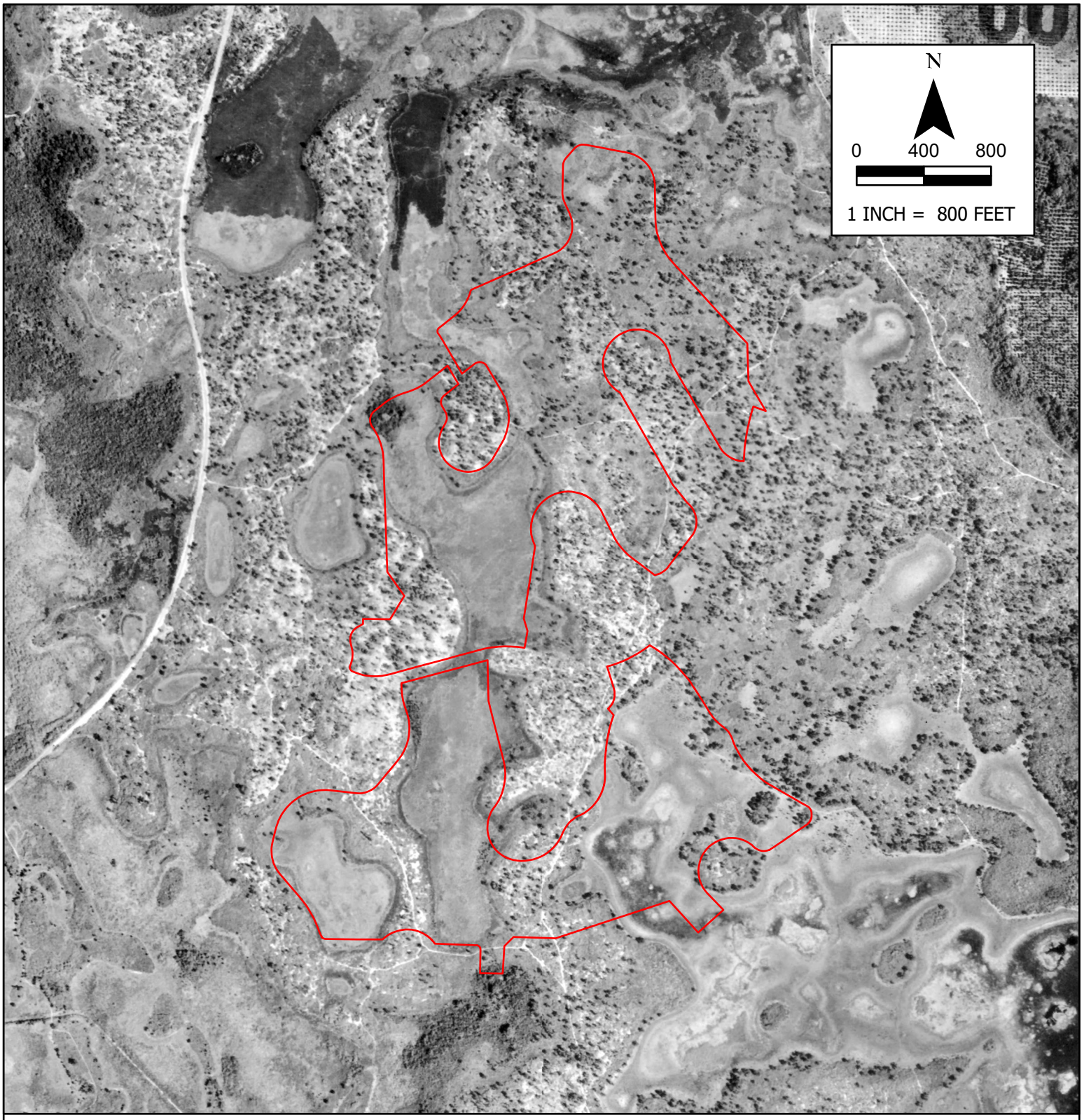


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- Subject Site 149.67
- Brevard County Scrub Jay

SCRUB JAY	GEMINI LAKES	Florida Environmental Consulting, Inc. 1835 20th Street• Vero Beach, Florida 32960 • 772-299-4791 • TimM@FL-Env.com	JOB NO. FEC-22-200 DESIGNED DRAWN CHECKED DATE March 2024 SCALE

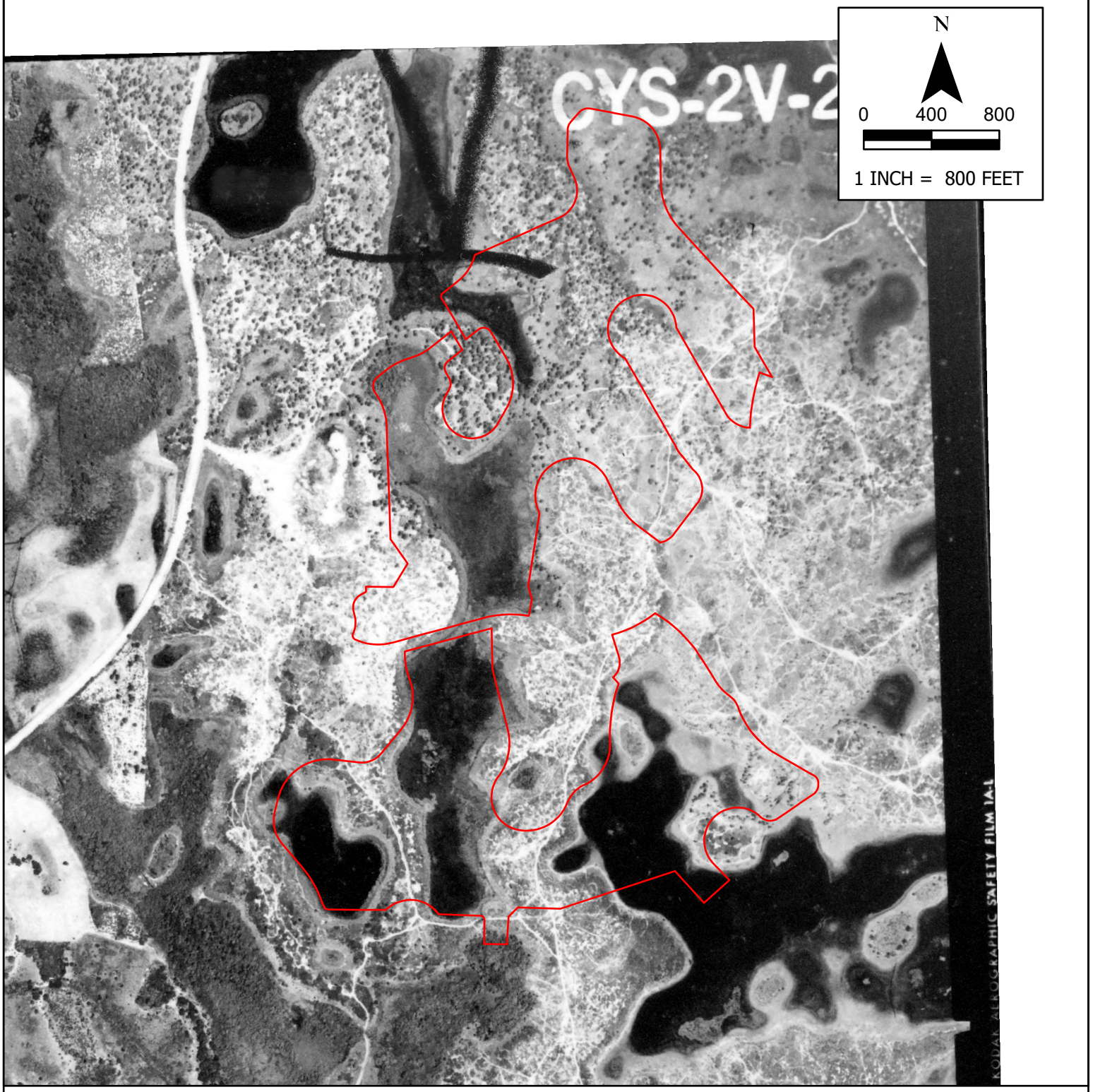
Revisions	Date



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Subject Site 149.67

1943 AERIAL	GEMINI LAKES	Florida Environmental Consulting, Inc. 1835 20th Street• Vero Beach, Florida 32960 • 772-299-4791 • TimM@FL-Env.com	JOB NO. FEC-22-200 DESIGNED DRAWN CHECKED DATE March 2024 SCALE	Revisions / Date

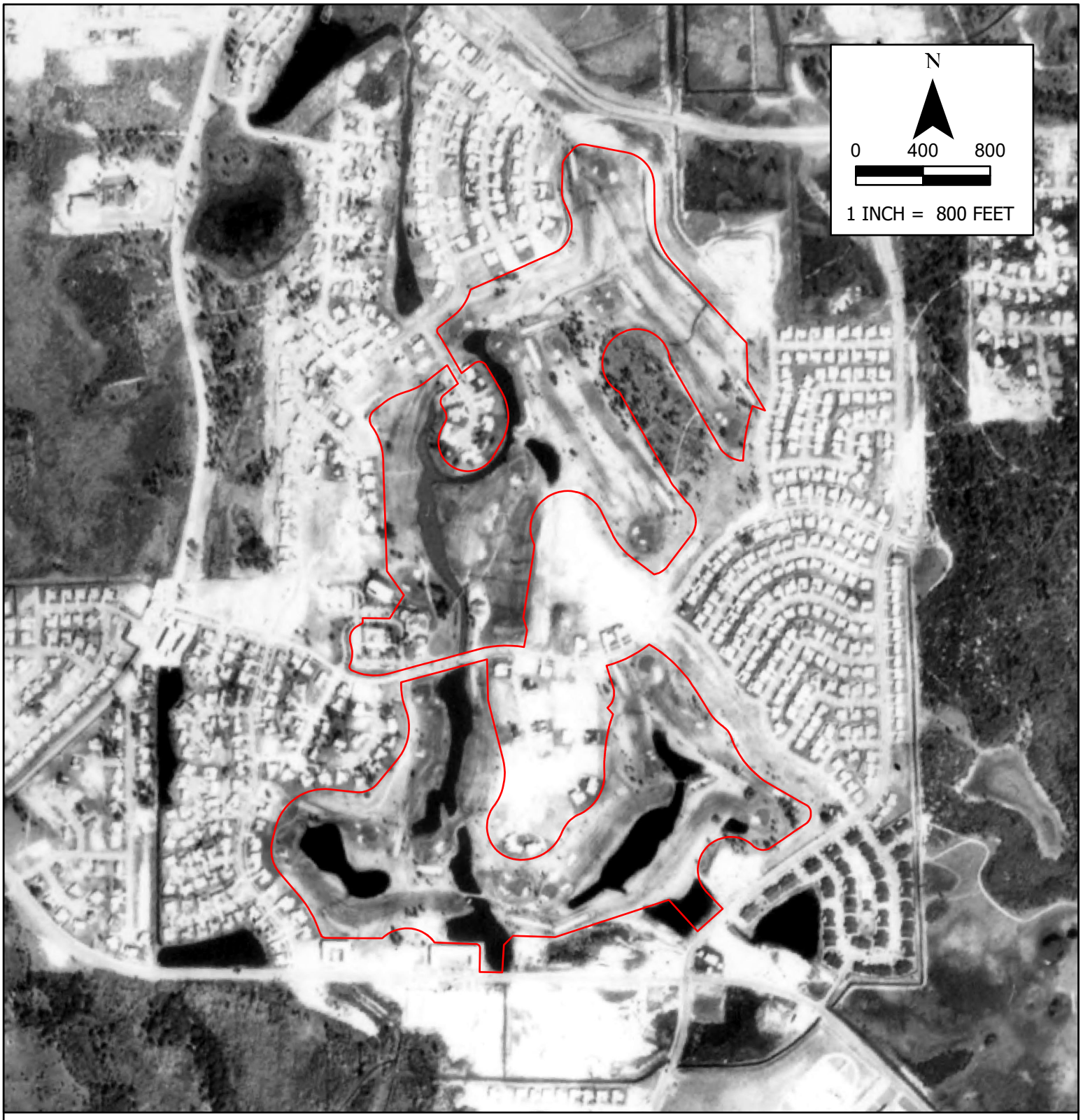


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1958 AERIAL	GEMINI LAKES	Florida Environmental Consulting, Inc. 1835 20th Street• Vero Beach, Florida 32960 • 772-299-4791 • TimM@FL-Env.com	JOB NO. FEC-22-200 DESIGNED DRAWN CHECKED DATE March 2024 SCALE

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1969 AERIAL	GEMINI LAKES	Florida Environmental Consulting, Inc. 1835 20th Street• Vero Beach, Florida 32960 • 772-299-4791 • TimM@FL-Env.com	JOB NO. FEC-22-200 DESIGNED DRAWN CHECKED DATE March 2024 SCALE	Revisions / Date



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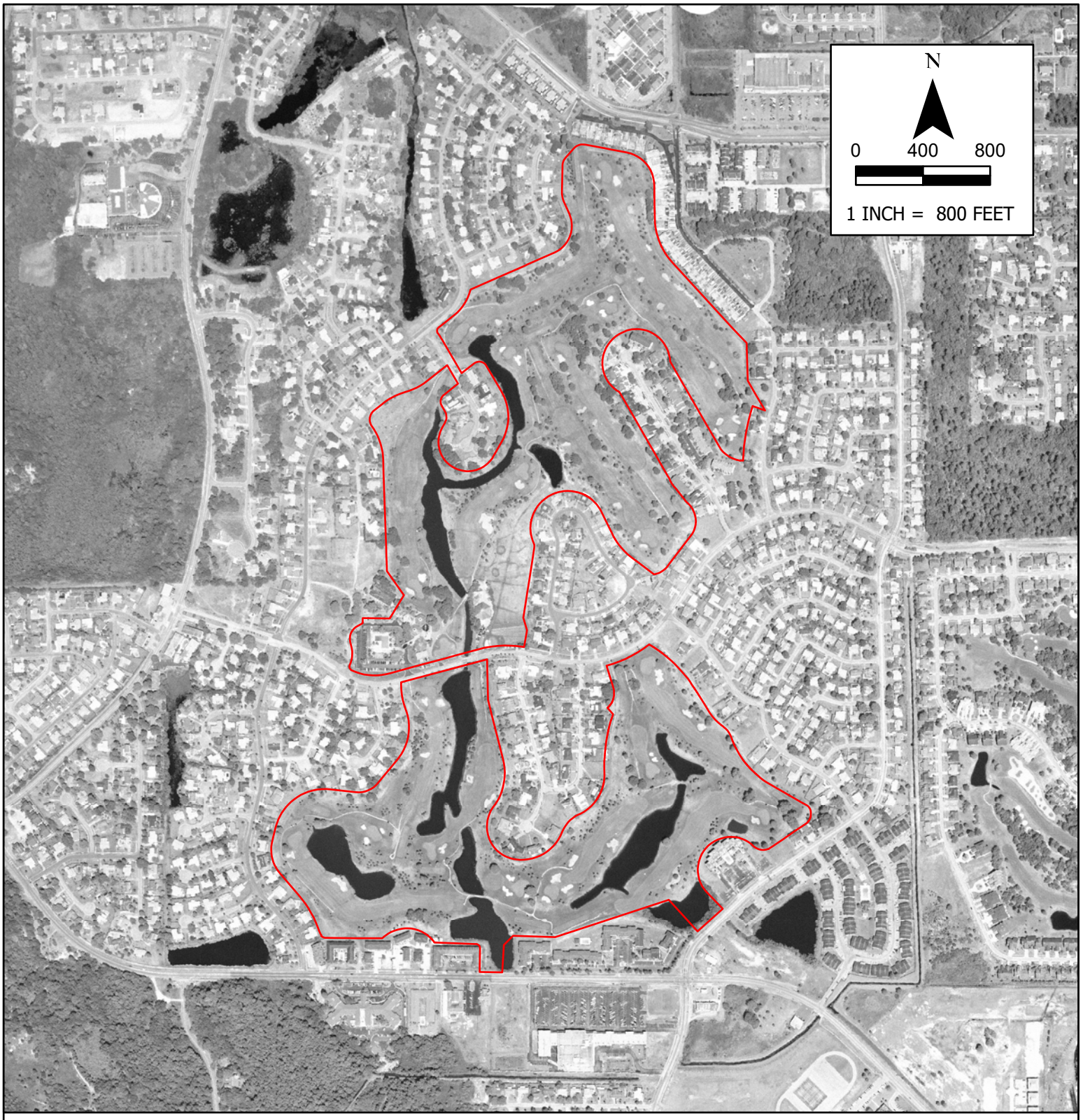
1979 AERIAL	GEMINI LAKES	Florida Environmental Consulting, Inc. 1835 20th Street• Vero Beach, Florida 32960 • 772-299-4791 • TimM@FL-Env.com	JOB NO. FEC-22-200 DESIGNED DRAWN CHECKED DATE March 2024 SCALE	Revisions / Date



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1983 AERIAL	GEMINI LAKES	Florida Environmental Consulting, Inc. 1835 20th Street• Vero Beach, Florida 32960 • 772-299-4791 • TimM@FL-Env.com	JOB NO. FEC-22-200 DESIGNED DRAWN CHECKED DATE March 2024 SCALE	Revisions / Date



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1993 AERIAL	GEMINI LAKES	Florida Environmental Consulting, Inc. 1835 20th Street• Vero Beach, Florida 32960 • 772-299-4791 • TimM@FL-Env.com	JOB NO. FEC-22-200 DESIGNED DRAWN CHECKED DATE March 2024 SCALE	Revisions / Date



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Subject Site 149.67

Green: Band_2

Blue: Band_3

2005

RGB

Red: Band_1

2005 AERIAL	GEMINI LAKES	Florida Environmental Consulting, Inc. 1835 20th Street• Vero Beach, Florida 32960 • 772-299-4791 • TimM@FL-Env.com	JOB NO. FEC-22-200 DESIGNED DRAWN CHECKED DATE March 2024 SCALE	Revisions / Date



Legend

Subject Site 149.67

BRE2012_57209.sid

RGB

Red: Band_1

Green: Band_2

Blue: Band_3

2012 AERIAL	GEMINI LAKES	Florida Environmental Consulting, Inc. 1835 20th Street• Vero Beach, Florida 32960 • 772-299-4791 • TimM@FL-Env.com	JOB NO. FEC-22-200 DESIGNED DRAWN CHECKED DATE March 2024 SCALE	Revisions / Date



Legend

Subject Site 149.67

BRE2018_257209.sid

RGB

Red: Band_1

Green: Band_2

Blue: Band_3

2018 AERIAL	GEMINI LAKES	Florida Environmental Consulting, Inc. 1835 20th Street• Vero Beach, Florida 32960 • 772-299-4791 • TimM@FL-Env.com	JOB NO. FEC-22-200 DESIGNED DRAWN CHECKED DATE March 2024 SCALE	Revisions / Date



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Subject Site 149.67

2024 AERIAL	GEMINI LAKES	Florida Environmental Consulting, Inc. 1835 20th Street• Vero Beach, Florida 32960 • 772-299-4791 • TimM@FL-Env.com	JOB NO. FEC-22-200 DESIGNED DRAWN CHECKED DATE March 2024 SCALE	Revisions / Date





























































Division of Agricultural
Environmental Services
Bureau of Licensing and Enforcement
(850) 617-7997
(850) 617-7850
(850) 617-7967 Fax

The Conner Building, No. 8
3125 Conner Boulevard
Tallahassee, Florida 32399-1650

Florida Department of Agriculture and Consumer Services

Commissioner Wilton Simpson

February 24, 2023

Mrs. Brienne Robertson
3300 Kentucky Street
Titusville, Florida 32796

Dear Mrs. Robertson:

The Florida Department of Agriculture and Consumer Services ("Department") initiated an investigation on September 19, 2022, in response to a written directive regarding your report which indicated your concern of pesticides that had been used at Royal Oak golf course at the locations of 2180 and 2150 Country Club Drive, Spring Hill, Florida. You expressed concerns regarding "forever chemical" pesticides remaining in the soil of the golf course and if the soil was disturbed the resurfacing of these "forever chemical pesticides, may still have adverse impacts on property near your residence.

In the report, you alleged the golf course firm, which has ceased its business activities, applied pesticide on certain sites for "beautification/ aesthetic maintenance", Further, you stated that these sites would have had been the most recent to have pesticides applied to them because of the view from Country Club Drive. Further, you expressed concerns for your health and the health of your community due to the alleged pesticide drift that might occur from previous pesticide activities.

Information obtained during the investigation indicated that, Toulon Apartments MS, LLC, a real-estate development firm based out of Brooklyn, NY, is now the owners of the property, Royal Oak Golf Course & country Club.

During the investigation, the Department's representative provided photographs of the area cited in the report where samples would be taken to test for the presence of pesticides.

The enclosed Pesticide Analysis Report regarding those sample indicated that a level of the analyte Oxadiazon was detected; Oxadiazon is an active ingredient of herbicides that are labeled for use on golf courses, however the exact source of the Oxadiazon and the circumstances leading to its presence cannot be determined.

After a complete review of the Pesticide Analysis Reports and information documented during the investigation, the complaint of the presence of "forever chemical" pesticides cannot be

substantiated as no indication that these pesticides were found in the samples taken at Royal Oak golf course at the locations of 2180 and 2150 Country Club Drive, Spring Hill, Florida. Further, from information documented during the investigation, it appears that no misuse of pesticides can be identified.

If you have any questions or comments regarding this matter, please contact this office at (850) 617-7880 or at the following email: thomas.whitejr@fdacs.gov.

Sincerely,

Jeffrey Bechtel

Jeffrey Bechtel
Manager, Agricultural Pesticide Enforcement
Bureau of Licensing & Enforcement

File Name: Royal Oak Resort GC **File No.:** 122-333-4137 TW

WILTON SIMPSON
COMMISSIONER

Florida Department of Agriculture & Consumer Services
Division of Agricultural Environmental Services
Bureau of Agricultural Environmental Laboratories

PESTICIDE ANALYSIS REPORT

Report Date: 1/12/2023

Laboratory Sample ID: AB23228

EPA Sample Number: 092122 4137 0101	**This sample was received by our lab:**
	Sample Description:
Compliance File Number: 122-333-4137	32oz soil sample from #1 tee
Compliance File Name: Royal Oak Resort GC	
	Date Sample Taken: 09/21/2022
	Date Sample Received: 09/22/2022

The attached report is for the sample referenced above. The sample was analyzed using standard FDACS testing procedures and quality analysis protocol. Instrument calibration and quality control are within acceptable limits of precision and accuracy.

A close review by our Quality Assurance Department certifies that our strict quality assurance standards were observed.

This cover sheet is an integral part of the analytical report that follows.

Pesticide Analysis Report

To: Bureau of Licensing and Enforcement
3125 Conner Boulevard, Bld. 8
Tallahassee, Fl. 32399-1650

Report Date: 1/12/2023

EPA Sample Number: 092122 4137 0101

Sample Matrix: SOIL

Sample Description: 32oz soil sample from #1 tee

Date Sample Taken: 09/21/2022

Date Sample Received: 09/22/2022

This sample was analyzed by standard Pesticide Laboratory, FDACS testing procedures. All results were validated against standard QA procedures.

Analytical Results

Analyte	Result	Analysis Unit	MDL	Qualifier	Method ID	Analysis Date
2,4-D	Not Detected	ug/Kg	110		BAEL_ACIDICHERB	10/10/22
3OH-Carbofuran	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Acetamiprid	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Acetochlor	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Alachlor	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Aldicarb	Not Reported	ug/Kg	0.74		BAEL_METH_705	12/28/22
Aldicarb Sulfone	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Aldicarb sulfoxide	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Allethrin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Ametryn	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Asulam	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Atrazine	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Azinphos-methyl	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Azoxystrobin	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Benefin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Bentazon	Not Detected	ug/Kg	110		BAEL_ACIDICHERB	10/10/22
Bifenazate	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Bifenthrin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Boscalid	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22

Sample ID: AB23228

Analyte	Result	Analysis Unit	MDL	Qualifier	Method ID	Analysis Date
Bromacil	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Buprofezin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Butylate	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Carbaryl	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Carbofuran	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Carfentrazone-ethyl	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Chloramben	Not Detected	ug/Kg	110		BAEL_ACIDICHERB	10/10/22
Chlorantraniliprole	Not Reported	ug/Kg	0.74		BAEL_METH_705	12/28/22
Chlorfenapyr	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Chlorothalonil	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Chlorpyrifos	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Clopyralid	Not Detected	ug/Kg	110		BAEL_ACIDICHERB	10/10/22
Clothianidin	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Coumaphos	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Cyfluthrin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Cyhalothrin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Cypermethrin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Cyprodinil	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
DEA	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Deltamethrin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
DIA	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Diazinon	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Dicamba	Not Detected	ug/Kg	110		BAEL_ACIDICHERB	10/10/22
Dichlorvos	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Diflubenzuron	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Dimethenamid-p	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Dimethoate	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Dinotefuran	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Disulfoton	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Diuron	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Endosulfan I	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Endosulfan II	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Ethion	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Ethoprop	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Etoxazole	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Fenamidone	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22

Analyte	Result	Analysis Unit	MDL	Qualifier	Method ID	Analysis Date
Fenamiphos	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Fenamiphos Sulfone	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Fenamiphos Sulfoxide	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Fenbuconazole	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Fenpropathrin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Fenpyroximate	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Fenthion	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Fenvalerate	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Fipronil	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Fluazifop-butyl	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Fludioxonil	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Flumioxazin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Flupyradifurone	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Fluridone	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Flutolanil	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Fluvalinate	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Fosthiazate	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Hexazinone	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Imazamox	Not Detected	ug/Kg	22		BAEL_ACIDICHERB	10/10/22
Imazapyr	Not Detected	ug/Kg	22		BAEL_ACIDICHERB	10/10/22
Imazaquin	Not Detected	ug/Kg	22		BAEL_ACIDICHERB	10/10/22
Imazethapyr	Not Detected	ug/Kg	22		BAEL_ACIDICHERB	10/10/22
Imidacloprid	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Imidacloprid-Olefin	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Iodosulfuron-methyl	Not Reported	ug/Kg	0.74		BAEL_METH_705	12/28/22
Iprodione	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Lindane	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Malathion	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
MCPA	Not Detected	ug/Kg	110		BAEL_ACIDICHERB	10/10/22
MCPP	Not Detected	ug/Kg	110		BAEL_ACIDICHERB	10/10/22
Metalaxyl	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Methidathion	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Methiocarb	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Methomyl	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Methyl Parathion	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Metolachlor	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22

Sample ID: AB23228

Analyte	Result	Analysis Unit	MDL	Qualifier	Method ID	Analysis Date
Metribuzin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Metsulfuron-methyl	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
MGK-264	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Myclobutanil	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Naled	Not Reported	ug/Kg	37		BAEL_METH_705	12/28/22
Nitenpyram	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Norflurazon	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Norflurazon-desmethyl	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Oryzalin	Not Reported	ug/Kg	0.74		BAEL_METH_705	12/28/22
Oxadiazon	Not Detected	ug/Kg	11	N	BAEL_METH_704	10/11/22
Oxamyl	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Parathion	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Pendimethalin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Permethrin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Phenothrin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Phorate	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Phosmet	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Picloram	Not Detected	ug/Kg	110		BAEL_ACIDICHERB	10/10/22
Picoxystrobin	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Piperonyl butoxide (TPB)	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Pirimiphos-methyl	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Prodiamine	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Prometon	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Prometryn	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Pronamide	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Propazine	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Propetamphos	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Propiconazole	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Propoxur	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Pyraclostrobin	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Pyrimethanil	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Resmethrin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Simazine	Not Reported	ug/Kg	0.74		BAEL_METH_705	12/28/22
Spirodiclofen	Not Reported	ug/Kg	0.74		BAEL_METH_705	12/28/22
Spirotetramat	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Sulfometuron-methyl	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22

Analyte	Result	Analysis Unit	MDL	Qualifier	Method ID	Analysis Date
Sulfosulfuron	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Sulfoxaflor	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Terbufos	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Tetramethrin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Thiacloprid	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Thiamethoxam	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Thiazopyr	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Thiazopyr-monoacid	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Thiencarbazone-methyl	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Thifensulfuron-methyl	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Triadimefon	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Tribufos	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Triclopyr	Not Detected	ug/Kg	110		BAEL_ACIDICHERB	10/10/22
Trifloxystrobin	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Trifloxysulfuron	Not Detected	ug/Kg	0.74		BAEL_METH_705	12/28/22
Trifluralin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Triticonazole	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22

Comments: See attached page for report qualifier definitions if applicable



Patricia A. Lucas, Chief
Bureau of Agricultural Environmental Laboratories
3125 Conner Blvd., Bld 7
Tallahassee, Fl. 32399
(850) 617-7830

WILTON SIMPSON
COMMISSIONER

Florida Department of Agriculture & Consumer Services
Division of Agricultural Environmental Services
Bureau of Agricultural Environmental Laboratories

PESTICIDE ANALYSIS REPORT

Report Date: 1/12/2023

Laboratory Sample ID: AB23229

EPA Sample Number: 092122 4137 0102	**This sample was received by our lab:**
	Sample Description:
Compliance File Number: 122-333-4137	32oz soil sample from #18 hole green
Compliance File Name: Royal Oak Resort GC	
	Date Sample Taken: 09/21/2022
	Date Sample Received: 09/22/2022

The attached report is for the sample referenced above. The sample was analyzed using standard FDACS testing procedures and quality analysis protocol. Instrument calibration and quality control are within acceptable limits of precision and accuracy.

A close review by our Quality Assurance Department certifies that our strict quality assurance standards were observed.

This cover sheet is an integral part of the analytical report that follows.

Pesticide Analysis Report

To: Bureau of Licensing and Enforcement
3125 Conner Boulevard, Bld. 8
Tallahassee, Fl. 32399-1650

Report Date: 1/12/2023

EPA Sample Number: 092122 4137 0102

Sample Matrix: SOIL

Sample Description: 32oz soil sample from #18 hole green

Date Sample Taken: 09/21/2022

Date Sample Received: 09/22/2022

This sample was analyzed by standard Pesticide Laboratory, FDACS testing procedures. All results were validated against standard QA procedures.

Analytical Results

Analyte	Result	Analysis Unit	MDL	Qualifier	Method ID	Analysis Date
2,4-D	Not Detected	ug/Kg	100		BAEL_ACIDICHERB	10/10/22
3OH-Carbofuran	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Acetamiprid	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Acetochlor	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Alachlor	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Aldicarb	Not Reported	ug/Kg	0.71		BAEL_METH_705	12/28/22
Aldicarb Sulfone	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Aldicarb sulfoxide	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Allethrin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Ametryn	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Asulam	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Atrazine	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Azinphos-methyl	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Azoxystrobin	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Benefin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Bentazon	Not Detected	ug/Kg	100		BAEL_ACIDICHERB	10/10/22
Bifenazate	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Bifenthrin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Boscalid	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22

Sample ID: AB23229

Analyte	Result	Analysis Unit	MDL	Qualifier	Method ID	Analysis Date
Bromacil	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Buprofezin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Butylate	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Carbaryl	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Carbofuran	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Carfentrazone-ethyl	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Chloramben	Not Detected	ug/Kg	100		BAEL_ACIDICHERB	10/10/22
Chlorantraniliprole	Not Reported	ug/Kg	0.71		BAEL_METH_705	12/28/22
Chlorfenapyr	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Chlorothalonil	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Chlorpyrifos	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Clopyralid	Not Detected	ug/Kg	100		BAEL_ACIDICHERB	10/10/22
Clothianidin	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Coumaphos	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Cyfluthrin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Cyhalothrin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Cypermethrin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Cyprodinil	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
DEA	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Deltamethrin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
DIA	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Diazinon	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Dicamba	Not Detected	ug/Kg	100		BAEL_ACIDICHERB	10/10/22
Dichlorvos	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Diflubenzuron	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Dimethenamid-p	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Dimethoate	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Dinotefuran	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Disulfoton	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Diuron	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Endosulfan I	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Endosulfan II	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Ethion	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Ethoprop	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Etoxazole	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Fenamidone	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22

Sample ID: AB23229

Analyte	Result	Analysis Unit	MDL	Qualifier	Method ID	Analysis Date
Fenamiphos	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Fenamiphos Sulfone	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Fenamiphos Sulfoxide	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Fenbuconazole	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Fenpropathrin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Fenpyroximate	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Fenthion	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Fenvalerate	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Fipronil	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Fluazifop-butyl	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Fludioxonil	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Flumioxazin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Flupyradifurone	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Fluridone	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Flutolanil	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Fluvalinate	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Fosthiazate	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Hexazinone	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Imazamox	Not Detected	ug/Kg	21		BAEL_ACIDICHERB	10/10/22
Imazapyr	Not Detected	ug/Kg	21		BAEL_ACIDICHERB	10/10/22
Imazaquin	Not Detected	ug/Kg	21		BAEL_ACIDICHERB	10/10/22
Imazethapyr	Not Detected	ug/Kg	21		BAEL_ACIDICHERB	10/10/22
Imidacloprid	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Imidacloprid-Olefin	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Iodosulfuron-methyl	Not Reported	ug/Kg	0.71		BAEL_METH_705	12/28/22
Iprodione	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Lindane	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Malathion	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
MCPA	Not Detected	ug/Kg	100		BAEL_ACIDICHERB	10/10/22
MCPP	Not Detected	ug/Kg	100		BAEL_ACIDICHERB	10/10/22
Metalaxyl	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Methidathion	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Methiocarb	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Methomyl	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Methyl Parathion	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Metolachlor	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22

Analyte	Result	Analysis Unit	MDL	Qualifier	Method ID	Analysis Date
Metribuzin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Metsulfuron-methyl	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
MGK-264	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Myclobutanil	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Naled	Not Reported	ug/Kg	35		BAEL_METH_705	12/28/22
Nitenpyram	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Norflurazon	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Norflurazon-desmethyl	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Oryzalin	Not Reported	ug/Kg	0.71		BAEL_METH_705	12/28/22
Oxadiazon	33	ug/Kg	11	G	BAEL_METH_704	10/11/22
Oxamyl	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Parathion	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Pendimethalin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Permethrin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Phenothrin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Phorate	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Phosmet	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Picloram	Not Detected	ug/Kg	100		BAEL_ACIDICHERB	10/10/22
Picoxystrobin	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Piperonyl butoxide (TPB)	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Pirimiphos-methyl	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Prodiamine	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Prometon	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Prometryn	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Pronamide	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Propazine	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Propetamphos	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Propiconazole	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Propoxur	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Pyraclostrobin	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Pyrimethanil	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Resmethrin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Simazine	Not Reported	ug/Kg	0.71		BAEL_METH_705	12/28/22
Spirodiclofen	Not Reported	ug/Kg	0.71		BAEL_METH_705	12/28/22
Spirotetramat	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Sulfometuron-methyl	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22

Analyte	Result	Analysis Unit	MDL	Qualifier	Method ID	Analysis Date
Sulfosulfuron	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Sulfoxaflor	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Terbufos	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Tetramethrin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Thiacloprid	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Thiamethoxam	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Thiazopyr	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Thiazopyr-monoacid	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Thiencarbazone-methyl	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Thifensulfuron-methyl	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Triadimefon	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Tribufos	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Triclopyr	Not Detected	ug/Kg	100		BAEL_ACIDICHERB	10/10/22
Trifloxystrobin	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Trifloxysulfuron	Not Detected	ug/Kg	0.71		BAEL_METH_705	12/28/22
Trifluralin	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22
Triticonazole	Not Detected	ug/Kg	11		BAEL_METH_704	10/11/22

Comments: See attached page for report qualifier definitions if applicable



Patricia A. Lucas, Chief
Bureau of Agricultural Environmental Laboratories
3125 Conner Blvd., Bld 7
Tallahassee, Fl. 32399
(850) 617-7830

DATA 052 Attachment B — Uncontrolled

Pesticide Reporting Qualifier Definitions

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A	ADL is above level of detection (analysis performed by Food Laboratory).
B	BDL is below level of detection (analysis performed by Food Laboratory).
C	The presence was confirmed by dual column chromatography.
D	Sample analysis could not be performed due to insufficient sample size.
E	Estimated value; analyte concentrations (as analyzed) fall outside the calibration range.
F	Value reported is the mean of two or more determinations.
G	The presence was confirmed by Gas Chromatography/Mass Spectroscopy (GC/MS).
H	Sample analyzed out of hold time.
I	The presence of this analyte was unable to be confirmed by Mass Spectroscopy due to instrument sensitivity limitations.
J	Value is >MDL but <PQL; for information only.
K	Analyte not reported due to sample matrix interferences.
L	The presence was confirmed by Liquid Chromatography/Mass Spectroscopy (LC/MS).
M	Accurate quantitation was not possible due to matrix interferences.
N	There are indications of the presence of this analyte at below the lowest method standard level.
O	Sample bottle broken in laboratory prior to completion of analysis.
P	Sample prepped out of hold time.
Q	The laboratory was unable to accurately quantitate the amount present in the sample due to the limited amount of sample available.
R	The data are unusable (analyte may or may not be present). Resampling and reanalysis is necessary for verification.
S	The laboratory does not have the appropriate analytical equipment necessary for this analysis.

T	The analysis was from an unpreserved or improperly preserved sample. Sample integrity may be compromised.
V	The laboratory does not have validated methodology for this analysis.
W	The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
X	Sample arrived broken upon receipt – unable to analyze.
Y	Analysis was unable to be completed due to method difficulties that exhausted the sample.
Z	Analysis not performed by Pesticide Laboratory.
AA	The analyte was not detected, however some or all of the quality control data for the analyte were outside QA criteria, and the presence or absence of the analyte cannot definitively be determined from the data.
BB	Sample integrity may be compromised; sample received leaking into bag.
CC	Sample custody may be compromised due to chain of custody documentation deficiency.
DD	Sample integrity may be compromised; sample received at temperature above 10 degrees C.
EE	The presence was confirmed by HPLC-PDA Spectra.
FF	The presence was determined by HPLC with Fluorescence detection.
GG	Confirmation Methodology not available.
HH	The analyte was detected; however, the quality control data for the analyte was outside QA criteria (low recovery), therefore the reported value is estimated.
II	For informational purposes for Pesticides in Fertilizer Mixtures – An investigational allowance of 25 percent of the guarantee shall be allowed on all pesticides when added to custom blend fertilizers.
JJ	Analysis result is estimated due to non-homogeneous sample matrice.

KK	Analysis was unable to be completed due to sample preparation difficulties that exhausted the sample.
LL	The presence was confirmed by Inductively Coupled Plasma Mass Spectrometry (ICPMS)

Other Lab Report Definitions

MDL	**The method detection limit (MDL) is defined as "the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero."** ***40 CFR part 136 Appendix B***
PQL	**The practical quantitation limit (PQL) is defined as "the lowest concentration of an analyte that can be reliably measured within specified limits of precision and accuracy during routine laboratory operating conditions."** ***50 CFR 46906*** **The PQL = 3 x MDL value.**
NA	**Not Analyzed – The laboratory did not conduct a test for this analyte.**
ND	**Not Detected at or above the MDL for sample results reported as a concentration and Not Detected at or above the lowest method standard level for sample results reported as a weight value (i.e. swabs)**
NR	**Not Reported – The laboratory did not report this analyte. See Qualifier for details.**
ppm	**mg/kg, mg/L**
ppb	**µg/kg, µg/L**

Gemini Lakes

Traffic Impact Study

City of Titusville, FL

March 2025

Kimley»Horn

Gemini Lakes

Traffic Impact Study

City of Titusville, FL

Prepared by:

Kimley-Horn and Associates, Inc.

JAMES MICHAEL TAYLOR, P.E.

STATE OF FLORIDA,
PROFESSIONAL ENGINEER,
LICENSE NO. 69979

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Digitally signed by James M Taylor
DN: cn=James M Taylor, c=US, o=KIMLEY-HORN AND ASSOCIATES INC, email=james.taylor@kimley-horn.com
Date: 2025.03.30 18:18:41 -04'00'

March 2025

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1.0 INTRODUCTION

1.1 INTRODUCTION

Kimley-Horn and Associates, Inc. was retained to analyze and document the transportation impacts associated with the proposed Gemini Lakes PD (formerly known as Royal Oak PD), a redevelopment of the existing golf course within the Royal Oak Country Club in the City of Titusville, Florida. The proposed redevelopment will consist of approximately 239 single family homes, 164 townhomes, and 148 apartment units. The conceptual site plan is provided in **Appendix A**. The following Traffic Impact Study (TIS) generally conforms to the approved methodology provided in **Appendix B**.

The 147.13-acre site is generally located to the north of Knox McRae Drive, and south of Royal Oak Drive. Access to the proposed development on the north side of Country Club Drive will be provided via one (1) full access driveway on Country Club Drive, one (1) full access driveway on Saunders Place (with access to Royal Oak Drive) and one (1) full access driveway on Royal Oak Drive. Access to the proposed development on the south side of Country Club Drive will be provided via two (2) full access driveways on Country Club Drive and one (1) full access driveway on Barna Avenue.

1.2 STUDY AREA

As agreed to in the approved methodology, the study area includes the following, as shown in **Figure 1**:

Study Area Roadway Segments

- Barna Avenue, from SR 405 to SR 50
- Barna Avenue, from SR 50 to Knox McRae Drive
- Barna Avenue, from Knox McRae Drive to Harrison Street
- SR 405, from SR 50 to Fox Lake Road

Study Area Intersections

- Country Club Drive & Barna Avenue
- Country Club Drive & Royal Oak Drive
- Country Club Drive & Park Avenue
- Royal Oak Drive & Saunders Place
- Barna Avenue & Harrison Street
- Barna Avenue & Knox McRae Drive

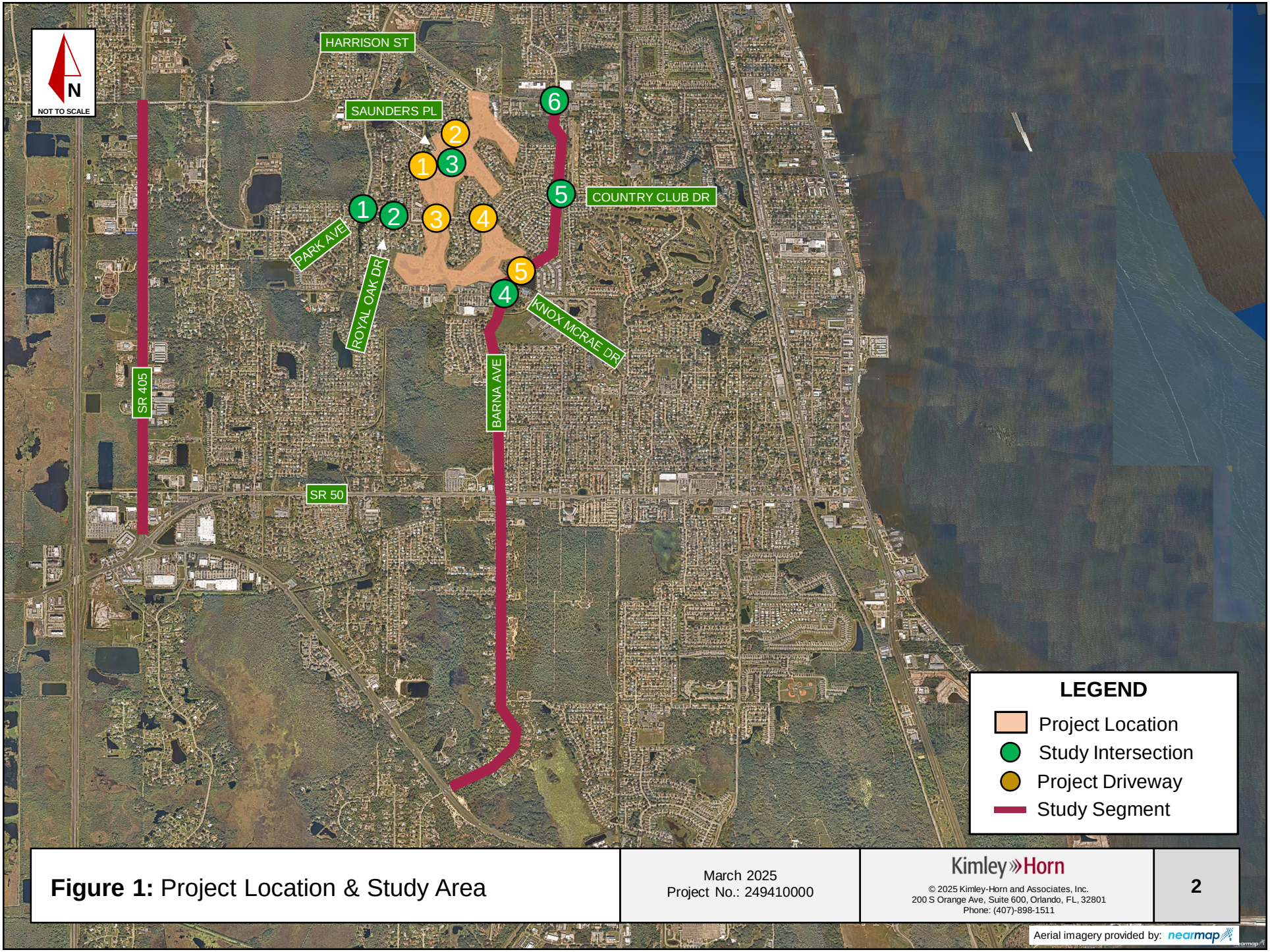


Figure 1: Project Location & Study Area

March 2025
Project No.: 249410000

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200 S Orange Ave, Suite 600, Orlando, FL, 32801
Phone: (407)-898-1511

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2.0 EXISTING CONDITIONS ANALYSIS

2.1 EXISTING ROADWAY SEGMENT CONDITIONS

A Daily and PM peak hour roadway segment capacity analysis was performed for the roadway segments adjacent to the development for existing conditions. Average Annual Daily Traffic (AADT) was obtained for the existing study segments from the Space Coast Transportation Planning Organization (SCTPO) Traffic Counts document, provided in **Appendix C**, and FDOT's Florida Traffic Online (FTO) database, provided in **Appendix D**. The 2023 AADTs were grown to the existing year, 2025, by applying a 2% annual growth rate. Determination of the growth rate is discussed in the Background Section of this report and additional information is provided in **Appendix E**. Daily Maximum Service Volume (MSV) was obtained for the study segments from the Space Coast Transportation Planning Organization (SCTPO) Traffic Counts.

The 2025 peak hour, peak direction (PHPD) volumes were derived from seasonally adjusted field collected turning movement counts and peak hour turning movement data from the Space Coast Transportation Planning Organization (SCTPO) Traffic Counts database. The PHPD MSV corresponding to the context classification and geometry of the roadway was determined from the FDOT Q/LOS Handbook.

The existing condition Daily and PM peak hour segment capacity analyses are shown in **Tables 1 and 2**. All segments in the study area are operating with existing Daily and PM peak hour volumes within their adopted maximum service volumes (MSV) with the exception of SR 405 from SR 50 to Fox Lake Road, with a v/c over 1 in the Daily and PM peak hour existing condition.

Table 1: Existing (2025) Daily Capacity Analysis

Roadway From	To	Roadway Attributes [1] Functional Classification	Adopted LOS	Number of Lanes	Daily MSV[2]	Daily - Existing (2025) 2023 AADT[1]	Annual Growth Rate	2025 AADT[3]	V/C Ratio	Deficient?
Barna Avenue										
SR 405	*SR 50*	Urban Major Collector	E	2	15,600	4,940	2%	5,140	0.33	No
SR 50	Knox McRae Drive	Urban Major Collector	E	2	15,600	11,200	2%	11,652	0.75	No
Knox McRae Drive	*Harrison Drive*	Urban Major Collector	E	2	15,600	11,300	2%	11,757	0.75	No
SR 405										
SR 50	*Fox Lake Road*	Urban Minor Arterial	D	2	18,590	18,790	2%	19,549	1.05	Yes

Notes:

1. Data obtained from the Space Coast Transportation Planning Organization (TPO) Traffic Counts Report and FDOT FTO Database.

2. Maximum Service Volume obtained from SCTPO Traffic Count Report.

3. 2025 AADT derived by applying a 2% annual growth rate to 2023 AADT volumes.

Table 2: Existing (2025) PM Peak Hour Capacity Analysis

Roadway From	To	Roadway Attributes [1] Functional Classification	Adopted LOS	Number of Lanes	PHPD MSV[2]	PHPD - Existing (2025) 2023/2024 PHPD Volume[3]	Annual Growth Rate	2025 PHPD Volume[4]	V/C Ratio	Deficiency?
Barna Avenue										
SR 405	*SR 50*	Urban Major Collector	E	2	800	344	2%	358	0.45	No
SR 50	*Knox McRae*	Urban Major Collector	E	2	800	567	2%	578	0.72	No
Knox McRae Drive	*Harrison Drive*	Urban Major Collector	E	2	800	530	2%	541	0.68	No
SR 405										
SR 50	*Fox Lake Road*	Urban Minor Arterial	D	2	920	957	2%	996	1.08	Yes

Notes:

1. Data obtained from the Space Coast Transportation Planning Organization (TPO) Traffic Counts Report.

2. PHPD Maximum Service Volume obtained from the FDOT Q/LOS Handbook.

3. PHPD Volume derived from seasonally adjusted field collected turning movement counts (2024) and SCTPO Traffic Counts (2023).

4. 2025 PHPD Volume derived by applying a 2% annual growth rate to 2023 or 2024 PHPD Volumes.

2.2 EXISTING TRAFFIC COUNTS

Turning movement counts (TMCs) were collected at the study intersections on Tuesday, May 21, 2024 and are provided in **Appendix F**. Data was collected during the PM Peak Period (4:00 PM to 6:00 PM).

The counts were adjusted using seasonal factor (SF) data from FDOT's Florida Traffic Online (FTO) publication, provided in **Appendix D**. Turning movement volume development worksheets for all study area intersections are provided in **Appendix G.**

Existing signal timings were provided by the City of Titusville, provided in **Appendix H**, for the following signalized intersections:

- Barna Avenue & Knox McRae Drive
- Barna Avenue & Country Club Drive
- Barna Avenue & Harrison Street

2.3 EXISTING INTERSECTION CONDITIONS

An intersection operational analysis was performed for existing (2025) conditions during the PM peak hour using procedures outlined in the *Highway Capacity Manual, 7th Edition* with Synchro (v12) software.

Intersection level of service (LOS) and maximum volume to capacity (v/c) ratios for the PM peak hour existing conditions are provided in **Table 3**. Synchro outputs are included in **Appendix I**.

As shown in **Table 3**, all study area intersections currently operate with acceptable overall LOS in existing (2025) PM peak hour conditions.

Table 3: Existing (2025) PM Peak Hour Intersection Conditions

Existing Condition - 2025						
Intersection		Control Type	Approach	PM Peak Hour		
				Max Level of Service	Max V/C Movement	Max V/C Ratio
1	Park Avenue & Country Club Drive	Unsignalized (TWSC)	EB	B	EBL/T/R	0.01
			WB	B	WBL/T/R	0.18
			NB(L)	A	NBL/T	0.00
			SB(L)	A	SBL/T/R	0.02
			Overall	**-**	**WBL/T/R**	**0.18**
2	Royal Oak Drive & Country Club Drive	Unsignalized (TWSC)	EB(L)	A	EBL/T/R	0.02
			WB(L)	A	WBL/T/R	0.01
			NB	B	NBL/T/R	0.07
			SB	B	SBL/T/R	0.06
			Overall	**-**	**NBL/T/R**	**0.07**
3	Royal Oak Drive & Saunders Place	Unsignalized (TWSC)	EB	-	-	-
			WB	A	WBL/R	0.01
			NB(L)	-	-	-
			SB(L)	A	SBL/T	0.00
			Overall	**-**	**WBL/R**	**0.01**
4	Barna Avenue & Knox McRae Drive	Signalized	EB	C	EBT/R	0.67
			WB	C	WBT/R	0.79
			NB	C	NBT/R	0.88
			SB	C	SBT/R	0.66
			Overall	**C (26.4 s)**	**NBT/R**	**0.88**
5	Barna Avenue & Country Club Drive	Signalized	EB	B	EBL/T/R	0.26
			WB	B	WBT/R	0.54
			NB	B	NBT/R	0.78
			SB	B	SBT/R	0.52
			Overall	**B (14.1 s)**	**NBT/R**	**0.78**
6	Barna Avenue & Harrison Street	Signalized	EB	C	EBT/R	0.77
			WB	B	WBT/R	0.57
			NB	C	NBT/R	0.79
			SB	B	SBT/R	0.42
			Overall	**C (22.0 s)**	**NBT/R**	**0.79**

3.0 BACKGROUND CONDITIONS ANALYSIS

Traffic conditions were evaluated for Year 2027 background conditions, without the impact of project trips on the roadway network. Background volumes at study area intersections were derived by applying a 2% annual growth rate to existing turning movement volumes and adding trips from vested developments.

Historic growth rates have been calculated based on historic AADT counts from FTO. All study area segments were determined to have a negative growth rate. Therefore, a conservative growth rate of 2.0% is applied. Growth rate outputs are provided in **Appendix E**.

At the request of the City of Titusville, trips from the following developments were considered vested:

- Huntington Park (86 single family homes)
- Apollo Gardens (84 affordable housing units)

Vested trips for these developments were considered at the Gemini Lakes study area intersections, based on the study area intersections in each development's TIA. Huntington Park trips were included at Study Intersection #1 (Park Avenue & Country Club Drive). Apollo Gardens trips were included at Study Intersections #5 (Barna Avenue & County Club Drive) and #6 (Barna Avenue & Harrison Street).

For the roadway segment analysis, the Huntington Park TIA only analyzed segments of Park Avenue, which are not included in the Gemini Lakes study area. The Apollo Gardens TIA analyzed a segment of Barna Avenue, which overlaps with the Gemini Lakes study area. Trips from this segment (Barna Avenue, from Harrison to Country Club Drive) were assigned to the similar segment (Barna Avenue, from Knox McRae Drive to Harrison Drive).

Background growth is shown in the intersection movement volume development worksheets provided in **Appendix G**.

3.1 BACKGROUND ROADWAY SEGMENT CONDITIONS

A Daily and PM peak hour capacity analysis was performed for the roadway segments under background conditions.

The background Daily and PM peak hour segment capacity analyses are shown in **Tables 4 and 5**. All segments in the study area are operating with background Daily and PM peak hour volumes within their adopted maximum service volumes (MSV) with the exception of the existing deficient segment of SR 405 from SR 50 to Fox Lake Road, with a v/c over 1 in the Daily and PM peak hour background condition.

Table 4: Background (2027) Daily Capacity Analysis

Roadway From	To	Daily MSV [1]	Daily - Background (2027) Existing 2025 AADT	Annual Growth Rate	Vested Trips[2]	Background 2027 AADT [3]	V/C Ratio	Deficient?
Barna Avenue								
SR 405	*SR 50*	15,600	5,140	2.0%	0	5,347	0.34	No
SR 50	Knox McRae Drive	15,600	11,652	2.0%	0	12,123	0.78	No
Knox McRae Drive	*Harrison Drive*	15,600	11,757	2.0%	272	12,503	0.80	No
SR 405								
SR 50	*Fox Lake Road*	18,590	19,549	2.0%	0	20,339	1.09	Yes

Notes:

1. Maximum Service Volume obtained from SCTPO Traffic Count Report.

2. Vested trips considered from Apollo Gardens TIA. Huntington Park TIA was reviewed, but these segments were not analyzed in that TIA.

3. Background (2025) AADT volumes derived by applying a 2% annual growth rate and adding vested trips to existing 2025 volumes.

Table 5: Background (2027) PM Peak Hour Capacity Analysis

Roadway From	To	PHPD MSV [1]	PHPD - Background (2027) Existing 2025 PHPD Volume	Annual Growth Rate	Vested Trips[2]	Background 2027 PHPD Volume[3]	V/C Ratio	Deficiency?
Barna Avenue								
SR 405	*SR 50*	800	358	2%	0	372	0.47	No
SR 50	*Knox McRae*	800	578	2%	0	602	0.75	No
Knox McRae Drive	*Harrison Drive*	800	541	2%	23	585	0.73	No
SR 405								
SR 50	*Fox Lake Road*	920	996	2%	0	1,036	1.13	Yes

Notes:

1. PHPD Maximum Service Volume obtained from the 2023 FDOT Q/LOS Handbook.

2. Vested trips considered from Apollo Gardens TIA. Huntington Park TIA was reviewed, but these segments were not analyzed in that TIA.

3. Background (2025) PHPD Volumes derived by applying a 2% annual growth rate and adding vested trips to Existing PHPD Volumes.

3.2 BACKGROUND INTERSECTION CONDITIONS

An intersection operational analysis was performed for background conditions during the PM peak hour using procedures outlined in the *Highway Capacity Manual,7th Edition* with Synchro (v12) software.

Intersection level of service (LOS) and maximum volume to capacity (v/c) ratios for the PM peak hour background conditions are provided in **Table 6**. Synchro outputs are provided in **Appendix H**.

As shown in **Table 6**, all study area intersections are expected to operate at an acceptable LOS overall and with v/c ratios less than one (1.0) during background (2027) PM peak hour conditions.

Table 6: Background (2027) PM Peak Hour Intersection Conditions

Background Condition - 2027						
Intersection		Control Type	Approach	PM Peak Hour		
				Max Level of Service	Max V/C Movement	Max V/C Ratio
1	Park Avenue & Country Club Drive	Unsignalized (TWSC)	EB	B	EBL/T/R	0.01
			WB	B	WBL/T/R	0.21
			NB(L)	A	NBL/T	0.00
			SB(L)	A	SBL/T/R	0.03
			Overall	**-**	**WBL/T/R**	**0.21**
2	Royal Oak Drive & Country Club Drive	Unsignalized (TWSC)	EB(L)	A	EBL/T/R	0.02
			WB(L)	A	WBL/T/R	0.01
			NB	B	NBL/T/R	0.07
			SB	B	SBL/T/R	0.06
			Overall	**-**	**NBL/T/R**	**0.07**
3	Royal Oak Drive & Saunders Place	Unsignalized (TWSC)	EB	-	-	-
			WB	A	WBL/R	0.01
			NB(L)	-	-	-
			SB(L)	A	SBL/T	0.00
			Overall	**-**	**WBL/R**	**0.01**
4	Barna Avenue & Knox McRae Drive	Signalized	EB	C	EBT/R	0.69
			WB	C	WBT/R	0.81
			NB	C	NBT/R	0.90
			SB	C	SBT/R	0.67
			Overall	**C (28.2 s)**	**NBT/R**	**0.90**
5	Barna Avenue & Country Club Drive	Signalized	EB	B	EBL/T/R	0.30
			WB	C	WBT/R	0.59
			NB	B	NBT/R	0.80
			SB	B	SBT/R	0.53
			Overall	**B (14.4 s)**	**NBT/R**	**0.80**
6	Barna Avenue & Harrison Street	Signalized	EB	C	EBT/R	0.78
			WB	B	WBT/R	0.59
			NB	C	NBT/R	0.81
			SB	B	SBT/R	0.43
			Overall	**C (23.0 s)**	**NBT/R**	**0.81**

4.0 DEVELOPMENT TRAFFIC

The applicant is proposing to develop the site to consist of approximately 239 single family homes, 164 townhomes, and 148 apartment units. Buildout of the project is anticipated in Year 2027. The latest industry standards were referenced to evaluate the amount of new external trips to be generated by the site at buildout. The latest adopted regional travel demand model was used to forecast the distribution of trips throughout the study area.

4.1 TRIP GENERATION

Trip generation for the proposed site was calculated using procedures published in the 11th Edition of the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*. ITE excerpts are provided in **Appendix J**.

Table 7 provides the daily and PM peak hour trip generation summary for the project. As shown in the table, the proposed site is anticipated to generate 4,472 daily trips and 403 PM peak hour trips (249 inbound and 154 outbound).

Table 7: Trip Generation

Daily	**Land Use**	**ITE LUC[1]**	**Size**	**Units**	**ITE Trip Rate[1]**	**Daily**				
						Total	**In[1]**		**Out[1]**	
	Single-Family Detached Housing	210	**239**	DU	9.41	2,249	50%	1,125	50%	1,124
	Single-Family Attached Housing	215	**164**	DU	7.31	1,199	50%	600	50%	599
	Multi-Family Housing (Low-Rise)	220	**148**	DU	6.92	1,024	50%	512	50%	512
	Total Generated Trips					**4,472**	**2,237**		**2,235**	
PM Peak Hour	**Land Use**	**ITE LUC[1]**	**Size**	**Units**	**ITE Trip Rate[1]**	**PM Peak Hour**				
						Total	**In[1]**		**Out[1]**	
	Single-Family Detached Housing	210	**239**	DU	0.94	225	63%	142	37%	83
	Single-Family Attached Housing	215	**164**	DU	0.57	94	57%	54	43%	40
	Multi-Family Housing (Low-Rise)	220	**148**	DU	0.57	84	63%	53	37%	31
	Total Generated Trips					**403**	**249**		**154**	

Notes: [1] Vehicle trip rate and directional splits per ITE Trip Generation, 11th Edition

4.2 TRIP DISTRIBUTION

Projected traffic patterns on study area facilities were developed using the latest adopted regional travel demand model. Land use data for the project was entered into a new traffic analysis zone (TAZ) within the Central Florida Regional Planning Model (CFRPM v7) set and situated within the existing roadway network to appropriately represent project access. The model was used to assign trips for all trip purposes between allocated origin and destination pairs using project buildout year model data. Trip distribution for the project was extracted from the completed model assignment and reviewed for logic. The resulting model plot showing the percent of daily project distribution is provided in **Appendix K**.

Daily model project distribution was referenced to manually assign project distribution at the study area intersections in general accordance with daily model output. **Figure 2** shows the project distribution at the study intersection for use in forecasting project trips.

4.3 TRIP ASSIGNMENT

Project trip distribution percentages were used to assign anticipated project trips to the study area roadways and intersections. **Figure 3** shows the anticipated peak hour project trip assignments at study area intersections during the PM peak hour.

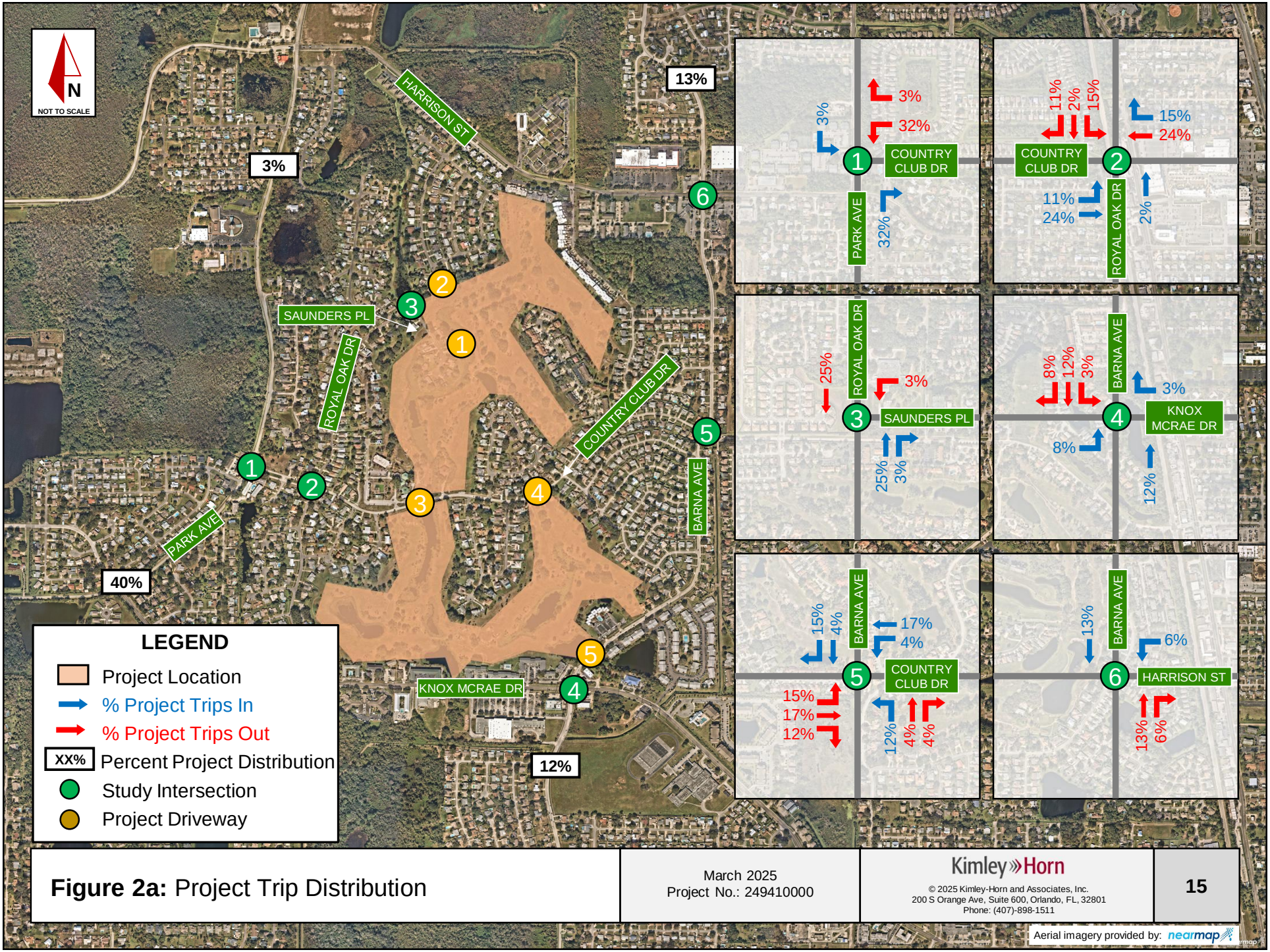


Figure 2a: Project Trip Distribution

March 2025
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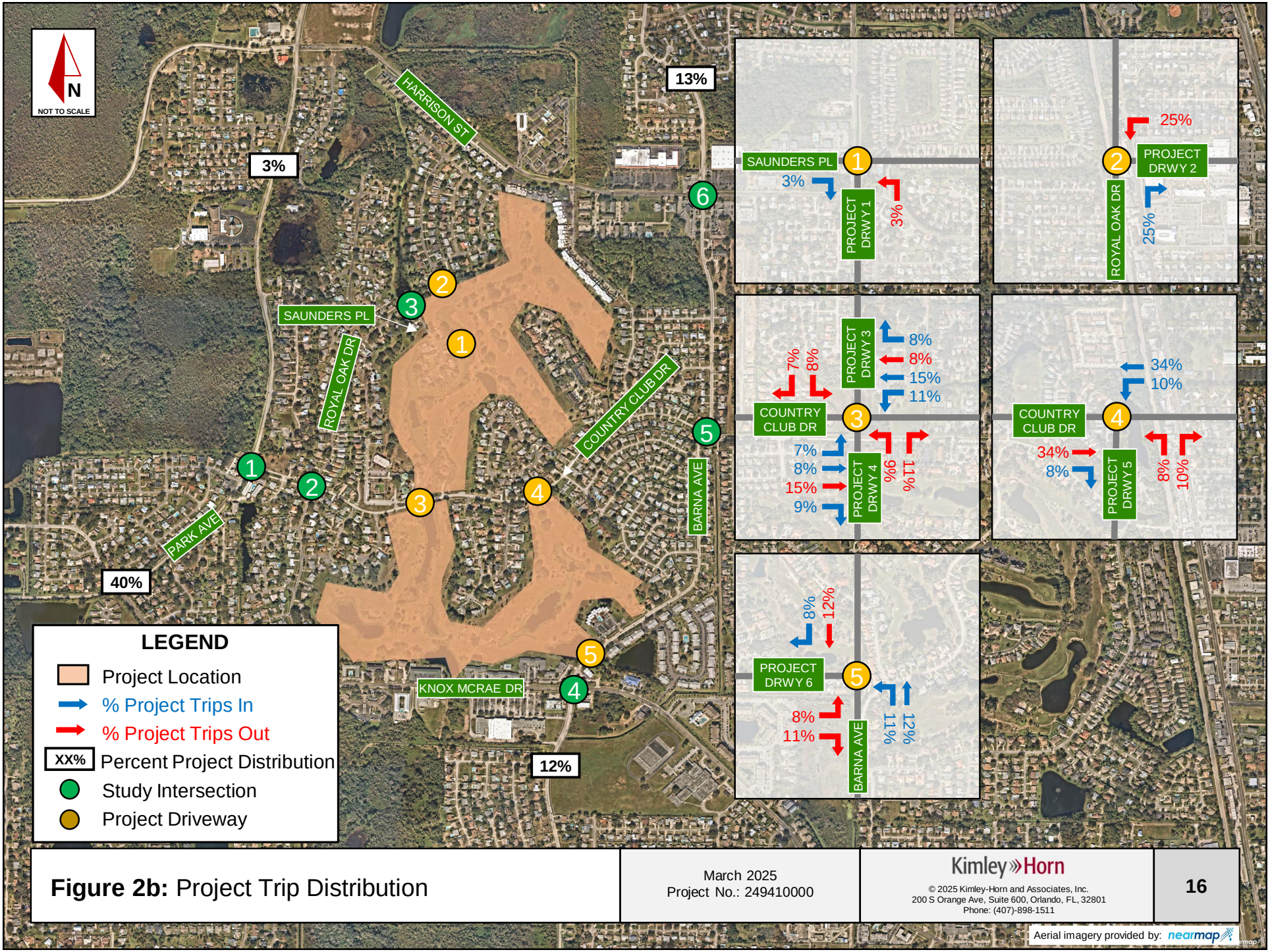


Figure 2b: Project Trip Distribution

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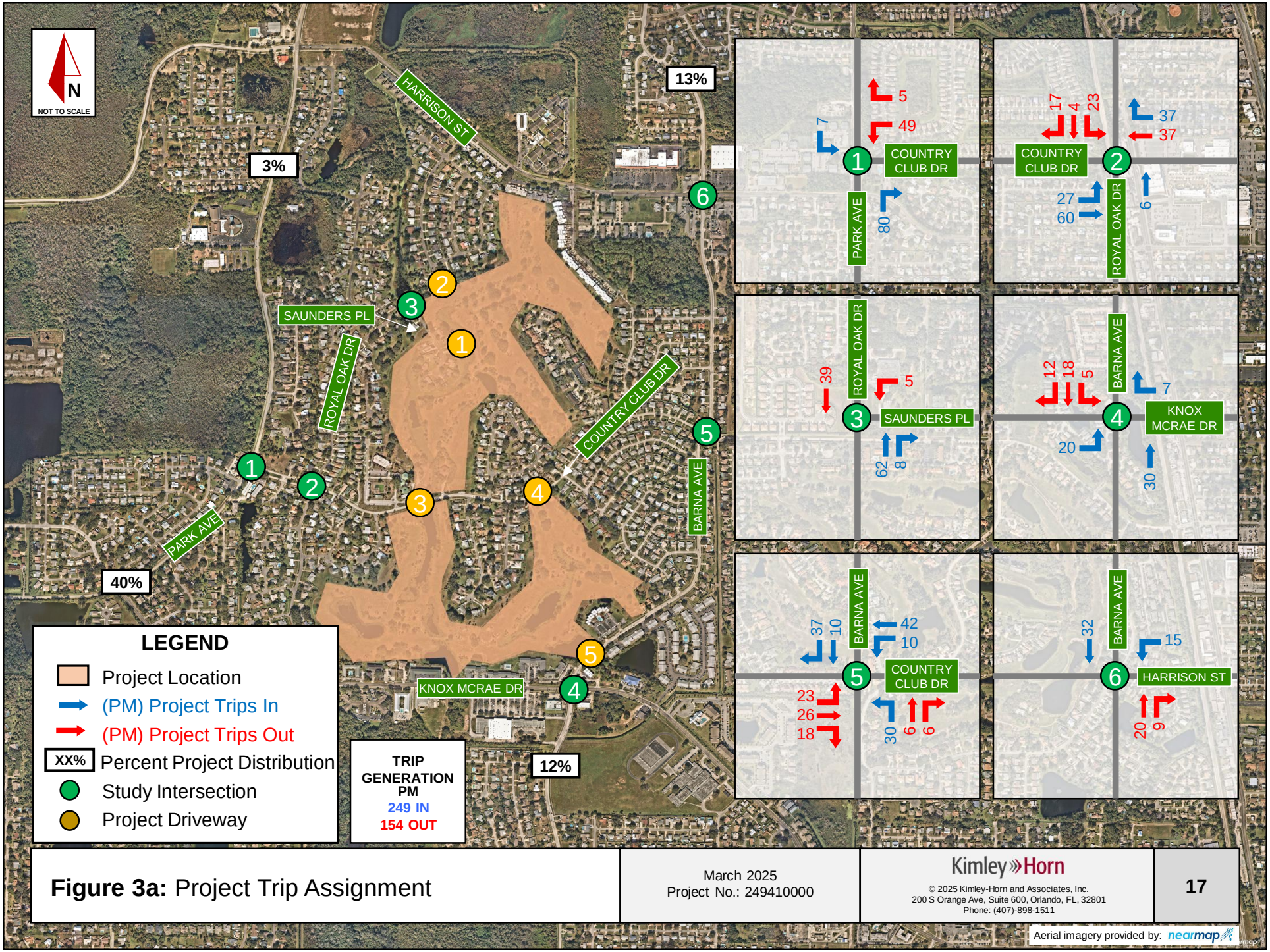


Figure 3a: Project Trip Assignment

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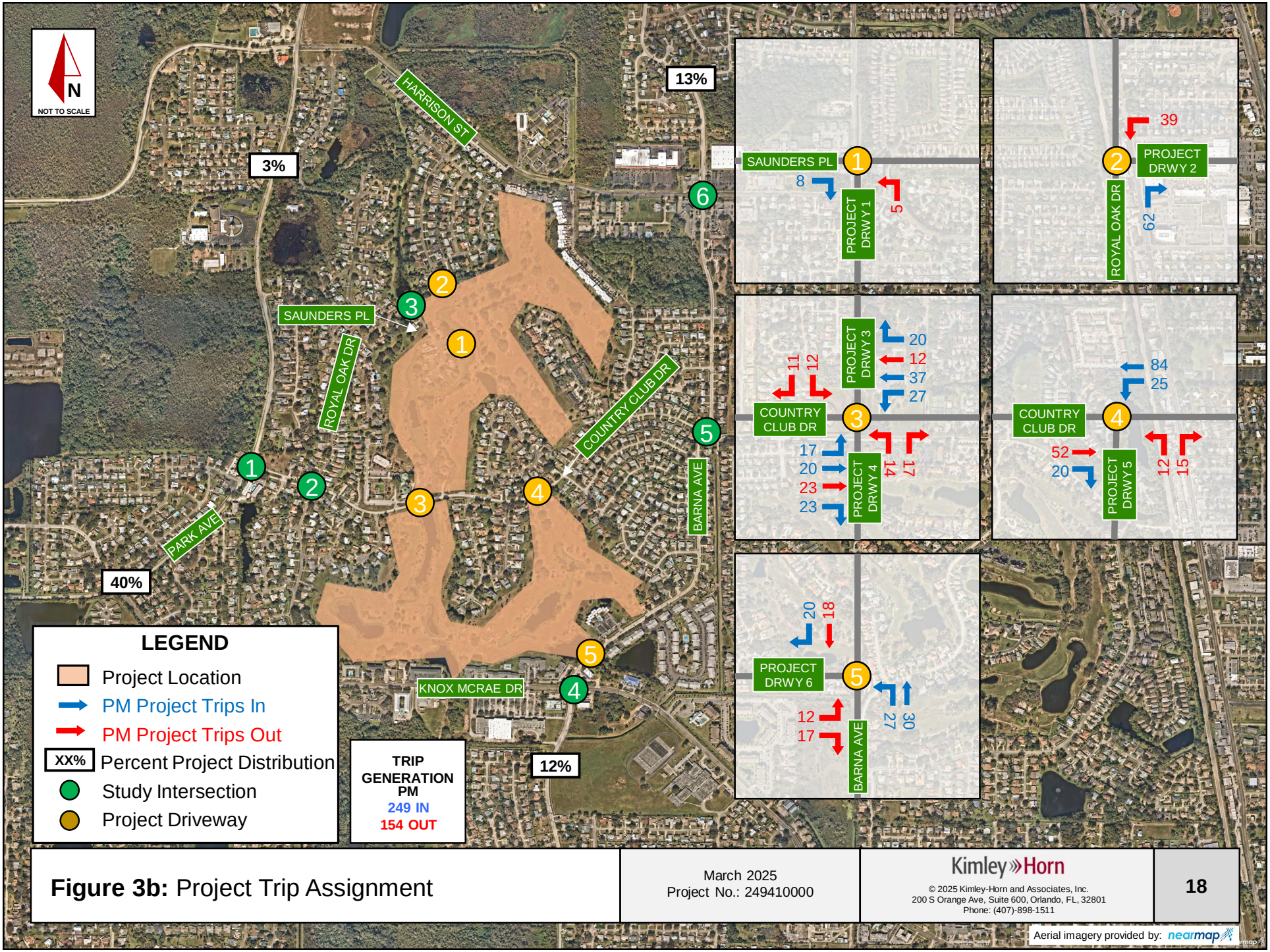


Figure 3b: Project Trip Assignment

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5.0 BUILDOUT CONDITIONS ANALYSIS

Buildout volumes were developed by adding anticipated project trips to background volumes. A determination of the impact of project traffic on the roadway network was made, including LOS conditions for the intersections and roadway segments within the study area. Turning movement volume worksheets for all intersections and driveways are provided in **Appendix G.**

5.1 BUILDOUT ROADWAY SEGMENT ANALYSIS

A Daily and PM peak hour capacity analysis was performed for the roadway segments adjacent to the development for buildout conditions. The buildout Daily and PM peak hour capacity analysis are shown in **Tables 8 and 9**.

As shown in the following tables, all segments in the study area are operating with buildout Daily and PM peak hour volumes within their adopted maximum service volumes (MSV) with the exception of the existing and background deficient segment of SR 405 from SR 50 to Fox Lake Road, with a v/c greater than one (1.0) in the Daily and PM peak hour buildout condition.

Table 8: Buildout (2027) Daily Capacity Analysis

Roadway From	To	Daily MSV [1]	Daily - Buildout (2027)					
			Background 2025 AADT	4,472 Daily Trips		Buildout AADT	V/C Ratio	LOS
				% Assign[2]	Project Trips			
Barna Avenue								
SR 405	*SR 50*	15,600	5,347	6%	268	5,615	0.36	No
SR 50	Knox McRae Drive	15,600	12,123	12%	537	12,660	0.81	No
Knox McRae Drive	*Harrison Drive*	15,600	12,503	23%	1029	13,532	0.87	No
SR 405								
SR 50	*Fox Lake Road*	18,590	20,339	26%	1163	21,502	1.16	Yes

Notes:

1. Maximum Service Volume obtained from SCTPO Traffic Count Report and supplemented with the 2020 FDOT Q/LOS Handbook.

2. Percent project traffic assignment was calculated as the maximum across the segment.

Table 9: Buildout (2027) PM Peak Hour Capacity Analysis

Roadway From	To	PHPD MSV [1]	PHPD - Buildout (2027)							
			Background 2025 PHPD Volume	PM Peak Hour Project Trips				Buildout PHPD Volume	V/C Ratio	Deficiency?
				% Assign[2]	NB / EB	SB / WB	Project Trips			
Barna Avenue										
SR 405	*SR 50*	800	372	6%	15	9	15	387	0.48	No
SR 50	*Knox McRae*	800	602	12%	30	18	30	632	0.79	No
Knox McRae Drive	*Harrison Drive*	800	585	23%	57	35	57	642	0.80	No
SR 405										
SR 50	*Fox Lake Road*	920	1,036	26%	65	40	65	1,101	1.19	Yes

Notes:

1. PHPD Maximum Service Volume obtained from the 2023 FDOT Q/LOS Handbook.

2. Percent project traffic assignment was calculated as the maximum across the segment.

5.2 BUILDOUT INTERSECTION ANALYSIS

An intersection operational analysis was performed for Year 2027 buildout conditions during the PM peak hours using procedures outlined in the *Highway Capacity Manual, 7th Edition* with Synchro (v12) software. Intersection level of service (LOS), delay, and maximum volume to capacity (v/c) ratios for the PM peak hour buildout conditions are provided in **Table 10.** Synchro outputs are provided in **Appendix I**. **Figure 4** illustrates turning movement buildout volumes at the study area intersections for the PM peak hour.

As shown in **Table 10**, the study area intersections are anticipated to operate at an acceptable LOS under buildout (2027) PM peak hour conditions.

No operational deficiencies were identified as a result of the proposed development.

Table 10: Buildout (2027) PM Peak Hour Intersection Conditions

Buildout Condition - 2027						
	Intersection	Control Type	Approach	PM Peak Hour		
				Max Level of Service	Max V/C Movement	Max V/C Ratio
1	Park Avenue & Country Club Drive	Unsignalized (TWSC)	EB	B	EBL/T/R	0.01
			WB	C	WBL/T/R	0.35
			NB(L)	A	NBL/T	0.00
			SB(L)	A	SBL/T/R	0.04
			Overall	**-**	**WBL/T/R**	**0.35**
2	Royal Oak Drive & Country Club Drive	Unsignalized (TWSC)	EB(L)	A	EBL/T/R	0.04
			WB(L)	A	WBL/T/R	0.01
			NB	B	NBL/T/R	0.10
			SB	B	SBL/T/R	0.16
			Overall	**-**	**SBL/T/R**	**0.16**
3	Royal Oak Drive & Saunders Place	Unsignalized (TWSC)	EB	-	-	-
			WB	B	WBL/R	0.02
			NB(L)	-	-	-
			SB(L)	A	SBL/T	0.00
			Overall	**-**	**WBL/R**	**0.02**
4	Barna Avenue & Knox McRae Drive	Signalized	EB	C	EBT/R	0.66
			WB	C	WBT/R	0.82
			NB	D	NBT/R	0.93
			SB	C	SBT/R	0.71
			Overall	**C (31.2 s)**	**NBT/R**	**0.93**
5	Barna Avenue & Country Club Drive	Signalized	EB	C	EBL/T/R	0.54
			WB	C	WBT/R	0.62
			NB	B	NBT/R	0.81
			SB	B	SBT/R	0.65
			Overall	**B (16.6 s)**	**NBT/R**	**0.81**
6	Barna Avenue & Harrison Street	Signalized	EB	C	EBT/R	0.79
			WB	B	WBT/R	0.59
			NB	C	NBT/R	0.83
			SB	C	SBT/R	0.47
			Overall	**C (24.3 s)**	**NBT/R**	**0.83**
7	Project Driveway 1 & Saunders Place	Unsignalized (TWSC)	EB(L)	-	-	-
			WB(L)	A	WBL/T	0.00
			NB	A	NBL	0.01
			SB	-	-	-
			Overall	**-**	**NBL**	**0.01**
8	Project Driveway 2 & Royal Oak Drive	Unsignalized (TWSC)	EB	-	-	-
			WB	A	WBL/R	0.06
			NB(L)	-	-	-
			SB(L)	A	SBL/T	0.00
			Overall	**-**	**WBL/R**	**0.06**
9	Project Driveway 3/4 & Country Club Drive	Unsignalized (TWSC)	EB(L)	A	EBL/T/R	0.01
			WB(L)	A	WBL/T/R	0.00
			NB	B	NBL/T/R	0.05
			SB	B	SBL/T/R	0.04
			Overall	**-**	**NBL/T/R**	**0.05**
10	Project Driveway 5 & Country Club Drive	Unsignalized (TWSC)	EB(L)	-	-	-
			WB(L)	A	WBL/T	0.02
			NB	B	NBL/R	0.04
			SB	-	-	-
			Overall	**-**	**NBL/R**	**0.04**
11	Project Driveway 6 & Barna Avenue	Unsignalized (TWSC)	EB	C	EBL/R	0.10
			WB	-	-	-
			NB(L)	A	NBL/T	0.03
			SB(L)	-	-	-
			Overall	**-**	**EBL/R**	**0.10**

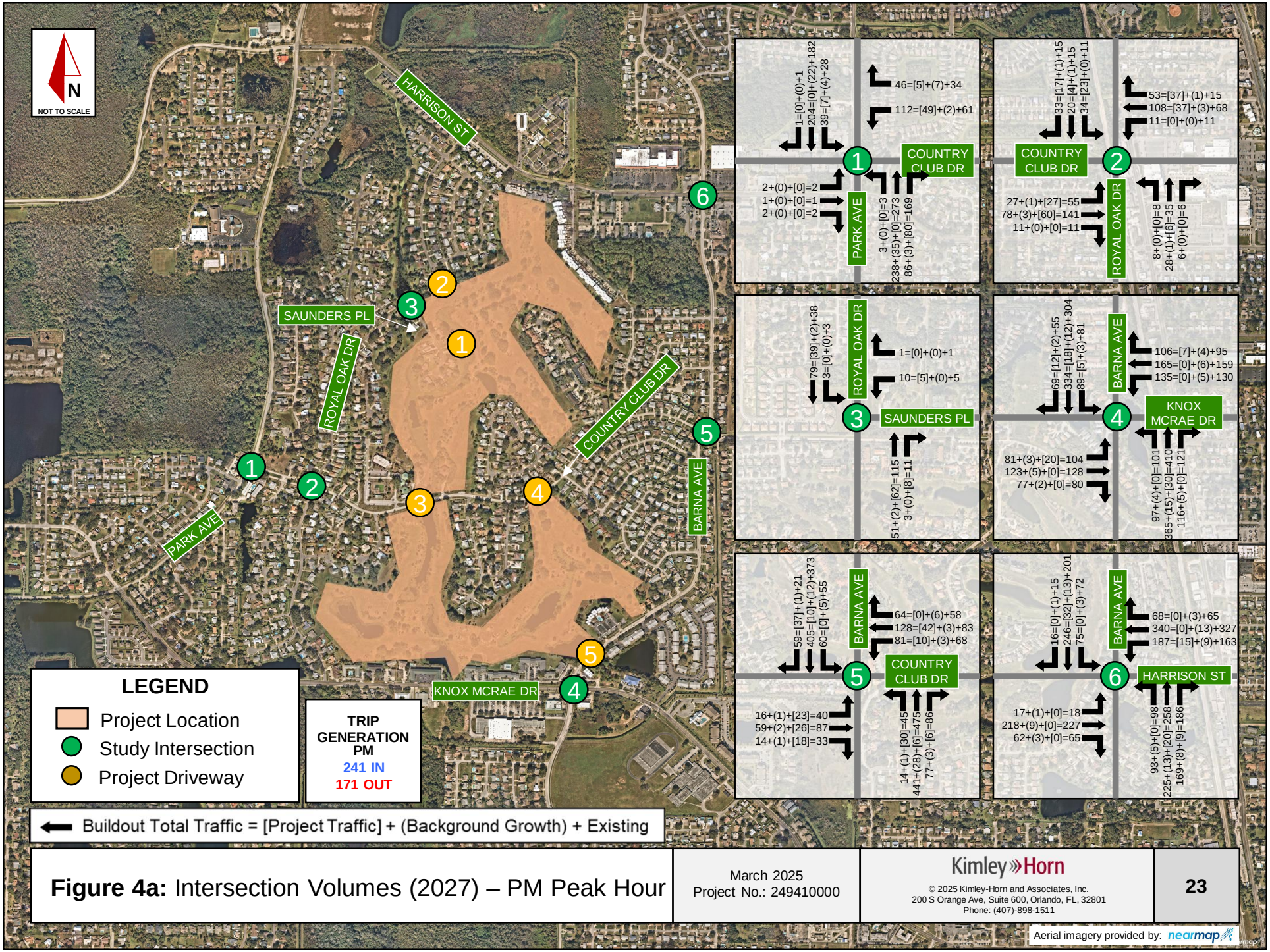


Figure 4a: Intersection Volumes (2027) – PM Peak Hour

March 2025
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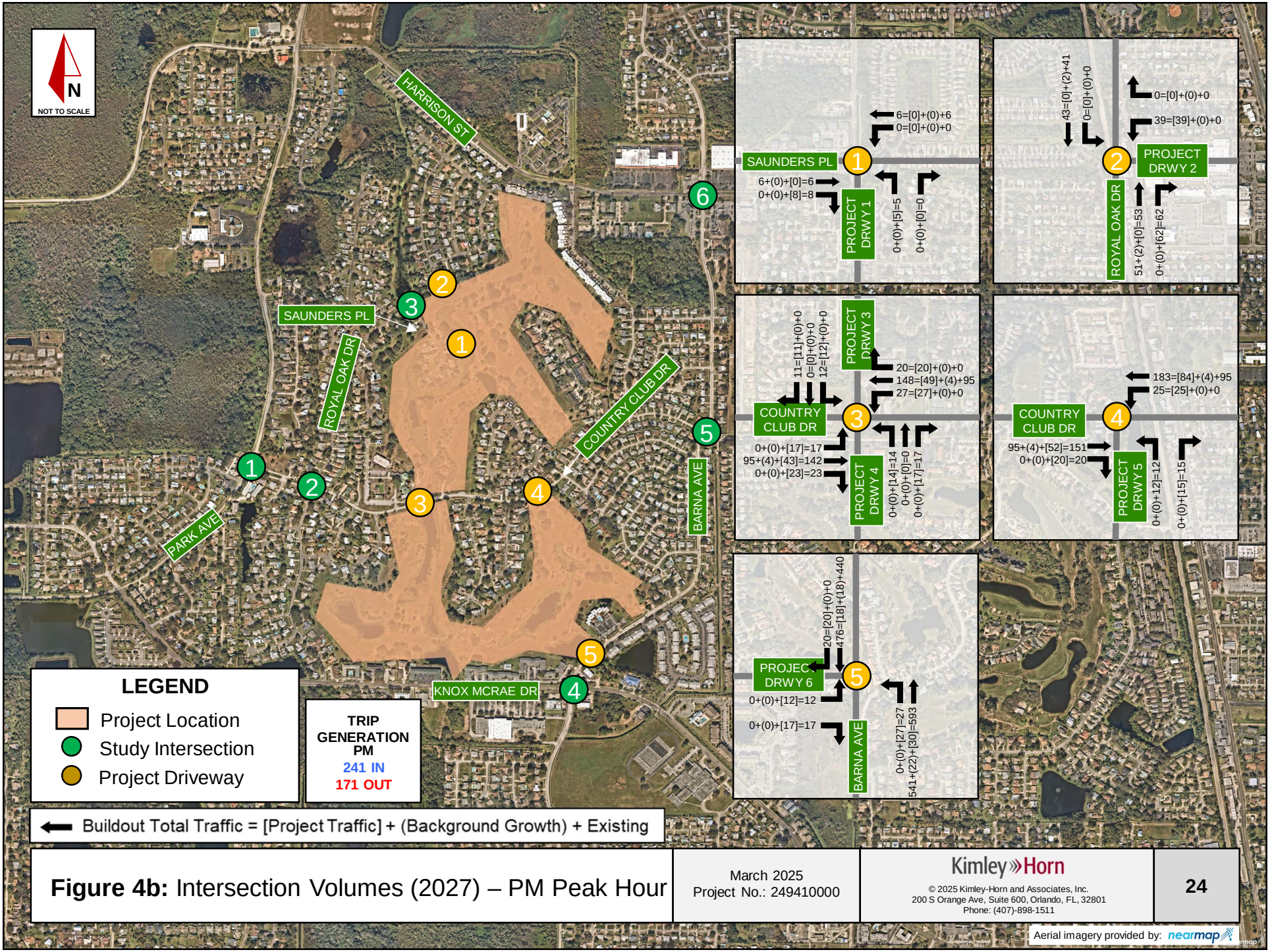


Figure 4b: Intersection Volumes (2027) – PM Peak Hour

March 2025
Project No.: 249410000

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5.3 BUILDOUT INGRESS TURN LANE ANALYSIS

The need for exclusive ingress right-turn and left-turn lanes at the proposed project driveways on Country Club Drive and the one (1) proposed project driveway on Barna Avenue were evaluated using the National Cooperative of Highway Research Program (NCHRP) Report 457 thresholds.

The need for an exclusive right-turn lane at the project driveways on Country Club Drive and Barna Avenue was determined by comparing the right turning volume with the approach volume. Based on the project volume shown in **Figure 4** and thresholds specified by the NCHRP Report 457, an ingress right-turn lane is not warranted at any of the project driveways.

The need for an exclusive left-turn lane at the project driveways on Country Club Drive and Barna Avneue was determined by comparing the left turning volume with the approach and opposing volume. Based on the project volume shown in **Figure 4** and thresholds specified by the NCHRP Report 457, an ingress left-turn lane is not warranted at any of the project driveways on Country Club Drive. A left-turn lane is warranted at the driveway on Barna Avenue. There is an existing two-way left-turn lane at this location, so no additional improvements are needed.

NCHRP outputs are provided in **Appendix L.**

6.0 SCHOOL OPERATIONAL ANALYSIS

During previous community outreach, comments were received about the intersection of Park Avenue & Country Club Drive being impacted by local school pick-up and drop-off times.

To understand operations of this intersection during school pick-up and drop-off times, turning movements counts were collected on Tuesday, May 21, 2024 at the intersection of Park Avenue & Country Club Drive during both the morning drop-off and afternoon pick-up time. The morning peak hour was observed from 7:30-8:30 AM and the afternoon peak hour was observed from 2:45-3:45 PM. The counts were adjusted using seasonal factor (SF) data from FDOT's Florida Traffic Online (FTO) publication, provided in **Appendix D**.

Background and buildout turning movement volumes were developed using the same methodology as the PM intersection analysis, discussed in Sections 3.0 and 5.0. AM peak hour trips from the Huntington Park TIA were included as vested trips in the morning peak hour analysis. The AM peak hour trip generation of the proposed residential development is lower than the PM peak hour trip generation. To provide a conservative analysis, the PM peak hour trip generation and assignment from Section 4.0, was used in these additional scenarios.

Turning movement volume development worksheets for the non-PM peak hour analysis at the intersection of Park Avenue & Country Club Drive are provided in **Appendix M.**

An intersection operational analysis was performed for buildout (2027) conditions during the morning and afternoon peak hour using procedures outlined in the *Highway Capacity Manual, 7th Edition* with Synchro (v12) software. Intersection level of service (LOS) and maximum volume to capacity (v/c) ratios for the morning and afternoon peak hour existing conditions are provided in **Table 11**. Synchro outputs for these scenarios are included in **Appendix M**.

As shown in **Table 11**, the intersection of Park Avenue & Country Club Drive operates with acceptable LOS and with v/c ratios less than one (1.0) in buildout (2027) morning and afternoon peak hour conditions.

Table 11: Buildout (2027) School Operations Analysis at Park Avenue & Country Club Drive

Buildout Condition - 2027						
Intersection		**Control Type**	**Approach**	**Max Level of Service**	**Max V/C Movement**	**Max V/C Ratio**
Morning Peak Hour						
1	Park Avenue & Country Club Drive	Unsignalized (TWSC)	EB	A	EBL/T/R	0.00
			WB	D	WBL/T/R	0.64
			NB(L)	A	NBL/T	0.00
			SB(L)	A	SBL/T/R	0.07
			Overall	**-**	**WBL/T/R**	**0.64**
Afternoon Peak Hour						
1	Park Avenue & Country Club Drive	Unsignalized (TWSC)	EB	C	EBL/T/R	0.03
			WB	D	WBL/T/R	0.59
			NB(L)	A	NBL/T	0.00
			SB(L)	A	SBL/T/R	0.08
			Overall	**-**	**WBL/T/R**	**0.59**
PM Peak Hour						
1	Park Avenue & Country Club Drive	Unsignalized (TWSC)	EB	B	EBL/T/R	0.01
			WB	C	WBL/T/R	0.35
			NB(L)	A	NBL/T	0.00
			SB(L)	A	SBL/T/R	0.04
			Overall	**-**	**WBL/T/R**	**0.35**

7.0 CONCLUSION

This traffic impact analysis was performed to analyze and document the traffic impacts associated with the proposed Gemini Lakes PD, a redevelopment of the existing golf course use within the Royal Oak Country Club in the City of Titusville, Florida. The 147.13-acre site is generally located to the north of Knox McRae Drive and south of Royal Oak Drive. The applicant is proposing to redevelop the site to consist of approximately 239 single family homes, 164 townhomes, and 148 apartment units. Access to the proposed development on the north side site of Country Club Drive will be provided via one (1) full access driveway on Country Club Drive, one full access driveway on Saunders Place (with access to Royal Oak Drive) and one (1) full access driveway on Royal Oak Drive. Access to the proposed development on the south side of Country Club Drive will be provided via (2) full access driveways on Country Club Drive and one (1) full access driveway on Barna Avenue.

The proposed development is anticipated to generate 4,472 daily trips and 403 PM peak hour trips (249 inbound and 154 outbound) based data from the 11th Edition of the Institute of Transportation Engineer's (ITE) *Trip Generation Manual*. Project trips were distributed onto the surrounding network using the latest adopted regional travel demand model and manually assigned at the study area intersections.

A roadway segment capacity analysis was performed for the roadway segments in the study area for existing, background, and buildout conditions. The analysis identifies no roadway segment capacity deficiencies, with the exception of SR 405 from SR 50 to Fox Lake Road under daily and PM peak hour existing, background, and buildout conditions. No new roadway segment capacity deficiencies were identified as a result of the proposed development.

An operational analysis was performed for existing, background, and buildout conditions at the driveways and intersections within the study area. The project driveways and study area intersections are anticipated to operate at an acceptable overall LOS under buildout (2027) PM peak hour conditions. No operational deficiencies were identified as a result of the proposed development.

The need for exclusive ingress left-turn and right-turn lanes were evaluated based on the NCHRP Report 457 thresholds for the proposed project driveways on Country Club Drive and Barna Avenue. Ingress right-turn lanes and left-turn lanes are not warranted at any of the project driveways on Country Club Drive. At the project driveway on Barna Avenue, a left-turn lane is warranted. There is an existing two-way left-turn lane at this location, so no additional improvements are needed.

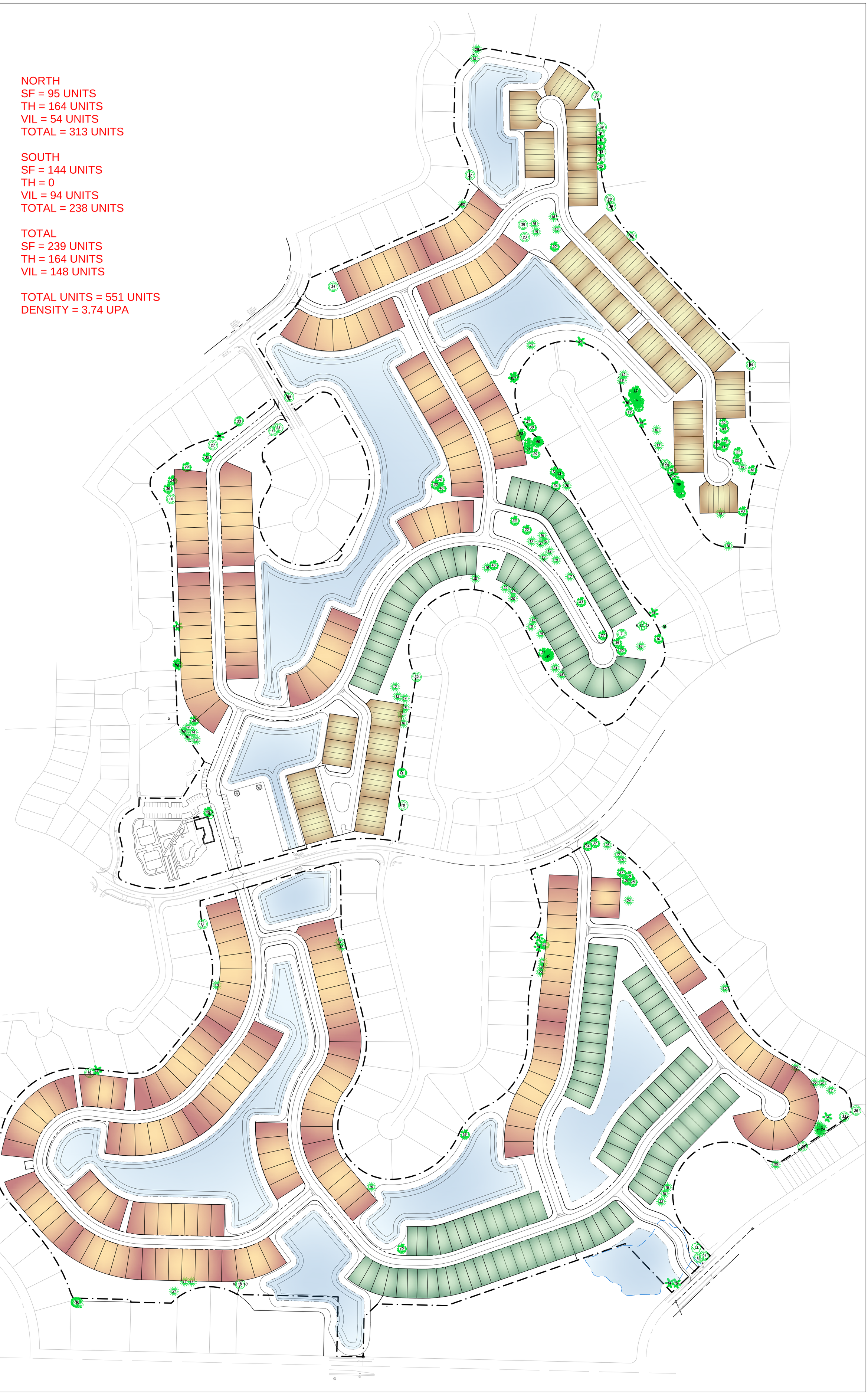
APPENDIX A
Conceptual Site Plan

NORTH
SF = 95 UNITS
TH = 164 UNITS
VIL = 54 UNITS
TOTAL = 313 UNITS

SOUTH
SF = 144 UNITS
TH = 0
VIL = 94 UNITS
TOTAL = 238 UNITS

TOTAL
SF = 239 UNITS
TH = 164 UNITS
VIL = 148 UNITS

TOTAL UNITS = 551 UNITS
DENSITY = 3.74 UPA



APPENDIX B
Methodology Statement

Miller, Erika (Shellenberger)

From: Ofosu, Kwabena KB <Kwabena.Ofosu@Titusville.com>
Sent: Monday, March 24, 2025 10:58 AM
To: Miller, Erika (Shellenberger)
Cc: Taylor, James
Subject: RE: Royal Oak Golf Course Redevelopment TIA Methodology

Categories: External

Good Morning Erika,

Thanks for the update.
The projects you need to consider for vested trips are:

- Huntington Park, subdivision. TIA by Kimley Horn
- Apollo Gardens, multifamily. TIA by Kimley Horn

I hope this helps.

Thanks.
KB

From: Miller, Erika (Shellenberger) <Erika.Miller@kimley-horn.com>
Sent: Monday, March 17, 2025 3:28 PM
To: Ofosu, Kwabena KB <Kwabena.Ofosu@Titusville.com>
Cc: Taylor, James <James.Taylor@kimley-horn.com>
Subject: RE: Royal Oak Golf Course Redevelopment TIA Methodology

KB,

Hope you are doing well!

The Royal Oak PUD site plan has been revised, based on feedback received from the surrounding community and City Staff. We will be updating the Traffic Study to existing year 2025, so we wanted to touch base with you on a few methodology items.

The proposed development now consists of redeveloping the golf course into the following:

- 239 single family homes
- 164 townhome units
- 148 villas (assumed to be multi-family dwelling units)

Access to the site will now be provided at the following locations:

- North Side of Country Club Drive
    - One (1) Full Access Driveway on Country Club Drive
    - One (1) Full Access Driveway on Saunders Place
    - One (1) Full Access Driveway on Royal Oak Drive
- South Side of County Club Drive
    - Two (2) Full Access Driveways on Country Club Drive

- One (1) Full Access Driveway on Barna Avenue

The revised site plan is attached.

No change to the previously agreed upon Study Area is proposed.

With the forthcoming revision to the study, are there any developments near the redevelopment that we should include in the background of the study? During our outreach, a resident mentioned a development in the southeast quadrant of Harrison Street & Knox McRae Drive. Any information you could provide from this development would be helpful. See image below for the proposed development. In the previous analysis, a 2% growth rate was utilized to develop future year volumes. In the forthcoming analysis, 2% + any vested trips you provide will be included in the study.



Please let us know if you have any questions or other information to provide. Thank you!

Erika (Shellenberger) Miller, PE
Kimley-Horn | 200 South Orange Ave, Suite 600, Orlando, FL 32801
Direct: 689 206 9002

From: Ofosu, Kwabena KB <Kwabena.Ofosu@Titusville.com>
Sent: Tuesday, June 27, 2023 2:27 PM
To: Shellenberger, Erika <Erika.Shellenberger@kimley-horn.com>

Cc: Taylor, James <James.Taylor@kimley-horn.com>; Viteri, Sabrina <Sabrina.Viteri@kimley-horn.com>
Subject: RE: Royal Oak Golf Course Redevelopment TIA Methodology

Hello Erika,

Please add the segment(s)
- Barna, from Knox McRae to Harrison.

Please add the intersection
- Barna and Harrison.
- Barna and Knox McRae

Thanks.
KB

Kwabena "KB" Ofosu, P.E.
Community Development Engineer
City of Titusville, FL

Please provide feedback on our service. The Community Development customer service survey is available at https://www.titusville.com/FormCenter/Community-Development-7/Customer-Satisfaction-Survey-55.

Titusville Gateway to Nature & Space | Community Development Planning

Do you live in a flood zone or concerned about flooding? Go to City of Titusville Flood Information.

Thanks.

From: Shellenberger, Erika <Erika.Shellenberger@kimley-horn.com>
Sent: Monday, June 26, 2023 12:00 PM
To: Ofosu, Kwabena KB <Kwabena.Ofosu@Titusville.com>
Cc: Taylor, James <James.Taylor@kimley-horn.com>; Viteri, Sabrina <Sabrina.Viteri@kimley-horn.com>
Subject: Royal Oak Golf Course Redevelopment TIA Methodology

Kwabena,

See below the proposed traffic impact analysis methodology for the proposed redevelopment of the existing golf course within the Royal Oak Golf Country Club. The existing development is generally located to the north of Knox McRae Drive and south Royal Oak Drive in the City of Titusville.

The existing golf course is planned to be redeveloped into a residential development consisting of approximately 125 single family homes, 541 townhomes, and 378 apartment units. The conceptual site plan is attached. Access to the site on the north side of Country Club Drive will be provided via one (1) full access driveways on Country Club Drive and two (2) full access driveway on Royal Oak Drive. Access to the site on the south side of County Club Drive will be provided via two (2) full access driveways on Country Club Drive.

The basis for this study will be to evaluate the traffic operations of the adjacent roadway segments and intersections. As part of the traffic impact analysis for the proposed development, we will perform the following tasks:

1. ITE's Trip Generation Manual (11th Edition) was used to determine the Daily & PM peak hour trip generation rates. The proposed development is anticipated to generate 4,969 daily trips and 412 PM peak hour trips (241 inbound and 171 outbound).
2. Determine project traffic distribution and assignment using transportation modeling software and traffic volumes on the adjacent roadway segments.
3. Obtain available traffic data from the Space Coast Transportation Planning Organization, Brevard County, City of Titusville, and FDOT for roadway segments within the project study area (unless the City provides additional data).
4. Calculate background growth (review of historical count data and any vested trip data to be provided by the City).
5. Perform PM peak hour intersection LOS analysis for the study area intersections and project driveways.
    a. Country Club Drive & Barna Avenue
    b. Country Club Drive & Royal Oak Drive
    c. Country Club Drive & Park Avenue
    d. Royal Oak Drive & Saunders Place / Proposed Development Access Point
    e. Country Club Road & Proposed Full Access Driveways (3)
    f. Royal Oak Drive & Proposed Full Access Driveway
6. Perform roadway segment analysis for:
    a. Barna Avenue, from SR 405 to SR 50
    b. SR 405, from SR 50 to Fox Lake Road
7. Perform PM peak hour turning movement counts at the following intersections:
    a. Country Club Drive & Barna Avenue
    b. Country Club Drive & Royal Oak Drive
    c. Country Club Drive & Park Avenue
    d. Royal Oak Drive & Saunders Place
8. Prepare a traffic impact analysis report summarizing the analysis to the City of Titusville.

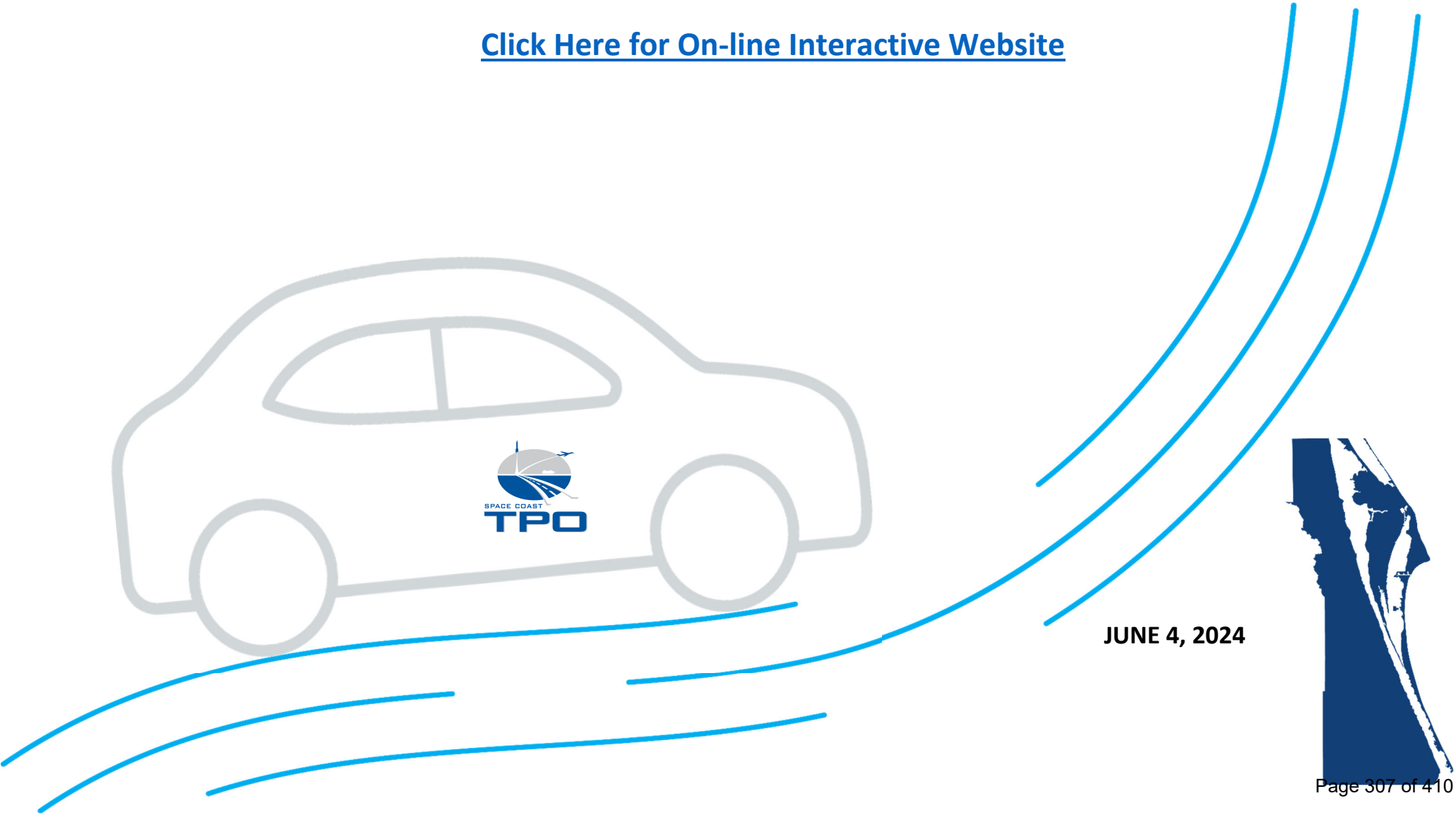
Please let us know if you have any questions or other information to provide. Thank you!

Erika Shellenberger, E.I.
Kimley-Horn | 189 S. Orange Ave. Suite 1000, Orlando, FL 32801
Direct: 689 206 9002

APPENDIX C
Space Coast TPO Traffic Counts

SPACE COAST
TRANSPORTATION PLANNING ORGANIZATION
HISTORICAL TRAFFIC VOLUMES – 2014-2023

[Click Here for On-line Interactive Website]



JUNE 4, 2024

SPACE COAST TRANSPORTATION PLANNING ORGANIZATION TRAFFIC COUNTS: 2014 - 2023

ID	ROAD	FROM	TO	2014 AADT	2015 AADT	2016 AADT	2017 AADT	2018 AADT	2019 AADT	2020 AADT	2021 AADT	2022 AADT	2023 AADT	Current MAV	Last Count Taken	Functional Classification
AREA: NORTH																
206	BARNA AVE.	SR 405	SR 50	4,930	5,160	5,540	5,920	NC	6,400	5,630	5,830	5,190	4,940	15,600	10/18/23-10/19/23	Urban Major Collector
521	CAMP RD.	GRISSOM PKWY.	US 1	2,370	2,150	2,670	2,730	2,690	2,430	2,410	2,390	2,210	2,350	15,600	09/20/23-09/21/23	Urban Major Collector
	CITRUS BLVD./CANAVERAL GROVES BLVD.	PINE ST.	US 1	6,760	4,360	7,290	4,620	7,680	5,260	7,530	5,315	7,570				
522	CITRUS BLVD.	PINE ST.	LEE ST./CANAVERAL GROVES BLVD.	NC	3,380	NC	3,830	NC	4,500	NC	4,240	NC	3,890	15,600	09/20/23-09/21/23	Urban Major Collector
212	CANAVERAL GROVES BLVD.	LEE ST.	GRISSOM PKWY.	6,760	NC	7,290	NC	7,680	NC	7,530	NC	7,570	NC	15,600	12/19/22-12/20/22	Urban Major Collector
213	CANAVERAL GROVES BLVD.	GRISSOM PKWY.	US 1	NC	5,340	NC	5,410	NC	6,020	NC	6,390	NC	5,140	15,600	09/20/23-09/21/23	Urban Major Collector
	CARPENTER RD.	FOX LAKE RD.	SR 46	4,390	4,455	4,557	4,437	4,630	4,560	4,290	4,463	4,610	4,653			
188	CARPENTER RD.	FOX LAKE RD.	GARDEN ST.	3,540	3,520	3,480	3,690	3,830	3,560	3,410	3,410	3,670	3,540	15,600	09/20/23-09/21/23	Urban Major Collector
184	CARPENTER RD.	GARDEN ST.	DAIRY RD.	4,960	5,390	5,390	5,410	5,400	5,450	5,140	5,270	5,420	5,800	15,600	09/27/23-09/28/23	Urban Major Collector
183	CARPENTER RD.	DAIRY RD.	SR 46	4,670	NC	4,800	4,210	4,660	4,670	4,320	4,710	4,740	4,620	15,600	09/27/23-09/28/23	Urban Major Collector
	DAIRY RD.	CARPENTER RD.	US 1	5,795	5,475	7,760	6,060	6,130	5,940	4,637	5,915	6,160	6,235			
185	DAIRY RD.	CARPENTER RD.	HOLDER RD.	NC	4,820	NC	5,030	NC	5,270	NC	5,180	NC	5,280	15,600	09/27/23-09/28/23	Urban Major Collector
523	DAIRY RD.	HOLDER RD.	SINGLETON AVE.	6,070	NC	7,760	NC	6,330	NC	5,870	NC	6,160	NC	15,600	11/28/22-11/29/22	Urban Major Collector
186	DAIRY RD.	SINGELTON AVE.	OLD DIXIE HWY.	NC	6,130	NC	6,930	NC	6,610	NC	6,650	NC	7,190	15,600	09/27/23-09/28/23	Urban Major Collector
187	DAIRY RD.	OLD DIXIE HWY.	US 1	5,520	NC	NC	6,220	5,930	NC	5,490	NC	6,160	NC	15,600	11/28/22-11/29/22	Urban Major Collector
596	DEERING PKWY.	I-95	US 1	1,870	1,720	2,090	2,470	2,530	2,720	2,550	2,780	3,150	2,930	14,200	10/18/23-10/19/23	Rural Major Collector
	FAY BLVD.	GOLFVIEW AVE.	GRISSOM PKWY.	7,805	5,825	8,765	6,275	7,760	6,200	7,740	6,010	7,785	5,850			
549	FAY BLVD.	GOLFVIEW AVE.	HOMESTEAD AVE.	NC	2,880	NC	3,160	NC	3,120	NC	3,410	NC	3,060	15,600	09/20/23-09/21/23	Urban Major Collector
207	FAY BLVD.	HOMESTEAD AVE.	DEER LN.	6,460	NC	6,640	NC	6,740	NC	6,590	NC	6,630	NC	15,600	11/28/22-11/29/22	Urban Major Collector
229	FAY BLVD.	DEER LN.	GRISSOM PKWY.	9,150	8,770	10,890	9,390	8,780	9,280	8,890	8,610	8,940	8,640	15,600	10/18/23-10/19/23	Urban Major Collector
	FAY BLVD.	GRISSOM PKWY.	US 1	13,670	13,590	14,465	14,280	14,380	14,325	13,425	14,875	14,765	13,520			
208	FAY BLVD.	GRISSOM PKWY.	AREQUIPPA RD.	12,830	13,400	13,590	NC	13,090	NC	12,150	NC	13,270	NC	33,800	11/14/22-11/15/22	Urban Major Collector
209	FAY BLVD.	AREQUIPPA RD.	CAROLE AVE.	NC	12,350	NC	12,860	NC	12,900	NC	14,190	NC	12,350	33,800	10/18/23-10/19/23	Urban Major Collector
210	FAY BLVD.	CAROLE AVE.	US 1	14,510	15,020	15,340	15,700	15,670	15,750	14,700	15,560	16,260	14,690	33,800	10/18/23-10/19/23	Urban Major Collector
235	FOX LAKE RD.	CARPENTER RD.	SOUTH ST.	NC	3,920	NC	NC	4,130	NC	NC	NC	NC	4,090	17,700	11/14/23-11/15/23	Urban Major Collector
	GRISSOM PKWY.	INDUSTRY RD.	PORT ST. JOHN PKWY	10,223	10,213	10,033	10,357	10,077	10,197	9,237	10,283	8,830	9,335			
634	GRISSOM PKWY.	INDUSTRY RD.	FED EX CENTER								12,750	NC	11,140	15,600	10/18/23-10/19/23	Urban Minor Arterial
197	GRISSOM PKWY.	FED EX CENTER	CANAVERAL GROVES BLVD.	11,540	11,720	11,300	11,160	10,800	10,640	9,480	NC	8,690	8,280	15,600	09/20/23-09/21/23	Urban Minor Arterial
196	GRISSOM PKWY.	CANAVERAL GROVES BLVD.	CAMP RD.	9,010	9,490	8,660	9,360	9,140	9,470	8,550	8,580	8,860	8,210	17,700	09/20/23-09/21/23	Urban Minor Arterial
195	GRISSOM PKWY.	CAMP RD.	PORT ST. JOHN PKWY	10,120	9,430	10,140	10,550	10,290	10,480	9,680	9,520	8,940	9,710	17,700	12/06/23-12/07/23	Urban Minor Arterial
	GRISSOM PKWY.	PORT ST. JOHN PKWY.	KINGS HWY.	12,220	11,170	14,117	11,890	12,660	12,607	11,933	11,700	12,630	11,883			
194	GRISSOM PKWY.	PORT ST. JOHN PKWY.	BRIDGE RD.	13,840	NC	14,940	13,920	14,150	14,550	13,230	13,240	13,740	13,030	17,700	09/20/23-09/21/23	Urban Minor Arterial
193	GRISSOM PKWY.	BRIDGE RD.	FAY BLVD.	12,390	12,740	13,700	12,070	12,670	12,990	11,820	11,980	12,770	13,470	17,700	10/18/23-10/19/23	Urban Minor Arterial
192	GRISSOM PKWY.	FAY BLVD.	CURTIS BLVD.	NC	9,600	NC	9,680	NC	10,280	NC	9,880	NC	9,150	15,600	09/20/23-09/21/23	Urban Minor Arterial
191	GRISSOM PKWY.	CURTIS BLVD.	KINGS HWY.	10,430	NC	13,710	NC	11,160	NC	10,750	NC	11,380	NC	15,600	11/28/22-11/29/22	Urban Minor Arterial
	GRISSOM PKWY.	KINGS HWY.	SR 405	9,310	9,320	8,660	10,080	9,160	10,440	7,070	10,270	9,940	9,620			
190	GRISSOM PKWY.	KINGS HWY.	SHEPARD DR.	NC	9,320	NC	10,080	NC	10,440	NC	10,270	NC	9,620	30,400	10/31/23-11/01/23	Rural Minor Arterial
189	GRISSOM PKWY.	SHEPARD DR.	SR 405	9,310	NC	8,620	NC	9,160	NC	8,560	NC	9,940	NC	39,800	11/14/22-11/15/22	Urban Minor Arterial
524	GOLFVIEW AVE.	PORT ST. JOHN PKWY.	FAY BLVD.	4,830	NC	NC	5,570	5,680	NC	5,580	NC	5,700	NC	15,600	11/28/22-11/29/22	Urban Major Collector
526	HOLDER RD.	DAIRY RD.	SR 46	NC	NC	NC	2,840	NC	2,730	NC	2,680	NC	2,560	17,700	09/27/23-09/28/23	Urban Major Collector
	HOPKINS AVE.	SR 50	GRACE ST.	8,390	6,770	8,995	7,765	8,995	7,715	7,985	7,665	8,955	7,170			
583	HOPKINS AVE.	SR 50	KNOX MCRAE DR.	7,130	NC	7,190	NC	7,420	NC	6,840	NC	7,450	NC	15,600	11/28/22-11/29/22	Urban Minor Arterial
584	HOPKINS AVE.	KNOX MCRAE DR.	COUNTRY CLUB DR.	NC	9,090	NC	10,710	NC	10,380	NC	10,280	NC	9,230	15,600	09/26/23-09/27/23	Urban Minor Arterial
577	HOPKINS AVE.	COUNTRY CLUB DR.	HARRISON ST.	9,650	NC	10,800	NC	10,570	NC	9,130	NC	10,460	NC	15,600	11/28/22-11/29/22	Urban Minor Arterial
586	HOPKINS AVE.	HARRISON ST.	GRACE ST.	NC	4,450	NC	4,820	NC	5,050	NC	5,050	5,140	5,110	15,600	09/26/23-09/27/23	Urban Minor Arterial
198	INDUSTRY RD. (SR 524)	SR 524	GRISSOM PKWY.	18,530	18,030	18,430	17,560	18,700	20,700	17,390	17,720	17,010	16,300	41,790	10/24/23-10/25/23	Urban Minor Arterial
594	INDUSTRY RD.	GRISSOM PKWY.	CIDCO RD.	4,360	NC	4,700	4,590	4,840	4,570	NC	4,790	4,170	3,650	15,600	10/31/23-11/01/23	Urban Local
245	KINGS HWY.	GRISSOM PKWY.	US 1	NC	4,060	NC	5,060	NC	5,200	NC	5,350	NC	5,270	15,600	10/18/23-10/19/23	Urban Major Collector
223	NASA CSWY.	US 1	SPACE COMMERCE WAY	11,110	10,170	12,070	12,260	13,400	14,380	8,870	9,900	13,730	13,560	30,400	10/31/23-11/01/23	Rural Principal Arterial Other
239	OLD DIXIE HWY.	GARDEN ST.	DAIRY RD.	1,190	NC	NC	NC	1,350	NC	1,060	1,170	1,160	NC	15,600	11/28/22-11/29/22	Urban Major Collector
240	OLD DIXIE HWY.	DAIRY RD.	PARRISH RD.	NC	860	NC	940	NC	820	NC	890	NC	920	15,600	09/27/23-09/28/23	Urban Major Collector
	PARRISH RD.	HOLDER RD.	US 1	780	1,240	850	1,210	840	1,110	690	1,120	NC	1,050			
242	PARRISH RD.	HOLDER RD.	SINGLETON AVE.	780	NC	840	NC	840	NC	690	NC	NC	NC	15,600	12/01/20-12/02/20	Urban Major Collector
241	PARRISH RD.	SINGLETON AVE.	US 1	NC	1,240	NC	1,210	NC	1,110	NC	1,120	NC	1,050	15,600	10/18/23-10/19/23	Urban Major Collector
211	PT ST JOHN PKWY.	I-95	GRISSOM PKWY.	9,960	10,550	10,370	10,990	11,030	10,940	10,960	10,930	11,460	10,060	39,800	10/24/23-10/25/23	Urban Minor Arterial
	SINGLETON AVE.	SR 405 (SOUTH ST.)	SR 46	1,680			8,180	4,570	9,140	4,360	8,840	1,520	6,980			
578	SINGLETON AVE.	SR 405 (SOUTH ST.)	GARDEN ST.	NC	NC	NC	7,570	7,510	NC	7,230	NC	NC	NC	17,700	11/16/20-11/17/20	Urban Major Collector
238	SINGLETON AVE.	GARDEN ST.	DAIRY RD.	NC	NC	NC	8,790	NC	9,140	NC	8,840	NC	6,980	15,600	09/27/23-09/28/23	Urban Major Collector
547	SINGLETON AVE.	DAIRY RD.	SR 46	1,680	NC	NC	NC	1,630	NC	1,490	NC	1,520	NC	15,600	11/28/22-11/29/22	Urban Major Collector
	SISSON RD.	SR 405	SR 50	6,770	6,825	7,500	7,905	7,070	7,810	7,545	7,515	7,620	7,225			
234	SISSON RD.	SR 405	SAN MATEO BLVD.	5,870	5,980	6,450	6,980	7,330	6,810	6,570	6,150	6,290	5,890	15,600	09/20/23-09/21/23	Urban Major Collector
550	SISSON RD.	SAN MATEO BLVD.	SR 50	7,670	7,670	8,550	8,830	6,810	8,810	8,520	8,880	8,950	8,560	15,600	09/20/23-09/21/23	Urban Major Collector
201	SR 46	VOLUSIA CO.	FAWN LAKE BLVD.	5,970	5,680	7,230	7,070	7,660	8,520	6,130	6,360	6,750	6,520	8,400	11/14/23-11/15/23	Rural Principal Arterial Other
	SR 46	FAWN LAKE BLVD.	US 1	9,605	11,000	10,755	11,040	10,440	10,780	10,400	11,485	11,520	11,725			
200	SR 46	FAWN LAKE BLVD.	I-95	9,080	NC	9,930	10,360	10,440	10,050	9,380	10,520	10,540	10,660	14,160	10/18/23-10/19/23	Urban Principal Arterial-Other
199	SR 46	I-95	US 1	10,130	11,000	11,580	11,720	NC	11,510	11,420	12,450	12,500	12,790	14,160	09/27/23-09/28/23	Urban Principal Arterial-Other
231	SR 50	ORANGE CO.	I-95	10,190	10,270	10,470	11,500	12,370	13,260	11,160	12,010	13,510	14,580	40,300	10/18/23-10/19/23	Rural Principal Arterial Other

**Note: 2016 AADT's Beaches area were counted twice in 2016 and the AADT listed is the average of the two counts.*
NC=Not Counted; UC=Under Construction

SPACE COAST TRANSPORTATION PLANNING ORGANIZATION TRAFFIC COUNTS: 2014 - 2023

ID	ROAD	FROM	TO	2014 AADT	2015 AADT	2016 AADT	2017 AADT	2018 AADT	2019 AADT	2020 AADT	2021 AADT	2022 AADT	2023 AADT	Current MAV	Last Count Taken	Functional Classification
AREA: NORTH																
	SR 50	I-95	US 1	18,487	21,715	20,268	21,568	24,043	23,148	20,598	21,908	22,328	20,938			
232	SR 50	I-95	SR 405	UC	27,980	23,810	30,320	34,830	31,190	29,760	29,350	31,490	29,480	41,790	10/24/23-10/25/23	Urban Principal Arterial-Other
164	SR 50	SR 405	BARNA AVE.	NC	24,080	NC	23,350	NC	23,940	NC	22,460	NC	20,520	41,790	09/26/23-09/27/23	Urban Minor Arterial
163	SR 50	BARNA AVE.	SISSON RD.	20,800	NC	21,360	NC	23,450	NC	18,740	NC	21,920	NC	41,790	11/28/22-11/29/22	Urban Minor Arterial
162	SR 50	SISSON RD.	HOPKINS AVE.	20,460	20,240	20,900	16,660	21,580	21,500	20,170	20,610	21,370	19,240	34,020	09/26/23-09/27/23	Urban Minor Arterial
161	SR 50	HOPKINS AVE.	US 1	14,200	14,560	15,000	15,940	16,310	15,960	13,720	15,210	14,530	14,510	34,020	09/26/23-09/27/23	Urban Minor Arterial
	SR 405 (COLUMBIA BLVD.)	SR 50	US 1	16,710	17,004	17,604	18,292	19,163	19,590	16,258	17,396	17,992	17,352			
218	SR 405 (COLUMBIA BLVD.)	SR 50	BARNA AVE.	19,070	19,500	19,110	20,210	20,330	20,540	18,790	21,070	21,540	18,520	41,790	09/26/23-09/27/23	Urban Principal Arterial-Other
219	SR 405 (COLUMBIA BLVD.)	BARNA AVE.	SR 407	16,850	17,740	17,950	18,510	19,530	19,870	17,220	17,800	18,500	19,060	41,790	11/14/23-11/15/23	Urban Principal Arterial-Other
220	SR 405 (COLUMBIA BLVD.)	SR 407	GRISSOM PKWY.	19,730	20,020	21,110	21,370	22,430	23,250	19,140	20,140	21,610	19,210	41,790	10/24/23-10/25/23	Urban Principal Arterial-Other
221	SR 405 (COLUMBIA BLVD.)	GRISSOM PKWY.	SISSON RD.	16,080	15,730	17,140	17,060	NC	18,920	14,940	15,970	14,640	17,510	41,790	10/24/23-10/25/23	Urban Principal Arterial-Other
222	SR 405 (COLUMBIA BLVD.)	SISSON RD.	US 1	11,820	12,030	12,710	14,310	14,360	15,370	11,200	12,000	13,670	12,460	41,790	10/24/23-10/25/23	Urban Principal Arterial-Other
	SR 405 (SOUTH ST.)	SR 50	SINGLETON AVE.	15,095	14,265	15,690	16,130	16,110	16,075	14,770	15,690	16,015	15,355			
217	SR 405 (SOUTH ST.)	SR 50	FOX LAKE RD.	17,720	16,910	18,210	18,840	18,770	18,950	17,070	18,480	19,160	18,790	18,590	10/18/23-10/19/23	Urban Minor Arterial
216	SR 405 (SOUTH ST.)	FOX LAKE RD.	SINGLETON AVE.	12,470	11,620	13,170	13,420	13,450	13,200	12,470	12,900	12,870	11,920	17,700	09/20/23-09/21/23	Urban Minor Arterial
	SR 405 (SOUTH ST.)	SINGLETON AVE.	WASHINGTON AVE.	6,070	6,930	6,480	6,630	6,240	6,800	5,610	6,350	5,990	6,350			
215	SR 405 (SOUTH ST.)	SINGLETON AVE.	PARK AVE.	6,660	6,930	6,960	6,630	7,010	6,800	6,300	6,350	6,590	6,350	37,810	09/26/23-09/27/23	Urban Minor Arterial
214	SR 405 (SOUTH ST.)	PARK AVE.	WASHINGTON AVE.	5,290	NC	5,520	NC	5,470	NC	4,920	NC	5,390	NC	34,020	11/28/22-11/29/22	Urban Minor Arterial
595	SR 406 (GARDEN ST.)	CARPENTER RD.	I-95	6,260	NC	6,960	NC	7,290	NC	7,240	NC	7,440	NC	15,600	11/28/22-11/29/22	Urban Major Collector
	SR 406 (GARDEN ST.)	I-95	WASHINGTON AVE.	11,890	12,833	13,613	13,243	13,763	14,050	12,443	12,913	13,745	13,035			
202	SR 406 (GARDEN ST.)	I-95	SINGLETON AVE.	12,800	13,850	14,510	14,730	16,310	15,700	14,820	15,300	16,130	15,220	41,790	09/27/23-09/28/23	Urban Principal Arterial-Other
203	SR 406 (GARDEN ST.)	SINGLETON AVE.	PARK AVE.	15,690	18,060	16,180	16,930	17,390	17,230	14,980	15,810	16,240	15,900	39,800	10/10/23-10/11/23	Urban Principal Arterial-Other
204	SR 406 (GARDEN ST.)	PARK AVE.	HOPKINS AVE.	10,960	10,940	13,780	10,930	11,480	12,910	11,210	11,380	11,890	11,550	39,800	09/27/23-09/28/23	Urban Principal Arterial-Other
205	SR 406 (GARDEN ST.)	HOPKINS AVE.	WASHINGTON AVE.	8,110	8,480	9,980	10,380	9,870	10,360	8,760	9,160	10,720	9,470	32,400	10/31/23-11/01/23	Urban Principal Arterial-Other
233	A. MAX BREWER MEMORIAL PKWY.	WASHINGTON AVE.	MAX BREWER MEMORIAL PKWY. (SR 402)	4,030	4,900	5,960	5,290	6,120	6,530	4,980	5,360	6,080	5,800	14,800	09/27/23-09/28/23	Urban Principal Arterial-Other
	SR 407	SR 528	SR 405	6,833	7,210	8,550	8,693	9,433	12,110	8,023	8,050	8,720	8,813			
225	SR 407	SR 528	I-95	6,830	7,220	8,750	9,150	9,970	12,640	7,520	6,860	7,270	5,710	8,820	10/18/23-10/19/23	Rural Principal Arterial - Freeways & Expressways
548	SR 407	I-95	SHEPARD DR.	7,460	7,660	9,190	8,980	10,090	12,850	9,370	9,690	10,470	11,230	24,200	11/14/23-11/15/23	Urban Principal Arterial - Freeways & Expressways
224	SR 407	SHEPARD DR.	SR 405	6,210	6,750	7,710	7,950	8,240	10,840	7,180	7,600	8,420	9,500	24,200	11/27/23-11/28/23	Urban Principal Arterial - Freeways & Expressways
	US 1	SR 528	SR 405	24,064	24,543	22,713	22,772	27,963	29,667	26,237	26,770	27,692	25,468			
226	US 1	SR 528	CANAVERAL GROVES BLVD.	UC	NC	29,100	31,820	31,420	32,820	28,080	27,850	28,860	26,900	41,790	11/14/23-11/15/23	Urban Principal Arterial-Other
159	US 1	CANAVERAL GROVES BLVD.	CAMP RD.	25,690	NC	28,610	25,590	29,950	30,880	26,290	26,840	27,670	30,420	41,790	11/27/23-11/28/23	Urban Principal Arterial-Other
160	US 1	CAMP RD.	BROADWAY BLVD.	24,890	24,300	28,130	29,170	29,210	30,290	26,300	25,880	27,230	24,270	41,790	11/14/23-11/15/23	Urban Principal Arterial-Other
227	US 1	BROADWAY BLVD.	FAY BLVD.	25,530	27,110	27,820	29,560	28,470	30,310	28,420	29,590	30,080	25,350	41,790	10/24/23-10/25/23	Urban Principal Arterial-Other
228	US 1	FAY BLVD.	KINGS HWY.	23,960	25,870	27,610	27,240	25,040	28,810	26,570	28,200	28,930	23,210	41,790	10/24/23-10/25/23	Urban Principal Arterial-Other
230	US 1	KINGS HWY.	SR 405	20,250	20,890	22,830	22,810	23,690	24,890	21,760	22,260	23,380	22,660	41,790	10/18/23-10/19/23	Urban Principal Arterial-Other
	US 1	SR 405	GRACE ST.	23,092	24,818	24,770	24,682	26,710	26,468	24,838	24,100	26,292	24,262			
169	US 1	SR 405	SR 50	19,670	20,130	21,390	20,310	23,280	23,550	21,000	21,210	22,790	21,210	41,790	09/26/23-09/27/23	Urban Principal Arterial-Other
170	US 1	SR 50	KNOX MCRAE DR.	23,660	26,210	25,030	25,130	28,180	27,110	25,500	24,410	25,910	25,750	41,790	09/26/23-09/27/23	Urban Principal Arterial-Other
172	US 1	KNOX MCRAE DR.	COUNTRY CLUB DR.	23,980	26,150	26,640	27,580	28,320	28,210	26,690	25,610	30,810	26,340	41,790	10/24/23-10/25/23	Urban Principal Arterial-Other
173	US 1	COUNTRY CLUB DR.	HARRISON ST.	24,930	26,420	26,680	26,700	28,120	27,920	26,450	25,210	26,110	24,520	41,790	09/26/23-09/27/23	Urban Principal Arterial-Other
174	US 1	HARRISON ST.	GRACE ST.	23,220	25,180	24,110	23,690	25,650	25,550	24,550	24,060	25,840	23,490	41,790	10/24/23-10/25/23	Urban Principal Arterial-Other
	US 1 (NB WASHINGTON AVE.)	GRACE ST.	GARDEN ST.	11,457	11,100	12,477	12,230	12,487	12,825	11,063	11,800	12,420	11,020			
182	US 1 (NB WASHINGTON AVE.)	GRACE ST.	SOUTH ST.	12,300	NC	13,780	13,230	13,330	13,770	10,930	12,540	12,960	12,150	23,880	09/26/23-09/27/23	Urban Principal Arterial-Other
181	US 1 (NB WASHINGTON AVE.)	SOUTH ST.	MAIN ST.	11,480	NC	12,310	NC	12,530	NC	11,510	NC	12,620	NC	19,440	12/01/22-12/02/22	Urban Principal Arterial-Other
179	US 1 (NB WASHINGTON AVE.)	MAIN ST.	GARDEN ST.	10,590	11,100	11,340	11,230	11,600	11,880	10,750	11,060	11,680	9,890	19,440	10/31/23-11/01/23	Urban Principal Arterial-Other
	US 1 (SB HOPKINS AVE.)	GARDEN ST.	GRACE ST.	11,183	10,925	12,040	12,740	12,587	13,085	11,507	12,345	13,137	12,090			
178	US 1 (SB HOPKINS AVE.)	GARDEN ST.	MAIN ST.	9,870	8,900	11,110	11,970	11,680	12,090	10,850	11,450	12,120	11,650	19,440	10/18/23-10/19/23	Urban Principal Arterial-Other
176	US 1 (SB HOPKINS AVE.)	MAIN ST.	SOUTH ST.	11,060	NC	11,600	NC	12,260	NC	11,210	NC	12,350	NC	23,880	12/01/22-12/02/22	Urban Principal Arterial-Other
175	US 1 (SB HOPKINS AVE.)	SOUTH ST.	GRACE ST.	12,620	12,950	13,410	13,510	13,820	14,080	12,460	13,240	14,940	12,530	23,880	09/26/23-09/27/23	Urban Principal Arterial-Other
	US 1	GARDEN ST.	SR 46	18,010		19,300	17,930	19,710	20,010	18,370	17,985	19,485	18,590			
165	US 1	GARDEN ST.	DAIRY RD.	21,900	NC	22,490	20,270	22,680	23,060	21,240	20,400	21,630	21,670	41,790	10/10/23-10/11/23	Urban Principal Arterial-Other
166	US 1	DAIRY RD.	SR 46	14,120	NC	16,110	15,590	16,740	16,960	15,500	15,570	17,340	15,510	41,790	09/27/23-09/28/23	Urban Principal Arterial-Other
	US 1	SR 46	VOLUSIA CO.	7,583		8,010	8,123	8,217	8,390	7,943	7,980	8,763	8,047			
167	US 1	SR 46	LIONEL RD.	10,030	NC	10,370	10,310	10,810	11,010	10,400	10,420	11,400	10,800	41,790	10/18/23-10/19/23	Urban Principal Arterial-Other
168	US 1	LIONEL RD.	BURKHOLM RD.	9,040	NC	9,810	10,220	9,600	9,870	9,330	9,460	10,440	9,600	40,300	10/18/23-10/19/23	Urban Principal Arterial-Other
527	US 1	BURKHOLM RD.	VOLUSIA CO.	3,680	NC	3,850	3,840	4,240	4,290	4,100	4,060	4,450	3,740	40,300	10/18/23-10/19/23	Rural Principal Arterial Other

**Note: 2016 AADT's Beaches area were counted twice in 2016 and the AADT listed is the average of the two counts.*
NC=Not Counted; UC=Under Construction

APPENDIX D

FDOT's Florida Traffic Online (FTO) Date

2023 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 7000 BREVARD COUNTYWIDE

MOCF: 0.94

WEEK	DATES	SF	PSCF
1	01/01/2023 - 01/07/2023	1.03	1.10
2	01/08/2023 - 01/14/2023	1.01	1.07
3	01/15/2023 - 01/21/2023	0.98	1.04
4	01/22/2023 - 01/28/2023	0.97	1.03
5	01/29/2023 - 02/04/2023	0.96	1.02
* 6	02/05/2023 - 02/11/2023	0.94	1.00
* 7	02/12/2023 - 02/18/2023	0.93	0.99
* 8	02/19/2023 - 02/25/2023	0.93	0.99
* 9	02/26/2023 - 03/04/2023	0.92	0.98
*10	03/05/2023 - 03/11/2023	0.92	0.98
*11	03/12/2023 - 03/18/2023	0.91	0.97
*12	03/19/2023 - 03/25/2023	0.92	0.98
*13	03/26/2023 - 04/01/2023	0.93	0.99
*14	04/02/2023 - 04/08/2023	0.94	1.00
*15	04/09/2023 - 04/15/2023	0.95	1.01
*16	04/16/2023 - 04/22/2023	0.95	1.01
*17	04/23/2023 - 04/29/2023	0.96	1.02
*18	04/30/2023 - 05/06/2023	0.96	1.02
19	05/07/2023 - 05/13/2023	0.96	1.02
20	05/14/2023 - 05/20/2023	0.96	1.02
21	05/21/2023 - 05/27/2023	0.98	1.04
22	05/28/2023 - 06/03/2023	1.00	1.06
23	06/04/2023 - 06/10/2023	1.02	1.09
24	06/11/2023 - 06/17/2023	1.04	1.11
25	06/18/2023 - 06/24/2023	1.04	1.11
26	06/25/2023 - 07/01/2023	1.04	1.11
27	07/02/2023 - 07/08/2023	1.05	1.12
28	07/09/2023 - 07/15/2023	1.05	1.12
29	07/16/2023 - 07/22/2023	1.05	1.12
30	07/23/2023 - 07/29/2023	1.05	1.12
31	07/30/2023 - 08/05/2023	1.05	1.12
32	08/06/2023 - 08/12/2023	1.06	1.13
33	08/13/2023 - 08/19/2023	1.06	1.13
34	08/20/2023 - 08/26/2023	1.06	1.13
35	08/27/2023 - 09/02/2023	1.06	1.13
36	09/03/2023 - 09/09/2023	1.06	1.13
37	09/10/2023 - 09/16/2023	1.06	1.13
38	09/17/2023 - 09/23/2023	1.06	1.13
39	09/24/2023 - 09/30/2023	1.05	1.12
40	10/01/2023 - 10/07/2023	1.05	1.12
41	10/08/2023 - 10/14/2023	1.04	1.11
42	10/15/2023 - 10/21/2023	1.04	1.11
43	10/22/2023 - 10/28/2023	1.04	1.11
44	10/29/2023 - 11/04/2023	1.04	1.11
45	11/05/2023 - 11/11/2023	1.04	1.11
46	11/12/2023 - 11/18/2023	1.04	1.11
47	11/19/2023 - 11/25/2023	1.03	1.10
48	11/26/2023 - 12/02/2023	1.03	1.10
49	12/03/2023 - 12/09/2023	1.03	1.10
50	12/10/2023 - 12/16/2023	1.03	1.10
51	12/17/2023 - 12/23/2023	1.01	1.07
52	12/24/2023 - 12/30/2023	1.00	1.06
53	12/31/2023 - 12/31/2023	0.98	1.04

* PEAK SEASON

09-MAR-2024 18:41:41 830UPD 5_7000_PKSEASON.TXT

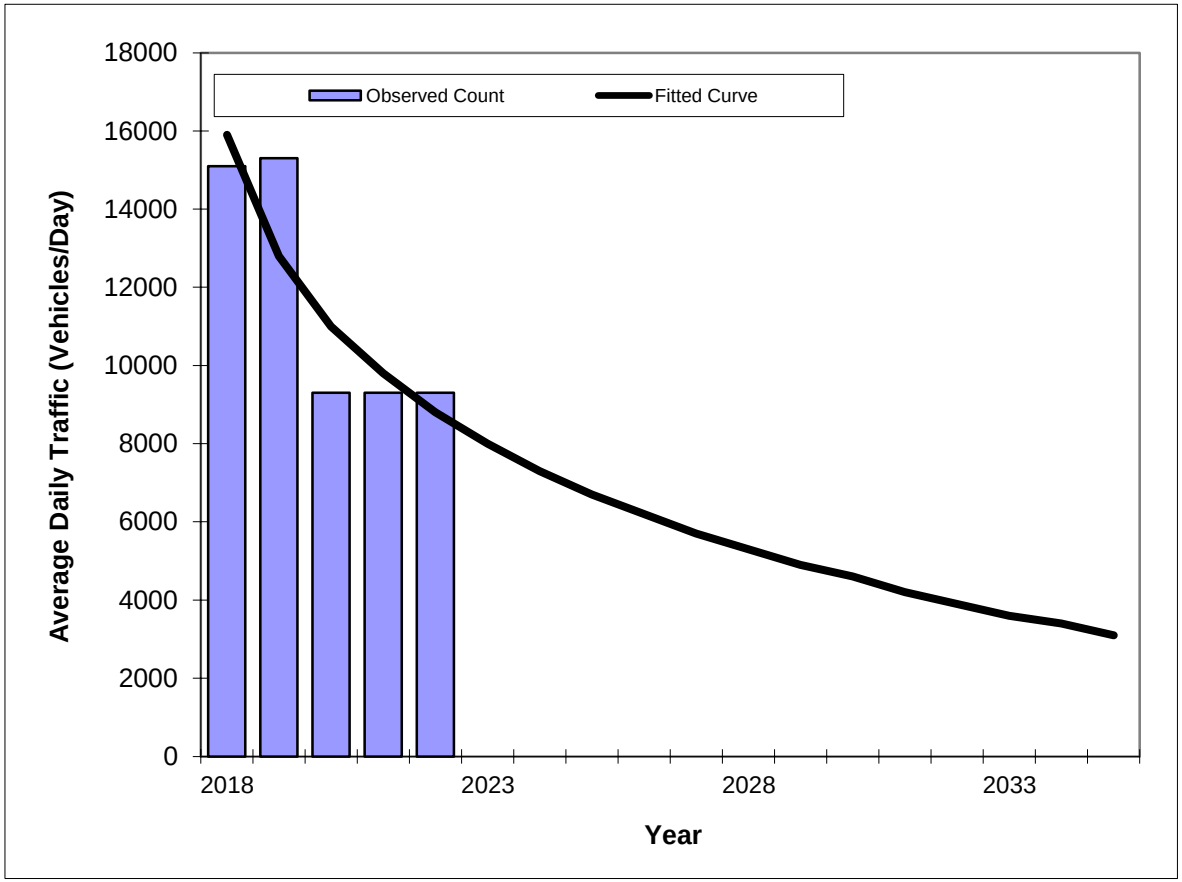
APPENDIX E
Growth Rate Trends

Traffic Trends - V2.0

BARNA AVE -- Knox McRae - Harrison

PIN#	0
Location	1

County:	Brevard (70)
Station #:	0
Highway:	BARNA AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2018	15100	15900
2019	15300	12800
2020	9300	11000
2021	9300	9800
2022	9300	8800
2023 Opening Year Trend		
2023	N/A	8000
2024 Mid-Year Trend		
2024	N/A	7300
2025 Design Year Trend		
2025	N/A	6700
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

Trend R-squared:	75.50%
Compounded Annual Historic Growth Rate:	-13.75%
Compounded Growth Rate (2022 to Design Year):	**-8.69%**
Printed:	5-Jul-23

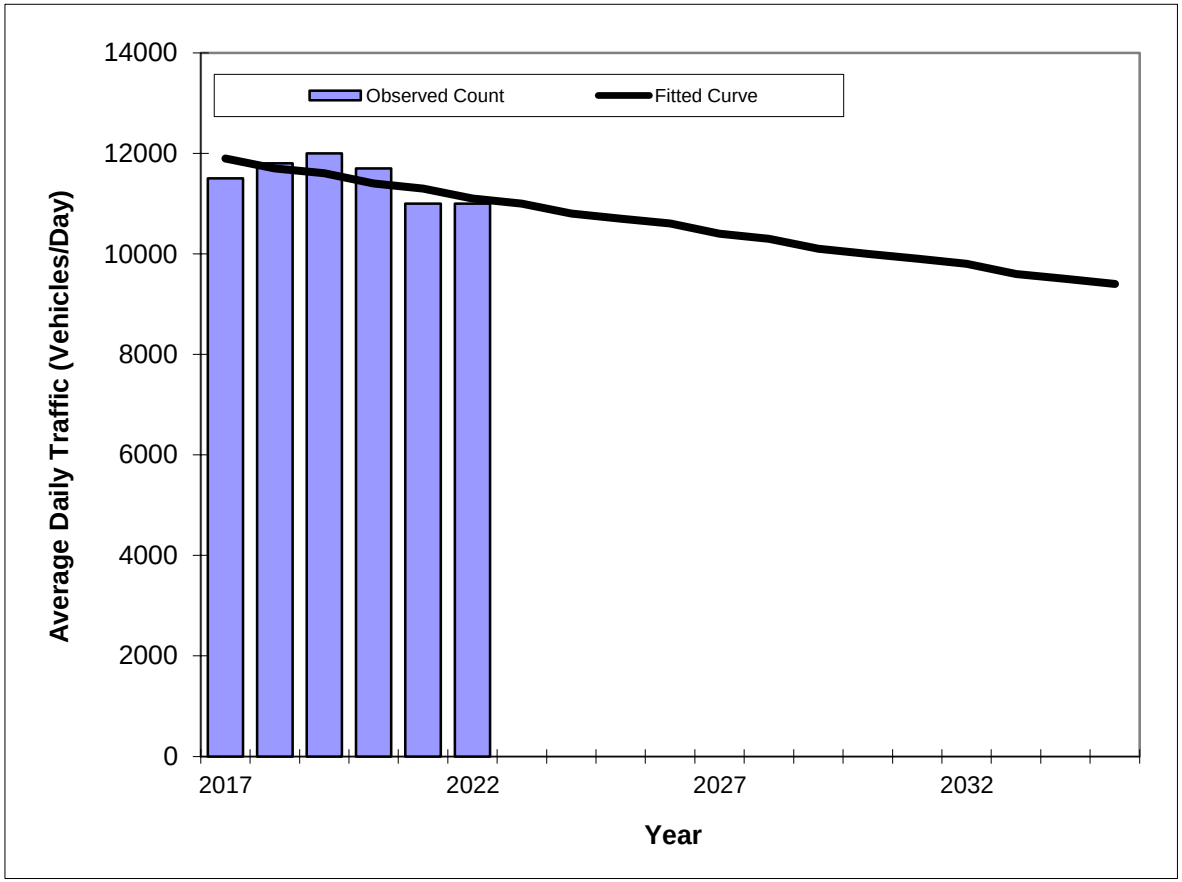
Decaying Exponential Growth Option

Traffic Trends - V2.0

BARNA AVE -- SR 50 - Knox McRae

PIN#	0
Location	1

County:	Brevard (70)
Station #:	8002
Highway:	BARNA AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2017	11500	11900
2018	11800	11700
2019	12000	11600
2020	11700	11400
2021	11000	11300
2022	11000	11100
2023 Opening Year Trend		
2023	N/A	11000
2024 Mid-Year Trend		
2024	N/A	10800
2025 Design Year Trend		
2025	N/A	10700
TRANPLAN Forecasts/Trends		

Trend R-squared:	44.62%
Compounded Annual Historic Growth Rate:	-1.38%
Compounded Growth Rate (2022 to Design Year):	**-1.22%**
Printed:	5-Jul-23

Exponential Growth Option

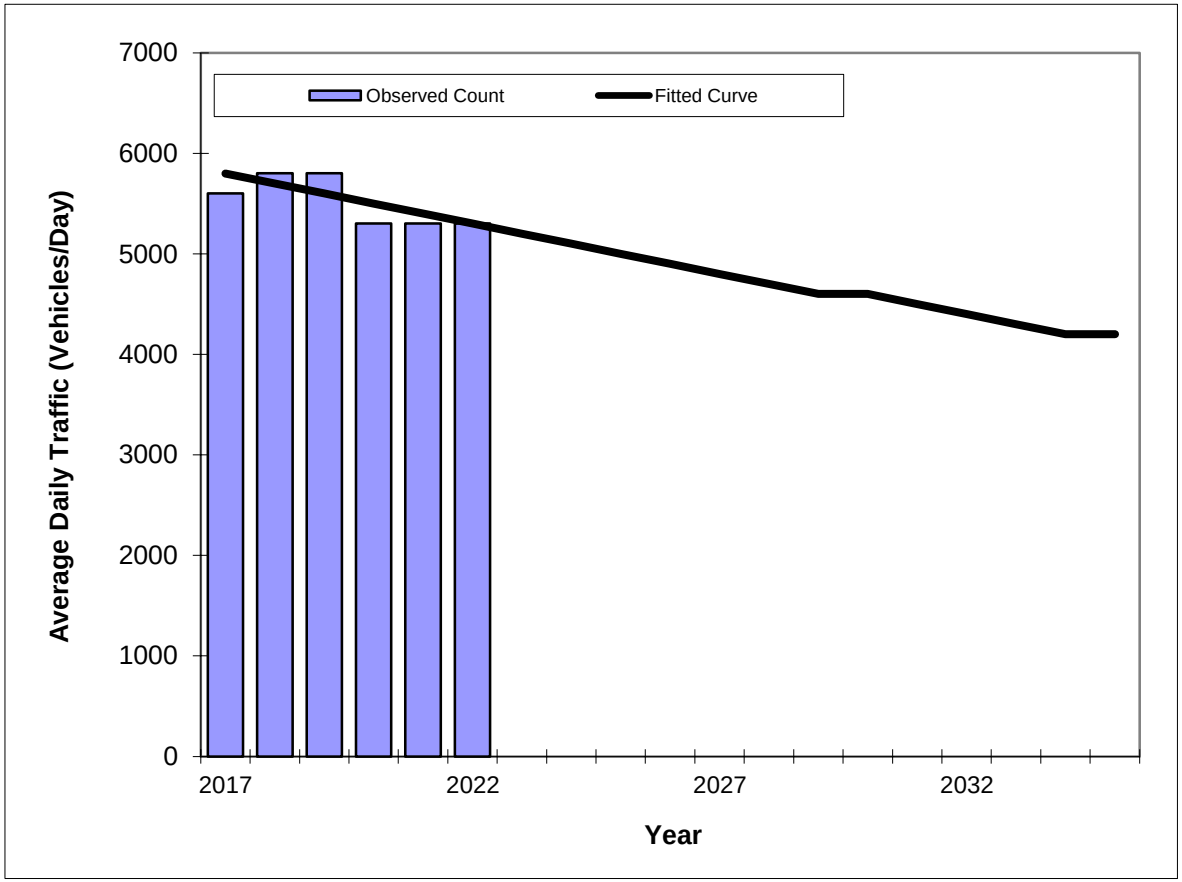
*Axle-Adjusted

Traffic Trends - V2.0

BARNA AVE -- SR 405 - SR 50

PIN#	0
Location	1

County:	Brevard (70)
Station #:	8124
Highway:	BARNA AVE



Year	Traffic (ADT/AADT) Count*	Trend**
2017	5600	5800
2018	5800	5700
2019	5800	5600
2020	5300	5500
2021	5300	5400
2022	5300	5300
2023 Opening Year Trend		
2023	N/A	5200
2024 Mid-Year Trend		
2024	N/A	5100
2025 Design Year Trend		
2025	N/A	5000
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

Trend R-squared:	57.46%
Compounded Annual Historic Growth Rate:	-1.79%
Compounded Growth Rate (2022 to Design Year):	**-1.92%**
Printed:	5-Jul-23

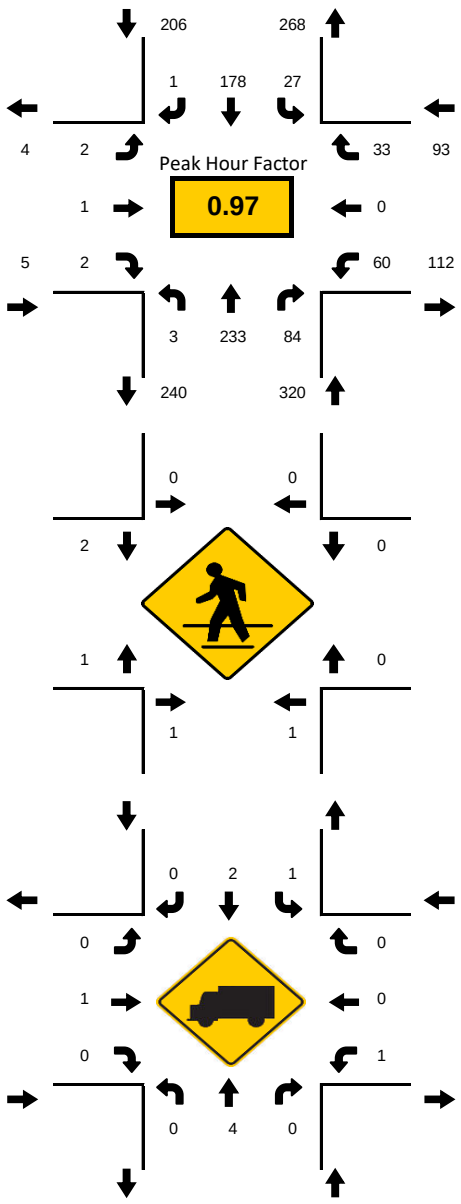
Exponential Growth Option

APPENDIX F
Turning Movement Counts

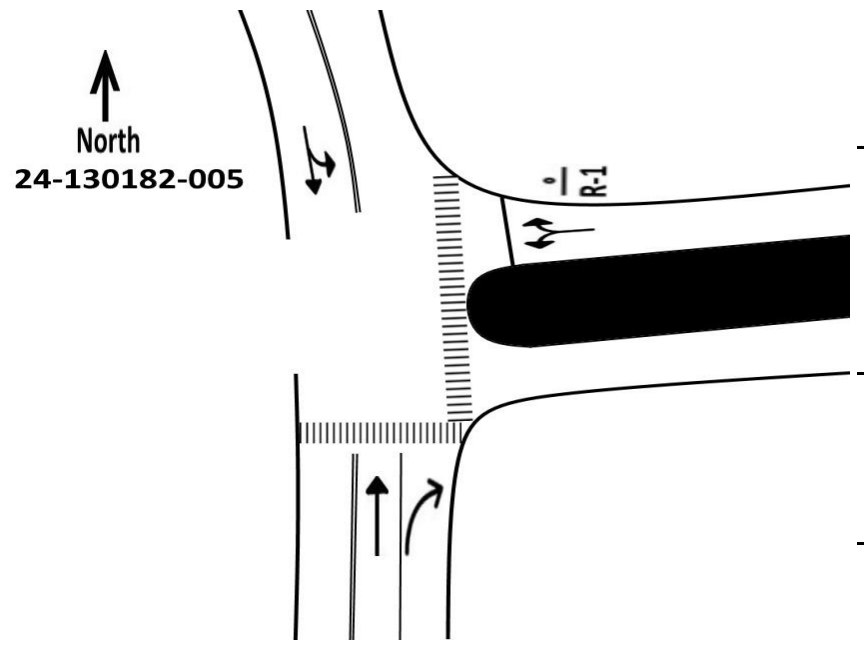
LOCATION: S Park Ave & County Club Dr
CITY/STATE: Titusville, FL

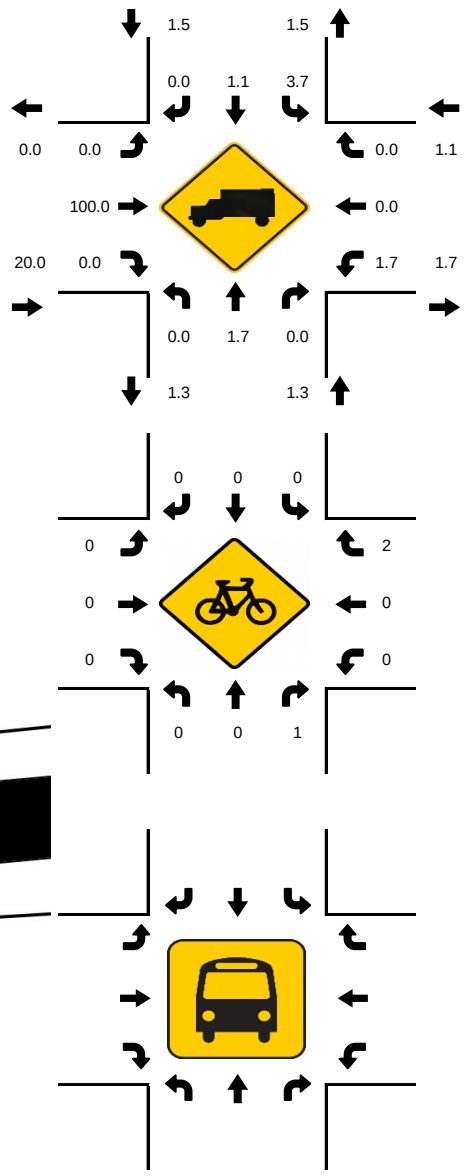
PROJECT ID: 24-130182-005
DATE: Tue, May 21, 2024

Peak-Hour: 04:45 PM - 05:45 PM
Peak 15-Minute: 04:45 PM - 05:00 PM



National Data & Surveying Services



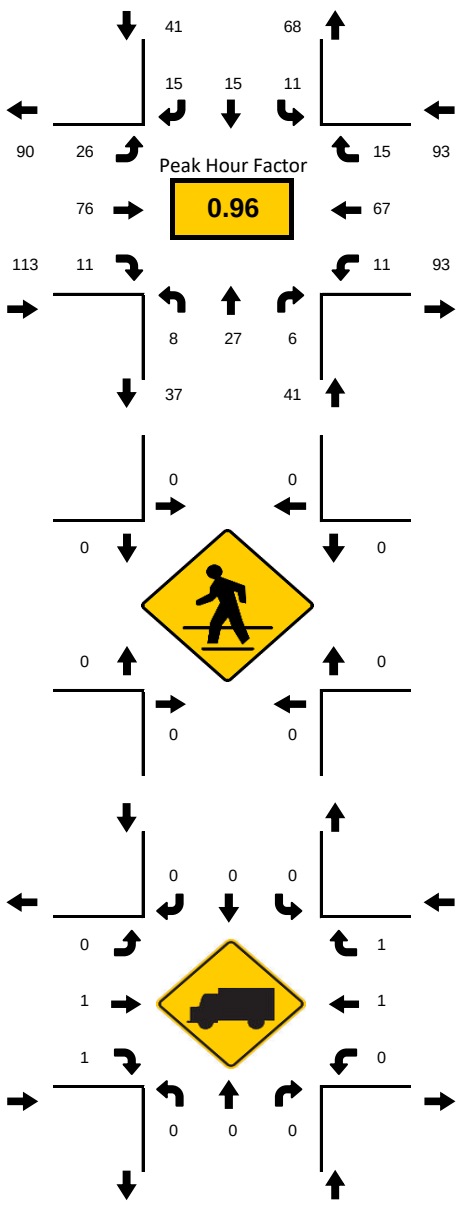


15-Min Count Period Beginning At	S Park Ave Northbound					S Park Ave Southbound					County Club Dr Eastbound					County Club Dr Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
4:00 PM	0	54	22	0		11	42	0	0		1	0	1	0		11	0	12	0		154	605
4:15 PM	0	50	10	0		13	34	0	0		1	0	1	0		19	0	10	0		138	601
4:30 PM	0	58	21	0		14	38	0	0		0	0	0	0		13	0	7	1		152	616
4:45 PM	1	55	25	0		8	44	1	0		0	1	0	0		17	0	9	0		161	624
5:00 PM	0	56	20	0		7	43	0	0		1	0	0	0		16	0	7	0		150	619
5:15 PM	1	57	20	0		7	44	0	0		0	0	1	0		12	0	9	2		153	469
5:30 PM	1	65	19	0		5	47	0	0		1	0	1	0		12	0	8	1		160	316
5:45 PM	0	76	13	0		7	35	0	0		0	0	0	0		14	1	9	1		156	156
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***		
All Vehicles	4	260	100	0		32	188	4	0		4	4	4	0		68	0	36	8		**712**	
Heavy Trucks	0	4	0	0		4	4	0	0		0	4	0	0		4	0	0	0		**20**	
Pedestrians		8					0					4					0				**12**	
Bicycles	0	0	4	0		0	0	0	0		0	0	0	0		0	0	4	0		**8**	
Buses																						
Stopped Buses																						

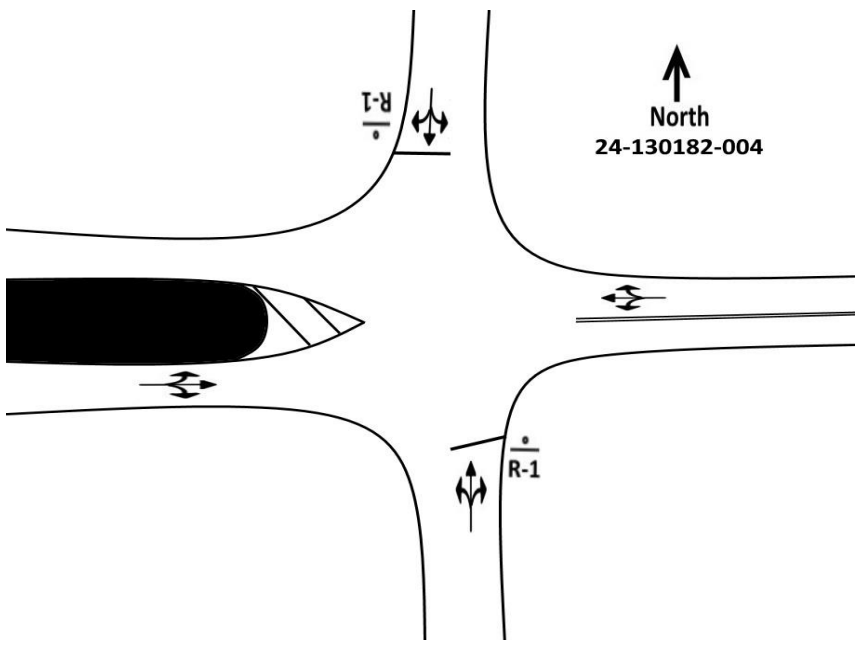
LOCATION: Royal Oak Dr & County Club Dr
CITY/STATE: Titusville, FL

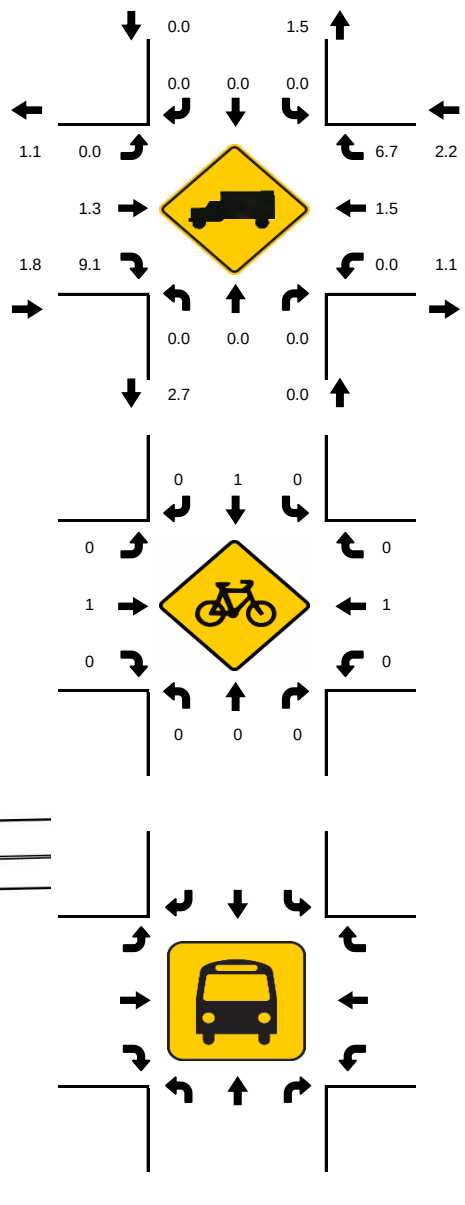
PROJECT ID: 24-130182-004
DATE: Tue, May 21, 2024

Peak-Hour: 04:45 PM - 05:45 PM
Peak 15-Minute: 04:45 PM - 05:00 PM



National Data & Surveying Services



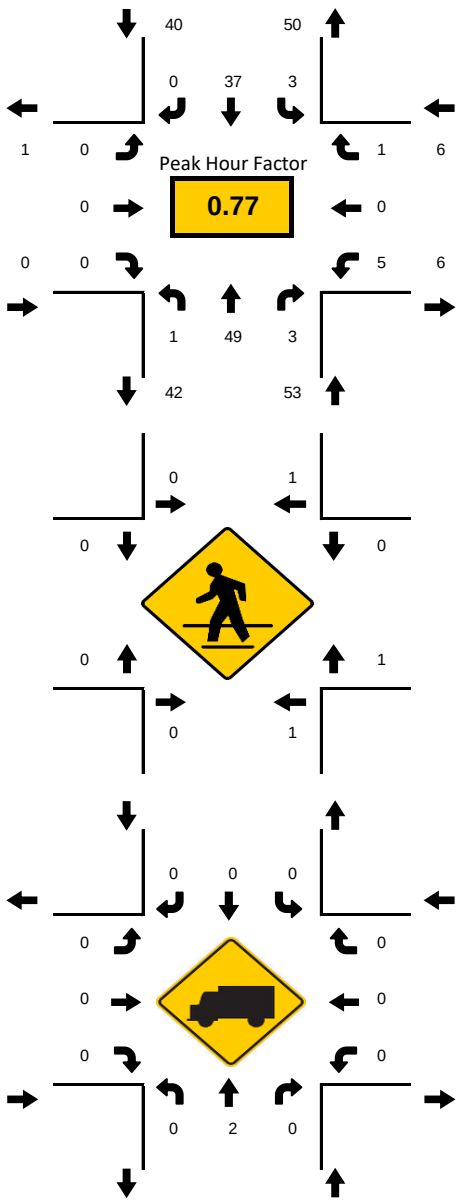


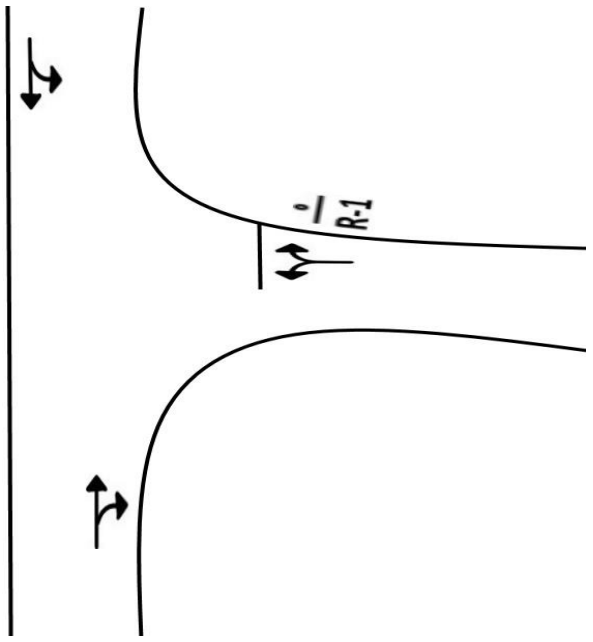
15-Min Count Period Beginning At	Royal Oak Dr Northbound					Royal Oak Dr Southbound					County Club Dr Eastbound					County Club Dr Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
4:00 PM	1	5	2	0		2	7	3	0		8	19	4	0		3	22	1	0		77	288
4:15 PM	3	6	0	0		2	7	4	0		6	16	1	0		1	19	0	0		65	281
4:30 PM	3	4	0	0		1	4	6	0		5	25	4	0		2	13	4	0		71	285
4:45 PM	3	5	2	0		3	4	5	0		7	21	3	0		2	16	4	0		75	288
5:00 PM	3	9	0	0		2	5	2	0		5	19	3	0		2	17	3	0		70	281
5:15 PM	0	8	3	0		3	2	3	0		7	20	1	0		3	17	2	0		69	211
5:30 PM	2	5	1	0		3	4	5	0		7	16	4	0		4	17	6	0		74	142
5:45 PM	4	8	2	0		2	5	5	0		5	11	5	0		3	17	1	0		68	68
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***		
All Vehicles	12	36	12	0		12	20	20	0		28	84	16	0		16	68	24	0		**348**	
Heavy Trucks	0	0	0	0		0	0	0	0		0	4	4	0		0	4	4	0		**16**	
Pedestrians		0					0					0					0				**0**	
Bicycles	0	0	0	0		0	4	0	0		0	4	0	0		0	4	0	0		**12**	
Buses																						
Stopped Buses																						

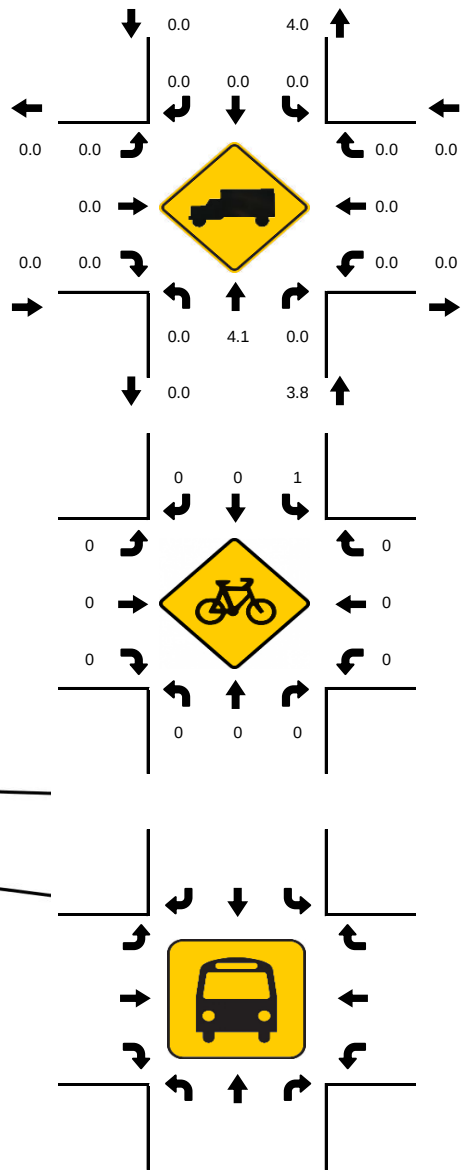
LOCATION: Royal Oak Dr & Saunders Pl
CITY/STATE: Titusville, FL

PROJECT ID: 24-130182-006
DATE: Tue, May 21, 2024

Peak-Hour: 05:00 PM - 06:00 PM
Peak 15-Minute: 05:30 PM - 05:45 PM





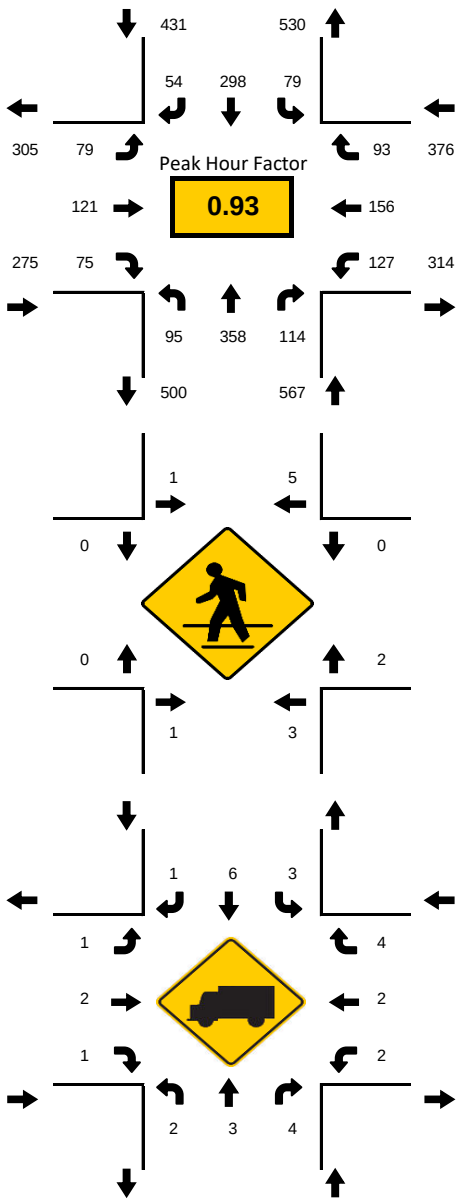


15-Min Count Period Beginning At	Royal Oak Dr Northbound					Royal Oak Dr Southbound					Saunders Pl Eastbound					Saunders Pl Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
4:00 PM	0	6	0	0		0	10	0	0		0	0	0	0		0	0	0	0		16	61
4:15 PM	0	5	1	0		1	9	0	0		0	0	0	0		0	0	0	0		16	66
4:30 PM	0	8	0	0		0	6	0	0		0	0	0	0		0	0	1	0		15	71
4:45 PM	0	8	1	0		0	4	0	0		0	0	0	0		1	0	0	0		14	88
5:00 PM	0	11	2	0		0	8	0	0		0	0	0	0		0	0	0	0		21	99
5:15 PM	0	12	1	1		1	6	0	0		0	0	0	0		0	0	0	0		21	78
5:30 PM	0	16	0	0		1	12	0	0		0	0	0	0		2	0	1	0		32	57
5:45 PM	0	10	0	0		1	11	0	0		0	0	0	0		3	0	0	0		25	25
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
All Vehicles	0	64	8	4		4	48	0	0		0	0	0	0		12	0	4	0		**144**	
Heavy Trucks	0	4	0	0		0	0	0	0		0	0	0	0		0	0	0	0		**4**	
Pedestrians		4					4					0					4				**12**	
Bicycles	0	0	0	0		4	0	0	0		0	0	0	0		0	0	0	0		**4**	
Buses																						
Stopped Buses																						

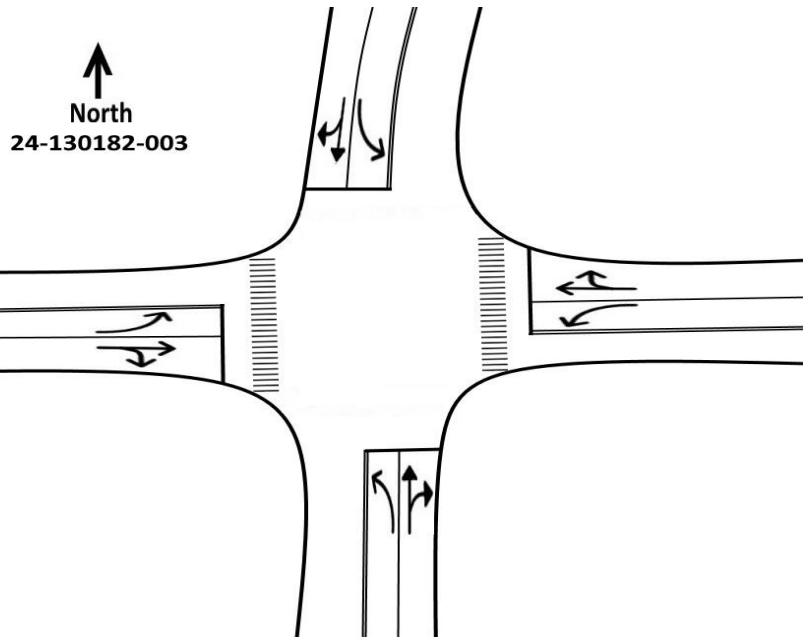
LOCATION: Barna Ave & Knox McRae Dr
CITY/STATE: Titusville, FL

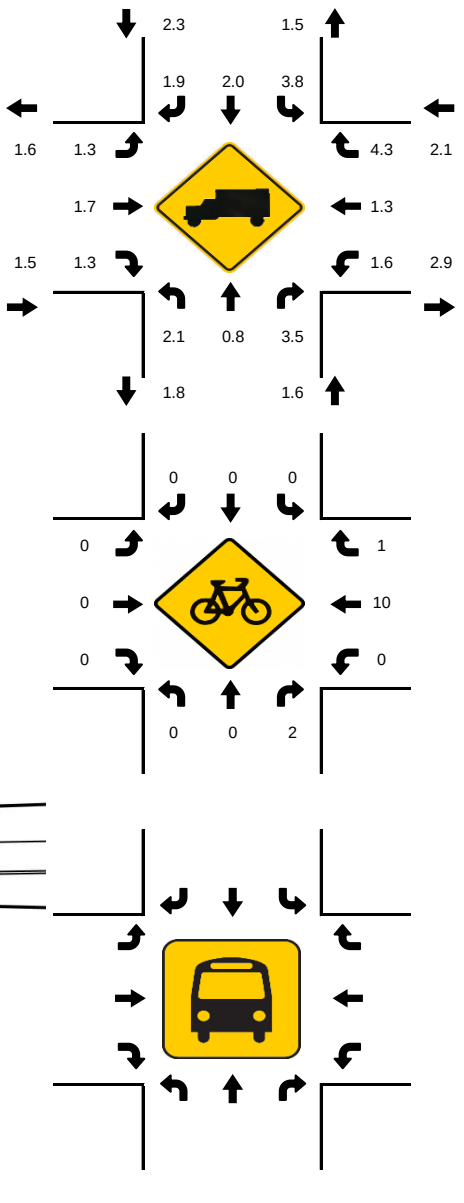
PROJECT ID: 24-130182-003
DATE: Tue, May 21, 2024

Peak-Hour: 04:00 PM - 05:00 PM
Peak 15-Minute: 04:30 PM - 04:45 PM



National Data & Surveying Services



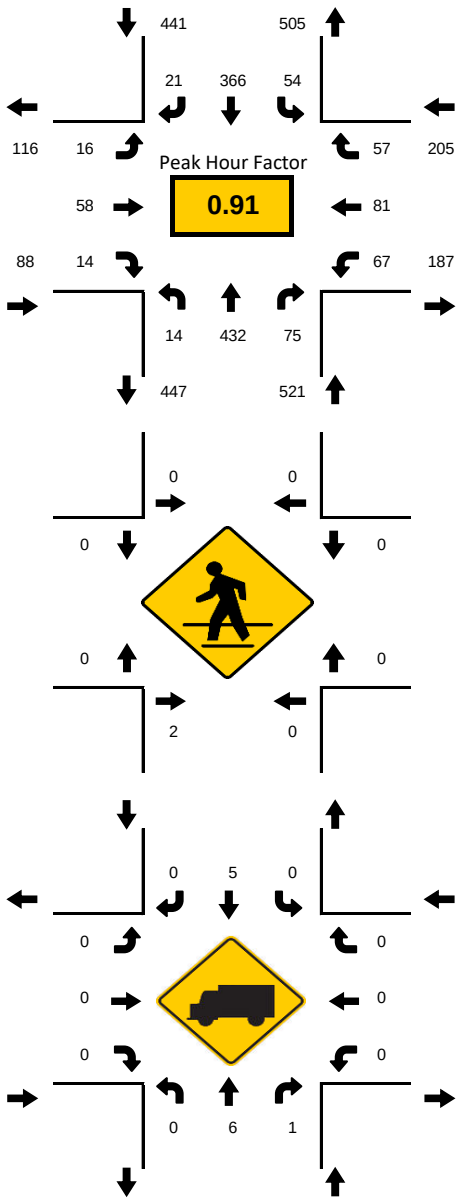


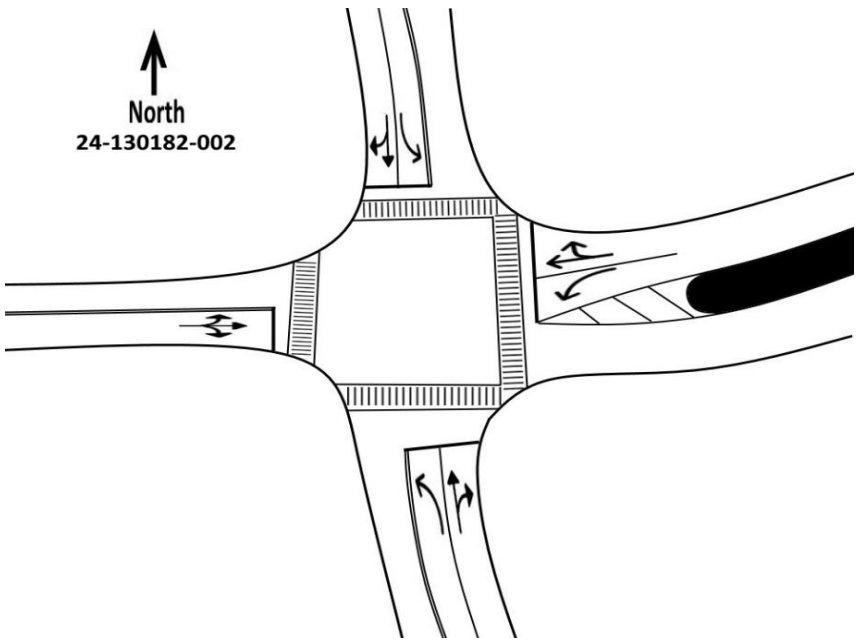
15-Min Count Period Beginning At	Barna Ave Northbound					Barna Ave Southbound					Knox McRae Dr Eastbound					Knox McRae Dr Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
4:00 PM	16	91	33	0		24	83	18	0		13	35	25	0		23	41	18	0		420	1649
4:15 PM	31	82	35	0		14	74	15	0		15	27	15	0		39	38	25	0		410	1616
4:30 PM	24	107	20	0		19	76	9	0		28	30	18	0		31	50	29	0		441	1611
4:45 PM	24	78	26	0		22	65	12	0		23	29	17	0		34	27	21	0		378	1535
5:00 PM	22	83	25	0		32	68	8	0		17	31	20	0		21	39	21	0		387	1497
5:15 PM	16	103	30	0		16	83	11	0		18	27	19	0		27	24	31	0		405	1110
5:30 PM	24	98	20	0		18	69	8	0		10	28	12	0		20	32	26	0		365	705
5:45 PM	21	88	20	0		8	64	9	0		16	28	25	0		17	25	19	0		340	340
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***		
All Vehicles	124	428	140	0		96	332	72	0		112	140	100	0		156	200	116	0		**2016**	
Heavy Trucks	8	4	12	0		8	8	4	0		4	4	4	0		8	4	4	0		**72**	
Pedestrians		12					16					0					8				**36**	
Bicycles	0	0	8	0		0	0	0	0		0	0	0	0		0	32	4	0		**44**	
Buses																						
Stopped Buses																						

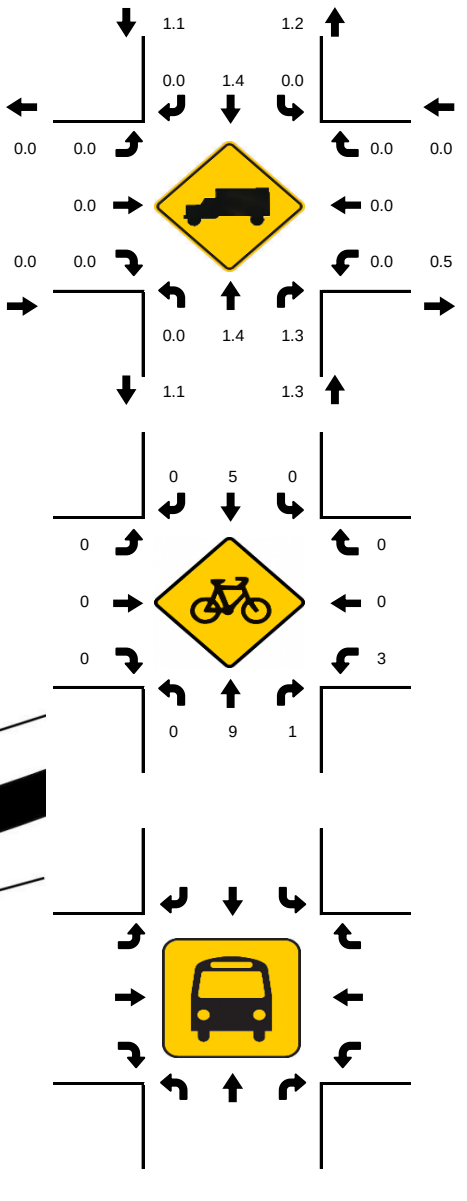
LOCATION: Barna Ave & County Club Dr
CITY/STATE: Titusville, FL

PROJECT ID: 24-130182-002
DATE: Tue, May 21, 2024

Peak-Hour: 04:30 PM - 05:30 PM
Peak 15-Minute: 05:15 PM - 05:30 PM





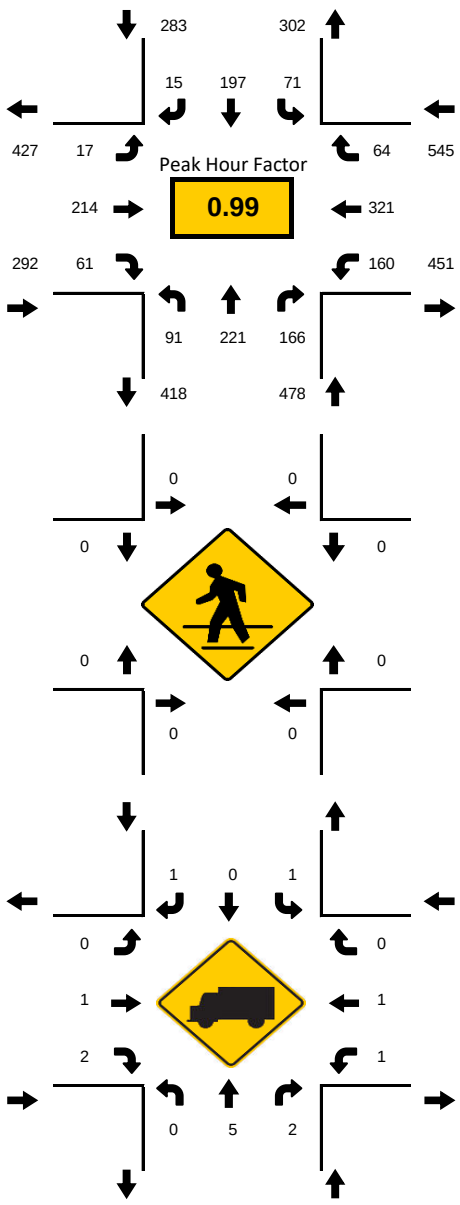


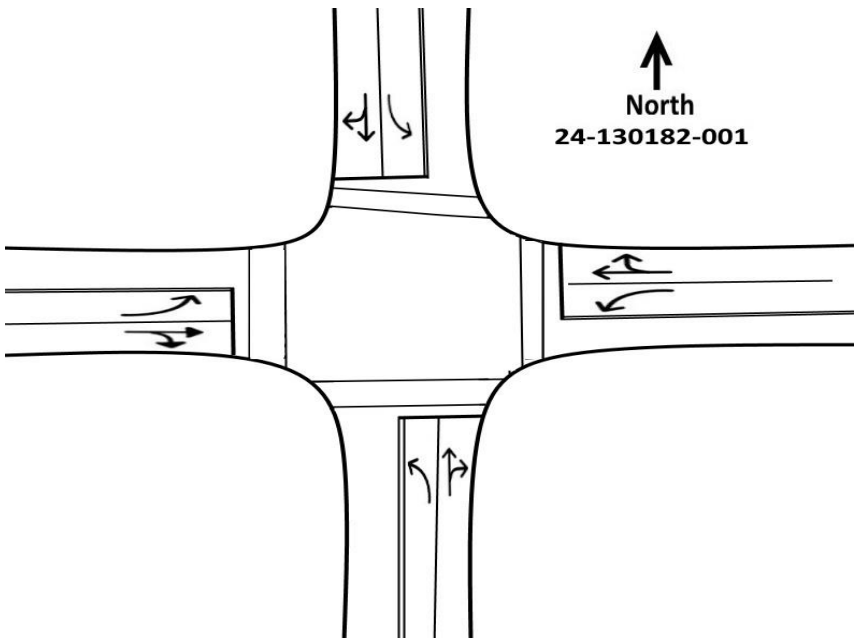
15-Min Count Period Beginning At	Barna Ave Northbound					Barna Ave Southbound					County Club Dr Eastbound					County Club Dr Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
4:00 PM	6	91	14	0		9	100	6	0		3	12	1	0		17	22	16	0		297	1216
4:15 PM	2	106	19	0		15	95	5	0		5	14	3	0		18	19	11	0		312	1224
4:30 PM	5	121	19	0		16	88	6	0		2	13	2	0		18	18	13	0		321	1255
4:45 PM	1	103	9	0		14	85	7	0		5	18	4	0		11	18	11	0		286	1222
5:00 PM	5	88	26	0		9	101	3	0		5	14	3	0		22	15	14	0		305	1181
5:15 PM	3	120	21	0		15	92	5	0		4	13	5	0		16	30	19	0		343	876
5:30 PM	2	110	19	0		12	89	3	0		5	10	0	0		10	16	12	0		288	533
5:45 PM	1	84	18	0		10	70	2	0		4	12	3	0		13	15	13	0		245	245
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***		
All Vehicles	20	484	104	0		64	404	28	0		20	72	20	0		88	120	76	0		**1500**	
Heavy Trucks	0	8	4	0		0	12	0	0		0	0	0	0		0	0	0	0		**24**	
Pedestrians		8					0					0					0				**8**	
Bicycles	0	24	4	0		0	12	0	0		0	0	0	0		8	0	0	0		**48**	
Buses																						
Stopped Buses																						

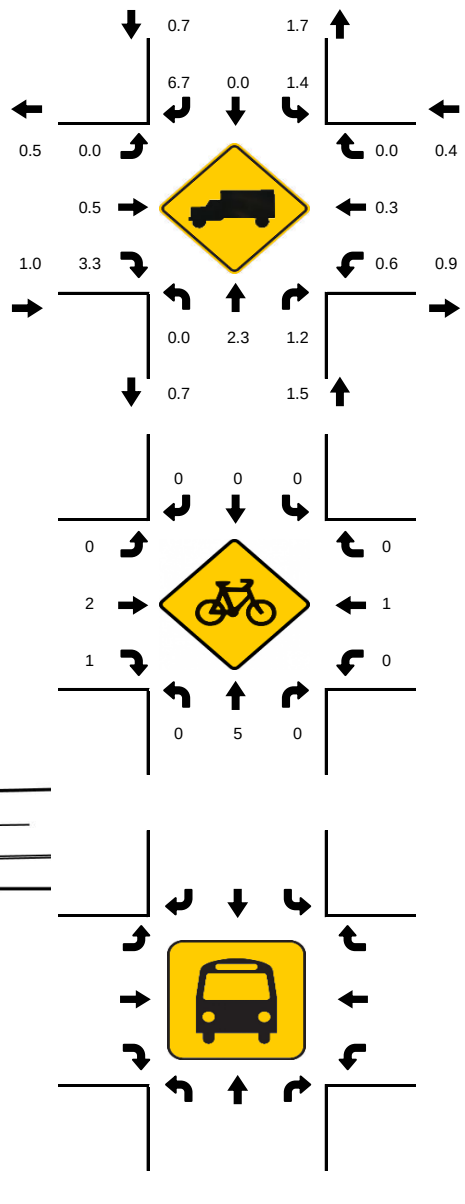
LOCATION: Barna Ave & Harrison St
CITY/STATE: Titusville, FL

PROJECT ID: 24-130182-001
DATE: Tue, May 21, 2024

Peak-Hour: 04:45 PM - 05:45 PM
Peak 15-Minute: 04:45 PM - 05:00 PM







NDS
National Data & Surveying Services

15-Min Count Period Beginning At	Barna Ave Northbound					Barna Ave Southbound					Harrison St Eastbound					Harrison St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
4:00 PM	26	56	34	0		16	52	4	0		4	49	16	0		49	81	10	0		397	1558
4:15 PM	33	52	38	0		17	58	3	0		2	44	13	0		35	58	18	0		371	1550
4:30 PM	21	68	34	0		15	53	5	0		4	45	19	0		32	70	20	0		386	1582
4:45 PM	21	59	41	0		21	39	3	0		2	44	17	0		49	100	8	0		404	1598
5:00 PM	20	48	38	0		20	57	2	0		4	53	17	0		36	77	17	0		389	1540
5:15 PM	26	56	43	0		13	47	3	0		6	68	16	0		41	64	20	0		403	1151
5:30 PM	24	58	44	0		17	54	7	0		5	49	11	0		34	80	19	0		402	748
5:45 PM	22	35	48	0		12	32	6	0		2	59	11	0		32	69	18	0		346	346
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***		
All Vehicles	104	236	176	0		84	228	28	0		24	272	68	0		196	400	80	0		**1896**	
Heavy Trucks	0	8	4	0		4	0	4	0		0	4	4	0		4	4	0	0		**36**	
Pedestrians		0					0					0					0				**0**	
Bicycles	0	20	0	0		0	0	0	0		0	4	4	0		0	4	0	0		**32**	
Buses																						
Stopped Buses																						

APPENDIX G
Turning Movement Volume Worksheets

Intersection Development Worksheet

Kimley»Horn
Expect More. Experience Better.

Intersection #:	1		***Existing Year:***	2025	***TMC Year:*** 2024
Major Street:	Park Ave	N/S	***Buildout Year:***	2027	
Minor Street:	Country Club Dr	E/W	***Seasonal Factor:***	1.00	

PM Peak Hour Trips: IN = 249 **OUT =** 154

PHF: 0.97

Weekday PM Peak Hour	**Park Ave**								**Country Club Dr**							
	Northbound				**Southbound**				**Eastbound**				**Westbound**			
4:45PM - 5:45PM	**U**	**L**	**T**	**R**	**U**	**L**	**T**	**R**	**U**	**L**	**T**	**R**	**U**	**L**	**T**	**R**
TMC (2024)	0	3	233	84	0	27	178	1	0	2	1	2	3	57	0	33
Seasonal Factor			1.00				1.00				1.00				1.00	
Heavy Vehicle (%)	0%	0%	2%	0%	0%	4%	2%	0%	0%	0%	100%	0%	0%	4%	0%	0%
Growth Factor			1.02				1.02				1.02				1.02	
Existing (2025)	**0**	**3**	**238**	**86**	**0**	**28**	**182**	**1**	**0**	**2**	**1**	**2**	**3**	**58**	**0**	**34**
Growth Rates			2.00%				2.00%				2.00%				2.00%	
Growth Factor			1.04				1.04				1.04				1.04	
Vested Trips (Huntington Park)[1]			25			3	15									6
Background (2027)	**0**	**3**	**273**	**89**	**0**	**32**	**204**	**1**	**0**	**2**	**1**	**2**	**3**	**60**	**0**	**41**
Project Assignment																
Ingress				32%		3%										
Egress														32%		3%
Project Trips	0	0	0	80	0	7	0	0	0	0	0	0	0	49	0	5
Project Buildout	**0**	**3**	**273**	**169**	**0**	**39**	**204**	**1**	**0**	**2**	**1**	**2**	**3**	**109**	**0**	**46**

1. Vested trips applied from Apollo Gardens TIA and Huntington Park TIA, based on the Study Intersections in those analyses.

Intersection Development Worksheet

Kimley»Horn
Expect More. Experience Better.

Intersection #:	2		***Existing Year:***	2025	***TMC Year:*** 2024
Major Street:	Country Club Dr	E/W	***Buildout Year:***	2027	
Minor Street:	Royal Oak Dr	N/S	***Seasonal Factor:***	1.00	

PHF: 0.96

PM Peak Hour Trips: IN = 249 **OUT =** 154

Weekday PM Peak Hour	Royal Oak Dr								Country Club Dr							
	Northbound				Southbound				Eastbound				Westbound			
4:45PM - 5:45PM	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2024)	0	8	27	6	0	11	15	15	0	26	76	11	0	11	67	15
Seasonal Factor			1.00				1.00				1.00				1.00	
Heavy Vehicle (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	7%
Growth Factor			1.02				1.02				1.02				1.02	
Existing (2025)	**0**	**8**	**28**	**6**	**0**	**11**	**15**	**15**	**0**	**27**	**78**	**11**	**0**	**11**	**68**	**15**
Growth Rates			2.00%				2.00%				2.00%				2.00%	
Growth Factor			1.04				1.04				1.04				1.04	
Vested Trips[1]																
Background (2027)	**0**	**8**	**29**	**6**	**0**	**11**	**16**	**16**	**0**	**28**	**81**	**11**	**0**	**11**	**71**	**16**
Project Assignment																
Ingress			2%							11%	24%					15%
Egress						15%	2%	11%							24%	
Project Trips	0	0	6	0	0	23	4	17	0	27	60	0	0	0	37	37
Project Buildout	**0**	**8**	**35**	**6**	**0**	**34**	**20**	**33**	**0**	**55**	**141**	**11**	**0**	**11**	**108**	**53**

1. Vested trips applied from Apollo Gardens TIA and Huntington Park TIA, based on the Study Intersections in those analyses.

Intersection Development Worksheet

Kimley»Horn
Expect More. Experience Better.

Intersection #:	3		***Existing Year:***	2025	***TMC Year:*** 2024
Major Street:	Royal Oak Dr	N/S	***Buildout Year:***	2027	
Minor Street:	Saunders Pl	E/W	***Seasonal Factor:***	1.00	

PM Peak Hour Trips: IN = 249 **OUT =** 154

PHF: 0.77

Weekday PM Peak Hour	Royal Oak Dr								Saunders Pl							
	Northbound				Southbound				Eastbound				Westbound			
5:00PM - 6:00PM	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2024)	1	0	49	3	0	3	37	0	0	0	0	0	0	5	0	1
Seasonal Factor			1.00				1.00				1.00				1.00	
Heavy Vehicle (%)	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
Growth Factor			1.02				1.02				1.02				1.02	
Existing (2025)	**1**	**0**	**50**	**3**	**0**	**3**	**38**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**1**
Growth Rates			2.00%				2.00%				2.00%				2.00%	
Growth Factor			1.04				1.04				1.04				1.04	
Vested Trips[1]																
Background (2027)	**1**	**0**	**52**	**3**	**0**	**3**	**40**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**1**
Project Assignment																
Ingress			25%	3%												
Egress							25%							3%		
Project Trips	0	0	62	8	0	0	39	0	0	0	0	0	0	5	0	0
Project Buildout	**1**	**0**	**114**	**11**	**0**	**3**	**79**	**0**	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**1**

1. Vested trips applied from Apollo Gardens TIA and Huntington Park TIA, based on the Study Intersections in those analyses.

Intersection Development Worksheet

Kimley»Horn
Expect More. Experience Better.

Intersection #:	4		***Existing Year:***	2025	***TMC Year:*** 2024
Major Street:	Barna Ave	N/S	***Buildout Year:***	2027	
Minor Street:	Knox McRae Dr	E/W	***Seasonal Factor:***	1.00	

PHF: 0.94

PM Peak Hour Trips: IN = 249 **OUT =** 154

Weekday PM Peak Hour	Barna Ave								Knox McRae Dr							
	Northbound				Southbound				Eastbound				Westbound			
4:00PM - 5:00PM	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2024)	0	95	358	114	0	79	298	54	0	79	121	75	0	127	156	93
Seasonal Factor		1.00				1.00				1.00				1.00		
Heavy Vehicle (%)	0%	2%	1%	4%	0%	4%	2%	2%	0%	1%	2%	1%	0%	2%	1%	4%
Growth Factor		1.02				1.02				1.02				1.02		
Existing (2025)	**0**	**97**	**365**	**116**	**0**	**81**	**304**	**55**	**0**	**81**	**123**	**77**	**0**	**130**	**159**	**95**
Growth Rates		2.00%				2.00%				2.00%				2.00%		
Growth Factor		1.04				1.04				1.04				1.04		
Vested Trips[1]																
Background (2027)	**0**	**101**	**380**	**121**	**0**	**84**	**316**	**57**	**0**	**84**	**128**	**80**	**0**	**135**	**165**	**99**
Project Assignment																
Ingress			12%							8%						3%
Egress						3%	12%	8%								
Project Trips	0	0	30	0	0	5	18	12	0	20	0	0	0	0	0	7
Project Buildout	**0**	**101**	**410**	**121**	**0**	**89**	**334**	**69**	**0**	**104**	**128**	**80**	**0**	**135**	**165**	**106**

1. Vested trips applied from Apollo Gardens TIA and Huntington Park TIA, based on the Study Intersections in those analyses.

Intersection Development Worksheet

Kimley»Horn
Expect More. Experience Better.

Intersection #:	5		***Existing Year:***	2025	***TMC Year:*** 2024
Major Street:	Barna Ave	N/S	***Buildout Year:***	2027	
Minor Street:	Country Club Dr	E/W	***Seasonal Factor:***	1.00	

PHF: 0.92

PM Peak Hour Trips: IN = 249 **OUT =** 154

Weekday PM Peak Hour	**Barna Ave**								**Country Club Dr**							
	Northbound				**Southbound**				**Eastbound**				**Westbound**			
4:30PM - 5:30PM	**U**	**L**	**T**	**R**	**U**	**L**	**T**	**R**	**U**	**L**	**T**	**R**	**U**	**L**	**T**	**R**
TMC (2024)	0	14	432	75	0	54	366	21	0	16	58	14	0	67	81	57
Seasonal Factor			1.00				1.00				1.00				1.00	
Heavy Vehicle (%)	0%	0%	1%	1%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Growth Factor			1.02				1.02				1.02				1.02	
Existing (2025)	**0**	**14**	**441**	**77**	**0**	**55**	**373**	**21**	**0**	**16**	**59**	**14**	**0**	**68**	**83**	**58**
Growth Rates			2.00%				2.00%				2.00%				2.00%	
Growth Factor			1.04				1.04				1.04				1.04	
Vested Trips (Apollo Gardens)[1]			10			3	7									4
Background (2027)	**0**	**15**	**469**	**80**	**0**	**60**	**395**	**22**	**0**	**17**	**61**	**15**	**0**	**71**	**86**	**64**
Project Assignment																
Ingress		12%					4%	15%						4%	17%	
Egress			4%	4%						15%	17%	12%				
Project Trips	0	30	6	6	0	0	10	37	0	23	26	18	0	10	42	0
Project Buildout	**0**	**45**	**475**	**86**	**0**	**60**	**405**	**59**	**0**	**40**	**87**	**33**	**0**	**81**	**128**	**64**

1. Vested trips applied from Apollo Gardens TIA and Huntington Park TIA, based on the Study Intersections in those analyses.

Intersection Development Worksheet

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Intersection #:	6		***Existing Year:***	2025	***TMC Year:*** 2024
Major Street:	Barna Ave	N/S	***Buildout Year:***	2027	
Minor Street:	Harrison St	E/W	***Seasonal Factor:***	1.00	

PHF: 0.99

PM Peak Hour Trips: IN = 249 **OUT =** 154

Weekday PM Peak Hour	Barna Ave								Harrison St							
	Northbound				Southbound				Eastbound				Westbound			
4:45PM - 5:45PM	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2024)	0	91	221	166	0	71	197	15	0	17	214	61	0	160	321	64
Seasonal Factor		1.00				1.00				1.00				1.00		
Heavy Vehicle (%)	0%	0%	2%	1%	0%	1%	0%	7%	0%	0%	0%	0%	0%	1%	0%	0%
Growth Factor		1.02				1.02				1.02				1.02		
Existing (2025)	**0**	**93**	**225**	**169**	**0**	**72**	**201**	**15**	**0**	**17**	**218**	**62**	**0**	**163**	**327**	**65**
Growth Rates		2.00%				2.00%				2.00%				2.00%		
Growth Factor		1.04				1.04				1.04				1.04		
Vested Trips[1]		1	4	1			5					1		2		
Background (2027)	**0**	**98**	**238**	**177**	**0**	**75**	**214**	**16**	**0**	**18**	**227**	**65**	**0**	**172**	**340**	**68**
Project Assignment																
Ingress							13%							6%		
Egress			13%	6%												
Project Trips	0	0	20	9	0	0	32	0	0	0	0	0	0	15	0	0
Project Buildout	**0**	**98**	**258**	**186**	**0**	**75**	**246**	**16**	**0**	**18**	**227**	**65**	**0**	**187**	**340**	**68**

1. Vested trips applied from Apollo Gardens TIA and Huntington Park TIA, based on the Study Intersections in those analyses.

Intersection Development Worksheet

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Intersection #:	7		***Existing Year:***	2025	***TMC Year:*** 2024
Major Street:	Saunders Pl	E/W	***Buildout Year:***	2027	
Minor Street:	Project Drwy 1	N/S	***Seasonal Factor:***	1.00	

PHF: 0.77

PM Peak Hour Trips: IN = 249 **OUT =** 154

Weekday PM Peak Hour 4:30PM - 5:30PM	Project Drwy 1								Saunders Pl							
	Northbound				Southbound				Eastbound				Westbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2024)	0	0	0	0	0	0	0	0	0	0	6	0	0	0	6	0
Seasonal Factor		1.00				1.00				1.00				1.00		
Heavy Vehicle (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Growth Factor		1.02				1.02				1.02				1.02		
Existing (2025)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**6**	**0**
Growth Rates		2.00%				2.00%				2.00%				2.00%		
Growth Factor		1.04				1.04				1.04				1.04		
Vested Trips[1]																
Background (2027)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**6**	**0**
Project Assignment																
Ingress												3%				
Egress		3%														
Project Trips	0	5	0	0	0	0	0	0	0	0	0	8	0	0	0	0
Project Buildout	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**8**	**0**	**0**	**6**	**0**

1. Vested trips applied from Apollo Gardens TIA and Huntington Park TIA, based on the Study Intersections in those analyses.

Intersection Development Worksheet

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Intersection #:	8		***Existing Year:***	2025	***TMC Year:*** 2024
Major Street:	Royal Oak Dr	N/S	***Buildout Year:***	2027	
Minor Street:	Project Drwy 2	E/W	***Seasonal Factor:***	1.00	

PHF: 0.77

PM Peak Hour Trips: IN = 249 **OUT =** 154

Weekday PM Peak Hour	Royal Oak Dr								Project Drwy 2							
	Northbound				Southbound				Eastbound				Westbound			
4:30PM - 5:30PM	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2024)	0	0	50	0	0	0	40	0	0	0	0	0	0	0	0	0
Seasonal Factor			1.00				1.00				1.00				1.00	
Heavy Vehicle (%)	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Growth Factor			1.02				1.02				1.02				1.02	
Existing (2025)	**0**	**0**	**51**	**0**	**0**	**0**	**41**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Growth Rates			2.00%				2.00%				2.00%				2.00%	
Growth Factor			1.04				1.04				1.04				1.04	
Vested Trips[1]																
Background (2027)	**0**	**0**	**53**	**0**	**0**	**0**	**43**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Project Assignment																
Ingress				25%												
Egress														25%		
Project Trips	0	0	0	62	0	0	0	0	0	0	0	0	0	39	0	0
Project Buildout	**0**	**0**	**53**	**62**	**0**	**0**	**43**	**0**	**0**	**0**	**0**	**0**	**0**	**39**	**0**	**0**

1. Vested trips applied from Apollo Gardens TIA and Huntington Park TIA, based on the Study Intersections in those analyses.

Intersection Development Worksheet

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Intersection #:	9		***Existing Year:***	2025	***TMC Year:*** 2024
Major Street:	Country Club Dr	E/W	***Buildout Year:***	2027	
Minor Street:	Project Drwy 3 & 4	N/S	***Seasonal Factor:***	1.00	

PM Peak Hour Trips: IN = 249 **OUT =** 154

PHF: 0.92

Weekday PM Peak Hour	Project Drwy 3 & 4								Country Club Dr							
	Northbound				Southbound				Eastbound				Westbound			
4:30PM - 5:30PM	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2024)	0	0	0	0	0	0	0	0	0	0	93	0	0	0	93	0
Seasonal Factor		1.00				1.00				1.00				1.00		
Heavy Vehicle (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	0%
Growth Factor		1.02				1.02				1.02				1.02		
Existing (2025)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**95**	**0**	**0**	**0**	**95**	**0**
Growth Rates		2.00%				2.00%				2.00%				2.00%		
Growth Factor		1.04				1.04				1.04				1.04		
Vested Trips[1]																
Background (2027)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**99**	**0**	**0**	**0**	**99**	**0**
Project Assignment																
Ingress										7%	8%	9%		11%	15%	8%
Egress		9%		11%		8%		7%			15%				8%	
Project Trips	0	14	0	17	0	12	0	11	0	17	43	23	0	27	49	20
Project Buildout	**0**	**14**	**0**	**17**	**0**	**12**	**0**	**11**	**0**	**17**	**142**	**23**	**0**	**27**	**148**	**20**

1. Vested trips applied from Apollo Gardens TIA and Huntington Park TIA, based on the Study Intersections in those analyses.

Intersection Development Worksheet

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Intersection #:	10		***Existing Year:***	2025	***TMC Year:*** 2024
Major Street:	Country Club Dr	E/W	***Buildout Year:***	2027	
Minor Street:	Project Drwy 5	N/S	***Seasonal Factor:***	1.00	

PHF: 0.92

PM Peak Hour Trips: IN = 249 **OUT =** 154

Weekday PM Peak Hour	Project Drwy 5								Country Club Dr							
	Northbound				Southbound				Eastbound				Westbound			
4:30PM - 5:30PM	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2024)	0	0	0	0	0	0	0	0	0	0	93	0	0	0	93	0
Seasonal Factor		1.00				1.00				1.00				1.00		
Heavy Vehicle (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	0%
Growth Factor		1.02				1.02				1.02				1.02		
Existing (2025)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**95**	**0**	**0**	**0**	**95**	**0**
Growth Rates		2.00%				2.00%				2.00%				2.00%		
Growth Factor		1.04				1.04				1.04				1.04		
Vested Trips[1]																
Background (2027)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**99**	**0**	**0**	**0**	**99**	**0**
Project Assignment																
Ingress												8%		10%	34%	
Egress		8%		10%							34%					
Project Trips	0	12	0	15	0	0	0	0	0	0	52	20	0	25	84	0
Project Buildout	**0**	**12**	**0**	**15**	**0**	**0**	**0**	**0**	**0**	**0**	**151**	**20**	**0**	**25**	**183**	**0**

1. Vested trips applied from Apollo Gardens TIA and Huntington Park TIA, based on the Study Intersections in those analyses.

Intersection Development Worksheet

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Intersection #:	11		***Existing Year:***	2025	***TMC Year:*** 2024
Major Street:	Barna Avenue	N/S	***Buildout Year:***	2027	
Minor Street:	Project Drwy 6	E/W	***Seasonal Factor:***	1.00	

PHF: 0.92

PM Peak Hour Trips: IN = 249 **OUT =** 154

Weekday PM Peak Hour	Barna Avenue								Project Drwy 6							
	Northbound				Southbound				Eastbound				Westbound			
4:30PM - 5:30PM	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2024)	0	0	530	0	0	0	431	0	0	0	0	0	0	0	0	0
Seasonal Factor		1.00				1.00				1.00				1.00		
Heavy Vehicle (%)	0%	0%	2%	0%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Growth Factor		1.02				1.02				1.02				1.02		
Existing (2025)	**0**	**0**	**541**	**0**	**0**	**0**	**440**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Growth Rates		2.00%				2.00%				2.00%				2.00%		
Growth Factor		1.04				1.04				1.04				1.04		
Vested Trips[1]																
Background (2027)	**0**	**0**	**563**	**0**	**0**	**0**	**458**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Project Assignment																
Ingress		11%	12%					8%								
Egress							12%			8%		11%				
Project Trips	0	27	30	0	0	0	18	20	0	12	0	17	0	0	0	0
Project Buildout	**0**	**27**	**593**	**0**	**0**	**0**	**476**	**20**	**0**	**12**	**0**	**17**	**0**	**0**	**0**	**0**

1. Vested trips applied from Apollo Gardens TIA and Huntington Park TIA, based on the Study Intersections in those analyses.

Apollo Gardens

Traffic Impact Analysis

Titusville, FL

February 2023

Kimley»Horn

TRAFFIC IMPACT ANALYSIS

Apollo Gardens

Titusville, FL

Prepared by:

Kimley-Horn and Associates, Inc.

February 2023



Digitally signed by Alexander Memering
DN: cn=Alexander Memering, c=US, o=North Carolina, email=alex.memering@kimley-horn.com
Date: 2023.02.24 09:50:02 -05'00'

Alex Memering, P.E.

PE #91501

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4.0 DEVELOPMENT TRAFFIC

The applicant is proposing to develop the site to consist of ±84 affordable multifamily dwelling units. Buildout of the project is anticipated in Year 2026. The latest industry standards were referenced to evaluate the amount of new external trips to be generated by the site at buildout. The latest adopted regional travel demand model was used to forecast the distribution of trips throughout the study area.

4.1 TRIP GENERATION

Trip generation for the proposed site was calculated using procedures published in the 11th Edition of the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*. Relevant excerpts are provided in **Appendix I.**

Table 5 provides the daily and PM peak hour trip generation summary for the project. As shown in the table, the proposed site is anticipated to generate 453 daily trips and 39 PM peak hour trips (23 inbound and 16 outbound).

Table 5: Trip Generation

Land Use	Intensity	Daily Trips	PM Peak Hour of Adjacent Street		
			Total	In	Out
Proposed Development Affordable Housing	84 DU	453	39	23	16
TOTAL NET NEW TRIPS		453	39	23	16

Note 1: Trip Generation was calculated using the data from ITE's Trip Generation Manual, 11th Edition

Affordable Housing [ITE 223]

Daily	T = 3.73*(X)+139.35; (X is No. of Dwelling Units)
PM Peak Hour of Adjacent Street	Ln(T) = 0.72*Ln(X)+0.64; (X is No. of Dwelling Units; 59% in, 41% out)

4.2 TRIP DISTRIBUTION

Projected traffic patterns on study area facilities were developed using the latest adopted regional travel demand model. Land use data for the project was entered into a new traffic analysis zone (TAZ) within the Central Florida Regional Planning Model (CFRPM v7) set and situated within the existing roadway network to appropriately represent project access. The model was used to assign trips for all trip purposes between allocated origin and destination pairs using project buildout year model data. Trip distribution for the project was extracted from the completed model assignment and reviewed for logic. The resulting model plot showing the percent of daily project distribution is provided in **Appendix J**.

Daily model project distribution was referenced to manually assign project distribution at the study area in general accordance with daily model output. **Figure 4** shows the project distribution at the study intersection for use in forecasting project trips.



Figure 5: Project Trip Assignment

Apollo Gardens
Traffic Impact Analysis
February 2023

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5.2 BUILDOUT ROADWAY SEGMENT ANALYSIS

A roadway segment analysis was performed within the study area to determine buildout PM peak hour two-way conditions. The analysis was conducted by comparing the projected 2026 buildout PM peak hour two-way volume to the segment's service capacity.

The buildout roadway segment data is included in **Table 7**. As shown in the table, the analysis identifies no roadway segment capacity deficiencies within the study area during buildout (2026) PM peak hour traffic conditions.

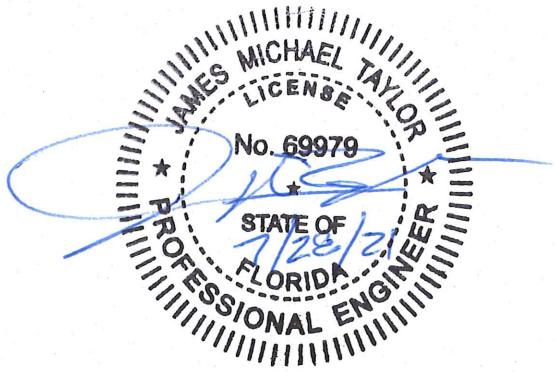
Table 7: Buildout (2026) PM Peak Hour Roadway Conditions

Roadway		Peak Hour Two-Way Service Capacity [1]	Background Two-Way Volumes	PM Peak Hour Project Traffic		2026 Buildout Traffic Conditions		
From	To			% Assign [2]	Project Trips	Two-Way Volumes [3]	V/C Ratios	Capacity Exceeded?
Barna Avenue								
Harrison Street	Country Club Drive	1,818	954	60.0%	23	977	0.54	No
Country Club Drive								
S Park Avenue	Barna Avenue	1,818	187	3.0%	1	188	0.10	No

Notes:
1. Peak hour two-way service capacities were obtained from the latest 2023 FDOT Multimodal Quality and Level of Service Handbook.
2. Percent assignment is the maximum trip distribution across the roadway segment.
3. Future buildout traffic volumes are the summation of future non-project traffic and PM peak hour project traffic.

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MEMORANDUM



To: Mr. Kwabena Ofosu
City of Titusville

From: James M. Taylor, P.E.
Kimley-Horn and Associates, Inc.

Date: July 28, 2021

Subject: Traffic Impact Analysis (TIA) Memorandum
Huntington Park Residential Subdivision

Purpose
The following Traffic Impact Analysis (TIA) Memorandum has been prepared to analyze and document the traffic impacts associated with a proposed residential subdivision located on the west side of S Park Avenue in Titusville, FL.

Project Description
The project site sits on a ±76.8-acre property (Parcel ID 22-35-17-AV-*-26), which is currently vacant. It is bounded on the east by S Park Avenue and an existing lake and recreation space on the west. To the south is a residential development and the northern boundary of the property is Park Avenue Christian Church.

The project location is shown in **Figure 1.**

Study Area
As discussed with City staff (July 7, 2021 – email correspondence included in **Attachment A**), the study area includes the following intersections:

- S Park Avenue & Treetop Drive (project driveway/access point).
- S Park Avenue & Harrison Street
- S Park Avenue & Knox McRae Drive

The following roadway segments will also be included in the project study area:

- S Park Avenue from Harrison Street to the Project Site
- S Park Avenue from the Project Site to Knox McRae Drive

Figure 1 shows the study area.

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Table 1: Existing Daily Roadway Segment Analysis

Roadway			Roadway Attributes [1]				Daily - Existing (2021)					
From	To		Functional Classification	Area Type	Adopted LOS	Number of Lanes	2019 AADT[2]	Growth Rate	Existing 2021 AADT[3]	Daily MSV[4]	V/C Ratio	LOS
S Park Avenue												
Harrison Street	Project Site		Major Collector	U	E	2	7,400	2%	7,699	14,040	0.55	D
Project Site	Knox McRae Drive		Major Collector	U	E	2	6,800	2%	7,075	14,040	0.50	D

Notes

1. Data obtained from Space Coast TPO Transportation Data Management System and the City of Titusville Comprehensive Plan.

2. Data obtained from Florida Department of Transportation Traffic Online.

3. Existing (2021) AADT developed by applying the calculated growth rates.

4. Maximum Service Volume (MSV) per the Florida Department of Transportation Quality/Level of Service Handbook.

Table 2: Background and Buildout Daily Roadway Segment Analysis

Roadway		Daily - Backgorund (2022)						Daily - Buildout (2022)				
								905 Daily Trips		Buildout AADT	V/C Ratio	LOS
From	To	Existing 2021 AADT[1]	Growth Rate[2]	2022 AADT	Daily MSV[4]	V/C Ratio	LOS	% Assign[5]	Project Trips			
S Park Avenue												
Harrison Street	Project Site	7,699	2.0%	7,853	14,040	0.56	D	44%	398	8,251	0.59	D
Project Site	Knox McRae Drive	7,075	2.0%	7,216	14,040	0.51	D	56%	507	7,723	0.55	D

Notes

1. Existing (2021) AADT developed by applying the calculated growth rates.

2. Growth rate as developed and shown in the Appendix.

3. No Vested Trips, provided in communication with the City of Titusville.

4. Maximum Service Volume (MSV) per the Florida Department of Transportation Quality/Level of Service Handbook.

5. Percent assigned as the highest percent from the segment

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Table 3: Existing PM Peak Hour Roadway Segment Analysis

Roadway	From	To	PM Peak Hour Peak Direction MSV [1]	2021 Existing PM Peak Hour Traffic Conditions				
				Existing Volumes [2]		Peak Direction	V/C Ratio	LOS
				NB / EB	SB / WB			
S Park Ave								
	Harrison Street	Project Site	720	250	191	N	0.35	C
	Project Site	Knox McRae Drive	720	252	184	N	0.35	C

Notes

1. Maximum Service Volume (MSV) per the Florida Department of Transportation Quality/Level of Service Handbook.

2. Existing (2021) AADT determined from Turning Movement Counts.

Table 4: Background and Buildout PM Peak Hour Roadway Segment Analysis

Roadway	From	To	PM Peak Hour Peak Direction MSV [1]	Existing Volumes [2]		Applied Growth Rate [3]	2022 Background AM Peak Hour				PM Peak Hour Project Trips			2023 Buildout AM Peak Hour			
							Background Volumes		Max V/C Ratio	LOS	% Assign [5]	55 IN & 33 OUT		Buildout Volumes		Max V/C Ratio	LOS
				NB / EB	SB / WB		NB / EB	SB / WB				NB / EB	SB / WB	NB / EB	SB / WB		
S Park Ave																	
	Harrison Street	Project Site	720	250	191	2.0%	255	195	0.35	C	44%	15	24	270	219	0.38	C
	Project Site	Knox McRae Drive	720	252	184	2.0%	257	188	0.36	C	56%	31	18	288	206	0.40	C

Notes

1. Maximum Service Volume (MSV) per the Florida Department of Transportation Quality/Level of Service Handbook.

2. Existing (2021) AADT determined from Turning Movement Counts.

2. Growth rate as developed and shown in the Appendix.

3. No Vested Trips, provided in communication with the City of Titusville.

4. Maximum Service Volume (MSV) per the Florida Department of Transportation Quality/Level of Service Handbook.

5. Percent assigned as the highest percent from the segment

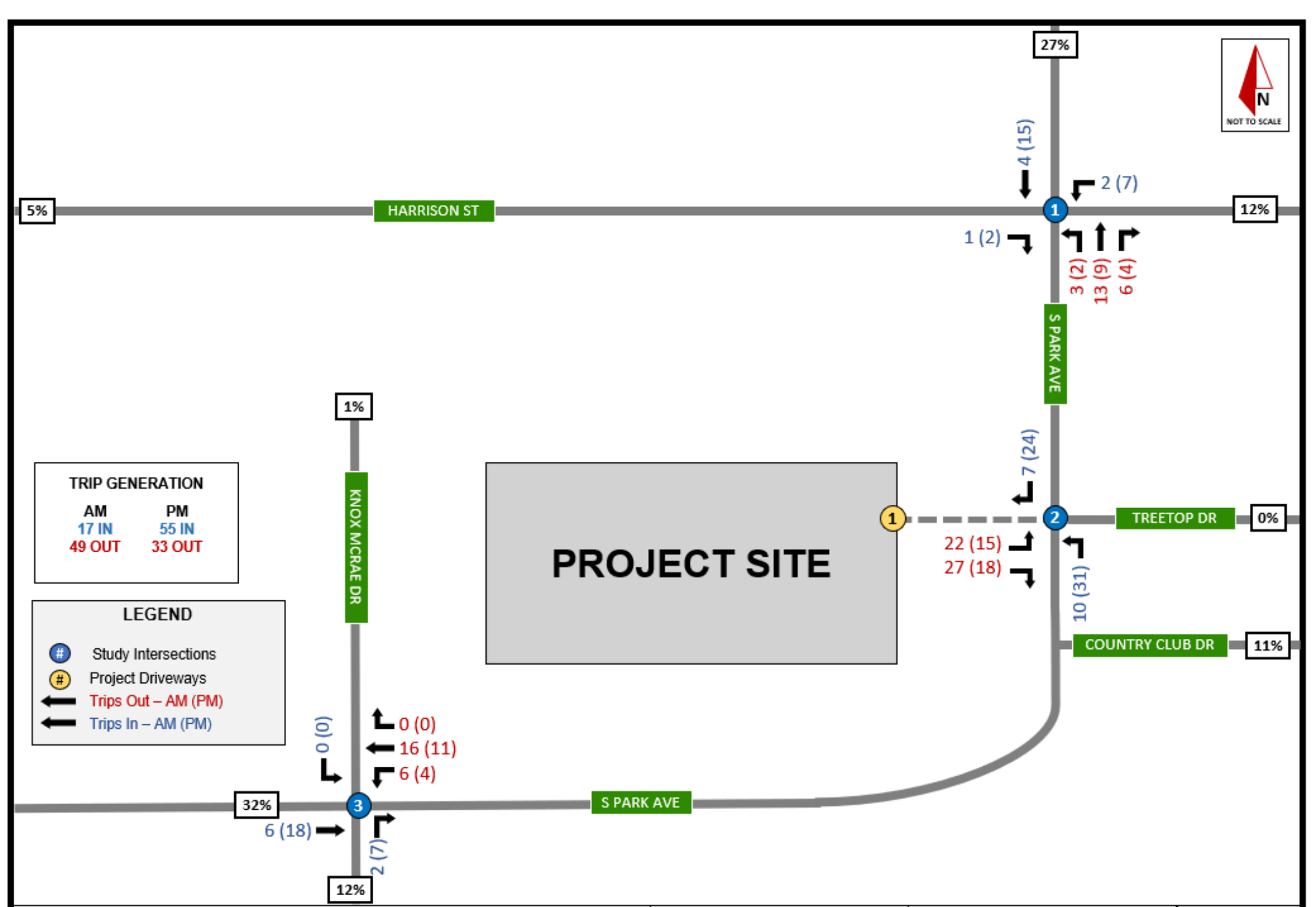


Figure 3: Project Trip Assignment

Huntington Park | Traffic Impact Analysis

Project No.: 149941001

July 2021

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APPENDIX H

Signal Timings

ID: 5534
Name: barna and country club
Configuration: Permanent

Param	Phs 1	Phs 2	Phs 3	Phs 4	Phs 5	Phs 6	Phs 7	Phs 8	Phs 9	Phs 10	Phs 11	Phs 12	Phs 13	Phs 14	Phs 15	Phs 16
Walk	0	7	0	7	0	7	0	7	0	0	0	0	0	0	0	0
Ped Clearance	0	12	0	12	0	18	0	12	0	0	0	0	0	0	0	0
Min Green	6	12	0	8	6	12	0	8	0	0	0	0	0	0	0	0
Passage	3	3	3	3	3	3	3	3	0	0	0	0	0	0	0	0
Max1	12	45	23	25	12	45	23	25	0	0	0	0	0	0	0	0
Max2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Yellow	4	4	4.4	4	4	4	4.5	4	0	0	0	0	0	0	0	0
Red	2	2	3.6	2	2	2	3	2	0	0	0	0	0	0	0	0
Red Revert	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Added Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduce By	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Step	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Startup	RED	GREEN	RED	RED	RED	GREEN	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED
Enable	On	On	Off	On	On	On	Off	On	Off	Off	Off	Off	Off	Off	Off	Off
Auto Entry	Off	Off	Off	On	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off
Auto Exit	Off	On	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Non Act1	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Non Act2	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Lock Call	Off	Off	Off	Off	Off	Off	Off	Off	On	On	On	On	On	On	On	On
Min Recall	Off	On	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Max Recall	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Ped Recall	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Soft Recall	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Dual Entry	Off	Off	Off	On	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off
Sim Gap Enable	Off	Off	Off	Off	Off	Off	Off	Off	On	On	On	On	On	On	On	On
Guar Passage	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Rest In Walk	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Cond Service	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Add Init Calc	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Ring	1	1	1	1	2	2	2	2	0	0	0	0	0	0	0	0
Concur 1	5	5	7	7	1	1	3	3	0	0	0	0	0	0	0	0
Concur 2	6	6	8	8	2	2	4	4	0	0	0	0	0	0	0	0
Concur 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ID: 5532
Name: barna and harrison
Configuration: Permanent

Param	Phs 1	Phs 2	Phs 3	Phs 4	Phs 5	Phs 6	Phs 7	Phs 8	Phs 9	Phs 10	Phs 11	Phs 12	Phs 13	Phs 14	Phs 15	Phs 16
Walk	0	7	0	7	0	7	0	7	0	0	0	0	0	0	0	0
Ped Clearance	0	15	0	15	0	15	0	15	0	0	0	0	0	0	0	0
Min Green	6	12	0	8	6	12	6	8	5	5	5	5	5	5	5	5
Passage	3	4	3	4	3	4	3	4	1	1	1	1	1	1	1	1
Max1	15	40	15	30	15	40	15	30	25	25	25	25	25	25	25	25
Max2	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Yellow	3.5	4	3.5	4	3.5	4	3.5	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red	2	2	2	2	2	2	2	2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Added Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduce By	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Step	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Startup	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED
Enable	On	On	Off	On	On	On	On	On	Off	Off	Off	Off	Off	Off	Off	Off
Auto Entry	Off	Off	Off	On	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off
Auto Exit	Off	On	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Non Act1	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Non Act2	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Lock Call	Off	Off	Off	Off	Off	Off	Off	Off	On	On	On	On	On	On	On	On
Min Recall	Off	On	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Max Recall	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Ped Recall	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Soft Recall	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Dual Entry	Off	Off	Off	On	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off
Sim Gap Enable	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On
Guar Passage	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Rest In Walk	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Cond Service	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Add Init Calc	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Ring	1	1	1	1	2	2	2	2	0	0	0	0	0	0	0	0
Concur 1	5	5	7	7	1	1	3	3	0	0	0	0	0	0	0	0
Concur 2	6	6	8	8	2	2	4	4	0	0	0	0	0	0	0	0
Concur 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ID: 5533
Name: barna and knox mcrae
Configuration: Permanent

Param	Phs 1	Phs 2	Phs 3	Phs 4	Phs 5	Phs 6	Phs 7	Phs 8	Phs 9	Phs 10	Phs 11	Phs 12	Phs 13	Phs 14	Phs 15	Phs 16
Walk	0	7	0	7	0	7	0	7	0	0	0	0	0	0	0	0
Ped Clearance	0	18	0	18	0	18	0	18	0	0	0	0	0	0	0	0
Min Green	6	12	6	10	6	12	6	10	5	5	5	5	5	5	5	5
Passage	3	4	3	4	3	4	3	4	1	1	1	1	1	1	1	1
Max1	12	30	12	25	12	30	12	25	25	25	25	25	25	25	25	25
Max2	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Yellow	3	4	3	4	3	4	3	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red	2	2	2	2	2	2	2	2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Added Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduce By	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Step	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Startup	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED
Enable	On	On	On	On	On	On	On	On	Off	Off	Off	Off	Off	Off	Off	Off
Auto Entry	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Auto Exit	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Non Act1	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Non Act2	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Lock Call	Off	Off	Off	Off	Off	Off	Off	Off	On	On	On	On	On	On	On	On
Min Recall	Off	On	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Max Recall	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Ped Recall	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Soft Recall	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Dual Entry	Off	On	Off	On	Off	On	Off	On	Off	Off	Off	Off	Off	Off	Off	Off
Sim Gap Enable	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On	On
Guar Passage	On	On	On	On	On	On	On	On	Off	Off	Off	Off	Off	Off	Off	Off
Rest In Walk	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Cond Service	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Add Init Calc	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Ring	1	1	1	1	2	2	2	2	0	0	0	0	0	0	0	0
Concur 1	5	5	7	7	1	1	3	3	0	0	0	0	0	0	0	0
Concur 2	6	6	8	8	2	2	4	4	0	0	0	0	0	0	0	0
Concur 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

APPENDIX I

Synchro Outputs

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	1	2	61	0	34	3	238	86	28	182	1
Future Vol, veh/h	2	1	2	61	0	34	3	238	86	28	182	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	90	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	4	2	2	2	2	2	4	2	2
Mvmt Flow	2	1	2	63	0	35	3	245	89	29	188	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	497	586	188	497	498	245	189	0	0	334	0	0
Stage 1	246	246	-	252	252	-	-	-	-	-	-	-
Stage 2	252	340	-	246	246	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.14	6.52	6.22	4.12	-	-	4.14	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.14	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.14	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.536	4.018	3.318	2.218	-	-	2.236	-	-
Pot Cap-1 Maneuver	483	422	854	480	474	793	1385	-	-	1214	-	-
Stage 1	758	703	-	748	699	-	-	-	-	-	-	-
Stage 2	753	639	-	753	702	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	448	410	854	464	460	793	1385	-	-	1214	-	-
Mov Cap-2 Maneuver	448	410	-	464	460	-	-	-	-	-	-	-
Stage 1	738	684	-	746	697	-	-	-	-	-	-	-
Stage 2	717	637	-	731	684	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	11.72	13.05	0.07	1.07
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	22	-	-	541	545	239	-	-
HCM Lane V/C Ratio	0.002	-	-	0.01	0.18	0.024	-	-
HCM Control Delay (s/veh)	7.6	0	-	11.7	13.1	8	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.7	0.1	-	-

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	78	11	11	68	15	8	28	6	11	15	15
Future Vol, veh/h	27	78	11	11	68	15	8	28	6	11	15	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	7	2	2	2	2	2	2
Mvmt Flow	28	81	11	11	71	16	8	29	6	11	16	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	86	0	0	93	0	0	245	253	87	254	251	79
Stage 1	-	-	-	-	-	-	143	143	-	102	102	-
Stage 2	-	-	-	-	-	-	102	109	-	152	149	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1510	-	-	1502	-	-	709	651	972	700	652	982
Stage 1	-	-	-	-	-	-	860	778	-	904	811	-
Stage 2	-	-	-	-	-	-	904	805	-	850	774	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1510	-	-	1502	-	-	662	633	972	646	634	982
Mov Cap-2 Maneuver	-	-	-	-	-	-	662	633	-	646	634	-
Stage 1	-	-	-	-	-	-	843	763	-	897	805	-
Stage 2	-	-	-	-	-	-	866	798	-	797	759	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	1.73	0.87	10.73	10.22
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	672	409	-	-	203	-	-	733
HCM Lane V/C Ratio	0.065	0.019	-	-	0.008	-	-	0.058
HCM Control Delay (s/veh)	10.7	7.4	0	-	7.4	0	-	10.2
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	0.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	1	51	3	3	38
Future Vol, veh/h	5	1	51	3	3	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	2	2	4	2	2	2
Mvmt Flow	6	1	66	4	4	49

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	125	68	0	0	70	0
Stage 1	68	-	-	-	-	-
Stage 2	57	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	869	995	-	-	1530	-
Stage 1	955	-	-	-	-	-
Stage 2	965	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	867	995	-	-	1530	-
Mov Cap-2 Maneuver	867	-	-	-	-	-
Stage 1	955	-	-	-	-	-
Stage 2	963	-	-	-	-	-

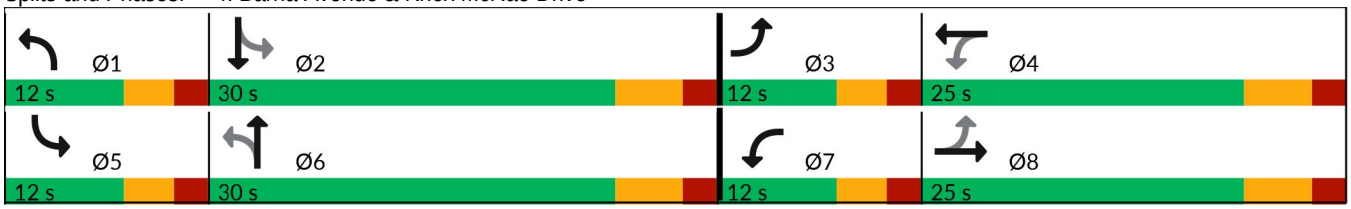
Approach	WB	NB	SB
HCM Control Delay, s/v	9.1	0	0.54
HCM LOS	A		

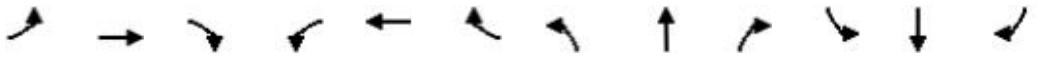
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	886	132	-
HCM Lane V/C Ratio	-	-	0.009	0.003	-
HCM Control Delay (s/veh)	-	-	9.1	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	81	123	130	159	97	365	81	304
Future Volume (vph)	81	123	130	159	97	365	81	304
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	3	8	7	4	1	6	5	2
Permitted Phases	8		4		6		2	
Detector Phase	3	8	7	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	6.0	10.0	6.0	10.0	6.0	12.0	6.0	12.0
Minimum Split (s)	11.0	24.0	11.0	24.0	11.0	24.0	11.0	24.0
Total Split (s)	12.0	25.0	12.0	25.0	12.0	30.0	12.0	30.0
Total Split (%)	15.2%	31.6%	15.2%	31.6%	15.2%	38.0%	15.2%	38.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min

Intersection Summary
Cycle Length: 79
Actuated Cycle Length: 69.4
Natural Cycle: 75
Control Type: Actuated-Uncoordinated

Splits and Phases: 4: Barna Avenue & Knox McRae Drive





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	123	77	130	159	95	97	365	116	81	304	55
Future Volume (veh/h)	81	123	77	130	159	95	97	365	116	81	304	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1841	1870	1870	1841	1841	1870	1870
Adj Flow Rate, veh/h	86	131	82	138	169	101	103	388	123	86	323	59
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	4	2	2	4	4	2	2
Cap, veh/h	292	196	123	341	214	128	387	442	140	286	492	90
Arrive On Green	0.07	0.18	0.18	0.09	0.19	0.19	0.08	0.33	0.33	0.07	0.32	0.32
Sat Flow, veh/h	1781	1076	673	1781	1097	656	1781	1361	432	1753	1539	281
Grp Volume(v), veh/h	86	0	213	138	0	270	103	0	511	86	0	382
Grp Sat Flow(s),veh/h/ln	1781	0	1749	1781	0	1752	1781	0	1793	1753	0	1820
Q Serve(g_s), s	2.5	0.0	7.4	4.0	0.0	9.6	2.4	0.0	17.6	2.1	0.0	11.8
Cycle Q Clear(g_c), s	2.5	0.0	7.4	4.0	0.0	9.6	2.4	0.0	17.6	2.1	0.0	11.8
Prop In Lane	1.00		0.38	1.00		0.37	1.00		0.24	1.00		0.15
Lane Grp Cap(c), veh/h	292	0	318	341	0	341	387	0	583	286	0	582
V/C Ratio(X)	0.29	0.00	0.67	0.40	0.00	0.79	0.27	0.00	0.88	0.30	0.00	0.66
Avail Cap(c_a), veh/h	353	0	507	380	0	508	439	0	656	346	0	666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.8	0.0	25.0	19.6	0.0	25.1	13.8	0.0	20.9	15.3	0.0	19.2
Incr Delay (d2), s/veh	0.6	0.0	3.4	0.8	0.0	6.6	0.4	0.0	12.5	0.6	0.0	2.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	0.0	5.7	2.9	0.0	7.7	1.7	0.0	13.6	1.4	0.0	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	20.3	0.0	28.4	20.3	0.0	31.7	14.2	0.0	33.4	15.9	0.0	21.6
LnGrp LOS	C		C	C		C	B		C	B		C
Approach Vol, veh/h		299			408			614			468	
Approach Delay, s/veh		26.1			27.9			30.2			20.5	
Approach LOS		C			C			C			C	

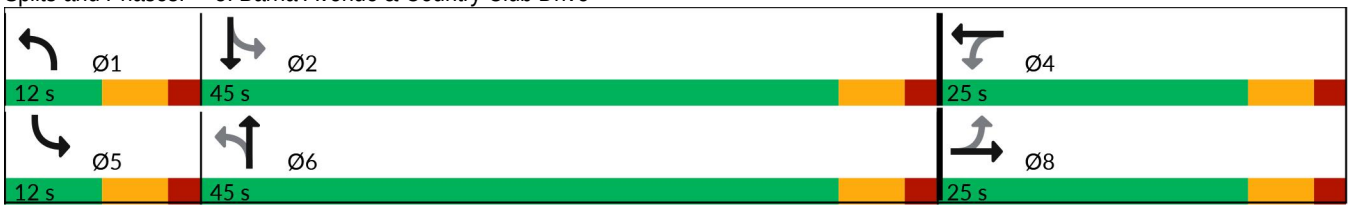
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.1	27.0	9.7	18.8	9.7	27.3	10.6	17.9
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	7.0	24.0	7.0	19.0	7.0	24.0	7.0	19.0
Max Q Clear Time (g_c+I1), s	4.4	13.8	4.5	11.6	4.1	19.6	6.0	9.4
Green Ext Time (p_c), s	0.0	2.2	0.0	1.2	0.0	1.7	0.0	1.0

Intersection Summary	
HCM 7th Control Delay, s/veh	26.4
HCM 7th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	16	59	68	83	14	441	55	373
Future Volume (vph)	16	59	68	83	14	441	55	373
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		8		4	1	6	5	2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	8.0	8.0	8.0	8.0	6.0	12.0	6.0	12.0
Minimum Split (s)	24.0	24.0	24.0	24.0	12.0	24.0	12.0	24.0
Total Split (s)	25.0	25.0	25.0	25.0	12.0	45.0	12.0	45.0
Total Split (%)	30.5%	30.5%	30.5%	30.5%	14.6%	54.9%	14.6%	54.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min

Intersection Summary
Cycle Length: 82
Actuated Cycle Length: 53.3
Natural Cycle: 60
Control Type: Actuated-Uncoordinated

Splits and Phases: 5: Barna Avenue & Country Club Drive



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	59	14	68	83	58	14	441	77	55	373	21
Future Volume (veh/h)	16	59	14	68	83	58	14	441	77	55	373	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	17	64	15	74	90	63	15	479	84	60	405	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	112	208	43	399	168	117	451	612	107	376	772	44
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.02	0.39	0.39	0.07	0.44	0.44
Sat Flow, veh/h	150	1270	263	1320	1024	717	1781	1550	272	1781	1753	100
Grp Volume(v), veh/h	96	0	0	74	0	153	15	0	563	60	0	428
Grp Sat Flow(s),veh/h/ln	1683	0	0	1320	0	1741	1781	0	1821	1781	0	1852
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	3.9	0.2	0.0	13.1	0.9	0.0	8.1
Cycle Q Clear(g_c), s	3.9	0.0	0.0	1.8	0.0	3.9	0.2	0.0	13.1	0.9	0.0	8.1
Prop In Lane	0.18		0.16	1.00		0.41	1.00		0.15	1.00		0.05
Lane Grp Cap(c), veh/h	363	0	0	399	0	285	451	0	719	376	0	816
V/C Ratio(X)	0.26	0.00	0.00	0.19	0.00	0.54	0.03	0.00	0.78	0.16	0.00	0.52
Avail Cap(c_a), veh/h	748	0	0	703	0	686	632	0	1472	476	0	1497
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.8	0.0	0.0	17.6	0.0	18.5	8.6	0.0	12.8	9.1	0.0	9.8
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.2	0.0	1.6	0.0	0.0	1.9	0.2	0.0	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.6	0.0	0.0	1.2	0.0	2.7	0.1	0.0	8.2	0.5	0.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	18.2	0.0	0.0	17.8	0.0	20.1	8.7	0.0	14.7	9.3	0.0	10.3
LnGrp LOS	B			B		C	A		B	A		B
Approach Vol, veh/h		96			227			578			488	
Approach Delay, s/veh		18.2			19.3			14.6			10.2	
Approach LOS		B			B			B			B	

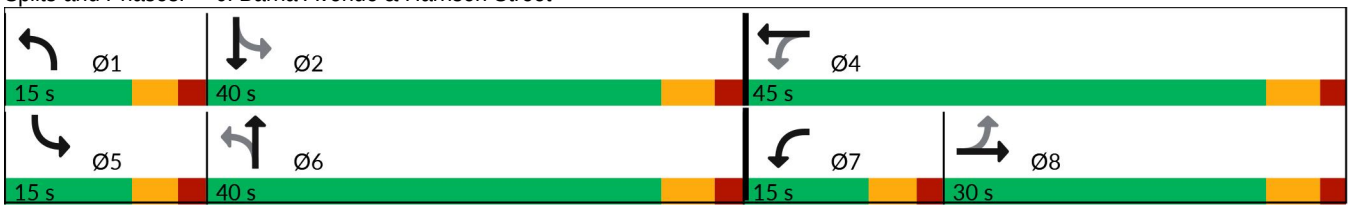
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.1	27.3		13.9	9.3	25.0		13.9				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	6.0	39.0		19.0	6.0	39.0		19.0				
Max Q Clear Time (g_c+I1), s	2.2	10.1		5.9	2.9	15.1		5.9				
Green Ext Time (p_c), s	0.0	2.9		0.8	0.0	4.0		0.3				

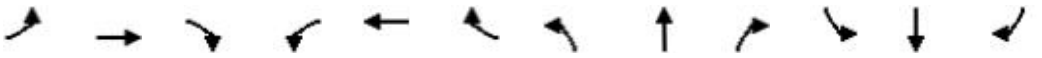
Intersection Summary		
HCM 7th Control Delay, s/veh		14.1
HCM 7th LOS		B

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	17	218	163	327	93	225	72	201
Future Volume (vph)	17	218	163	327	93	225	72	201
Turn Type	Perm	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases		8	7	4	1	6	5	2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	7	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	8.0	8.0	6.0	8.0	6.0	12.0	6.0	12.0
Minimum Split (s)	14.0	14.0	11.5	14.0	11.5	18.0	11.5	18.0
Total Split (s)	30.0	30.0	15.0	45.0	15.0	40.0	15.0	40.0
Total Split (%)	30.0%	30.0%	15.0%	45.0%	15.0%	40.0%	15.0%	40.0%
Yellow Time (s)	4.0	4.0	3.5	4.0	3.5	4.0	3.5	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	5.5	6.0	5.5	6.0	5.5	6.0
Lead/Lag	Lag	Lag	Lead		Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 79.2
Natural Cycle: 60
Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Barna Avenue & Harrison Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	218	62	163	327	65	93	225	169	72	201	15
Future Volume (veh/h)	17	218	62	163	327	65	93	225	169	72	201	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1796
Adj Flow Rate, veh/h	17	220	63	165	330	66	94	227	171	73	203	15
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	7
Cap, veh/h	310	287	82	339	579	116	456	287	216	304	487	36
Arrive On Green	0.21	0.21	0.21	0.10	0.38	0.38	0.07	0.29	0.29	0.07	0.28	0.28
Sat Flow, veh/h	988	1398	400	1781	1513	303	1781	990	746	1781	1720	127
Grp Volume(v), veh/h	17	0	283	165	0	396	94	0	398	73	0	218
Grp Sat Flow(s),veh/h/ln	988	0	1798	1781	0	1816	1781	0	1736	1781	0	1847
Q Serve(g_s), s	0.9	0.0	10.0	4.6	0.0	11.6	2.4	0.0	14.2	1.9	0.0	6.4
Cycle Q Clear(g_c), s	0.9	0.0	10.0	4.6	0.0	11.6	2.4	0.0	14.2	1.9	0.0	6.4
Prop In Lane	1.00		0.22	1.00		0.17	1.00		0.43	1.00		0.07
Lane Grp Cap(c), veh/h	310	0	370	339	0	695	456	0	504	304	0	522
V/C Ratio(X)	0.05	0.00	0.77	0.49	0.00	0.57	0.21	0.00	0.79	0.24	0.00	0.42
Avail Cap(c_a), veh/h	461	0	643	422	0	1055	577	0	879	437	0	936
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.6	0.0	25.1	17.8	0.0	16.4	15.0	0.0	21.9	16.3	0.0	19.6
Incr Delay (d2), s/veh	0.1	0.0	4.7	1.1	0.0	1.1	0.2	0.0	4.0	0.4	0.0	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.0	8.0	3.3	0.0	8.1	1.7	0.0	9.9	1.3	0.0	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	21.7	0.0	29.8	18.9	0.0	17.4	15.2	0.0	25.9	16.7	0.0	20.3
LnGrp LOS	C		C	B		B	B		C	B		C
Approach Vol, veh/h		300			561			492			291	
Approach Delay, s/veh		29.4			17.9			23.9			19.4	
Approach LOS		C			B			C			B	

Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.5	25.0		31.7	10.0	25.5	11.9	19.8				
Change Period (Y+Rc), s	5.5	6.0		6.0	5.5	6.0	5.5	6.0				
Max Green Setting (Gmax), s	9.5	34.0		39.0	9.5	34.0	9.5	24.0				
Max Q Clear Time (g_c+I1), s	4.4	8.4		13.6	3.9	16.2	6.6	12.0				
Green Ext Time (p_c), s	0.1	1.8		3.7	0.1	3.3	0.1	1.8				

Intersection Summary												
HCM 7th Control Delay, s/veh			22.0									
HCM 7th LOS			C									

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	1	2	63	0	41	3	273	89	32	204	1
Future Vol, veh/h	2	1	2	63	0	41	3	273	89	32	204	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	90	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	4	2	2	2	2	2	4	2	2
Mvmt Flow	2	1	2	65	0	42	3	281	92	33	210	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	564	656	211	564	565	281	211	0	0	373	0	0
Stage 1	277	277	-	288	288	-	-	-	-	-	-	-
Stage 2	288	379	-	277	277	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.14	6.52	6.22	4.12	-	-	4.14	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.14	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.14	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.536	4.018	3.318	2.218	-	-	2.236	-	-
Pot Cap-1 Maneuver	436	385	829	433	434	757	1359	-	-	1174	-	-
Stage 1	730	681	-	716	674	-	-	-	-	-	-	-
Stage 2	720	614	-	725	681	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	397	372	829	416	419	757	1359	-	-	1174	-	-
Mov Cap-2 Maneuver	397	372	-	416	419	-	-	-	-	-	-	-
Stage 1	706	660	-	713	672	-	-	-	-	-	-	-
Stage 2	678	612	-	699	659	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	12.37	14.02	0.06	1.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	20	-	-	493	506	243	-	-
HCM Lane V/C Ratio	0.002	-	-	0.01	0.212	0.028	-	-
HCM Control Delay (s/veh)	7.7	0	-	12.4	14	8.2	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.8	0.1	-	-

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	81	11	11	71	16	8	29	6	11	16	16
Future Vol, veh/h	28	81	11	11	71	16	8	29	6	11	16	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	7	2	2	2	2	2	2
Mvmt Flow	29	84	11	11	74	17	8	30	6	11	17	17

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	91	0	0	96	0	0	254	262	90	263	259	82
Stage 1	-	-	-	-	-	-	148	148	-	105	105	-
Stage 2	-	-	-	-	-	-	105	114	-	158	154	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1504	-	-	1498	-	-	700	643	968	690	645	977
Stage 1	-	-	-	-	-	-	854	774	-	900	808	-
Stage 2	-	-	-	-	-	-	900	802	-	844	770	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1504	-	-	1498	-	-	651	625	968	635	627	977
Mov Cap-2 Maneuver	-	-	-	-	-	-	651	625	-	635	627	-
Stage 1	-	-	-	-	-	-	837	758	-	893	802	-
Stage 2	-	-	-	-	-	-	860	795	-	789	754	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	1.74	0.83	10.83	10.29
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	662	410	-	-	195	-	-	726
HCM Lane V/C Ratio	0.068	0.019	-	-	0.008	-	-	0.062
HCM Control Delay (s/veh)	10.8	7.4	0	-	7.4	0	-	10.3
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	1	53	3	3	40
Future Vol, veh/h	5	1	53	3	3	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	2	2	4	2	2	2
Mvmt Flow	6	1	69	4	4	52

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	131	71	0	0	73	0
Stage 1	71	-	-	-	-	-
Stage 2	60	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	864	992	-	-	1527	-
Stage 1	952	-	-	-	-	-
Stage 2	963	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	861	992	-	-	1527	-
Mov Cap-2 Maneuver	861	-	-	-	-	-
Stage 1	952	-	-	-	-	-
Stage 2	960	-	-	-	-	-

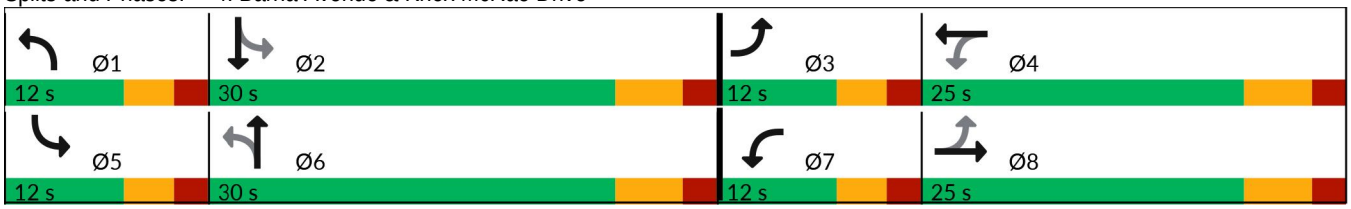
Approach	WB	NB	SB
HCM Control Delay, s/v	9.12	0	0.51
HCM LOS	A		

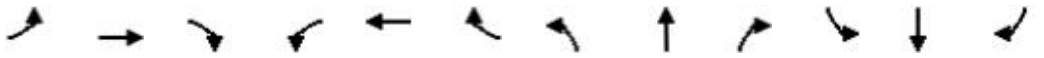
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	881	126	-
HCM Lane V/C Ratio	-	-	0.009	0.003	-
HCM Control Delay (s/veh)	-	-	9.1	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	84	128	135	165	101	380	84	316
Future Volume (vph)	84	128	135	165	101	380	84	316
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	3	8	7	4	1	6	5	2
Permitted Phases	8		4		6		2	
Detector Phase	3	8	7	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	6.0	10.0	6.0	10.0	6.0	12.0	6.0	12.0
Minimum Split (s)	11.0	24.0	11.0	24.0	11.0	24.0	11.0	24.0
Total Split (s)	12.0	25.0	12.0	25.0	12.0	30.0	12.0	30.0
Total Split (%)	15.2%	31.6%	15.2%	31.6%	15.2%	38.0%	15.2%	38.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min

Intersection Summary
Cycle Length: 79
Actuated Cycle Length: 70.1
Natural Cycle: 75
Control Type: Actuated-Uncoordinated

Splits and Phases: 4: Barna Avenue & Knox McRae Drive





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	128	80	135	165	99	101	380	121	84	316	57
Future Volume (veh/h)	84	128	80	135	165	99	101	380	121	84	316	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1841	1870	1870	1841	1841	1870	1870
Adj Flow Rate, veh/h	89	136	85	144	176	105	107	404	129	89	336	61
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	4	2	2	4	4	2	2
Cap, veh/h	286	198	123	339	219	130	380	449	144	274	502	91
Arrive On Green	0.07	0.18	0.18	0.09	0.20	0.20	0.08	0.33	0.33	0.07	0.33	0.33
Sat Flow, veh/h	1781	1076	673	1781	1098	655	1781	1359	434	1753	1540	280
Grp Volume(v), veh/h	89	0	221	144	0	281	107	0	533	89	0	397
Grp Sat Flow(s),veh/h/ln	1781	0	1749	1781	0	1752	1781	0	1792	1753	0	1820
Q Serve(g_s), s	2.6	0.0	8.0	4.3	0.0	10.3	2.6	0.0	19.1	2.2	0.0	12.7
Cycle Q Clear(g_c), s	2.6	0.0	8.0	4.3	0.0	10.3	2.6	0.0	19.1	2.2	0.0	12.7
Prop In Lane	1.00		0.38	1.00		0.37	1.00		0.24	1.00		0.15
Lane Grp Cap(c), veh/h	286	0	321	339	0	349	380	0	593	274	0	593
V/C Ratio(X)	0.31	0.00	0.69	0.42	0.00	0.81	0.28	0.00	0.90	0.32	0.00	0.67
Avail Cap(c_a), veh/h	342	0	492	367	0	493	428	0	637	329	0	647
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.4	0.0	25.8	20.0	0.0	25.8	14.1	0.0	21.5	15.8	0.0	19.6
Incr Delay (d2), s/veh	0.6	0.0	3.7	0.8	0.0	7.9	0.4	0.0	15.6	0.7	0.0	2.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.9	0.0	6.2	3.1	0.0	8.3	1.8	0.0	15.1	1.5	0.0	9.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	21.0	0.0	29.5	20.9	0.0	33.7	14.5	0.0	37.1	16.5	0.0	22.4
LnGrp LOS	C		C	C		C	B		D	B		C
Approach Vol, veh/h		310			425			640			486	
Approach Delay, s/veh		27.0			29.4			33.3			21.3	
Approach LOS		C			C			C			C	

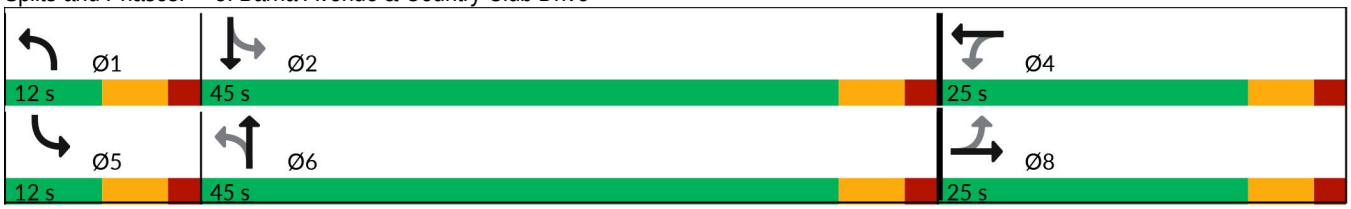
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.2	28.0	9.9	19.4	9.9	28.3	10.9	18.4
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	7.0	24.0	7.0	19.0	7.0	24.0	7.0	19.0
Max Q Clear Time (g_c+I1), s	4.6	14.7	4.6	12.3	4.2	21.1	6.3	10.0
Green Ext Time (p_c), s	0.0	2.2	0.0	1.1	0.0	1.2	0.0	1.0

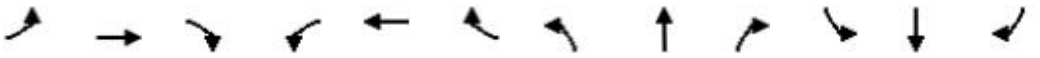
Intersection Summary	
HCM 7th Control Delay, s/veh	28.2
HCM 7th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	17	61	71	86	15	469	60	395
Future Volume (vph)	17	61	71	86	15	469	60	395
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		8		4	1	6	5	2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	8.0	8.0	8.0	8.0	6.0	12.0	6.0	12.0
Minimum Split (s)	24.0	24.0	24.0	24.0	12.0	24.0	12.0	24.0
Total Split (s)	25.0	25.0	25.0	25.0	12.0	45.0	12.0	45.0
Total Split (%)	30.5%	30.5%	30.5%	30.5%	14.6%	54.9%	14.6%	54.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min

Intersection Summary
Cycle Length: 82
Actuated Cycle Length: 57.7
Natural Cycle: 65
Control Type: Actuated-Uncoordinated

Splits and Phases: 5: Barna Avenue & Country Club Drive





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	61	15	71	86	64	15	469	80	60	395	22
Future Volume (veh/h)	17	61	15	71	86	64	15	469	80	60	395	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	18	66	16	77	93	70	16	510	87	65	429	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	106	186	39	373	157	118	452	640	109	373	804	45
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.02	0.41	0.41	0.07	0.46	0.46
Sat Flow, veh/h	134	1173	249	1316	991	746	1781	1557	266	1781	1755	98
Grp Volume(v), veh/h	100	0	0	77	0	163	16	0	597	65	0	453
Grp Sat Flow(s),veh/h/ln	1557	0	0	1316	0	1736	1781	0	1823	1781	0	1853
Q Serve(g_s), s	0.1	0.0	0.0	0.0	0.0	4.4	0.3	0.0	14.4	1.0	0.0	8.8
Cycle Q Clear(g_c), s	4.4	0.0	0.0	2.2	0.0	4.4	0.3	0.0	14.4	1.0	0.0	8.8
Prop In Lane	0.18		0.16	1.00		0.43	1.00		0.15	1.00		0.05
Lane Grp Cap(c), veh/h	331	0	0	373	0	275	452	0	749	373	0	849
V/C Ratio(X)	0.30	0.00	0.00	0.21	0.00	0.59	0.04	0.00	0.80	0.17	0.00	0.53
Avail Cap(c_a), veh/h	699	0	0	664	0	658	623	0	1419	459	0	1442
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.8	0.0	0.0	18.7	0.0	19.6	8.5	0.0	12.9	9.2	0.0	9.7
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.3	0.0	2.0	0.0	0.0	2.0	0.2	0.0	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	0.0	0.0	1.3	0.0	3.1	0.2	0.0	8.9	0.6	0.0	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	19.3	0.0	0.0	18.9	0.0	21.6	8.5	0.0	14.9	9.4	0.0	10.2
LnGrp LOS	B			B		C	A		B	A		B
Approach Vol, veh/h		100			240			613			518	
Approach Delay, s/veh		19.3			20.8			14.7			10.1	
Approach LOS		B			C			B			B	

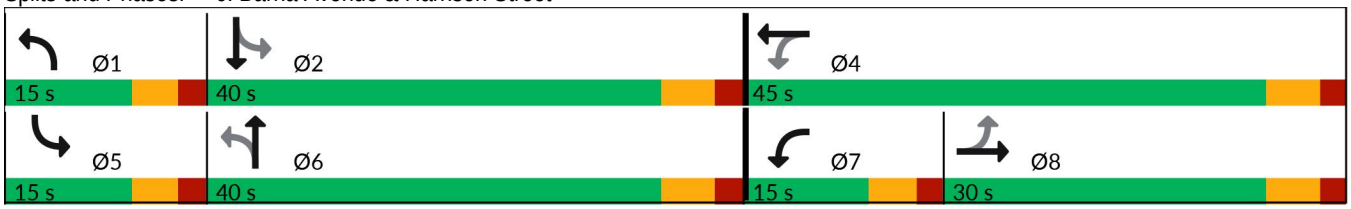
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.2	29.0		13.9	9.6	26.6		13.9				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	6.0	39.0		19.0	6.0	39.0		19.0				
Max Q Clear Time (g_c+I1), s	2.3	10.8		6.4	3.0	16.4		6.4				
Green Ext Time (p_c), s	0.0	3.1		0.9	0.0	4.2		0.3				

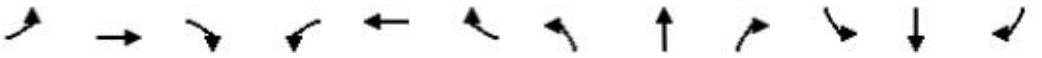
Intersection Summary		
HCM 7th Control Delay, s/veh	14.4	
HCM 7th LOS	B	

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	18	227	172	340	98	238	75	214
Future Volume (vph)	18	227	172	340	98	238	75	214
Turn Type	Perm	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases		8	7	4	1	6	5	2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	7	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	8.0	8.0	6.0	8.0	6.0	12.0	6.0	12.0
Minimum Split (s)	14.0	14.0	11.5	14.0	11.5	18.0	11.5	18.0
Total Split (s)	30.0	30.0	15.0	45.0	15.0	40.0	15.0	40.0
Total Split (%)	30.0%	30.0%	15.0%	45.0%	15.0%	40.0%	15.0%	40.0%
Yellow Time (s)	4.0	4.0	3.5	4.0	3.5	4.0	3.5	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	5.5	6.0	5.5	6.0	5.5	6.0
Lead/Lag	Lag	Lag	Lead		Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 81
Natural Cycle: 65
Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Barna Avenue & Harrison Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	227	65	172	340	68	98	238	177	75	214	16
Future Volume (veh/h)	18	227	65	172	340	68	98	238	177	75	214	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1796
Adj Flow Rate, veh/h	18	229	66	174	343	69	99	240	179	76	216	16
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	7
Cap, veh/h	303	293	84	337	584	117	451	298	222	294	503	37
Arrive On Green	0.21	0.21	0.21	0.10	0.39	0.39	0.07	0.30	0.30	0.07	0.29	0.29
Sat Flow, veh/h	974	1396	402	1781	1512	304	1781	995	742	1781	1720	127
Grp Volume(v), veh/h	18	0	295	174	0	412	99	0	419	76	0	232
Grp Sat Flow(s),veh/h/ln	974	0	1798	1781	0	1816	1781	0	1737	1781	0	1847
Q Serve(g_s), s	1.1	0.0	10.9	5.1	0.0	12.7	2.6	0.0	15.7	2.0	0.0	7.2
Cycle Q Clear(g_c), s	1.3	0.0	10.9	5.1	0.0	12.7	2.6	0.0	15.7	2.0	0.0	7.2
Prop In Lane	1.00		0.22	1.00		0.17	1.00		0.43	1.00		0.07
Lane Grp Cap(c), veh/h	303	0	377	337	0	701	451	0	520	294	0	540
V/C Ratio(X)	0.06	0.00	0.78	0.52	0.00	0.59	0.22	0.00	0.81	0.26	0.00	0.43
Avail Cap(c_a), veh/h	431	0	613	402	0	1006	562	0	839	417	0	892
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.6	0.0	26.3	18.6	0.0	17.2	15.4	0.0	22.8	16.9	0.0	20.2
Incr Delay (d2), s/veh	0.1	0.0	5.0	1.2	0.0	1.1	0.2	0.0	4.2	0.5	0.0	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.0	8.6	3.7	0.0	8.8	1.8	0.0	10.8	1.4	0.0	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	22.7	0.0	31.3	19.8	0.0	18.3	15.7	0.0	27.0	17.4	0.0	20.9
LnGrp LOS	C		C	B		B	B		C	B		C
Approach Vol, veh/h		313			586			518			308	
Approach Delay, s/veh		30.8			18.7			24.8			20.1	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.6	26.6		33.2	10.1	27.1	12.4	20.8				
Change Period (Y+Rc), s	5.5	6.0		6.0	5.5	6.0	5.5	6.0				
Max Green Setting (Gmax), s	9.5	34.0		39.0	9.5	34.0	9.5	24.0				
Max Q Clear Time (g_c+I1), s	4.6	9.2		14.7	4.0	17.7	7.1	12.9				
Green Ext Time (p_c), s	0.1	1.9		3.8	0.1	3.4	0.1	1.8				

Intersection Summary		
HCM 7th Control Delay, s/veh		23.0
HCM 7th LOS		C

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	1	2	112	0	46	3	273	169	39	204	1
Future Vol, veh/h	2	1	2	112	0	46	3	273	169	39	204	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	90	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	4	2	2	2	2	2	4	2	2
Mvmt Flow	2	1	2	115	0	47	3	281	174	40	210	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	579	753	211	579	579	281	211	0	0	456	0	0
Stage 1	291	291	-	288	288	-	-	-	-	-	-	-
Stage 2	288	462	-	291	292	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.14	6.52	6.22	4.12	-	-	4.14	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.14	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.14	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.536	4.018	3.318	2.218	-	-	2.236	-	-
Pot Cap-1 Maneuver	426	339	829	423	426	757	1359	-	-	1095	-	-
Stage 1	717	671	-	716	674	-	-	-	-	-	-	-
Stage 2	720	565	-	712	671	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	382	324	829	402	407	757	1359	-	-	1095	-	-
Mov Cap-2 Maneuver	382	324	-	402	407	-	-	-	-	-	-	-
Stage 1	687	644	-	713	672	-	-	-	-	-	-	-
Stage 2	673	563	-	680	643	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	12.82	16.82	0.05	1.34
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	20	-	-	466	466	287	-	-
HCM Lane V/C Ratio	0.002	-	-	0.011	0.35	0.037	-	-
HCM Control Delay (s/veh)	7.7	0	-	12.8	16.8	8.4	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	1.5	0.1	-	-

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	55	141	11	11	108	53	8	35	6	34	20	33
Future Vol, veh/h	55	141	11	11	108	53	8	35	6	34	20	33
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	7	2	2	2	2	2	2
Mvmt Flow	57	147	11	11	113	55	8	36	6	35	21	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	168	0	0	158	0	0	413	458	153	443	436	140
Stage 1	-	-	-	-	-	-	267	267	-	163	163	-
Stage 2	-	-	-	-	-	-	146	191	-	280	273	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1410	-	-	1421	-	-	549	499	894	525	514	908
Stage 1	-	-	-	-	-	-	738	688	-	839	763	-
Stage 2	-	-	-	-	-	-	857	743	-	727	684	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1410	-	-	1421	-	-	480	473	894	458	486	908
Mov Cap-2 Maneuver	-	-	-	-	-	-	480	473	-	458	486	-
Stage 1	-	-	-	-	-	-	705	657	-	832	756	-
Stage 2	-	-	-	-	-	-	795	736	-	651	653	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	2.04	0.48	12.96	12.46
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	503	471	-	-	108	-	-	573
HCM Lane V/C Ratio	0.101	0.041	-	-	0.008	-	-	0.158
HCM Control Delay (s/veh)	13	7.7	0	-	7.6	0	-	12.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0	-	-	0.6

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	1	115	11	3	79
Future Vol, veh/h	10	1	115	11	3	79
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	2	2	4	2	2	2
Mvmt Flow	13	1	149	14	4	103

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	267	156	0	0	164	0
Stage 1	156	-	-	-	-	-
Stage 2	110	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	722	889	-	-	1415	-
Stage 1	872	-	-	-	-	-
Stage 2	914	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	720	889	-	-	1415	-
Mov Cap-2 Maneuver	720	-	-	-	-	-
Stage 1	872	-	-	-	-	-
Stage 2	912	-	-	-	-	-

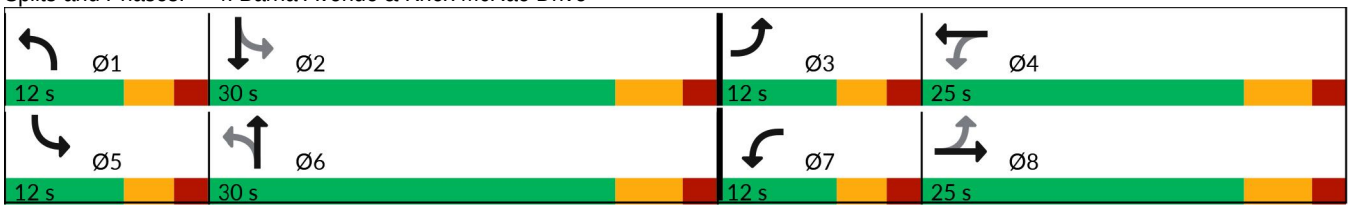
Approach	WB	NB	SB
HCM Control Delay, s/v	10.01	0	0.28
HCM LOS	B		

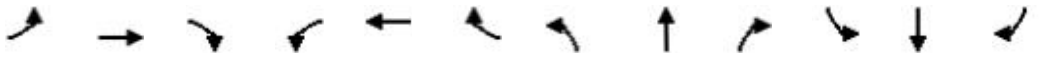
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	733	66	-
HCM Lane V/C Ratio	-	-	0.019	0.003	-
HCM Control Delay (s/veh)	-	-	10	7.6	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	104	128	135	165	101	410	89	334
Future Volume (vph)	104	128	135	165	101	410	89	334
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases	3	8	7	4	1	6	5	2
Permitted Phases	8		4		6		2	
Detector Phase	3	8	7	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	6.0	10.0	6.0	10.0	6.0	12.0	6.0	12.0
Minimum Split (s)	11.0	24.0	11.0	24.0	11.0	24.0	11.0	24.0
Total Split (s)	12.0	25.0	12.0	25.0	12.0	30.0	12.0	30.0
Total Split (%)	15.2%	31.6%	15.2%	31.6%	15.2%	38.0%	15.2%	38.0%
Yellow Time (s)	3.0	4.0	3.0	4.0	3.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min

Intersection Summary
Cycle Length: 79
Actuated Cycle Length: 71.1
Natural Cycle: 80
Control Type: Actuated-Uncoordinated

Splits and Phases: 4: Barna Avenue & Knox McRae Drive





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	128	80	135	165	106	101	410	121	89	334	69
Future Volume (veh/h)	104	128	80	135	165	106	101	410	121	89	334	69
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1841	1870	1870	1841	1841	1870	1870
Adj Flow Rate, veh/h	111	136	85	144	176	113	107	436	129	95	355	73
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	4	2	2	4	4	2	2
Cap, veh/h	285	205	128	342	215	138	360	467	138	256	503	103
Arrive On Green	0.08	0.19	0.19	0.09	0.20	0.20	0.07	0.34	0.34	0.07	0.33	0.33
Sat Flow, veh/h	1781	1076	673	1781	1064	683	1781	1386	410	1753	1505	310
Grp Volume(v), veh/h	111	0	221	144	0	289	107	0	565	95	0	428
Grp Sat Flow(s),veh/h/ln	1781	0	1749	1781	0	1747	1781	0	1797	1753	0	1815
Q Serve(g_s), s	3.4	0.0	8.2	4.5	0.0	11.1	2.7	0.0	21.3	2.4	0.0	14.4
Cycle Q Clear(g_c), s	3.4	0.0	8.2	4.5	0.0	11.1	2.7	0.0	21.3	2.4	0.0	14.4
Prop In Lane	1.00		0.38	1.00		0.39	1.00		0.23	1.00		0.17
Lane Grp Cap(c), veh/h	285	0	334	342	0	353	360	0	606	256	0	607
V/C Ratio(X)	0.39	0.00	0.66	0.42	0.00	0.82	0.30	0.00	0.93	0.37	0.00	0.71
Avail Cap(c_a), veh/h	328	0	473	366	0	473	404	0	614	305	0	620
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.0	0.0	26.3	20.5	0.0	26.8	14.7	0.0	22.5	16.7	0.0	20.4
Incr Delay (d2), s/veh	0.9	0.0	3.2	0.8	0.0	9.6	0.5	0.0	21.5	0.9	0.0	3.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.5	0.0	6.3	3.2	0.0	9.0	1.8	0.0	17.6	1.7	0.0	10.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	21.9	0.0	29.5	21.3	0.0	36.4	15.2	0.0	44.0	17.6	0.0	24.3
LnGrp LOS	C		C	C		D	B		D	B		C
Approach Vol, veh/h		332			433			672			523	
Approach Delay, s/veh		27.0			31.4			39.4			23.1	
Approach LOS		C			C			D			C	

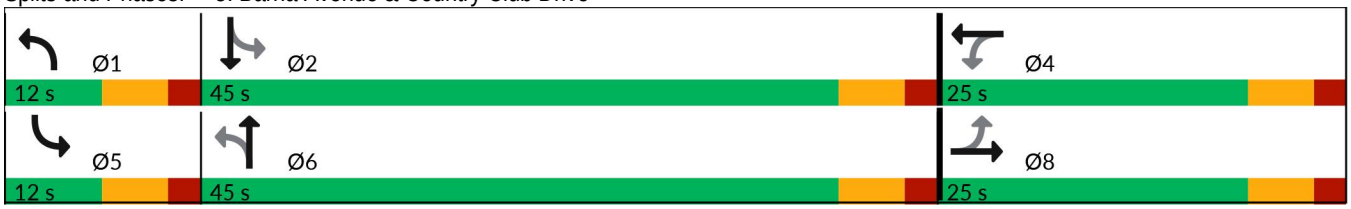
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	29.5	10.3	20.2	10.1	29.7	11.1	19.4
Change Period (Y+Rc), s	5.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0
Max Green Setting (Gmax), s	7.0	24.0	7.0	19.0	7.0	24.0	7.0	19.0
Max Q Clear Time (g_c+I1), s	4.7	16.4	5.4	13.1	4.4	23.3	6.5	10.2
Green Ext Time (p_c), s	0.0	2.1	0.0	1.1	0.0	0.3	0.0	1.0

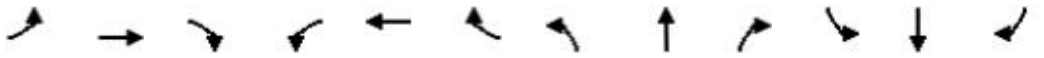
Intersection Summary	
HCM 7th Control Delay, s/veh	31.2
HCM 7th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	40	87	81	128	45	475	60	405
Future Volume (vph)	40	87	81	128	45	475	60	405
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases		8		4	1	6	5	2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	4	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	8.0	8.0	8.0	8.0	6.0	12.0	6.0	12.0
Minimum Split (s)	24.0	24.0	24.0	24.0	12.0	24.0	12.0	24.0
Total Split (s)	25.0	25.0	25.0	25.0	12.0	45.0	12.0	45.0
Total Split (%)	30.5%	30.5%	30.5%	30.5%	14.6%	54.9%	14.6%	54.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min

Intersection Summary
Cycle Length: 82
Actuated Cycle Length: 58
Natural Cycle: 65
Control Type: Actuated-Uncoordinated

Splits and Phases: 5: Barna Avenue & Country Club Drive





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	87	33	81	128	64	45	475	86	60	405	59
Future Volume (veh/h)	40	87	33	81	128	64	45	475	86	60	405	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	43	95	36	88	139	70	49	516	93	65	440	64
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	114	159	50	336	223	112	415	633	114	348	673	98
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.06	0.41	0.41	0.07	0.42	0.42
Sat Flow, veh/h	167	835	262	1259	1173	591	1781	1542	278	1781	1596	232
Grp Volume(v), veh/h	174	0	0	88	0	209	49	0	609	65	0	504
Grp Sat Flow(s),veh/h/ln	1264	0	0	1259	0	1764	1781	0	1820	1781	0	1829
Q Serve(g_s), s	1.9	0.0	0.0	0.0	0.0	5.9	0.8	0.0	16.2	1.1	0.0	12.0
Cycle Q Clear(g_c), s	7.8	0.0	0.0	4.2	0.0	5.9	0.8	0.0	16.2	1.1	0.0	12.0
Prop In Lane	0.25		0.21	1.00		0.33	1.00		0.15	1.00		0.13
Lane Grp Cap(c), veh/h	323	0	0	336	0	336	415	0	747	348	0	771
V/C Ratio(X)	0.54	0.00	0.00	0.26	0.00	0.62	0.12	0.00	0.81	0.19	0.00	0.65
Avail Cap(c_a), veh/h	573	0	0	535	0	615	509	0	1302	421	0	1308
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.5	0.0	0.0	19.6	0.0	20.3	9.2	0.0	14.2	10.3	0.0	12.6
Incr Delay (d2), s/veh	1.4	0.0	0.0	0.4	0.0	1.9	0.1	0.0	2.2	0.3	0.0	0.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.7	0.0	0.0	1.7	0.0	4.3	0.5	0.0	10.0	0.6	0.0	7.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	21.9	0.0	0.0	20.0	0.0	22.2	9.3	0.0	16.5	10.5	0.0	13.5
LnGrp LOS	C			B		C	A		B	B		B
Approach Vol, veh/h		174			297			658			569	
Approach Delay, s/veh		21.9			21.5			15.9			13.2	
Approach LOS		C			C			B			B	

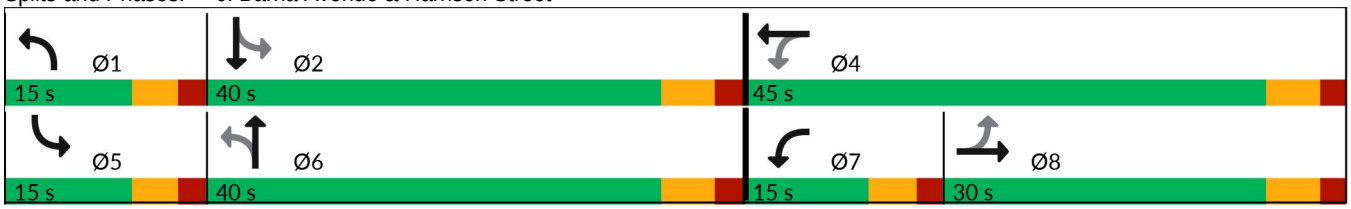
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.1	29.0		16.4	9.8	28.4		16.4				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	6.0	39.0		19.0	6.0	39.0		19.0				
Max Q Clear Time (g_c+I1), s	2.8	14.0		7.9	3.1	18.2		9.8				
Green Ext Time (p_c), s	0.0	3.5		1.1	0.0	4.2		0.6				

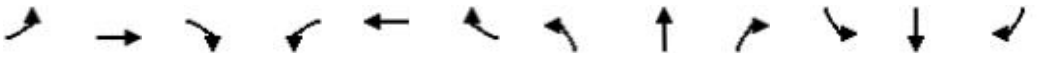
Intersection Summary		
HCM 7th Control Delay, s/veh		16.6
HCM 7th LOS		B

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	18	227	187	340	98	258	75	246
Future Volume (vph)	18	227	187	340	98	258	75	246
Turn Type	Perm	NA	pm+pt	NA	pm+pt	NA	pm+pt	NA
Protected Phases		8	7	4	1	6	5	2
Permitted Phases	8		4		6		2	
Detector Phase	8	8	7	4	1	6	5	2
Switch Phase								
Minimum Initial (s)	8.0	8.0	6.0	8.0	6.0	12.0	6.0	12.0
Minimum Split (s)	14.0	14.0	11.5	14.0	11.5	18.0	11.5	18.0
Total Split (s)	30.0	30.0	15.0	45.0	15.0	40.0	15.0	40.0
Total Split (%)	30.0%	30.0%	15.0%	45.0%	15.0%	40.0%	15.0%	40.0%
Yellow Time (s)	4.0	4.0	3.5	4.0	3.5	4.0	3.5	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	5.5	6.0	5.5	6.0	5.5	6.0
Lead/Lag	Lag	Lag	Lead		Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 82.7
Natural Cycle: 65
Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Barna Avenue & Harrison Street





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	227	65	187	340	68	98	258	186	75	246	16
Future Volume (veh/h)	18	227	65	187	340	68	98	258	186	75	246	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1796
Adj Flow Rate, veh/h	18	229	66	189	343	69	99	261	188	76	248	16
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	7
Cap, veh/h	298	289	83	339	583	117	436	316	228	281	532	34
Arrive On Green	0.21	0.21	0.21	0.10	0.39	0.39	0.07	0.31	0.31	0.06	0.31	0.31
Sat Flow, veh/h	974	1396	402	1781	1512	304	1781	1011	728	1781	1738	112
Grp Volume(v), veh/h	18	0	295	189	0	412	99	0	449	76	0	264
Grp Sat Flow(s),veh/h/ln	974	0	1798	1781	0	1816	1781	0	1739	1781	0	1850
Q Serve(g_s), s	1.1	0.0	11.5	5.8	0.0	13.3	2.7	0.0	17.7	2.1	0.0	8.5
Cycle Q Clear(g_c), s	1.2	0.0	11.5	5.8	0.0	13.3	2.7	0.0	17.7	2.1	0.0	8.5
Prop In Lane	1.00		0.22	1.00		0.17	1.00		0.42	1.00		0.06
Lane Grp Cap(c), veh/h	298	0	372	339	0	701	436	0	544	281	0	567
V/C Ratio(X)	0.06	0.00	0.79	0.56	0.00	0.59	0.23	0.00	0.83	0.27	0.00	0.47
Avail Cap(c_a), veh/h	413	0	585	382	0	959	540	0	801	396	0	852
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.7	0.0	27.8	19.6	0.0	18.0	15.7	0.0	23.5	17.4	0.0	20.7
Incr Delay (d2), s/veh	0.1	0.0	5.5	1.4	0.0	1.1	0.3	0.0	5.7	0.5	0.0	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	0.0	9.1	4.3	0.0	9.2	1.9	0.0	12.2	1.5	0.0	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	23.8	0.0	33.3	21.0	0.0	19.1	16.0	0.0	29.2	18.0	0.0	21.6
LnGrp LOS	C		C	C		B	B		C	B		C
Approach Vol, veh/h		313			601			548			340	
Approach Delay, s/veh		32.7			19.7			26.8			20.8	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.7	28.6		34.5	10.2	29.1	13.2	21.3				
Change Period (Y+Rc), s	5.5	6.0		6.0	5.5	6.0	5.5	6.0				
Max Green Setting (Gmax), s	9.5	34.0		39.0	9.5	34.0	9.5	24.0				
Max Q Clear Time (g_c+I1), s	4.7	10.5		15.3	4.1	19.7	7.8	13.5				
Green Ext Time (p_c), s	0.1	2.2		3.8	0.1	3.4	0.1	1.8				

Intersection Summary												
HCM 7th Control Delay, s/veh			24.3									
HCM 7th LOS			C									

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	6	8	0	6	5	0
Future Vol, veh/h	6	8	0	6	5	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	8	10	0	8	6	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	18	0	21	13
Stage 1	-	-	-	-	13	-
Stage 2	-	-	-	-	8	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1599	-	996	1067
Stage 1	-	-	-	-	1010	-
Stage 2	-	-	-	-	1015	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1599	-	996	1067
Mov Cap-2 Maneuver	-	-	-	-	996	-
Stage 1	-	-	-	-	1010	-
Stage 2	-	-	-	-	1015	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0	8.64
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	996	-	-	1599	-
HCM Lane V/C Ratio	0.007	-	-	-	-
HCM Control Delay (s/veh)	8.6	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	0	53	62	0	43
Future Vol, veh/h	39	0	53	62	0	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	77	77	77	77
Heavy Vehicles, %	2	2	4	2	2	2
Mvmt Flow	51	0	69	81	0	56

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	165	109	0	0	149	0
Stage 1	109	-	-	-	-	-
Stage 2	56	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	826	945	-	-	1432	-
Stage 1	915	-	-	-	-	-
Stage 2	967	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	826	945	-	-	1432	-
Mov Cap-2 Maneuver	826	-	-	-	-	-
Stage 1	915	-	-	-	-	-
Stage 2	967	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.64	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	826	1432	-
HCM Lane V/C Ratio	-	-	0.061	-	-
HCM Control Delay (s/veh)	-	-	9.6	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	142	23	2	148	20	14	0	17	12	0	11
Future Vol, veh/h	17	142	23	2	148	20	14	0	17	12	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	154	25	2	161	22	15	0	18	13	0	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	183	0	0	179	0	0	369	391	167	367	392	172
Stage 1	-	-	-	-	-	-	204	204	-	176	176	-
Stage 2	-	-	-	-	-	-	165	187	-	191	216	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1392	-	-	1396	-	-	587	545	877	589	544	872
Stage 1	-	-	-	-	-	-	798	733	-	826	753	-
Stage 2	-	-	-	-	-	-	837	745	-	810	724	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1392	-	-	1396	-	-	570	536	877	567	535	872
Mov Cap-2 Maneuver	-	-	-	-	-	-	570	536	-	567	535	-
Stage 1	-	-	-	-	-	-	786	722	-	824	752	-
Stage 2	-	-	-	-	-	-	824	744	-	782	713	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.71	0.09	10.36	10.49
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	705	164	-	-	21	-	-	681
HCM Lane V/C Ratio	0.048	0.013	-	-	0.002	-	-	0.037
HCM Control Delay (s/veh)	10.4	7.6	0	-	7.6	0	-	10.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	151	20	25	183	12	15
Future Vol, veh/h	151	20	25	183	12	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	164	22	27	199	13	16

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	186	0	428	175
Stage 1	-	-	-	-	175	-
Stage 2	-	-	-	-	253	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1389	-	583	868
Stage 1	-	-	-	-	855	-
Stage 2	-	-	-	-	789	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1389	-	571	868
Mov Cap-2 Maneuver	-	-	-	-	571	-
Stage 1	-	-	-	-	855	-
Stage 2	-	-	-	-	772	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.92	10.33
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	705	-	-	216	-
HCM Lane V/C Ratio	0.042	-	-	0.02	-
HCM Control Delay (s/veh)	10.3	-	-	7.6	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	17	27	593	476	20
Future Vol, veh/h	12	17	27	593	476	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	0	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	18	29	645	517	22

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1232	528	539	0	-	0
Stage 1	528	-	-	-	-	-
Stage 2	703	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	196	550	1029	-	-	-
Stage 1	591	-	-	-	-	-
Stage 2	491	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	190	550	1029	-	-	-
Mov Cap-2 Maneuver	190	-	-	-	-	-
Stage 1	575	-	-	-	-	-
Stage 2	491	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	17.99	0.37	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1029	-	308	-	-
HCM Lane V/C Ratio	0.029	-	0.102	-	-
HCM Control Delay (s/veh)	8.6	-	18	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

APPENDIX J

ITE Excerpts

Land Use: 210
Single-Family Detached Housing

Description

A single-family detached housing site includes any single-family detached home on an individual lot. A typical site surveyed is a suburban subdivision.

Specialized Land Use

Data have been submitted for several single-family detached housing developments with homes that are commonly referred to as patio homes. A patio home is a detached housing unit that is located on a small lot with little (or no) front or back yard. In some subdivisions, communal maintenance of outside grounds is provided for the patio homes. The three patio home sites total 299 dwelling units with overall weighted average trip generation rates of 5.35 vehicle trips per dwelling unit for weekday, 0.26 for the AM adjacent street peak hour, and 0.47 for the PM adjacent street peak hour. These patio home rates based on a small sample of sites are lower than those for single-family detached housing (Land Use 210), lower than those for single-family attached housing (Land Use 251), and higher than those for senior adult housing -- single-family (Land Use 251). Further analysis of this housing type will be conducted in a future edition of *Trip Generation Manual*.

Additional Data

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

For 30 of the study sites, data on the number of residents and number of household vehicles are available. The overall averages for the 30 sites are 3.6 residents per dwelling unit and 1.5 vehicles per dwelling unit.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Arizona, California, Connecticut, Delaware, Illinois, Indiana, Kentucky, Maryland, Massachusetts, Minnesota, Montana, New Jersey, North Carolina, Ohio, Ontario (CAN), Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Vermont, Virginia, and West Virginia.

Source Numbers

100, 105, 114, 126, 157, 167, 177, 197, 207, 211, 217, 267, 275, 293, 300, 319, 320, 356, 357, 367, 384, 387, 407, 435, 522, 550, 552, 579, 598, 601, 603, 614, 637, 711, 716, 720, 728, 735, 868, 869, 903, 925, 936, 1005, 1007, 1008, 1010, 1033, 1066, 1077,1078, 1079

Single-Family Detached Housing
(210)

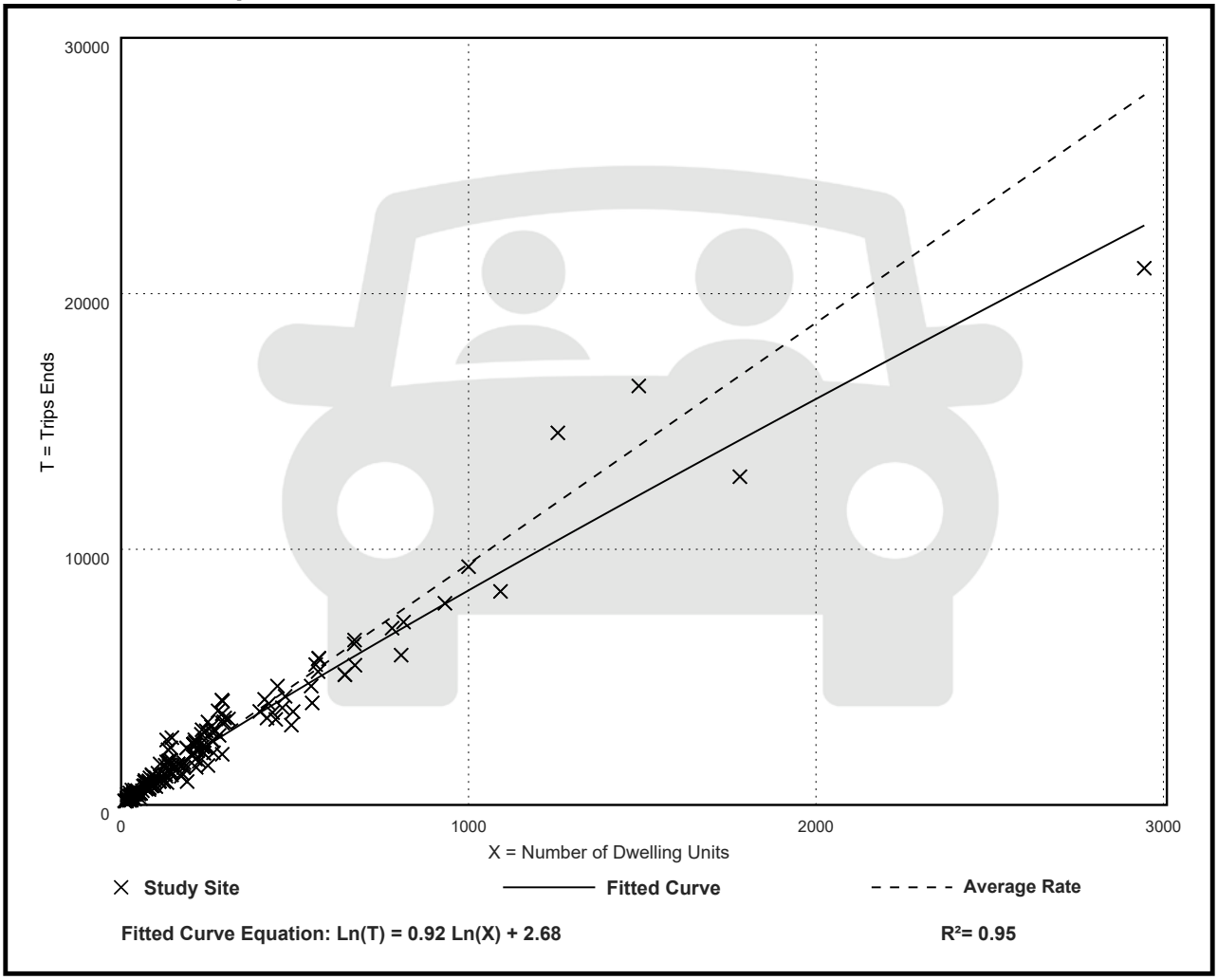
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 174
Avg. Num. of Dwelling Units: 246
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.43	4.45 - 22.61	2.13

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.92 Ln(X) + 2.68

R^2= 0.95

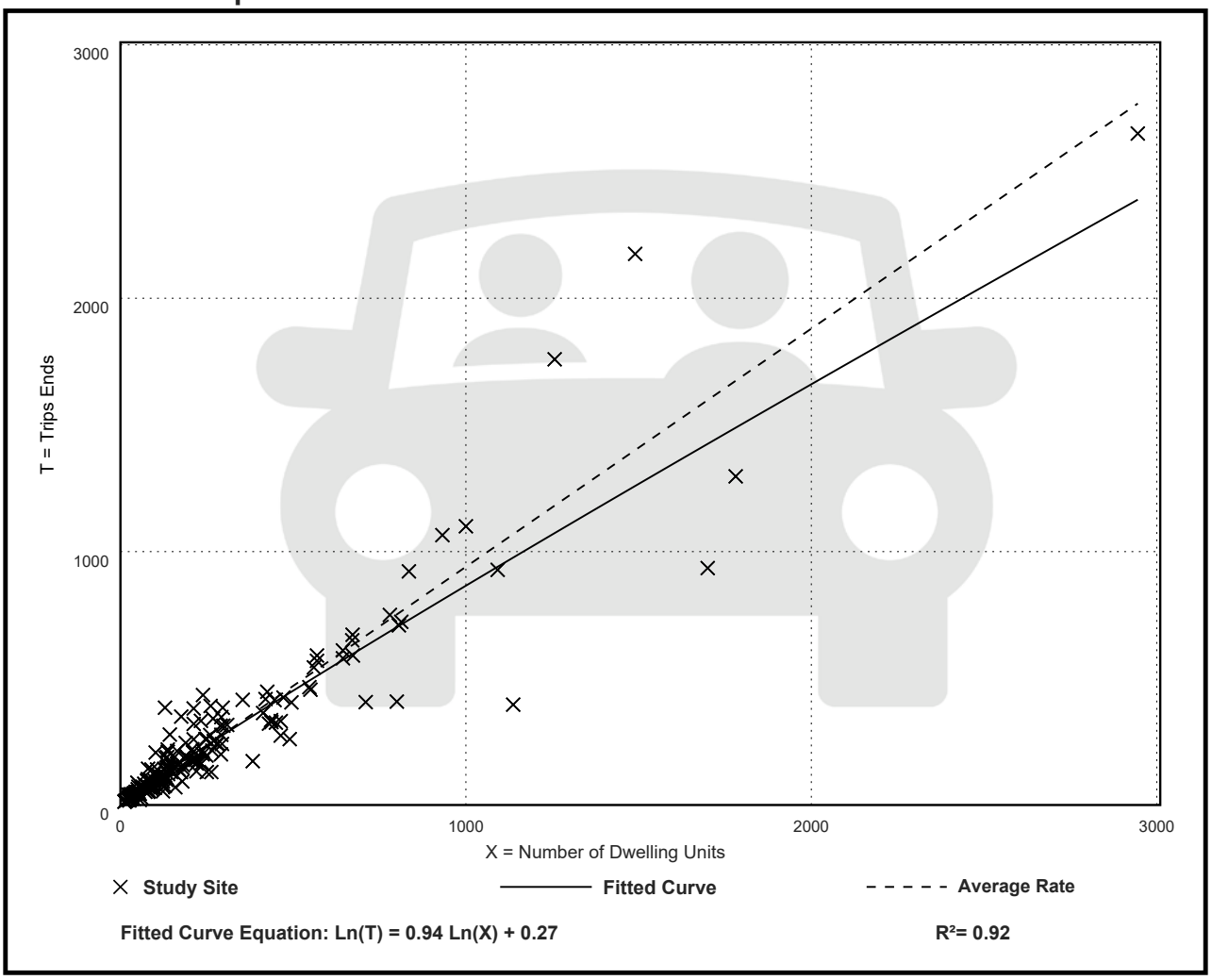
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 208
Avg. Num. of Dwelling Units: 248
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.94	0.35 - 2.98	0.31

Data Plot and Equation



Land Use: 215
Single-Family Attached Housing

Description

Single-family attached housing includes any single-family housing unit that shares a wall with an adjoining dwelling unit, whether the walls are for living space, a vehicle garage, or storage space.

Additional Data

The database for this land use includes duplexes (defined as a single structure with two distinct dwelling units, typically joined side-by-side and each with at least one outside entrance) and townhouses/rowhouses (defined as a single structure with three or more distinct dwelling units, joined side-by-side in a row and each with an outside entrance).

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in British Columbia (CAN), California, Georgia, Illinois, Maryland, Massachusetts, Minnesota, New Jersey, Ontario (CAN), Oregon, Pennsylvania, South Dakota, Utah, Virginia, and Wisconsin.

Source Numbers

168, 204, 211, 237, 305, 306, 319, 321, 357, 390, 418, 525, 571, 583, 638, 735, 868, 869, 870, 896, 912, 959, 1009, 1046, 1056, 1058, 1077

Single-Family Attached Housing
(215)

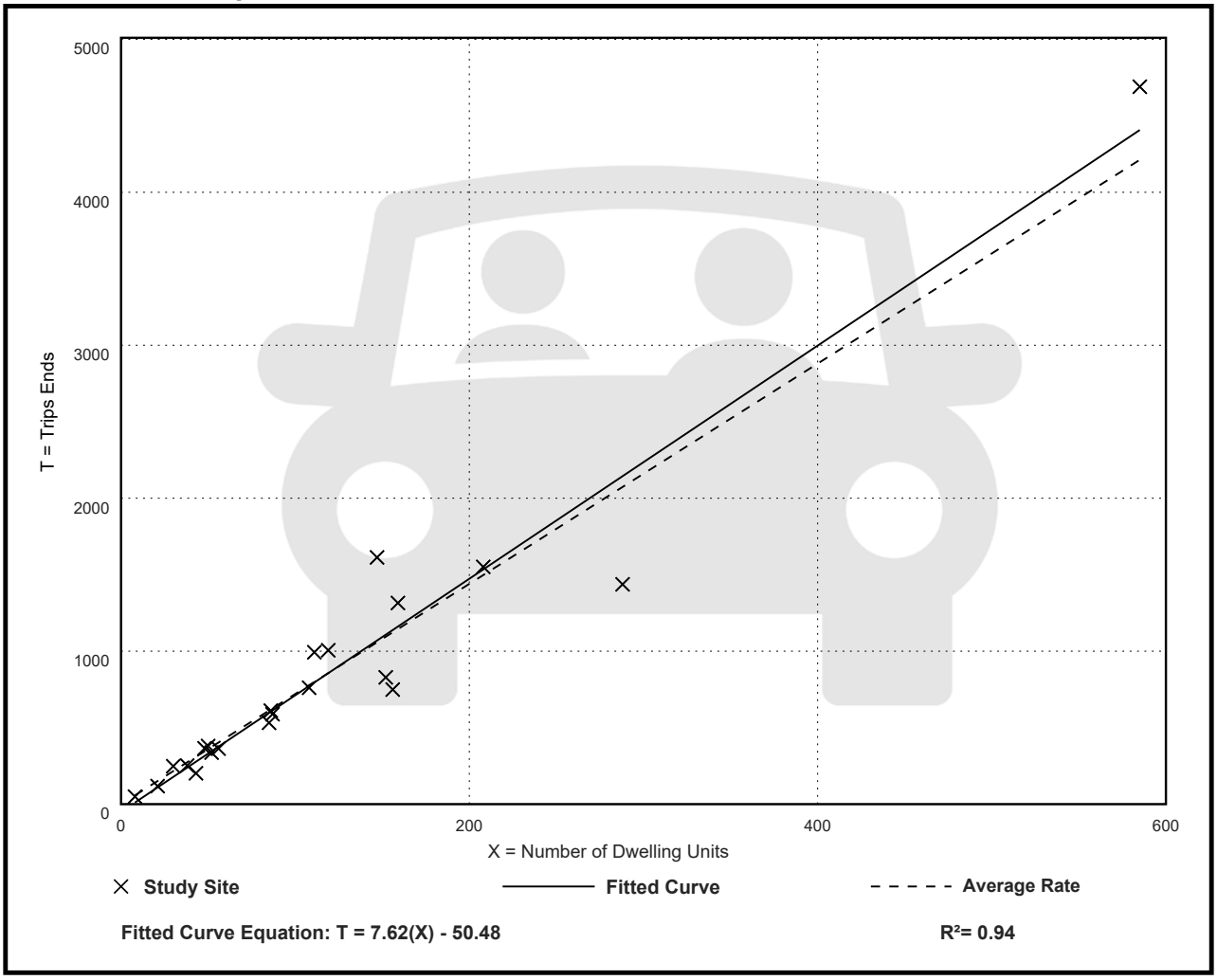
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 22
Avg. Num. of Dwelling Units: 120
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
7.20	4.70 - 10.97	1.61

Data Plot and Equation



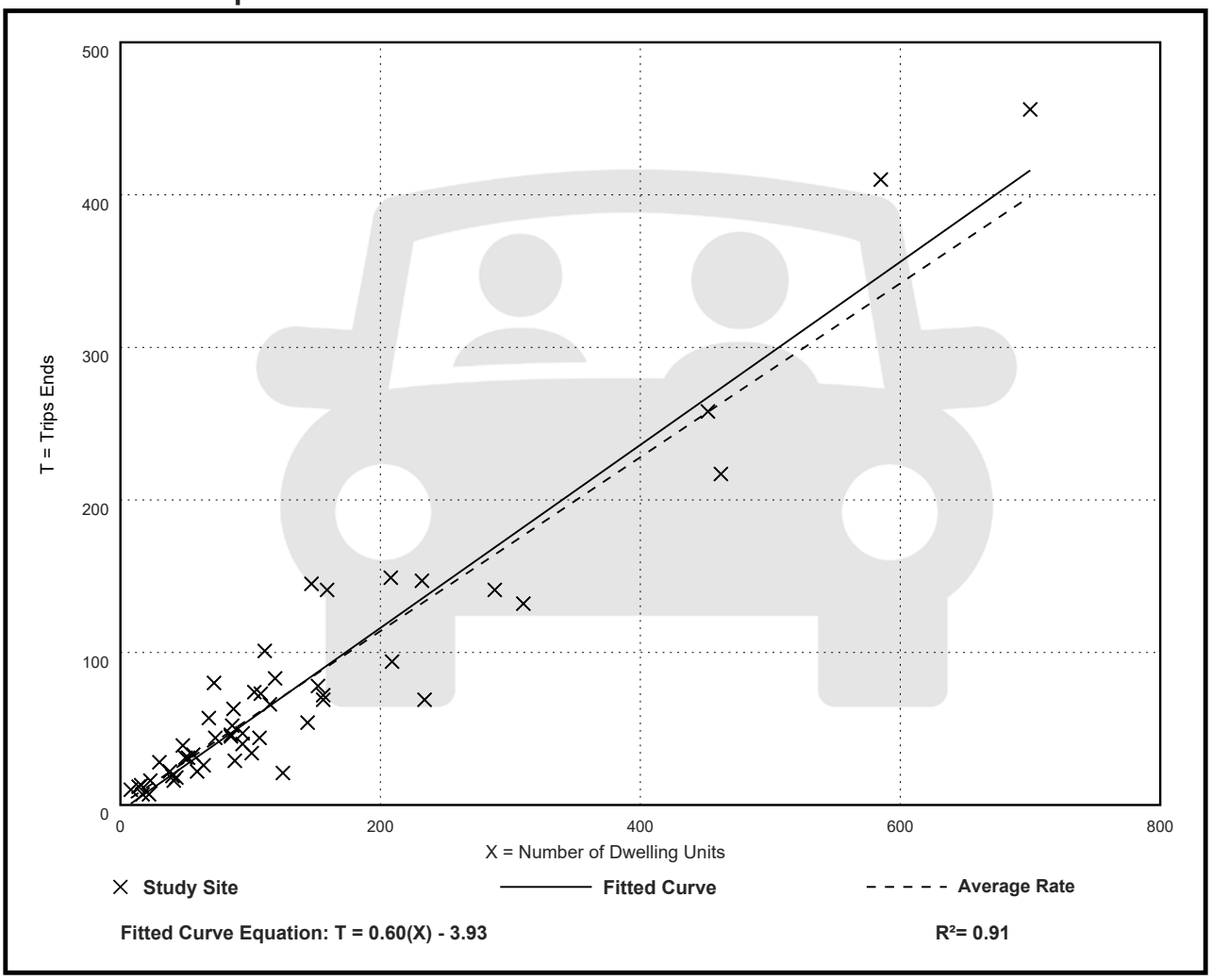
Single-Family Attached Housing
(215)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 51
Avg. Num. of Dwelling Units: 136
Directional Distribution: 57% entering, 43% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.57	0.17 - 1.25	0.18

Data Plot and Equation



Land Use: 220
Multifamily Housing (Low-Rise)

Description

Low-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have two or three floors (levels). Various configurations fit this description, including walkup apartment, mansion apartment, and stacked townhouse.

- A walkup apartment typically is two or three floors in height with dwelling units that are accessed by a single or multiple entrances with stairways and hallways.
- A mansion apartment is a single structure that contains several apartments within what appears to be a single-family dwelling unit.
- A fourplex is a single two-story structure with two matching dwelling units on the ground and second floors. Access to the individual units is typically internal to the structure and provided through a central entry and stairway.
- A stacked townhouse is designed to match the external appearance of a townhouse. But, unlike a townhouse dwelling unit that only shares walls with an adjoining unit, the stacked townhouse units share both floors and walls. Access to the individual units is typically internal to the structure and provided through a central entry and stairway.

Multifamily housing (mid-rise) (Land Use 221), multifamily housing (high-rise) (Land Use 222), affordable housing (Land Use 223), and off-campus student apartment (low-rise) (Land Use 225) are related land uses.

Land Use Subcategory

Data are presented for two subcategories for this land use: (1) not close to rail transit and (2) close to rail transit. A site is considered close to rail transit if the walking distance between the residential site entrance and the closest rail transit station entrance is ½ mile or less.

Additional Data

For the three sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.72 residents per occupied dwelling unit.

For the two sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 96.2 percent of the total dwelling units were occupied.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip

generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

For the three sites for which data were provided for both occupied dwelling units and residents, there was an average of 2.72 residents per occupied dwelling unit.

It is expected that the number of bedrooms and number of residents are likely correlated to the trips generated by a residential site. To assist in future analysis, trip generation studies of all multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).

The sites were surveyed in the 1980s, the 1990s, the 2000s, the 2010s, and the 2020s in British Columbia (CAN), California, Delaware, Florida, Georgia, Illinois, Indiana, Maine, Maryland, Massachusetts, Minnesota, New Jersey, Ontario (CAN), Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, and Washington.

Source Numbers

188, 204, 237, 300, 305, 306, 320, 321, 357, 390, 412, 525, 530, 579, 583, 638, 864, 866, 896, 901, 903, 904, 936, 939, 944, 946, 947, 948, 963, 964, 966, 967, 1012, 1013, 1014, 1036, 1047, 1056, 1071, 1076

Multifamily Housing (Low-Rise)
Not Close to Rail Transit (220)

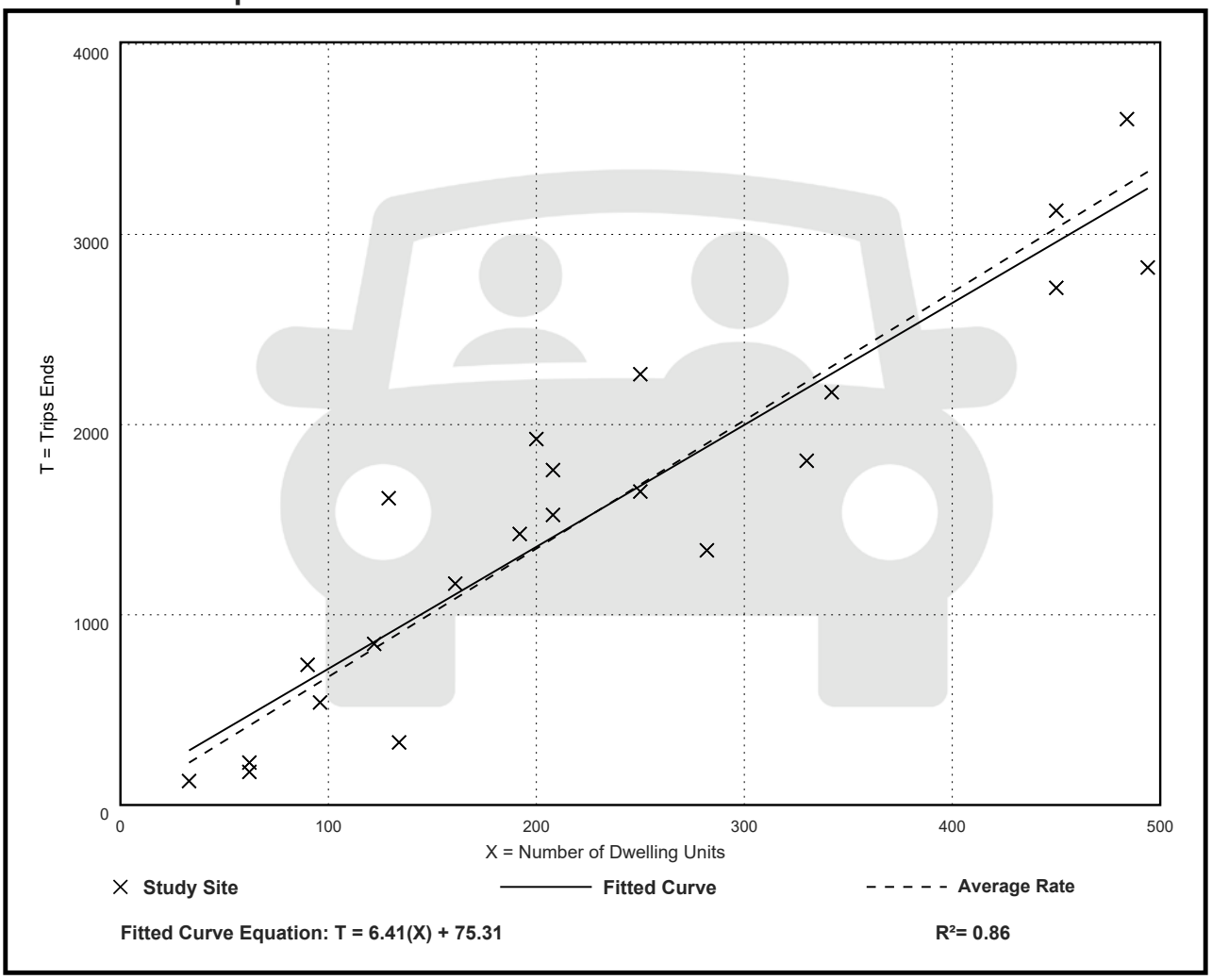
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 22
Avg. Num. of Dwelling Units: 229
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
6.74	2.46 - 12.50	1.79

Data Plot and Equation



Fitted Curve Equation: T = 6.41(X) + 75.31

R^2= 0.86

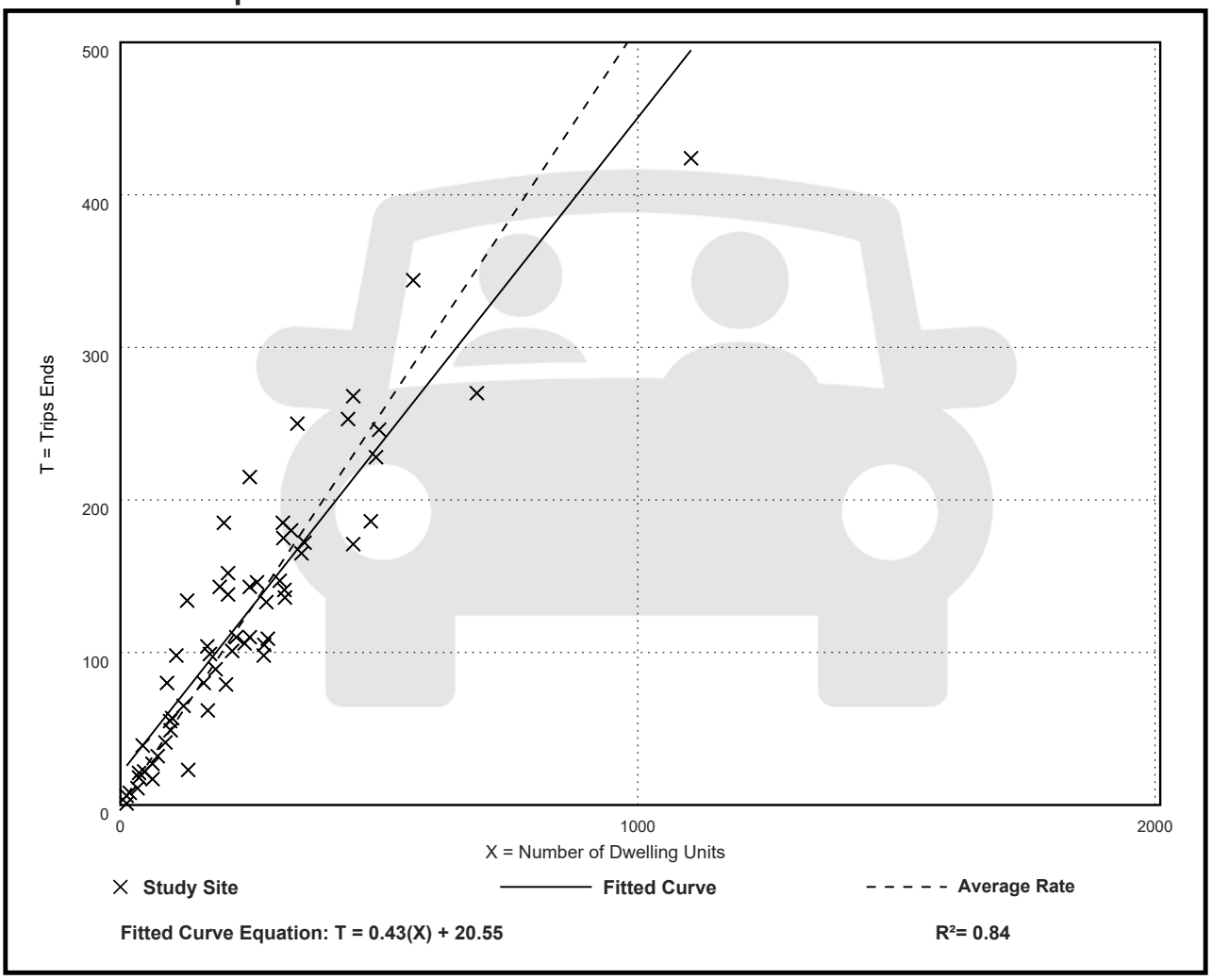
Multifamily Housing (Low-Rise)
Not Close to Rail Transit (220)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 59
Avg. Num. of Dwelling Units: 241
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

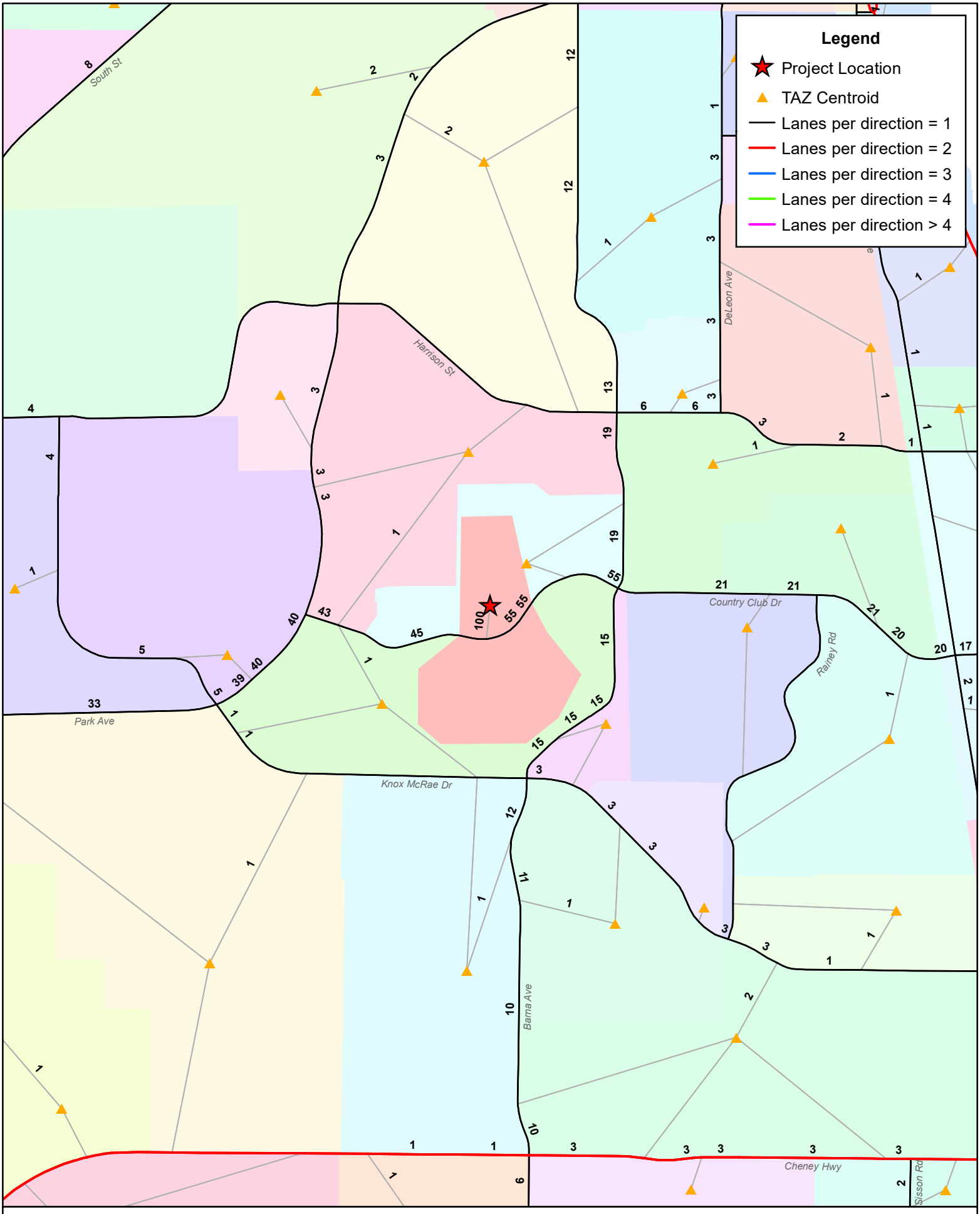
Average Rate	Range of Rates	Standard Deviation
0.51	0.08 - 1.04	0.15

Data Plot and Equation

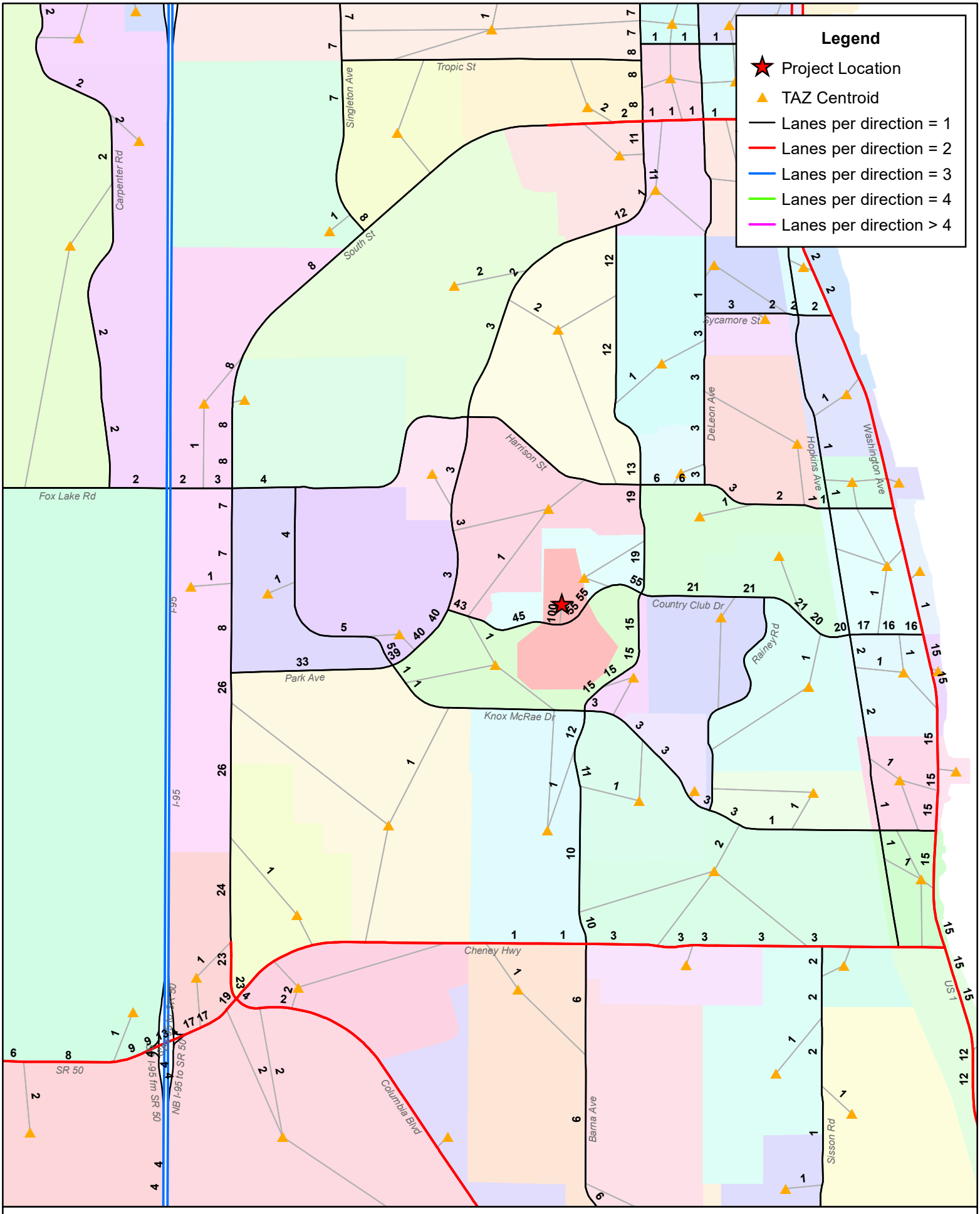


APPENDIX K

CFRPM Model Plot



Project Trip Distribution - Royal Oak
CFRPMv7 - 2025 - 6/21/2023



Project Trip Distribution - Royal Oak
CFRPMv7 - 2025 - 6/21/2023

APPENDIX L

NCHRP Outputs

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	25
Major-road volume (one direction), veh/h:	182
Right-turn volume, veh/h:	23

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	884226
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

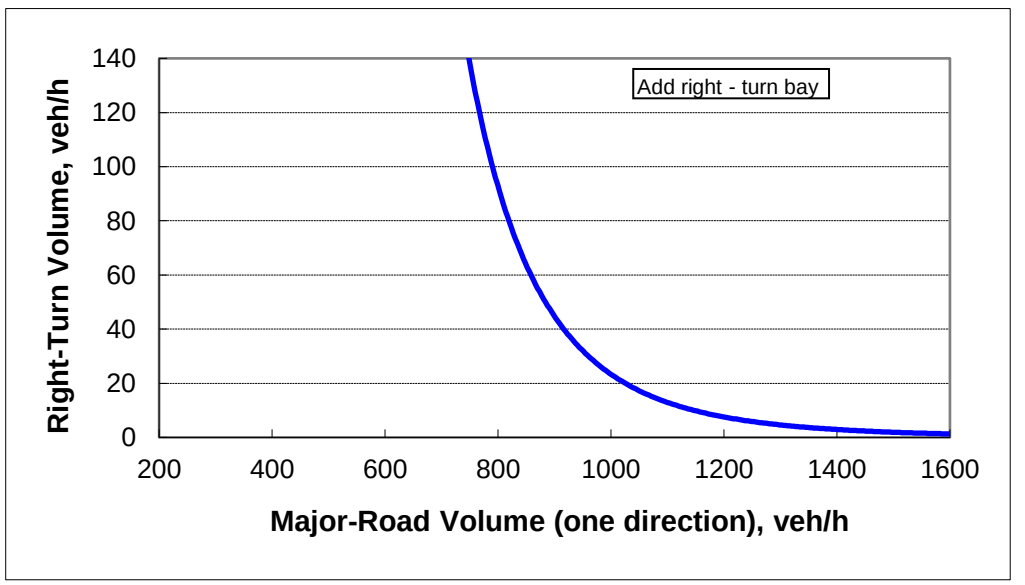


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	25
Major-road volume (one direction), veh/h:	195
Right-turn volume, veh/h:	20

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	576926
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

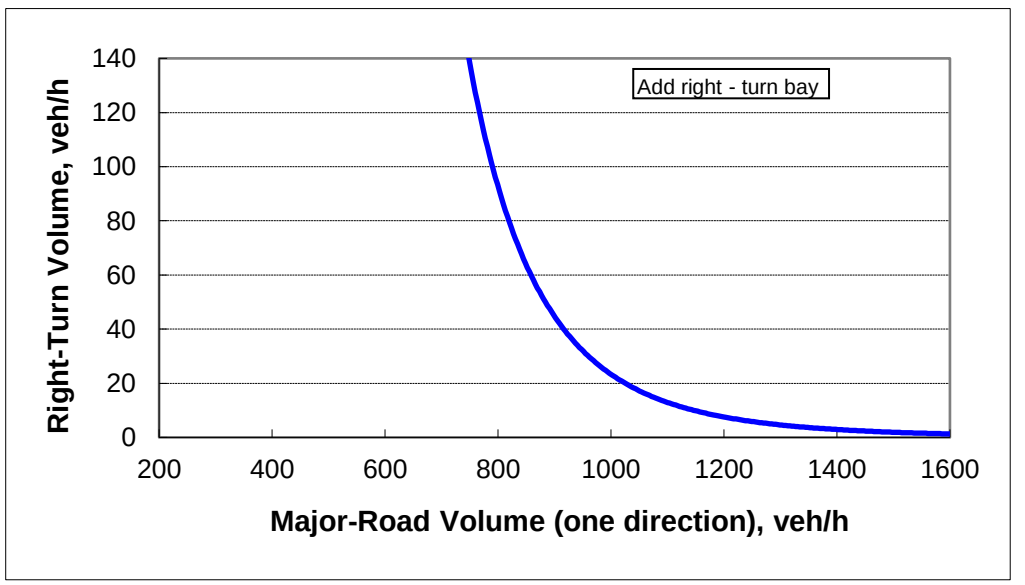


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	25
Major-road volume (one direction), veh/h:	171
Right-turn volume, veh/h:	20

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	1300566
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

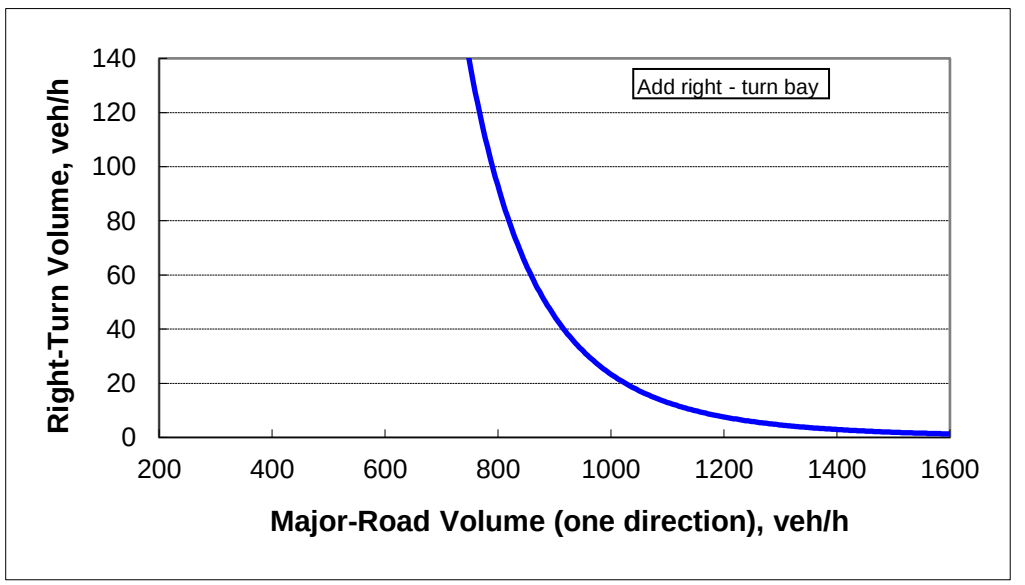


Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

INPUT

Roadway geometry:	2-lane roadway

Variable	Value
Major-road speed, mph:	30
Major-road volume (one direction), veh/h:	496
Right-turn volume, veh/h:	20

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	573
Guidance for determining the need for a major-road right-turn bay for a 2-lane roadway:	
Do NOT add right-turn bay.	

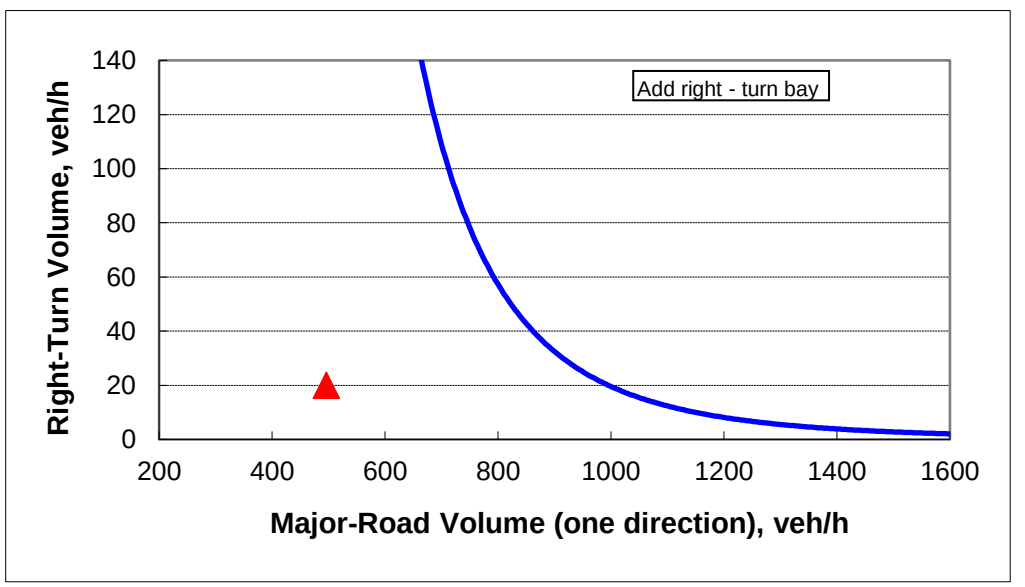


Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

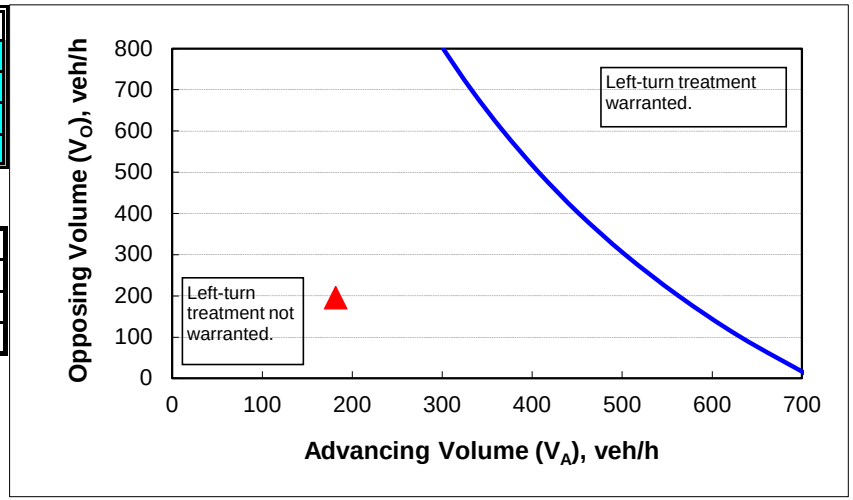
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	25
Percent of left-turns in advancing volume (V_A), %:	9%
Advancing volume (V_A), veh/h:	182
Opposing volume (V_O), veh/h:	195

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	566
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

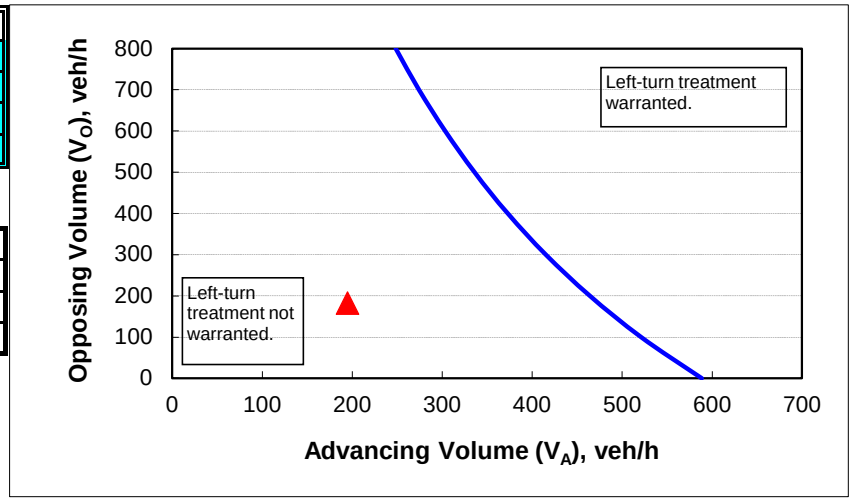
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	25
Percent of left-turns in advancing volume (V_A), %:	14%
Advancing volume (V_A), veh/h:	195
Opposing volume (V_O), veh/h:	182

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	474
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

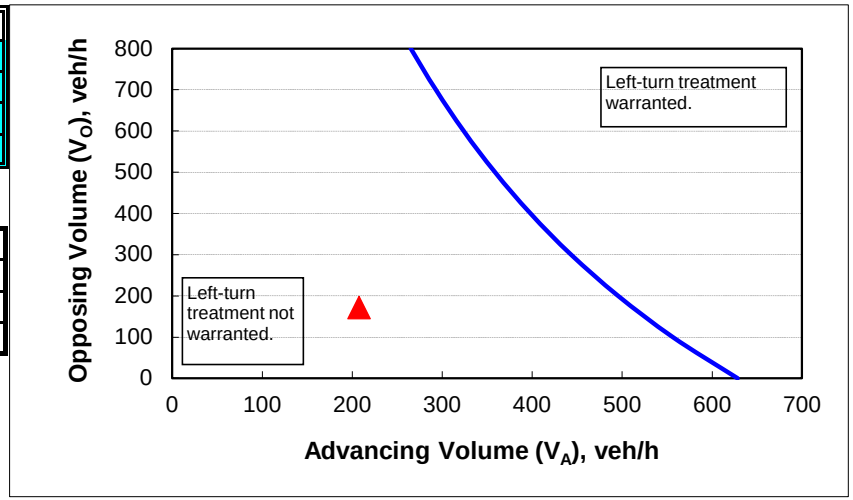
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	25
Percent of left-turns in advancing volume (V_A), %:	12%
Advancing volume (V_A), veh/h:	208
Opposing volume (V_O), veh/h:	171

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	512
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

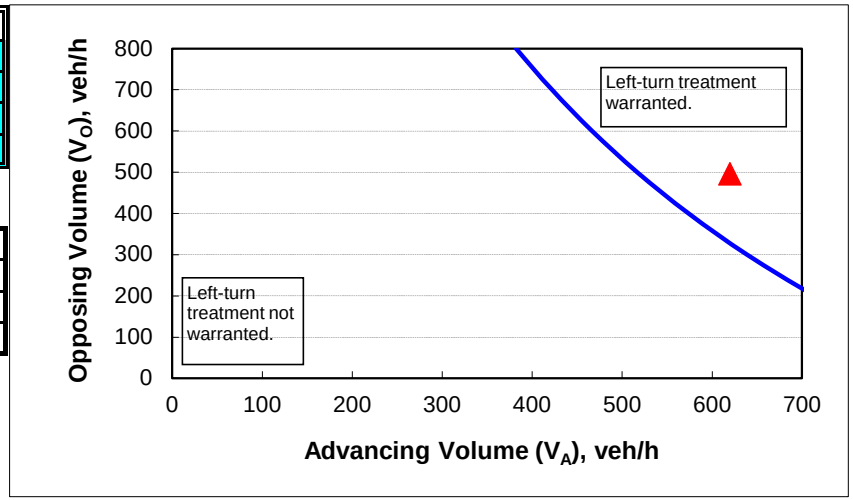
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	4%
Advancing volume (V_A), veh/h:	620
Opposing volume (V_O), veh/h:	496

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	519
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

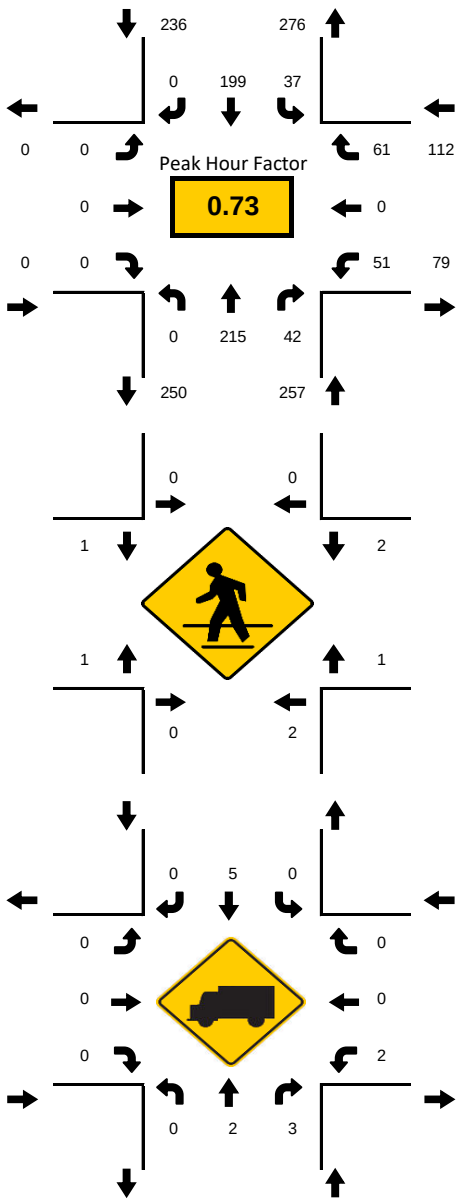
APPENDIX M

School Operational Analysis Documentation

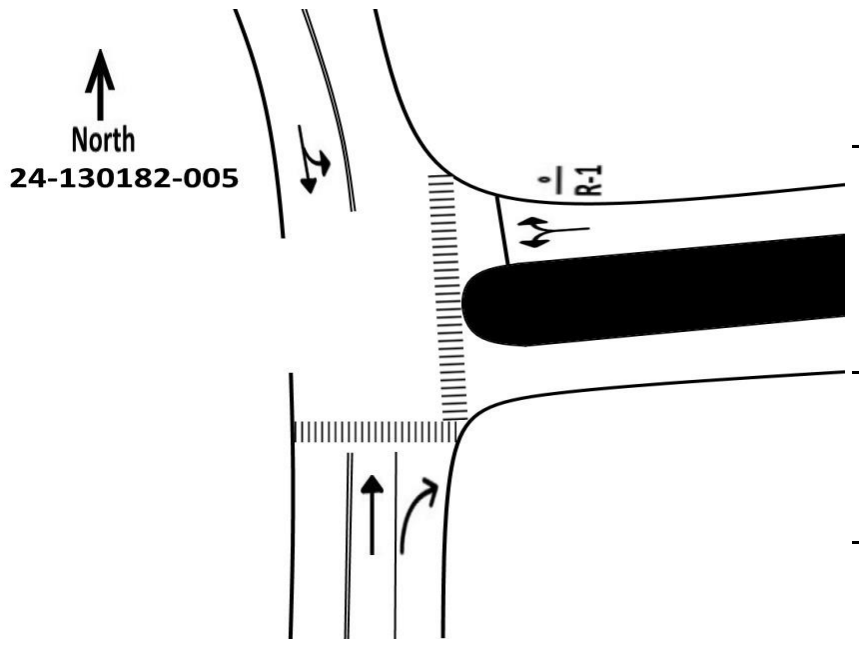
LOCATION: S Park Ave & County Club Dr
CITY/STATE: Titusville, FL

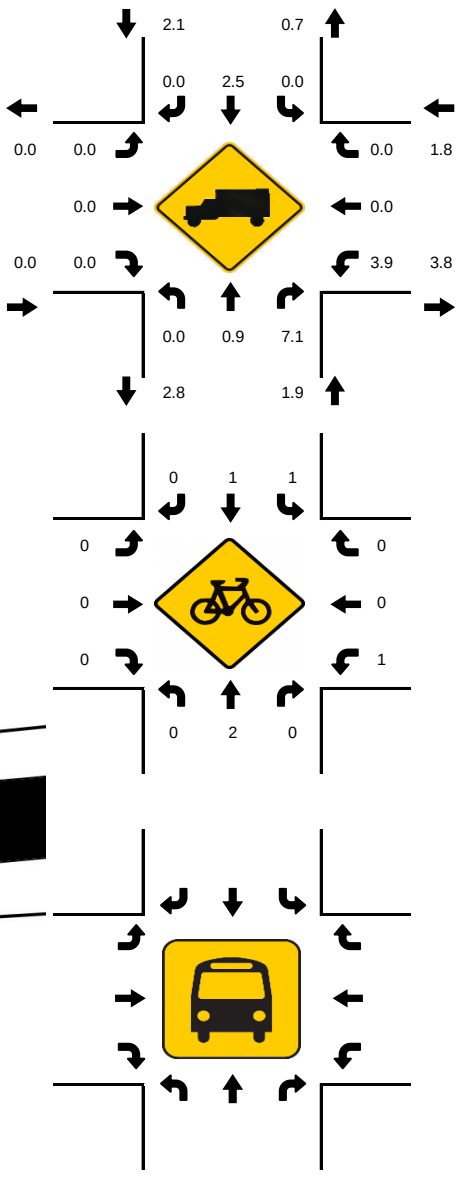
PROJECT ID: 24-130182-005
DATE: Tue, May 21, 2024

Peak-Hour: 07:30 AM - 08:30 AM
Peak 15-Minute: 07:45 AM - 08:00 AM



National Data & Surveying Services



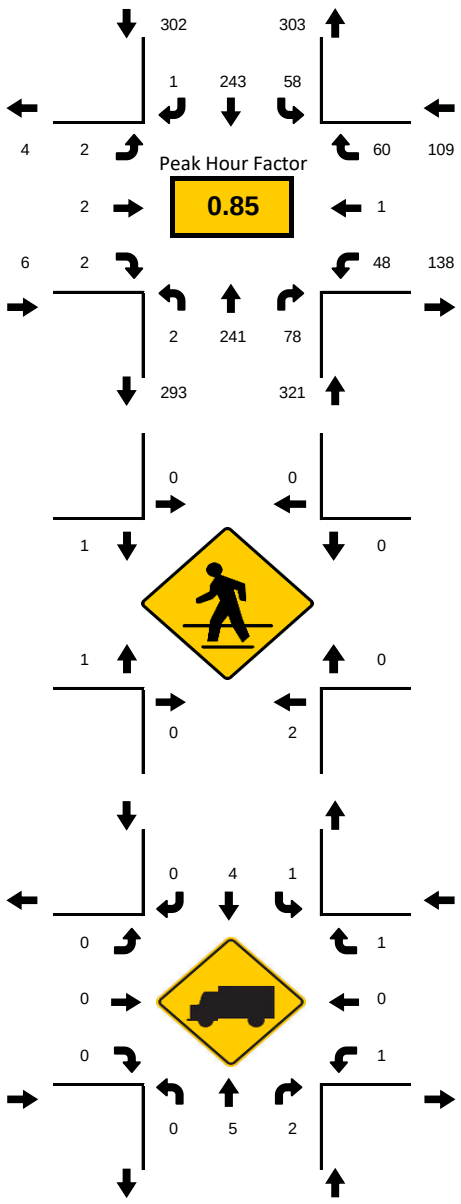


15-Min Count Period Beginning At	S Park Ave Northbound					S Park Ave Southbound					County Club Dr Eastbound					County Club Dr Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
7:00 AM	0	20	3	0		2	38	0	0		0	1	0	0		12	0	5	0		81	493
7:15 AM	0	15	6	0		1	38	0	0		0	0	0	0		9	0	2	0		71	592
7:30 AM	0	56	16	0		5	22	0	0		0	0	0	0		17	0	17	0		133	605
7:45 AM	0	78	11	0		12	73	0	0		0	0	0	0		14	0	20	0		208	576
8:00 AM	0	52	10	0		17	75	0	0		0	0	0	0		10	0	16	0		180	475
8:15 AM	0	29	5	0		3	29	0	0		0	0	0	0		9	0	8	1		84	295
8:30 AM	0	27	11	0		7	40	0	0		0	0	0	0		8	0	10	1		104	211
8:45 AM	0	31	11	0		6	31	0	0		0	0	0	0		17	0	11	0		107	107
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***		
All Vehicles	0	312	64	0		68	300	0	0		0	0	0	0		68	0	80	4		**896**	
Heavy Trucks	0	8	4	0		0	8	0	0		0	0	0	0		4	0	0	0		**24**	
Pedestrians		4					0					8					4				**16**	
Bicycles	0	8	0	0		4	4	0	0		0	0	0	0		4	0	0	0		**20**	
Buses																						
Stopped Buses																						

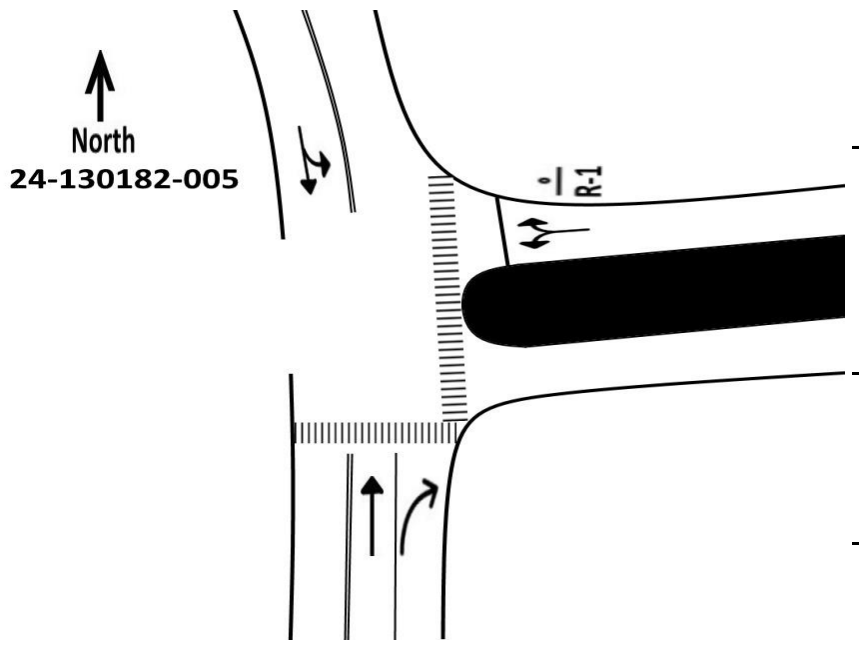
LOCATION: S Park Ave & County Club Dr
CITY/STATE: Titusville, FL

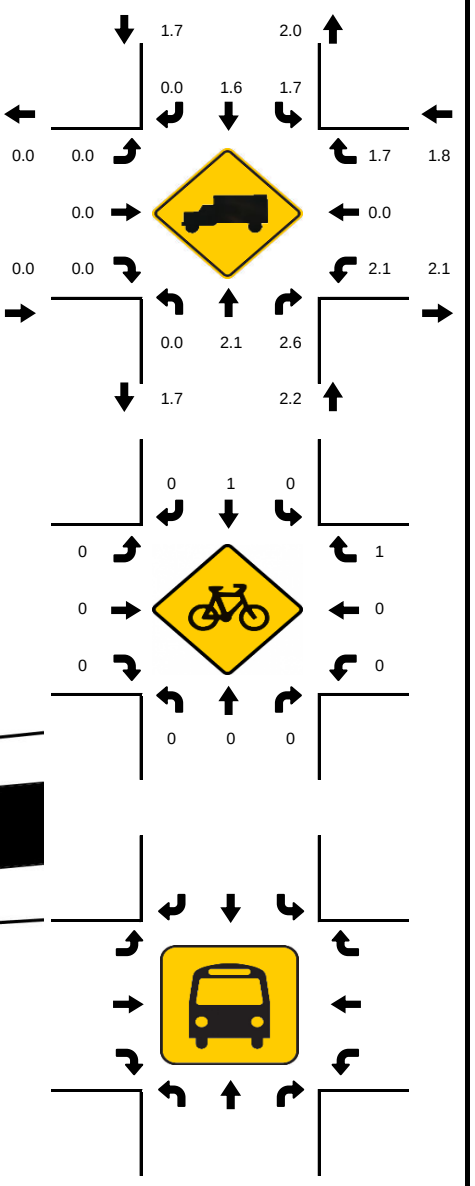
PROJECT ID: 24-130182-005
DATE: Tue, May 21, 2024

Peak-Hour: 02:45 PM - 03:45 PM
Peak 15-Minute: 03:15 PM - 03:30 PM



National Data & Surveying Services





15-Min Count Period Beginning At	S Park Ave Northbound					S Park Ave Southbound					County Club Dr Eastbound					County Club Dr Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
2:00 PM	0	47	6	0		6	54	1	0		0	0	0	0		11	1	3	0		129	557
2:15 PM	0	36	13	0		6	36	1	0		0	0	0	0		9	0	11	0		112	594
2:30 PM	1	63	15	0		8	35	2	0		0	0	0	0		8	0	14	0		146	698
2:45 PM	1	67	24	0		9	33	0	0		1	0	0	0		13	1	20	1		170	738
3:00 PM	0	58	17	0		8	58	0	0		1	0	1	0		7	0	16	0		166	696
3:15 PM	1	68	22	0		26	77	0	0		0	2	0	0		10	0	10	0		216	530
3:30 PM	0	48	15	0		15	75	1	0		0	0	1	0		15	0	14	2		186	314
3:45 PM	0	38	13	0		11	49	0	0		0	0	0	0		7	0	9	1		128	128
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
All Vehicles	4	272	96	0		104	308	4	0		4	8	4	0		60	4	80	8		**956**	
Heavy Trucks	0	8	4	0		4	8	0	0		0	0	0	0		4	0	4	0		**32**	
Pedestrians		8					0					8					0				**16**	
Bicycles	0	0	0	0		0	4	0	0		0	0	0	0		0	0	4	0		**8**	
Buses																						
Stopped Buses																						

Intersection Development Worksheet

Kimley»Horn
Expect More. Experience Better.

Intersection #:	1		***Existing Year:***	2025	***TMC Year:*** 2024
Major Street:	Park Ave	N/S	***Buildout Year:***	2027	
Minor Street:	Country Club Dr	E/W	***Seasonal Factor:***	1.00	

PHF: 0.73

AM Peak Hour Trips: IN = 249 **OUT =** 154

Weekday AM Peak Hour	Park Ave								Country Club Dr							
	Northbound				Southbound				Eastbound				Westbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2024)	0	0	215	42	0	37	199	0	0	0	0	0	1	50	0	61
Seasonal Factor			1.00				1.00				1.00				1.00	
Heavy Vehicle (%)	0%	0%	2%	0%	0%	4%	2%	0%	0%	0%	100%	0%	0%	4%	0%	0%
Growth Factor			1.02				1.02				1.02				1.02	
Existing (2025)	**0**	**0**	**219**	**43**	**0**	**38**	**203**	**0**	**0**	**0**	**0**	**0**	**1**	**51**	**0**	**62**
Growth Rates			2.00%				2.00%				2.00%				2.00%	
Growth Factor			1.04				1.04				1.04				1.04	
Vested Trips (Huntington Park)[1]			8			5	22									2
Background (2027)	**0**	**0**	**236**	**45**	**0**	**45**	**233**	**0**	**0**	**0**	**0**	**0**	**1**	**53**	**0**	**66**
Project Assignment																
Ingress				32%		3%										
Egress														32%		3%
Project Trips	0	0	0	80	0	7	0	0	0	0	0	0	0	49	0	5
Project Buildout	**0**	**0**	**236**	**125**	**0**	**52**	**233**	**0**	**0**	**0**	**0**	**0**	**1**	**102**	**0**	**71**

1. Vested trips applied from Apollo Gardens TIA and Huntington Park TIA, based on the Study Intersections in those analyses.

Intersection Development Worksheet

Kimley»Horn
Expect More. Experience Better.

Intersection #:	1		***Existing Year:***	2025	***TMC Year:*** 2024
Major Street:	Park Ave	N/S	***Buildout Year:***	2027	
Minor Street:	Country Club Dr	E/W	***Seasonal Factor:***	1.00	

PHF: 0.85

PM Peak Hour Trips: IN = 249 **OUT =** 154

Weekday Afternoon Peak Hour	Park Ave								Country Club Dr							
	Northbound				Southbound				Eastbound				Westbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2024)	0	2	241	78	0	58	243	1	0	2	2	2	3	45	1	60
Seasonal Factor		1.00				1.00				1.00				1.00		
Heavy Vehicle (%)	0%	0%	2%	0%	0%	4%	2%	0%	0%	0%	100%	0%	0%	4%	0%	0%
Growth Factor		1.02				1.02				1.02				1.02		
Existing (2025)	**0**	**2**	**246**	**80**	**0**	**59**	**248**	**1**	**0**	**2**	**2**	**2**	**3**	**46**	**1**	**61**
Growth Rates		2.00%				2.00%				2.00%				2.00%		
Growth Factor		1.04				1.04				1.04				1.04		
Vested Trips (Huntington Park)[1]			25			3	15									6
Background (2027)	**0**	**2**	**281**	**83**	**0**	**64**	**273**	**1**	**0**	**2**	**2**	**2**	**3**	**48**	**1**	**69**
Project Assignment																
Ingress				32%		3%										
Egress														32%		3%
Project Trips	0	0	0	80	0	7	0	0	0	0	0	0	0	49	0	5
Project Buildout	**0**	**2**	**281**	**163**	**0**	**71**	**273**	**1**	**0**	**2**	**2**	**2**	**3**	**97**	**1**	**74**

1. Vested trips applied from Apollo Gardens TIA and Huntington Park TIA, based on the Study Intersections in those analyses.

Intersection	
Int Delay, s/veh	6.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	103	0	71	0	236	125	52	233	0
Future Vol, veh/h	0	0	0	103	0	71	0	236	125	52	233	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	90	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	73	73	73	73	73	73	73	73	73	73	73
Heavy Vehicles, %	2	2	2	4	2	2	2	2	2	4	2	2
Mvmt Flow	0	0	0	141	0	97	0	323	171	71	319	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	785	956	319	785	785	323	319	0	0	495	0	0
Stage 1	462	462	-	323	323	-	-	-	-	-	-	-
Stage 2	323	495	-	462	462	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.14	6.52	6.22	4.12	-	-	4.14	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.14	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.14	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.536	4.018	3.318	2.218	-	-	2.236	-	-
Pot Cap-1 Maneuver	310	258	722	308	325	718	1241	-	-	1059	-	-
Stage 1	580	565	-	685	650	-	-	-	-	-	-	-
Stage 2	689	546	-	576	565	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	246	237	722	283	298	718	1241	-	-	1059	-	-
Mov Cap-2 Maneuver	246	237	-	283	298	-	-	-	-	-	-	-
Stage 1	533	519	-	685	650	-	-	-	-	-	-	-
Stage 2	595	546	-	529	519	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0	29.82	0	1.58
HCM LOS	A	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1241	-	-	-	376	328	-	-
HCM Lane V/C Ratio	-	-	-	-	0.635	0.067	-	-
HCM Control Delay (s/veh)	0	-	-	0	29.8	8.6	0	-
HCM Lane LOS	A	-	-	A	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	4.2	0.2	-	-

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	2	2	100	1	74	2	281	163	71	273	1
Future Vol, veh/h	2	2	2	100	1	74	2	281	163	71	273	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	90	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	4	2	2	2	2	2	4	2	2
Mvmt Flow	2	2	2	118	1	87	2	331	192	84	321	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	825	1016	322	825	825	331	322	0	0	522	0	0
Stage 1	489	489	-	335	335	-	-	-	-	-	-	-
Stage 2	336	527	-	489	489	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.14	6.52	6.22	4.12	-	-	4.14	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.14	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.14	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.536	4.018	3.318	2.218	-	-	2.236	-	-
Pot Cap-1 Maneuver	292	238	719	289	308	711	1237	-	-	1034	-	-
Stage 1	561	549	-	675	642	-	-	-	-	-	-	-
Stage 2	678	528	-	557	549	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	229	214	719	257	277	711	1237	-	-	1034	-	-
Mov Cap-2 Maneuver	229	214	-	257	277	-	-	-	-	-	-	-
Stage 1	505	495	-	673	641	-	-	-	-	-	-	-
Stage 2	592	527	-	498	495	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	17.83	28.67	0.04	1.81
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	13	-	-	288	352	370	-	-
HCM Lane V/C Ratio	0.002	-	-	0.025	0.585	0.081	-	-
HCM Control Delay (s/veh)	7.9	0	-	17.8	28.7	8.8	0	-
HCM Lane LOS	A	A	-	C	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	3.5	0.3	-	-