



APOPKA PLANNING COMMISSION MEETING AGENDA

August 8, 2023 5:30 PM

Apopka City Hall Council Chambers

APOPKA PLANNING COMMISSION MEETING WILL BE LIVE-STREAMED ON YOUTUBE. TO WATCH, PLEASE VISIT:

<https://www.youtube.com/CityofApopkaFL>

CALL TO ORDER

OPENING AND INVOCATION

APPROVAL OF MINUTES

1. Meeting Minutes from June 13, 2023
2. Meeting Minutes from July 11, 2023

PUBLIC COMMENT PERIOD

The Public Comment Period is for City-related issues that may or may not be on today's Agenda. If you are here for a matter that requires a public hearing, please wait for that item to come up on the agenda. If you wish to address the Council, you must fill out an Intent to Speak form and provide it to the City Clerk prior to the start of the meeting. If you wish to speak during the Public Comment Period, please fill out a green-colored Intent-to-Speak form. If you wish to speak on a matter that requires a public hearing, please fill out a white-colored Intent-to-Speak form. Speaker forms may be completed up to 48 hours in advance of the Council meeting. Each speaker will have four minutes to give remarks, regardless of the number of items addressed. Please refer to Resolution No. 2016-16 for further information regarding our Public Participation Policy & Procedures for addressing the City Council.

PUBLIC HEARING

1. Small-Scale Future Land Use Amendment - The Ridge Self-Storage
2. Rezoning - The Ridge Self-Storage
3. Quasi Judicial - 4203 Hogshead Road - Special Exception
4. Quasi Judicial - 4233 Hogshead Road - Special Exception
5. Quasi Judicial – Shoppes at East Shore Retaining Walls – Variance
6. Quasi Judicial - Wyld Oaks Golden Gem/Neighborhood Properties - Special Exception
7. Land Development Code amendment, Ordinance Number 3021

SITE PLANS

1. Floor and Décor Apopka – Major Development Plan
2. Shoppes at East Shore Multifamily – Major Development Plan

OLD BUSINESS

NEW BUSINESS

ADJOURNMENT

Individuals with disabilities needing assistance to participate in any of these proceedings should contact the City Clerk at least two (2) working days in advance of the meeting date and time at (407) 703-1704. F.S. 286.0105 If a person decides to appeal any decision or recommendation made by Planning Commission with respect to any matter considered at this meeting, he will need record of the proceedings, and that for such purposes he 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.

Any opening invocation that is offered before the official start of the Planning Commission meeting shall be the voluntary offering of a private person, to and for the benefit of the Planning Commission. The views or beliefs expressed by the invocation speaker have not been previously reviewed or approved by the Planning Commission or the city staff, and the City is not allowed by law to endorse the religious or non-religious beliefs or views of such speaker. Persons in attendance at the Planning Commission meeting are invited to stand during the opening ceremony. However, such invitation shall not be construed as a demand, order, or any other type of command. No person in attendance at the meeting shall be required to participate in any opening invocation that is offered or to participate in the Pledge of Allegiance. You may remain seated within the City Council Chambers or exit the City Council Chambers and return upon completion of the opening invocation and/or Pledge of Allegiance if you do not wish to participate in or witness the opening invocation and/or the recitation of the Pledge of Allegiance.

MINUTES OF THE PLANNING COMMISSION REGULAR MEETING HELD ON JUNE 13, 2023 AT 5:30 P.M. IN THE CITY COUNCIL CHAMBERS, APOKA, FLORIDA.

MEMBERS PRESENT: William Gusler, Howard Washington, Butch Stanley, Robert Ryan, Mary Norwood and Eric Mock

ABSENT: Wes Dumey and Orange County Public Schools (Non-voting)

STAFF PRESENT: James Hitt, FRA-RA – Community Development Director, Jean Sanchez – Senior Planner, Bobby Howell – Planning Manager, Robert Hippler – IT Director and Susan Bone – City Clerk.

OTHERS PRESENT:

OPENING AND INVOCATION: Chairperson Gusler called the meeting to order and asked for a moment of silent prayer. The Pledge of Allegiance followed.

PUBLIC COMMENT: Chairperson Gusler asked if anyone from the public wished to speak on a matter that is not on the agenda. With no one wishing to speak, Chairperson Gusler closed the public comment period.

LEGISLATIVE – FUTURE LAND USE AMENDMENT – SHAKE THE NATIONS PROPERTY

Chairperson Gusler read the item description.

Staff Presentation: Jean Sanchez presented the item based on the staff report and answered questions.

Chairperson Gusler opened the meeting for public hearing. With no one wishing to speak, Chairperson Gusler closed the public hearing.

MOTION: Butch Stanley made a motion to find the proposed change in Future Land Use from Industrial to Commercial consistent with the Comprehensive Plan and Land Development Code, and compatible with the character of the surrounding areas, recommending approval of the future land use amendment, based on the findings and facts presented in the staff report and exhibits. Motion seconded by Robert Ryan. Aye votes were cast William Gusler, Howard Washington, Butch Stanley, Robert Ryan, Mary Norwood and Eric Mock (6-0).

QUASI JUDICIAL – CHANGE OF ZONING – SHAKE THE NATIONS PROPERTY

Chairperson Gusler read the item description.

Staff Presentation: Jean Sanchez presented the item based on the staff report.

Chairperson Gusler read the item description and asked if anyone had ex-parte communication on this matter. All commissioners responded no.

Chairperson Gusler opened the meeting for public hearing. With no one wishing to speak, Chairperson Gusler closed the public hearing.

MOTION: Howard Washington made a motion to find the proposed Change of Zoning from I-L (Light Industrial) to C-COR (Corridor Commercial), consistent with the Comprehensive Plan and Land Development Code, and compatible with the character of the surrounding areas, recommend approval of the proposed Change of Zoning, based on the findings and facts presented in the staff report and exhibits. Motion seconded by Eric Mock. Aye votes were cast William Gusler, Howard Washington, Butch Stanley, Robert Ryan, Mary Norwood and Eric Mock (6-0).

LEGISLATIVE – FUTURE LAND USE AMENDMENT – WYLD OAKS GOLDEN GEM PROPERTIES

Chairperson Gusler read the item description.

Staff Presentation: Jean Sanchez presented the item based on the staff report.

Jonathan Huels, 215 N Eola Drive Orlando FL 32801, is the applicant and addressed Commissioner Washington's questions regarding how the property will be used. He stated that they are going to split and some of that is dictated by the master overlay that is part of the framework that was adopted for the interchange plan. There isn't a lot of wiggle room. That went out when the property got annexed last month and so it has to have a mixed-use future land use designation. This will have a neighborhood designation and an employment designation.

Chairperson Gusler opened the meeting for public hearing. With no one wishing to speak, Chairperson Gusler closed the public hearing.

MOTION: Butch Stanley made a motion to find the proposed change in Future Land Use from County Rural to Mixed Use consistent with the Comprehensive Plan and Land Development Code, and compatible with the character of the surrounding areas, recommending approval of the future land use amendment, based on the findings and facts presented in the staff report and exhibits. Motion seconded by Mary Norwood. Aye votes were cast William Gusler, Howard Washington, Butch Stanley, Robert Ryan, Mary Norwood and Eric Mock (6-0).

LEGISLATIVE – CHANGE OF ZONING AND MASTER PLAN – WYLD OAKS GOLDEN GEM PROPERTIES

Chairperson Gusler read the item description.

Staff Presentation: Jean Sanchez presented the item based on the staff report.

Chairperson Gusler opened the meeting for public hearing. With no one wishing to speak, Chairperson Gusler closed the public hearing.

MOTION: Mary Norwood made a motion to find the proposed Kelly Park Crossings – Change of Zoning and Master Plan consistent with the Comprehensive Plan and Land Development Code, and compatible with the character of the surrounding areas,

recommending approval of the proposed Change of Zoning from County A-1 (Citrus Rural) to KPI-MU (Kelly Park Interchange – Mixed-Use), assignment of Neighborhood and Employment Overlay Districts, and the Master Plan, based on the findings and facts presented in the staff report and exhibits. Motion seconded by Robert Ryan. Aye votes were cast William Gusler, Howard Washington, Butch Stanley, Robert Ryan, Mary Norwood and Eric Mock (6-0).

LEGISLATIVE – CHANGE OF ZONING AND MASTER PLAN – WYLD OAKS FREEPORT PROPERTY

Chairperson Gusler read the item description.

Staff Presentation: Jean Sanchez presented the item based on the staff report.

Chairperson Gusler opened the meeting for public hearing. With no one wishing to speak, Chairperson Gusler closed the public hearing.

MOTION: Howard Washington made a motion to find the proposed Kelly Park Crossings – Change of Zoning and Master Plan consistent with the Comprehensive Plan and Land Development Code, and compatible with the character of the surrounding areas, recommending approval of the proposed Change of Zoning from T (Transitional) to KPI-MU (Kelly Park Interchange – Mixed-Use), assignment of the Interchange Overlay District, and the Master Plan, based on the findings and facts presented in the staff report and exhibits. Motion seconded by Mary Norwood. Aye votes were cast William Gusler, Howard Washington, Butch Stanley, Robert Ryan, Mary Norwood and Eric Mock (6-0).

Mr. Hitt stated that at the May meeting the planning commission voted 6-1 to recommend denial of the text amendment for the future land use plan amendment for the apartment complex off of Plymouth Sorrento Road. Between that meeting and the city council meeting a few things were brought to light. The first was the floor area ratio that's allowed for this property as a commercial property would actually result in a higher traffic count than what it would for the number of apartment units that were proposed for this site. In addition, there's no guarantee the southwestern entrance at the traffic light underneath the bridge would not necessarily be something that they would want to pursue. The developer was looking to do that to basically dissipate the number of traffic counts because it is residential. The second item is the Senate Bill 102 which is an affordable housing bill that was passed and goes into effect July 1st and basically any commercial property, industrial property or any mixed-use property would be allowed the highest density and highest height that the city has for any of those properties. That means 25 dwellings per acre and there is no requirement for setback information as was noted in this project they were 244 feet which is about four times farther for a residential project from the wall of the apartment complex to the back wall of the subdivision to the east which is Plymouth Landing. If a developer wanted to they could come in and build a 25-dwelling unit per acre and up to seven stories on any of these properties. There is a funding limitation on the sale program from the state for 800 million dollars. The other thing that came to light is that the approval process does not have to go and is not required we cannot make them go through Planning Commission or City Council. It's basically administrative staff approval. City Council decided to go in favor of this.

MINUTES OF THE PLANNING COMMISSION REGULAR MEETING HELD ON JUNE 13, 2023 AT 5:30 P.M. IN THE CITY COUNCIL CHAMBERS, APOPKA, FLORIDA.

OLD BUSINESS: Chairperson Gusler mentioned that he did a little research on the roads in Orange County and we have put a little more than 60 million dollars in their coppers for roads and infrastructures through our transportation impact fees. He emailed the county asking what has the city gotten for our 60 million dollars and he hasn't gotten a response. He also mentioned that there are 5 different phases of road development in Orange County according to their paperwork and Ruby Dempsey Rozier, the manager, there are 18 roads in the study phase Apopka has 0. In the design phase there's 20, Apopka has 0. In the construction phase, there's 8, Apopka has 0. The only listing of an Orange County road in Apopka is under "other projects" and when you open that up it says Apopka Boulevard widening between Sheeler Rd and Hiawasse Rd. There is no information whatsoever. Out of the 46 projects going on and the city has zero, how do we put pressure on them or get a reaction out of them? The last traffic study done in the City of Apopka by Orange County was 2009. There is no accountability as far as Orange County and they aren't paying any attention to us.

Mr. Hitt responded that he had a meeting with Mayor Nelson, Pam Richmond, John Weiss, the new County Administrator, and about 5 of his department directors and their non-committal attitude for the city's roadway system was brought up. Their response was that since the city is doing all of this building then you are also responsible for the roads. They are getting taxes from those properties that are generating 10 to 20 times more than what they were before they got developed and there is no more commitment to helping the city's forgotten area of the county than what they were before was built. They have dedicated zero amount of money to our roadway system and yet they are getting tax money out of it and then reinvesting it in Horizons West and All-American Blvd. Commissioner Moore has responded to staff that there is no more money that is dedicated in the next 10 years to any project or any road projects in Apopka. It's going to be a long process to get county commissioners to realize that they need to help support their second largest city a little bit more than what they are.

NEW BUSINESS: No new business.

ADJOURNMENT: The meeting adjourned at 6:10 p.m.

William Gusler, Chairperson

James K. Hitt, FRA-RA Community Development Director

MINUTES OF THE PLANNING COMMISSION REGULAR MEETING HELD ON JULY 11, 2023 AT 5:30 P.M. IN THE CITY COUNCIL CHAMBERS, APOKA, FLORIDA.

MEMBERS PRESENT: William Gusler, Howard Washington, Butch Stanley, Robert Ryan, Wes Dumey and Eric Mock

ABSENT: Mary Norwood and Orange County Public Schools (Non-voting)

STAFF PRESENT: James Hitt, FRA-RA – Community Development Director, Bobby Howell – Planning Manager, Amer Hamza – Planner I, Drew Smith – City Attorney (Cliff Sheppard’s Office), Kelly Robertson – IT Content Administrator and Erin Arnold – Administrative Assistant.

OTHERS PRESENT: Dr. Jeffrey Woods, Blake Wagner, Kevin Robinson, Erika Hughes, Jeff Hofius, Cortez Whatley, Casey Webb, Charles Hill, Adam Crunk, Greg Ohe and Jonathan Huels.

OPENING AND INVOCATION: Chairperson Gusler called the meeting to order and asked for a moment of silent prayer. The Pledge of Allegiance followed.

APPROVAL OF MINUTES: Chairperson Gusler asked if there were any corrections or additions to the regular meeting minutes of February 14, 2023 at 5:30 p.m.

Motion: Howard Washington made a motion to approve the Planning Commission minutes from the regular meeting held on February 14, 2023 at 5:30 p.m. and seconded by Butch Stanley. Aye votes were cast William Gusler, Howard Washington, Butch Stanley, Robert Ryan, Wes Dumey and Eric Mock (6-0).

APPROVAL OF MINUTES: Chairperson Gusler asked if there were any corrections or additions to the regular meeting minutes of March 14, 2023 at 5:30 p.m.

Motion: Butch Stanley made a motion to approve the Planning Commission minutes from the regular meeting held on March 14, 2023 at 5:30 p.m. and seconded by Robert Ryan. Aye votes were cast William Gusler, Howard Washington, Butch Stanley, Robert Ryan, Wes Dumey and Eric Mock (6-0).

APPROVAL OF MINUTES: Chairperson Gusler asked if there were any corrections or additions to the regular meeting minutes of April 11, 2023 at 5:30 p.m.

Motion: Wes Dumey made a motion to approve the Planning Commission minutes from the regular meeting held on April 11, 2023 at 5:30 p.m. and seconded by Howard Washington. Aye votes were cast William Gusler, Howard Washington, Butch Stanley, Robert Ryan, Wes Dumey and Eric Mock (6-0).

APPROVAL OF MINUTES: Chairperson Gusler asked if there were any corrections or additions to the regular meeting minutes of May 09, 2023 at 5:30 p.m.

Motion: Butch Stanley made a motion to approve the Planning Commission minutes from the regular meeting held on May 09, 2023 at 5:30 p.m. and seconded by Robert Ryan. Aye votes were cast William Gusler, Howard Washington, Butch Stanley, Robert Ryan, Wes Dumey and Eric Mock (6-0).

MINUTES OF THE PLANNING COMMISSION REGULAR MEETING HELD ON JULY 11, 2023 AT 5:30 P.M. IN THE CITY COUNCIL CHAMBERS, APOPKA, FLORIDA.

PUBLIC COMMENT: Chairperson Gusler asked if anyone from the public wished to speak on a matter that is not on the agenda. With no one wishing to speak, Chairperson Gusler closed the public comment period.

LEGISLATIVE – FUTURE LAND USE AMENDMENT – 225 E 7TH STREET

Chairperson Gusler read the item description.

Staff Presentation: Bobby Howell presented the item based on the staff report and answered questions.

Chairperson Gusler opened the meeting for public hearing. With no one wishing to speak, Chairperson Gusler closed the public hearing.

MOTION: Butch Stanley made a motion to find the proposed change in Future Land Use from Office to Mixed-Use consistent with the Comprehensive Plan and Land Development Code, and compatible with the character of the surrounding areas, recommending approval of the future land use amendment, based on the findings and facts presented in the staff report and exhibits. Motion seconded by Wes Dumey. Aye votes were cast William Gusler, Howard Washington, Butch Stanley, Robert Ryan, Wes Dumey and Eric Mock (6-0).

QUASI JUDICIAL – SPECIAL EXCEPTION – FREEPORT PROPERTY

Chairperson Gusler read the item description.

Staff Presentation: Bobby Howell presented the item based on the staff report.

Chairperson Gusler read the item description and asked if anyone had ex-parte communication on this matter. All commissioners responded no.

Chairperson Gusler opened the meeting for public hearing. With no one wishing to speak, Chairperson Gusler closed the public hearing.

MOTION: Howard Washington made a motion to approve a Special Exception to allow multi-family uses for the Freeport property, subject to the adoption of rezoning Ordinance Number 3016, as well as, the exhibits and findings of the staff report. Motion seconded by Wes Dumey. Aye votes were cast William Gusler, Howard Washington, Butch Stanley, Robert Ryan, Wes Dumey and Eric Mock (6-0).

LEGISLATIVE – MAJOR DEVELOPMENT PLAN – ACADIA ORLANDO HEALTH

Chairperson Gusler read the item description.

Commissioner Butch Stanley stated that he would be abstaining from any discussion or voting since he works for the Agency for Healthcare Administration who issues licenses at this facility. Form 8B will be filled out and added to the record and incorporated into the minutes.

MINUTES OF THE PLANNING COMMISSION REGULAR MEETING HELD ON JULY 11, 2023 AT 5:30 P.M. IN THE CITY COUNCIL CHAMBERS, APOKA, FLORIDA.

Staff Presentation: James Hitt presented the item based on the staff report.

Dr. Jeffrey Woods, Operations Group President with Acadia Healthcare mentioned that he and a few others involved with the project would be giving a brief presentation so that there would be some understanding of the scope and what they intend to do and what their intentions are.

Greg Ohe with Orlando Health spoke about how there is a large need for a behavioral health space to really meet the needs of the community. They did an extensive search and went national as well as regional looking at various Behavioral Health Providers and selected Acadia. Acadia is the largest provider in the country with a number of relationships in the health system. The partnership was formed on the basis of having a shared vision on how we approach health care. 1 in 5 adults have a mental health need in Florida which is about 2.5 million people. 1 in 10 adults in Florida report poor mental health for at least 14 days out of the month. Access to health services here in the State of Florida is 49th out of the 50 states.

Dr. Woods spoke about who they will and won't be treating. There are limitations for this hospital in terms of who they are able to serve. It will be adults, senior citizens, youth and individuals who have various diagnostic categories such as depression, anxiety, bipolar disorder, post traumatic stress which is mostly provided to military members veterans, law enforcement or fire departments. There will also be care for adults who have thoughts disorders. There are 2 classes of seniors that will be treated. The first group are cognitively intact, faculties are strong but they are dealing with some of the same issues that were previously mentioned like mood disorder, thought disorder, substance use disorder. There will be dual diagnosis substance use disorder treatment as part of the continuum of care for all of the patients in the hospital whether it's alcohol or other substances that might be being abused. The second class of seniors who have moderate neurocognitive decline and have some disturbance of mood and behavior. The treatment is highly amenable to treatment which allows them to return to home or their assisted living facility.

This facility is not a jail nor will it hold people in an incarcerated state. They will have involuntary patients under the Baker Act in the hospital but they will not take patients in the criminal justice system. They will not accept patients who are a threat to the patient population or are a threat to the community which includes individuals who have a history of sexually aggressive violent or other type of acting out behavior.

The vast majority of the admissions will come to the hospital from local emergency departments. They will have an ambulance transport bay that is covered and off to the side of the hospital but there will be no lights and sirens at this facility. This length of stay is between 7 to 10 days so it is not a long-term hospitalization. Patients are cared for by a multi-disciplinary team of professionals who will care for their unique individual disease. At discharge, no patient walks out of the hospital without transportation to their home.

There are a number of security measures that are unique to this hospital. Once you enter the building you cannot exit unless you have a wristband that electronically activates the security measures at each point of entry. There are Sally ports in different parts of the hospital to prevent patients from being able to go in and out of the hospital. They provide outdoor activity yards that have walls that are not scalable.

MINUTES OF THE PLANNING COMMISSION REGULAR MEETING HELD ON JULY 11, 2023 AT 5:30 P.M. IN THE CITY COUNCIL CHAMBERS, APOKA, FLORIDA.

Greg Ohe spoke about community outreach and partnering with agencies to offer school outreach programs. Adolescents often have various mental health issues that need to be addressed working with teachers to train them on suicide, recognition of depression and suicide prevention. Also making certain that the school has ready access to the resources in the community so that they can rapidly move students to those resources when needed. They will work with veterans, military personnel, law enforcement, fire crisis teams, churches and other community health services throughout Central Florida.

Chip Hill is the architect on this project and he gave a brief presentation of the building process and the approximate length of time it will take to complete this project.

Adam Crunk, Crunk Engineering 7112 Crossroads Blvd Brentwood, TN is the engineer for this project and he spoke about landscape plans, wetlands, and property access regarding the project.

Commissioner Ryan asked Dr. Woods if this was an outpatient facility. Mr. Woods responded that it will have 2 outpatient programs. Commissioner Ryan questioned Mr. Hitt since his understanding was that it was an inpatient only. Mr. Hitt responded that he has been corrected. Commissioner Ryan responded that outpatient facilities need 10% of their patient visitor parking spaces to be accessible to people with disabilities and they only have 6 versus 160. Adam Crunk stated that the primary difference is defined in the ADA code really is referring to acute care individuals coming in for surgeries and have mobility impairments. In these cases, these outpatient services are more attuned to this being more of a doctor's visit and don't happen very frequently.

Commissioner Washington mentioned that he is on the board of an organization for youth development at the high school level and was wondering if this business would be able to assist groups like his to recognize signs of mental health concerns before it's too late. Dr. Woods responded that they welcome the opportunity to be a part of the community and educate organizations.

Commissioner Dumey asked if this facility will be replacing the current location that they have in Longwood. Greg responded that the short answer is yes. Commissioner Dumey asked if the 220 full time employees that were mentioned would be transfers from that facility. Greg stated that the expectation would be that some would transfer over and the they are looking at more like 260 full time employees for this hospital.

Commissioner Dumey asked Mr. Hitt how the Pentecostal church that is located directly to the north will be affected by this project. He heard that they are looking to add a school or some other religious services to their property in the future. Mr. Hitt stated that he couldn't speculate. One of the parishioners called Mr. Hitt to ask if there had been any outreach to which he responded that there was. No representatives from the church came to that meeting nor did they respond to phone calls that were made to them approximately 5 times.

Commissioner Ryan stated that he has a problem with this being an out patient facility. He doesn't see how they are exempt from the ADA requirements of 10 visitors and patient parking spaces to be accessible. They offer no proof and the city needs to look in to that.

MINUTES OF THE PLANNING COMMISSION REGULAR MEETING HELD ON JULY 11, 2023 AT 5:30 P.M. IN THE CITY COUNCIL CHAMBERS, APOPKA, FLORIDA.

Commissioner Dumey is curious as to why they picked that location and why in the city. He asked what will the benefit be to the city for having this facility here.

Chairperson Gusler followed up to Commissioner Dumey's concern with asking the applicant what the next closest facility would be or what would be the service area for this facility. Dr. Woods said that they did a heat study and that West Orange is where the majority of patients are coming into the health system seeking care for services. Apopka made sense to them in terms of its geographic location and other various emergency departments. The next closest facility is in Orlando which is a 30-mile radius. Dr. Woods believes that this is an opportunity to lift the overall health of the community and for Apopka to be seen as a place that is caring for the whole individuals.

Chairperson Gusler is concerned with how secure the facility will be. He asked if they will have security on staff or do they have security outside or inside or will there be video surveillance. Dr. Woods said that the exterior of the building and the common areas will have cameras that record and store those recordings. All of their staff are trained in "handle with care" which is a management of and prevention of aggressive behaviors. This is not a forensic facility and they will not be taking care of the criminally insane or individuals who require long-term psychiatric mental health care.

Attorney Drew Smith reminded the board that they are sitting as the planning board and are to be looking at this from the land use component not from the policy making component. They are really to be applying land use development code and comprehensive plan to the application that submitted and does it check those boxes.

Commissioner Mock mentioned that his first career was in healthcare and he has great appreciation of any health entity that can provide services to individuals. He said that we are all very happy that Orlando Health is one of the providers in the Central Orlando area and being able to partner with Acadia along with the professionalism that they provide will be a very positive experience. Traffic will continue to increase more and more over time. This building will be top notch and provide better access to those who need to visit and have access to quickly get in and out.

Chairperson Gusler opened the meeting for public hearing. With no one wishing to speak, Chairperson Gusler closed the public hearing.

MOTION: Eric Mock made a motion to recommend approval of the Acadia Orlando Health – Major Development Plan, subject to the findings in the staff report. Motion seconded by Howard Washington. Aye votes were cast William Gusler, Howard Washington and Eric Mock. Nay vote was cast by Robert Ryan (3-1).

LEGISLATIVE – PLAT – FLOOR AND DÉCOR APOPKA

Chairperson Gusler read the item description.

Staff Presentation: James Hitt presented the item based on the staff report and answered questions.

MINUTES OF THE PLANNING COMMISSION REGULAR MEETING HELD ON JULY 11, 2023 AT 5:30 P.M. IN THE CITY COUNCIL CHAMBERS, APOPKA, FLORIDA.

Commissioner Mock asked if there were any plans to at least put a turn lane on the section. Mr. Hitt responded that Pam Richmond is looking into that. The city has not been able to get any right-of-way and that is a county road.

Chairperson Gusler opened the meeting for public hearing. With no one wishing to speak, Chairperson Gusler closed the public hearing.

MOTION: Butch Stanley made a motion to approve the Floor and Décor Apopka – Plat, subject to the following conditions 1) approval of the Shepard Avenue right-of-way vacation 2) 20-foot wide right-of-way dedication adjacent to U.S. 441 and 3) reviews of the city engineer and city surveyor. Motion seconded by Robert Ryan. Aye votes were cast William Gusler, Howard Washington, Butch Stanley, Robert Ryan, Wes Dumey and Eric Mock (6-0).

OLD BUSINESS: None

NEW BUSINESS: Mr. Hitt introduced the newest hire in the Community Development Department, Amer Hamza. He will be on staff as a Planner I.

ADJOURNMENT: The meeting adjourned at 7:15 p.m.

William Gusler, Chairperson

James K. Hitt, FRA-RA Community Development Director



City of Apopka PLANNING COMMISSION STAFF REPORT

Section: PUBLIC HEARING

Item #: 1.

Meeting Date: August 8, 2023

Department: Community Development

SUBJECT:

Small-Scale Future Land Use Amendment - The Ridge Self-Storage

REQUEST:

Small-Scale Future Land Use Map Amendment from Mixed-Use to Industrial for The Ridge Self-Storage

SUMMARY:

This chart includes the relationships to adjacent properties.

Direction	Future Land Use	Zoning	Present Use
North	"City" Mixed-Use, "County" Rural	"City" PD (Planned Development), "County" A-1 (Citrus Rural District)	Vacant – The Ridge PD (Planned Development)
East	Industrial	I-L (Light Industrial)	Warehouse distribution
South	Mixed-Use	I-L (Light Industrial)	SR 414 right-of-way
West	"County" Rural	"County" A-1 (Citrus Rural District)	SR 414 retention pond

PROJECT SUMMARY:

The applicant has submitted a Small-Scale Future Land Use Amendment from Mixed-Use to Industrial for a 12.25 acre parcel located on the west side of Ocoee-Apopka Road, north of SR 414. The parcel is currently vacant. The applicant is requesting the Small-Scale Future Land Use Amendment to develop a proposed self-storage facility on the property. A companion rezoning from T (Transitional) to I-L (Light Industrial) is proposed to allow the self-storage facility as a permitted use on the subject property. An Industrial future land use designation is compatible with the proposed I-L zoning, thus the request for the future land use amendment. The proposed Industrial future land use designation is compatible with the area as properties to the east have Future Land Use designations of Industrial, and is the site of a warehouse distribution facility.

SCHOOL CAPACITY REPORT:

As the subject property is used for non-residential purposes, school capacity is not applicable.

ORANGE COUNTY NOTIFICATION:

The JPA (Joint Planning Agreement) requires the City to notify the County 30 days before any public hearing or advisory board. The City notified Orange County on June 21, 2023.

PUBLIC HEARING SCHEDULE:

August 8, 2023 – Planning Commission (5:30 P.M.)
September 6, 2023 – City Council (1:30 P.M.), First Reading
September 20, 2023 – City Council (7:00 P.M.), Second Reading and Adoption

DULY ADVERTISED:

July 24, 2023 – Poster Placed on Property
July 24, 2023 – Mailed Notices to Adjacent Property Owners
July 28, 2023 – Advertised in the Apopka Chief

DEVELOPMENT REVIEW COMMITTEE:

Recommends approval of the change in Future Land Use from Mixed-Use to Industrial and finds the proposed amendment consistent with the Comprehensive Plan and Land Development Code, and compatible with the character of the surrounding areas, recommending approval of the future land use amendment, based on the findings and facts presented in the staff report and exhibits.

LAND USE REPORT

RELATIONSHIP TO ADJACENT PROPERTIES

Direction	Future Land Use	Zoning	Present Use
North	"City" Mixed-Use, "County" Rural	"City" PD (Planned Development), "County" A-1 (Citrus Rural District)	Vacant – The Ridge PD (Planned Development)
East	Industrial	I-L (Light Industrial)	Warehouse distribution
South	Mixed-Use	I-L (Light Industrial)	SR 414 right-of-way
West	"County" Rural	"County" A-1 (Citrus Rural District)	SR 414 retention pond

LAND USE ANALYSIS

Industrial uses exist in this area of the City, and are located to the east of the subject property. Development must comply with the Industrial future land use designation and be consistent with the Comprehensive Plan policies, Development Design Guidelines, and Land Development Code. The property is currently developed and is approximately 12.25 acres in size. This future land use amendment is being requested to allow the construction of a self-storage facility on the subject property. The parcel is not located in the following areas:

- Wekiva Parkway Interchange Vision Plan Area: No
- Wekiva River Protection Area: No
- Area of Critical State Concern: No

JPA: The City of Apopka and Orange County entered into a Joint Planning Area (JPA) agreement on October 26, 2004. The proposed FLUM Amendment request for a change from Mixed-Use to Industrial is consistent with the terms of the JPA (Second Amendment).

City of Apopka Comprehensive Plan Policies:

Future Land Use Element:

Policy 3.1.I states that the primary use shall be industrial, intensive commercial, agricultural and business/research parks. Also allowed are public facilities and supporting infrastructure. The use of the Planned Unit Development process shall be encouraged. The maximum floor area ratio shall be .60.

Planned Unit Development uses may include:

- (1) All primary uses
- (2) Other uses deemed compatible with and complimentary to the other proposed master planned uses and the surrounding neighborhoods.

Transportation Element:

Policies 1.1 and 1.2 state that the City of Apopka is a Transportation Concurrency Exception Area. The property may be accessed from the northeast via an access easement.

Infrastructure Element:

Policies 1.1.1, 2.1.1 and 5.1.2 state the minimum levels of service for the City's wastewater and water systems as well as the City's solid waste collection service. The property currently has access to City water. City wastewater and reclaimed water are available for future connection. Additional demand can be provided by the City.

Conservation Element:

Policy 4.1 states that a habitat study is required for developments ten (10) acres or more in size. Therefore, a habitat study will not be required if a proposed development on this parcel.

Land Use Calculations:

CURRENT: Mixed-Use (1.0 FAR maximum)

1.0 X 12.25 acres (533,610) square feet = 533,610 square feet of non-residential maximum building area

PROPOSED: Industrial (0.6 floor area ratio)

0.6 X 12.25 Acres (533,610) square feet = 320,166 square feet of non-residential area maximum building area.

This initial review does not preclude conformance with concurrency requirements at the time of development approval.

Note: This item is considered legislative. The staff report and its findings are to be incorporated into and made a part of the minutes of this meeting.

FUNDING SOURCE:

Not applicable

RECOMMENDED MOTION:

Find the proposed change in Future Land Use from Mixed-Use to Industrial consistent with the Comprehensive Plan and Land Development Code, and compatible with the character of the surrounding areas, recommending approval of the future land use amendment, based on the findings and facts presented in the staff report and exhibits.

ATTACHMENTS:

1. Supporting documentation ssflum file

AN ORDINANCE OF THE CITY OF APOPKA, FLORIDA, AMENDING THE FUTURE LAND USE ELEMENT OF THE APOPKA COMPREHENSIVE PLAN OF THE CITY OF APOPKA; CHANGING THE FUTURE LAND USE DESIGNATION FROM MIXED-USE TO INDUSTRIAL FOR CERTAIN REAL PROPERTY GENERALLY LOCATED WEST OF OCOEE-APOPKA ROAD AND NORTH OF SR 414, OWNED BY THE RIDGE SELF-STORAGE, LLC COMPRISING 12.25 ACRES, MORE OR LESS; PROVIDING FOR SEVERABILITY, CONFLICTS, AND AN EFFECTIVE DATE.

WHEREAS, the City of Apopka's Local Planning Agency (Planning Commission) has, in preparation of the amended version of the Apopka Comprehensive Plan, analyzed the proposed amendment pursuant to Chapter 163, Part II, F.S., found it to be consistent with the intent of the Apopka Comprehensive Plan, and held public hearings providing for full public participation.

Section I. Purpose and Intent. This Ordinance is enacted to carry out the purpose and intent of, and exercise the authority set out in, the Local Government Comprehensive Planning and Land Development Regulation Act, Sections 163.3184 and 163.3187, Florida Statutes.

Section III. Applicability and Effect. The applicability and effect of the City of Apopka Comprehensive Plan shall be as provided by the Local Government Comprehensive Planning and Land Development Regulation Act, Sections 163.3161 through 163.3215, Florida Statutes.

Section VI. Effective Date. This Ordinance shall become effective thirty-one (31) days after adoption. If challenged within thirty (30) days after adoption, the Ordinance shall become

ORDINANCE NO. 3019

PAGE 2

1 effective after the state land planning agency or the Administration Commission, respectively,
2 issues a final order determining that the adopted small-scale development amendment is in
3 compliance.
4

5 ADOPTED at a regular meeting of the City Council of the City of Apopka, Florida, this
6 _____ day of _____, 2023.

READ FIRST TIME: September 6, 2023

READ SECOND TIME AND
ADOPTED: _____

ATTEST:

Susan Bone, City Clerk

Bryan Nelson, Mayor

Approved as to form and legal sufficiency:

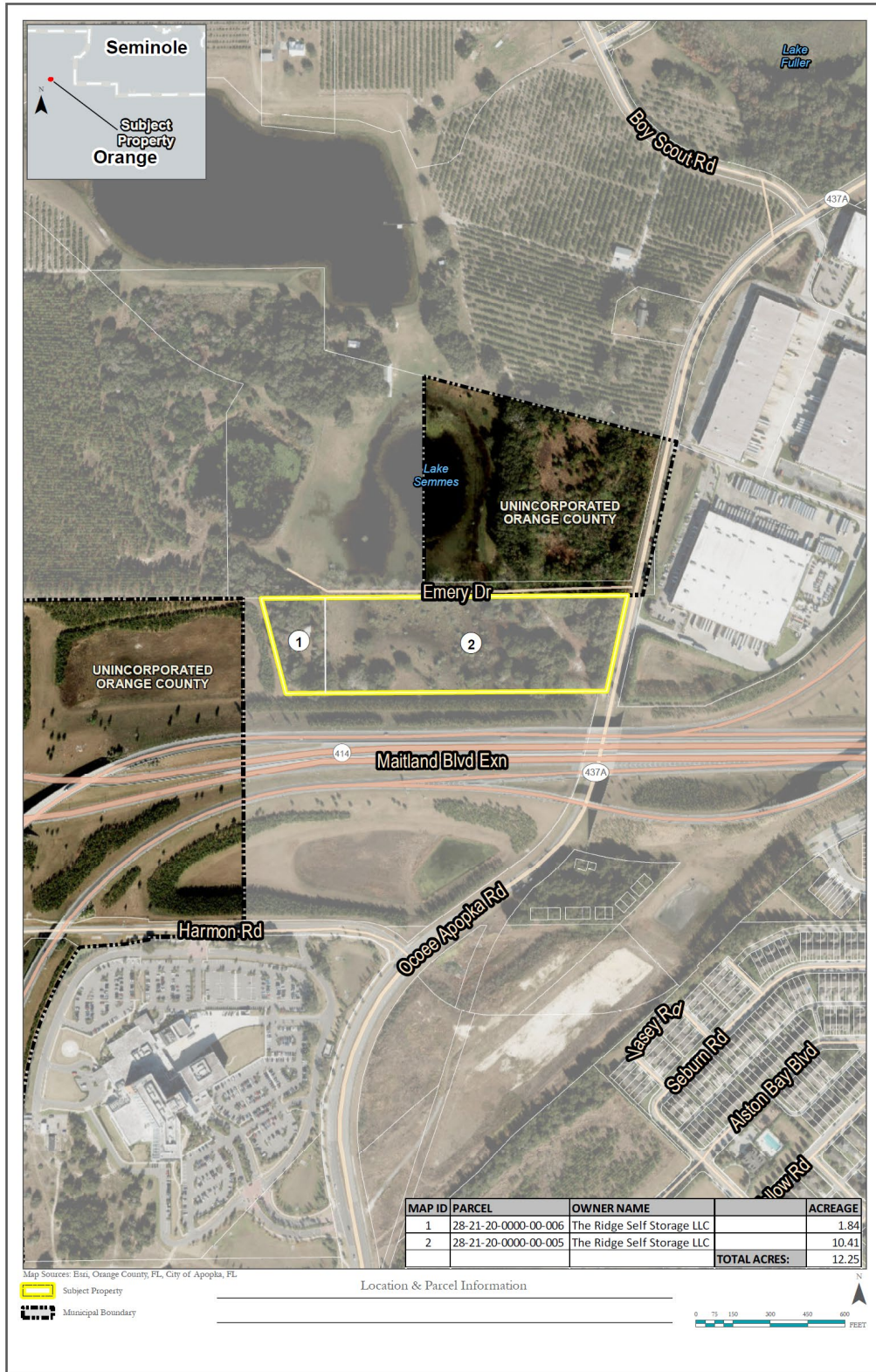
Cliff Sheppard, City Attorney

DULY ADVERTISED FOR PUBLIC HEARING: July 28, 2023

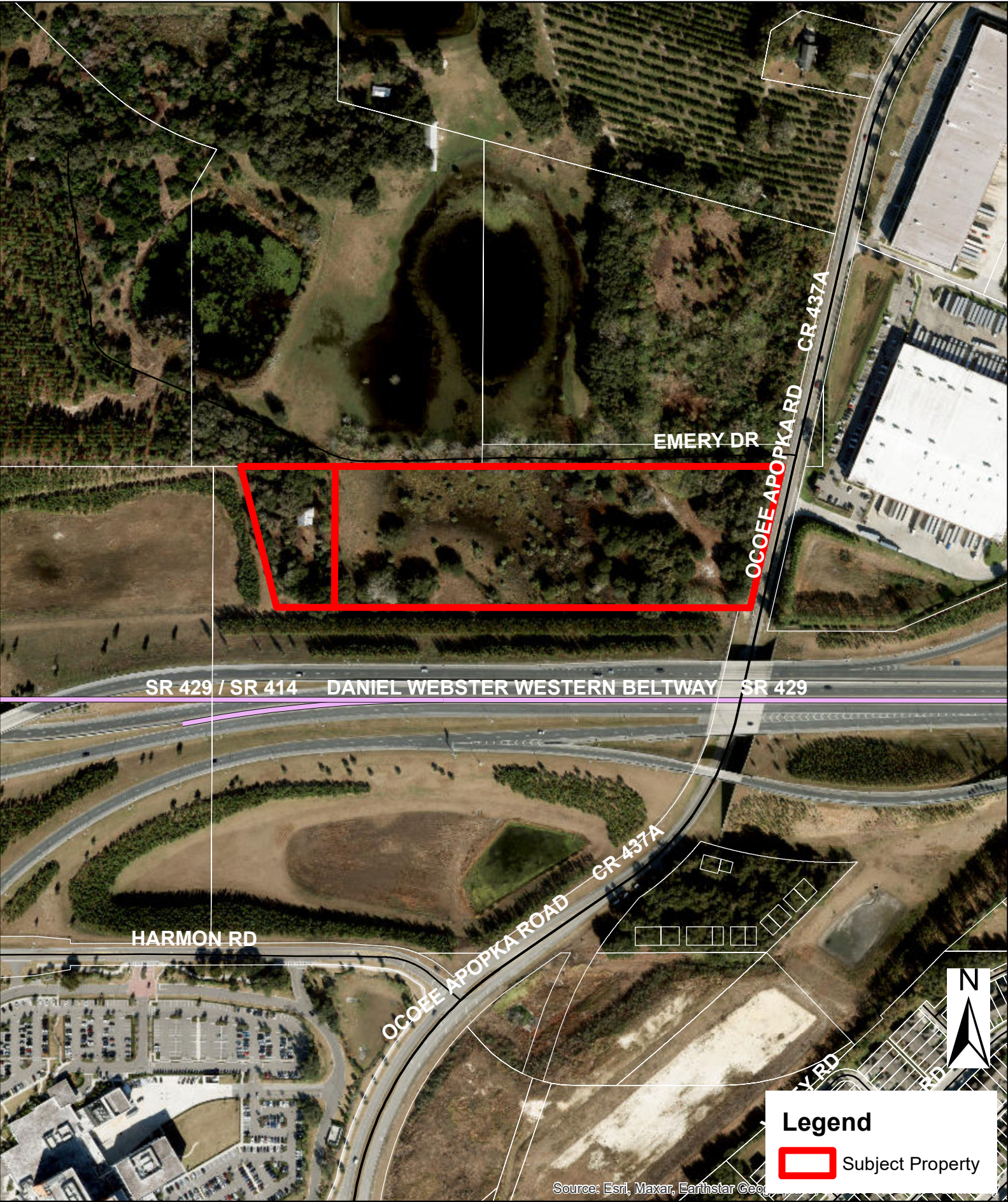
1

EXHIBIT "A"

Parcel Identification Number(s): 20-21-28-0000-00-005, 20-21-28-0000-00-006

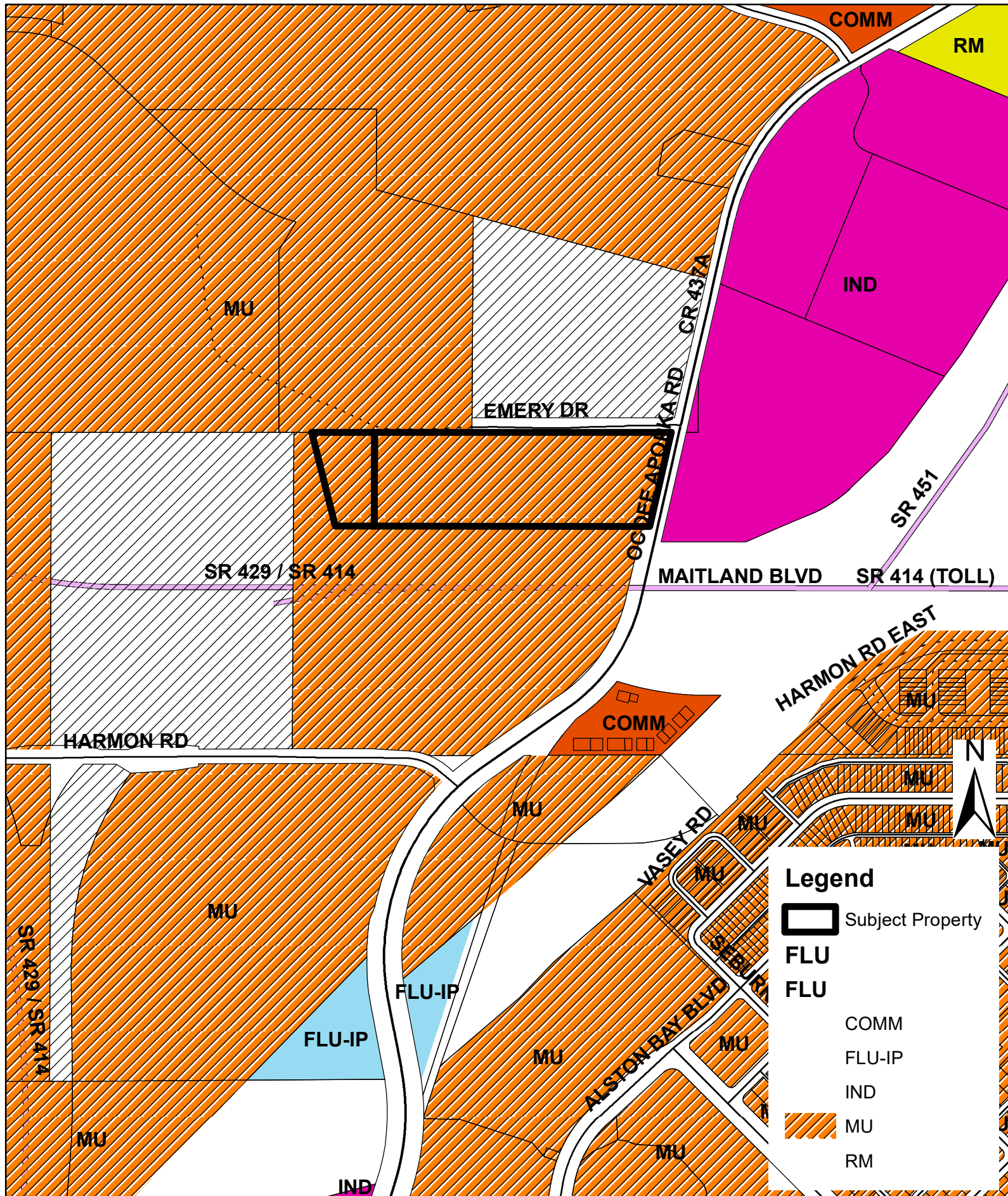


Aerial



(THIS MAP IS FOR REFERENCE PURPOSES ONLY AND IS NOT TO SCALE)

Future Land Use



(THIS MAP IS FOR REFERENCE PURPOSES ONLY AND IS NOT TO SCALE)

Map showing the location of the Subject Property (indicated by a thick black outline) relative to surrounding streets and landmarks.

Streets shown include:

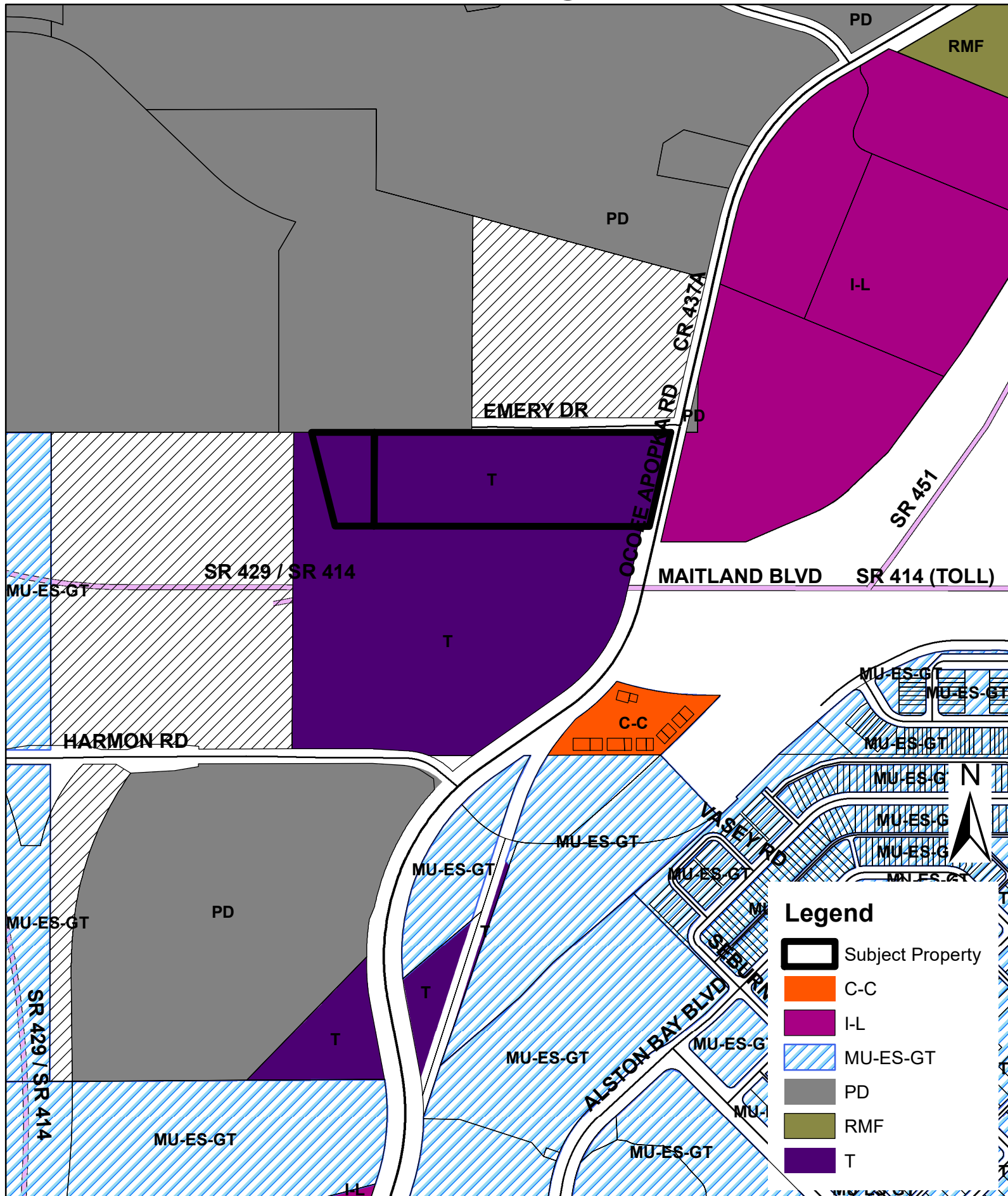
- EMERY DR
- OC DEE APOKA RD
- CR 437A
- SR 429 / SR 414
- SR 414 (TOLL)
- SR 451
- MAITLAND BLVD
- HARMON RD
- HARMON RD EAST
- PAVIA DR
- VASEY RD
- SEBURN RD
- ALSTON BAY BLVD
- TALLOW RD
- RAFTON RD
- COT PL
- SUNBOX

Legend:

- Subject Property

Page 22 of 387

Zoning



(THIS MAP IS FOR REFERENCE PURPOSES ONLY AND IS NOT TO SCALE)



City of Apopka PLANNING COMMISSION STAFF REPORT

Section: PUBLIC HEARING

Item #: 2.

Meeting Date: August 8, 2023

Department: Community Development

SUBJECT:

Rezoning - The Ridge Self-Storage

REQUEST:

Change of Zoning from T (Transitional) to I-L (Light Industrial) for The Ridge Self-Storage

SUMMARY:

PROJECT SUMMARY:

The subject property is approximately 12.25 acres in size and is located on the west side of Ocoee-Apopka Road and north of SR 414, and is currently vacant. This application is being processed simultaneously with an application to amend the Future Land Use designation from Mixed-Use to Industrial. The parcel is currently vacant. The applicant is requesting the Rezoning to develop a proposed self-storage facility on the property as self-storage facility is a permitted use in the I-L (Light Industrial) zoning district. The proposed I-L zoning district is compatible with the area as properties to the east have zoning designations of Industrial, and is the site of a warehouse distribution facility.

This chart includes the relationships to adjacent properties.

Direction	Future Land Use	Zoning	Present Use
North	"City" Mixed-Use, "County" Rural	"City" PD (Planned Development), "County" A-1 (Citrus Rural District)	Vacant – The Ridge PD (Planned Development)
South	Industrial	I-L (Light Industrial)	Warehouse distribution
East	Mixed-Use	I-L (Light Industrial)	SR 414 right-of-way
West	"County" Rural	"County" A-1 (Citrus Rural District)	SR 414 retention pond

ORANGE COUNTY NOTIFICATION:

The JPA (Joint Planning Agreement) requires the City to notify the County 30 days before any public hearing or advisory board. The City notified Orange County on June 21, 2023.

PUBLIC HEARING SCHEDULE:

August 8, 2023 – Planning Commission (5:30 P.M.)

September 6, 2023 – City Council (1:30 P.M.), First Reading

September 20, 2023 – City Council (7:00 P.M.), Second Reading and Adoption

DULY ADVERTISED:

July 28, 2023 – Apopka Chief

July 24, 2023 – Mailed notices to adjacent property owners; Posters placed on property

Development Review Committee (DRC):

Recommends approval of the Change of Zoning from T (Transitional) to I-L (Light Industrial), finding the proposed change consistent with the Comprehensive Plan and Land Development Code, and compatible with the character of the surrounding areas, based on the findings and facts presented in the staff report and exhibits.

Note: This item is considered quasi-judicial. The staff report and its findings are to be incorporated into and made a part of the minutes of this meeting.

FUNDING SOURCE:

Not applicable

RECOMMENDED MOTION:

Find the proposed Change of Zoning from T (Transitional) to I-L (Light Industrial), consistent with the Comprehensive Plan and Land Development Code, and compatible with the character of the surrounding areas, recommend approval of the proposed Change of Zoning, based on the findings and facts presented in the staff report and exhibits.

ATTACHMENTS:

1. Supporting documentation

AN ORDINANCE OF THE CITY OF APOPKA, FLORIDA, CHANGING THE ZONING FROM T (TRANSITIONAL) TO I-L (LIGHT INDUSTRIAL), FOR CERTAIN REAL PROPERTY GENERALLY LOCATED WEST OF OCOEE-APOPKA ROAD AND NORTH OF SR 414; OWNED BY THE RIDGE SELF-STORAGE, LLC COMPRISING 12.25 ACRES, MORE OR LESS; PROVIDING FOR SEVERABILITY, CONFLICTS, AND AN EFFECTIVE DATE.

WHEREAS, Joshua Edmondson, Poulos & Bennett, LLC has requested a change in zoning on said property as identified in Section I of this ordinance; and

NOW THEREFORE, BE IT ORDAINED, by the City Council of the City of Apopka, Florida, as follows:

Section II. That the zoning classification is consistent with the Comprehensive Plan of the City of Apopka, Florida. The applicant shall obtain all approvals as required, if any, per the Orange County Charter and the Amended Interlocal Agreement for Public School Facility Planning and Implementation of Concurrency.

Section IV. That if any section or portion of a section or subsection of this Ordinance proves to be invalid, unlawful, or unconstitutional, it shall not be held to invalidate or impair the validity, force or effect of any other section or portion of section or subsection or part of this ordinance.

Section VI. That this Ordinance shall take effect upon the date of adoption.

ORDINANCE NO. 3020

PAGE 2

49
50
51
52

ADOPTED at a regular meeting of the City Council of the City of Apopka, Florida, this
____ day of _____, 2023.

READ FIRST TIME: September 6, 2023

READ SECOND TIME AND
ADOPTED: _____

ATTEST:

Susan Bone, City Clerk

Bryan Nelson, Mayor

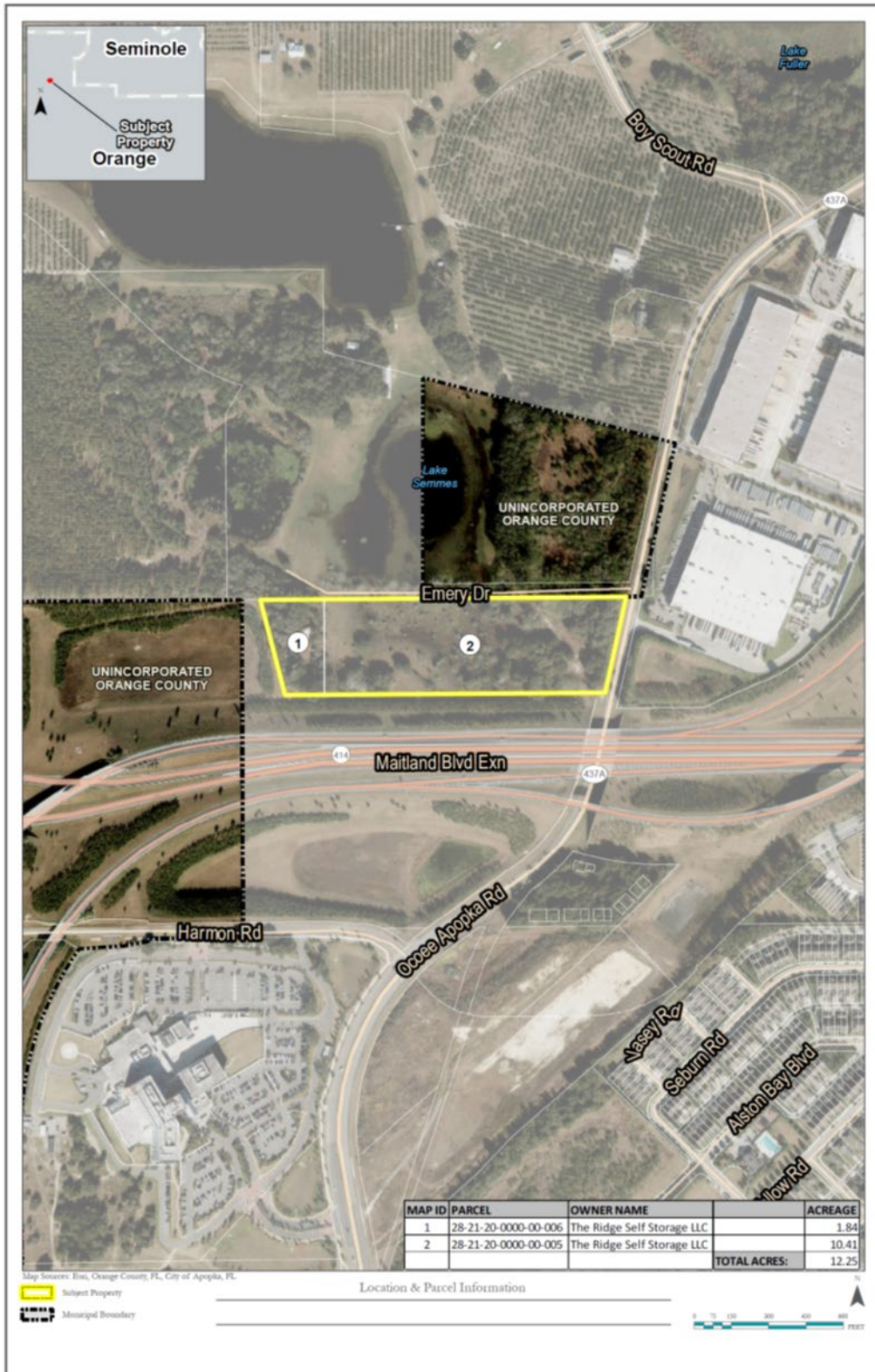
Approved as to form and legal sufficiency:

Cliff Sheppard, City Attorney

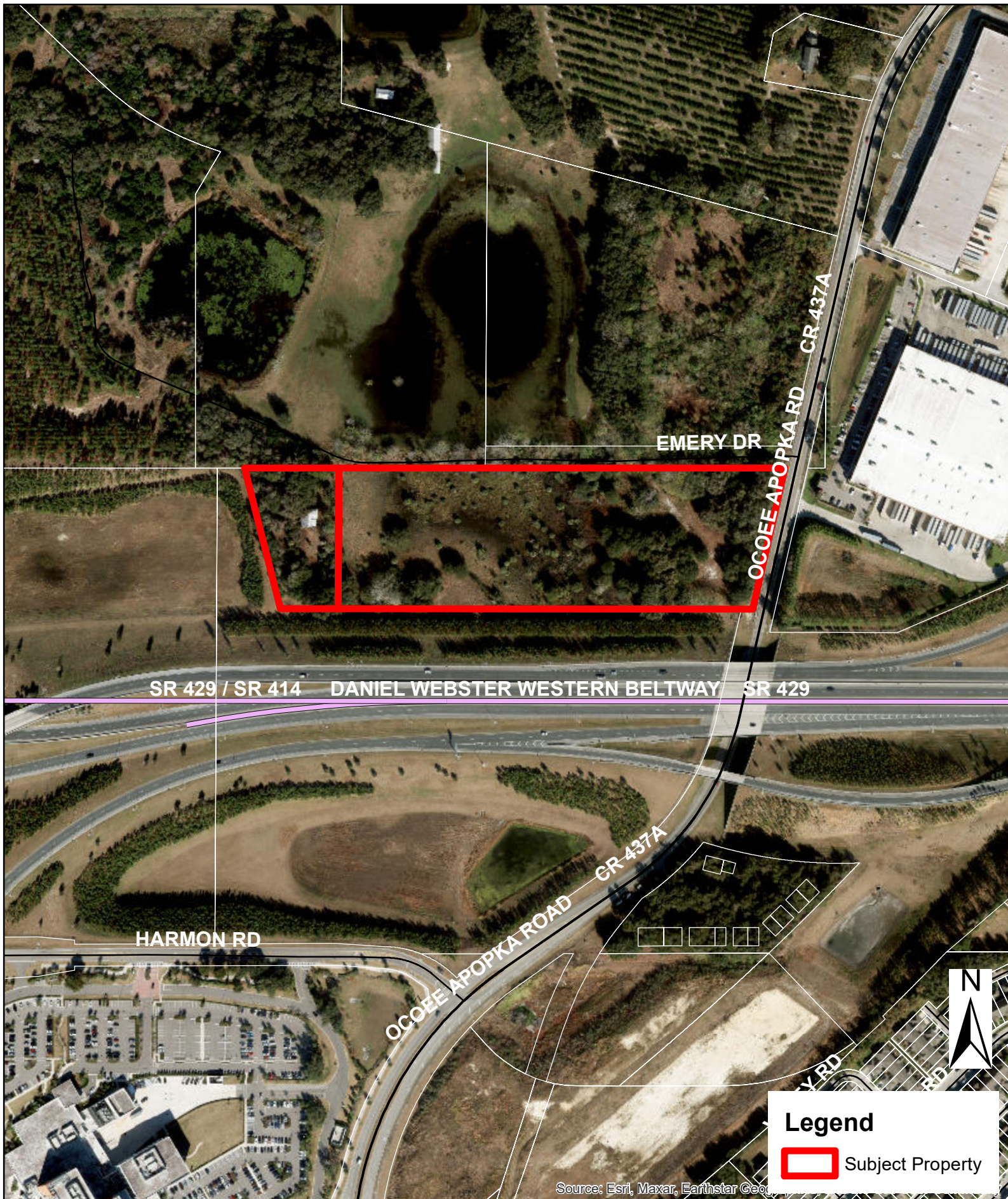
DULY ADVERTISED FOR PUBLIC HEARING: July 28, 2023

EXHIBIT "A"

Parcel Identification Number(s): 20-21-28-0000-00-005, 20-21-28-0000-00-006

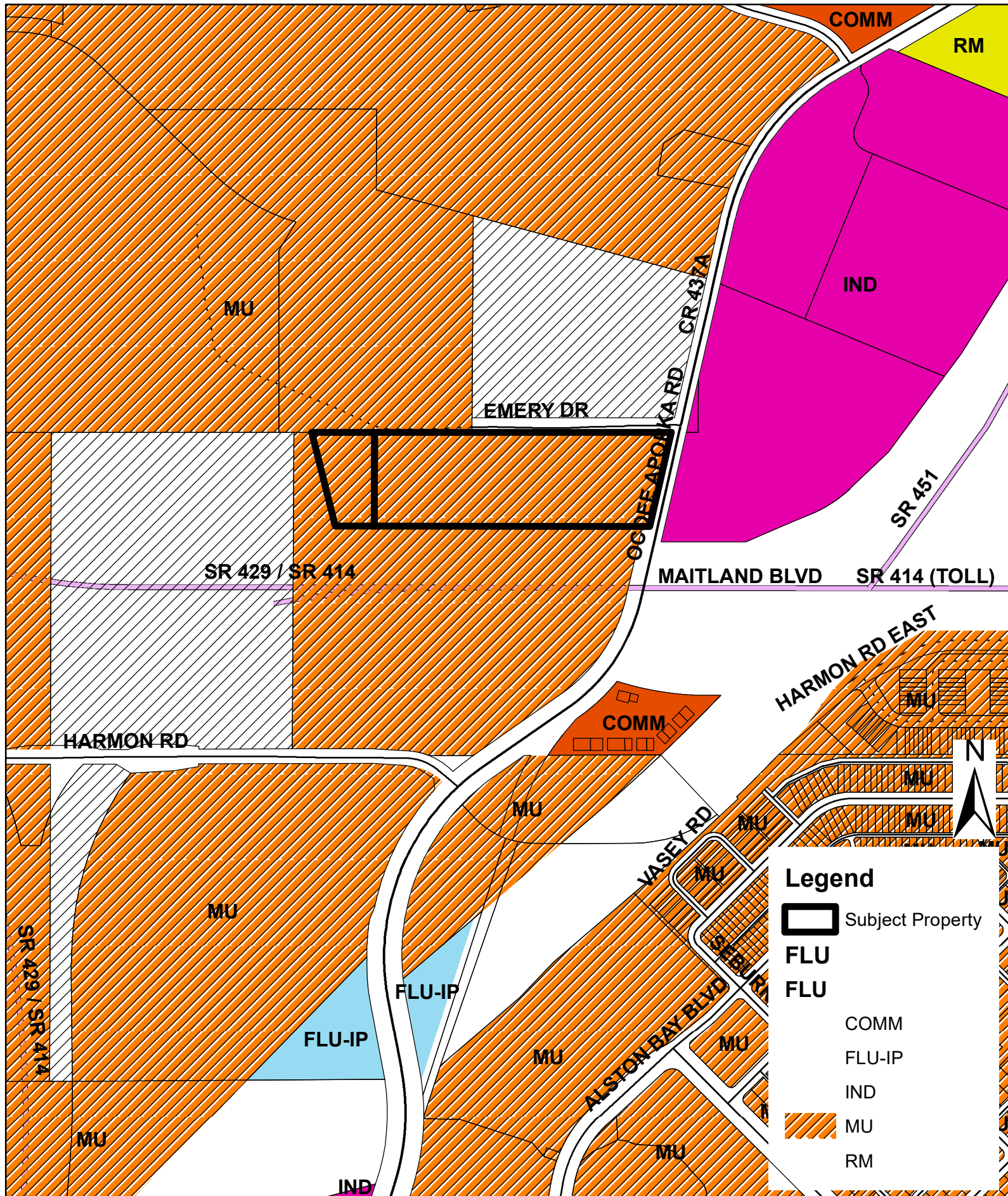


Aerial



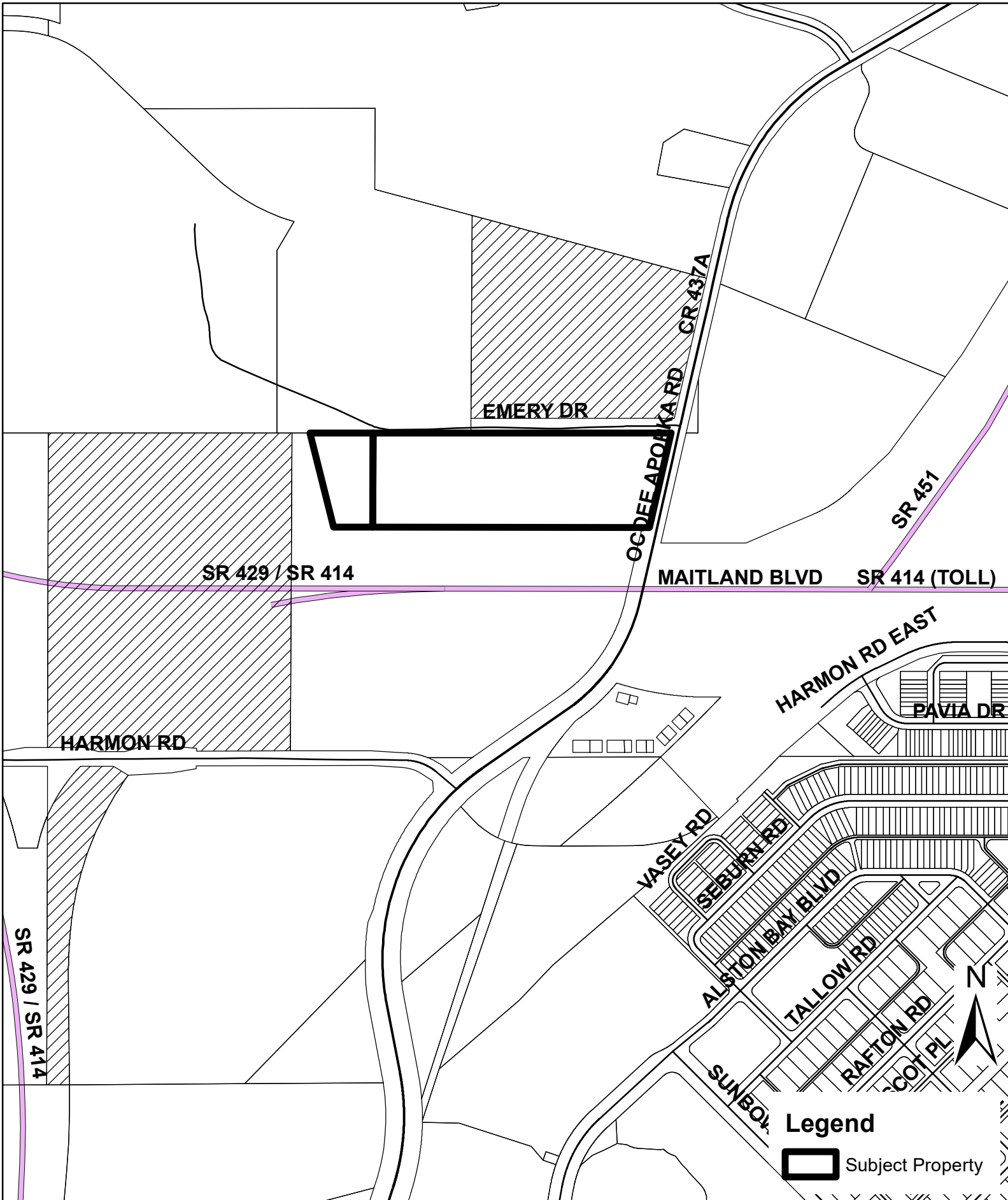
(THIS MAP IS FOR REFERENCE PURPOSES ONLY AND IS NOT TO SCALE)

Future Land Use



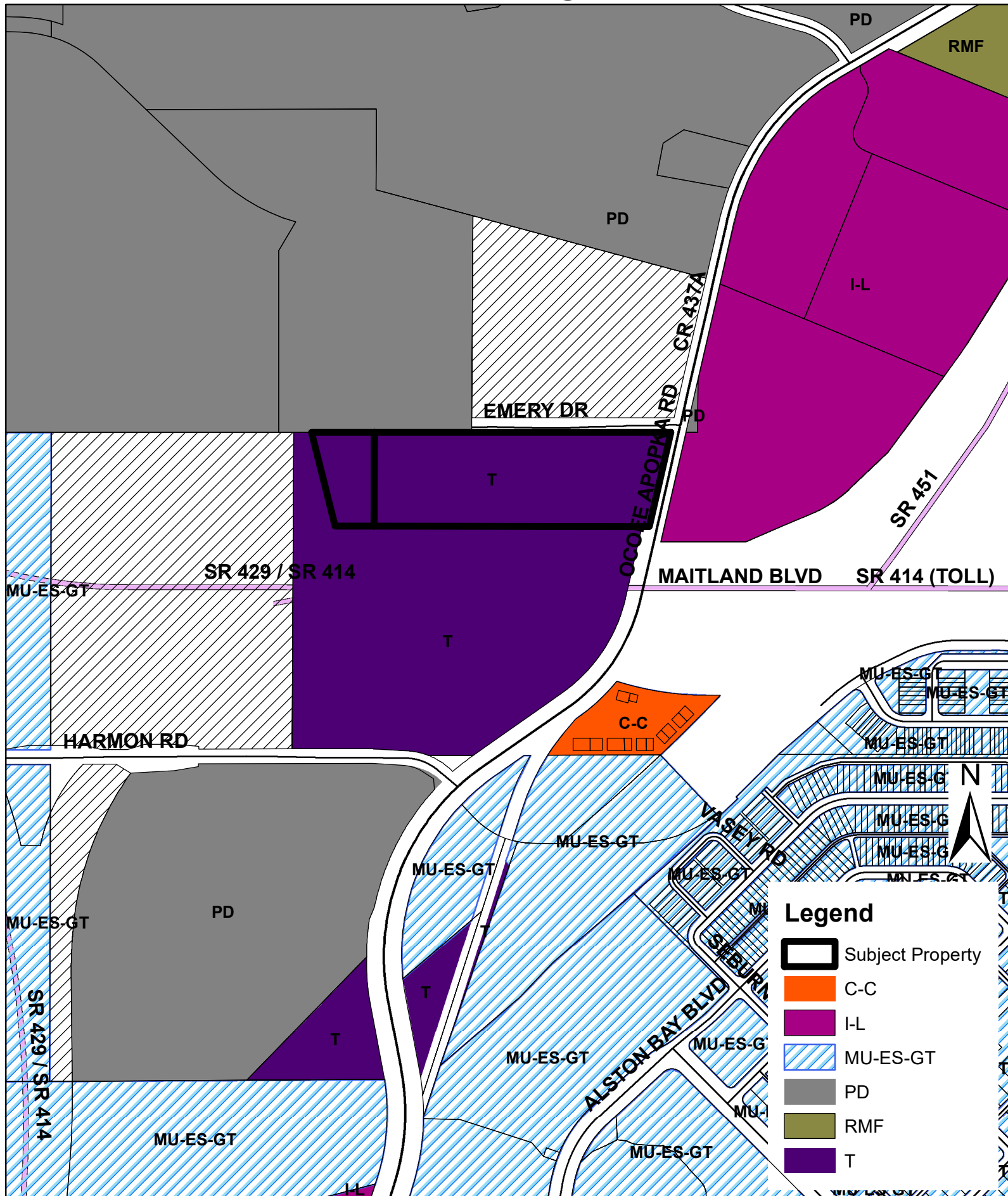
(THIS MAP IS FOR REFERENCE PURPOSES ONLY AND IS NOT TO SCALE)

Vicinity



(THIS MAP IS FOR REFERENCE PURPOSES ONLY AND IS NOT TO SCALE)

Zoning



(THIS MAP IS FOR REFERENCE PURPOSES ONLY AND IS NOT TO SCALE)



City of Apopka PLANNING COMMISSION STAFF REPORT

Section: PUBLIC HEARING

Item #: 3.

Meeting Date: August 8, 2023

Department: Community Development

SUBJECT:

Quasi Judicial - 4203 Hogshead Road - Special Exception

REQUEST:

Approve a Special Exception Use Permit to allow heavy equipment sales, rental, repair, servicing or storage in the I-L (Light Industrial) Zoning District

SUMMARY:

Zoning Report

This chart includes the relationships to adjacent properties.

Direction	Future Land Use	Zoning	Present Use
North	Industrial	I-L (Light Industrial)	Vacant
East	Industrial	I-L (Light Industrial)	Vacant
South	Industrial	I-L (Light Industrial)	Industrial warehouse
West	Industrial	I-L (Light Industrial)	Proposed outdoor storage facility

PROJECT SUMMARY:

The applicant intends to utilize the site for outdoor storage for construction equipment, trucks and truck trailers, which requires a Special Exception Use Permit within the I-L (Light Industrial) zoning district. Any repair of equipment shall be conducted within an enclosed building. Prior to commencement of the use on the property, the applicant shall submit a Construction Site Plan which is required to comply with all site design and other standards to the greatest extent practicable as noted in the Land Development Code, including buffering. Buffering must be provided per the requirements of the Land Development Code, including landscaping buffer Type E, which is required for Special Exception uses under Land Development Code Table 5.2.5.B.3.D-2. There is an existing 6-foot tall white PVC around the perimeter of the property that is not consistent with the aforementioned buffering requirements of the Land Development Code.

Per Land Development Code Section 2.5.1.G.4, a Special Exception is required to comply with the following standards:

- Will be consistent with the goals, objectives, and policies of the comprehensive plan;
- Will comply with all applicable zoning district standards;
- Will comply with all standards in Sec. 4.2.3, Standards Specific to Principal Uses, Standards for Specific Principal Uses;
- Will be appropriate for its location and is compatible with the general character of surrounding lands and the uses permitted in the zoning district;
- Will adequately screen, buffer, or otherwise minimize adverse visual impacts on adjacent lands;

- Will ensure that no site lighting source shall negatively impact adjacent properties and rights-of-way;
- Will maintain safe and convenient ingress and egress and traffic flow onto and through the site by vehicles and pedestrians, and safe road conditions around the site;
- Will avoid significant adverse odor, noise, glare, and vibration impacts on surrounding lands regarding refuse collection, service delivery, parking and loading, signs, lighting, and other site elements;
- Will not have an adverse impact on land values and the ability of neighboring lands to develop uses permitted in the zoning district;
- Will avoid significant deterioration of water and air resources, scenic resources, and other natural resources;
- Will not overburden existing public facilities and services, including, but not limited to, streets and other transportation facilities, schools, potable water facilities, sewage disposal, stormwater management, and police and fire protection facilities; and
- Will comply with all other relevant City, State, and federal laws and regulations.

PUBLIC HEARING SCHEDULE:

August 8, 2023 – Planning Commission (5:30 P.M.)

DULY ADVERTISED:

July 28, 2023 – Apopka Chief
 July 24, 2023 – Poster Placed on Property
 July 24, 2023 – Mailed Notices to Adjacent Property Owners

Development Review Committee: Recommends approval of a Special Exception to allow outdoor storage for construction equipment, trucks and truck trailers within the I-L (Light Industrial) zoning district, subject to the exhibits and findings of the staff report.

FUNDING SOURCE:

Not applicable

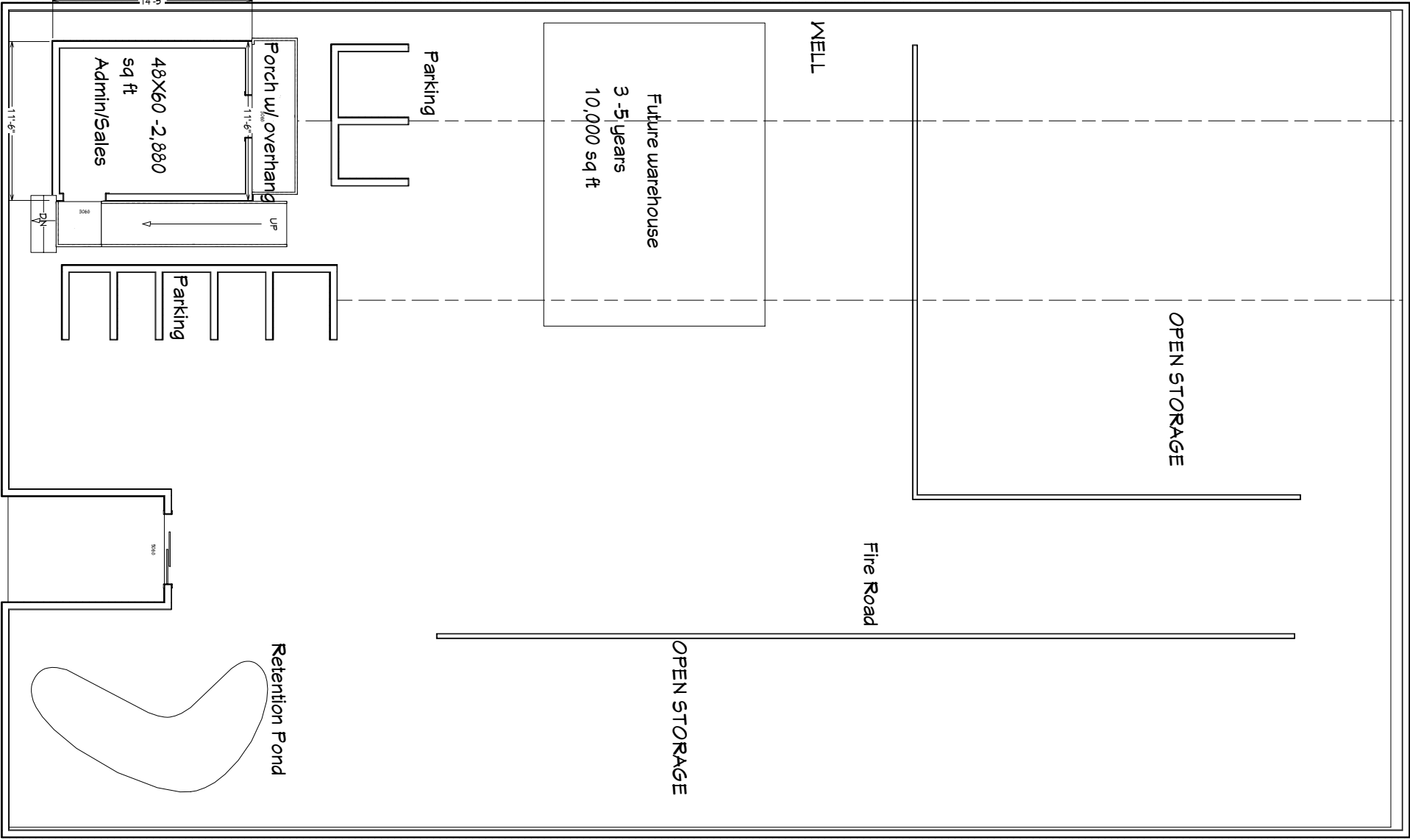
RECOMMENDED MOTION:

Approve a Special Exception to allow outdoor storage for construction equipment, trucks and truck trailers within the I-L (Light Industrial) zoning district, subject to the exhibits and findings of the staff report.

Planning Commission Role: Pursuant to the City of Apopka Code of Ordinances, Part III, Land Development Code, Article II, Section 2.3.2.B.1.a, the Planning Commission has the authority to take make decisions on special exception permits. Therefore, the Planning Commission may approve, deny or approve with conditions this application. An applicant may appeal the Planning Commission action to the City Council.

ATTACHMENTS:

1. Supporting documents



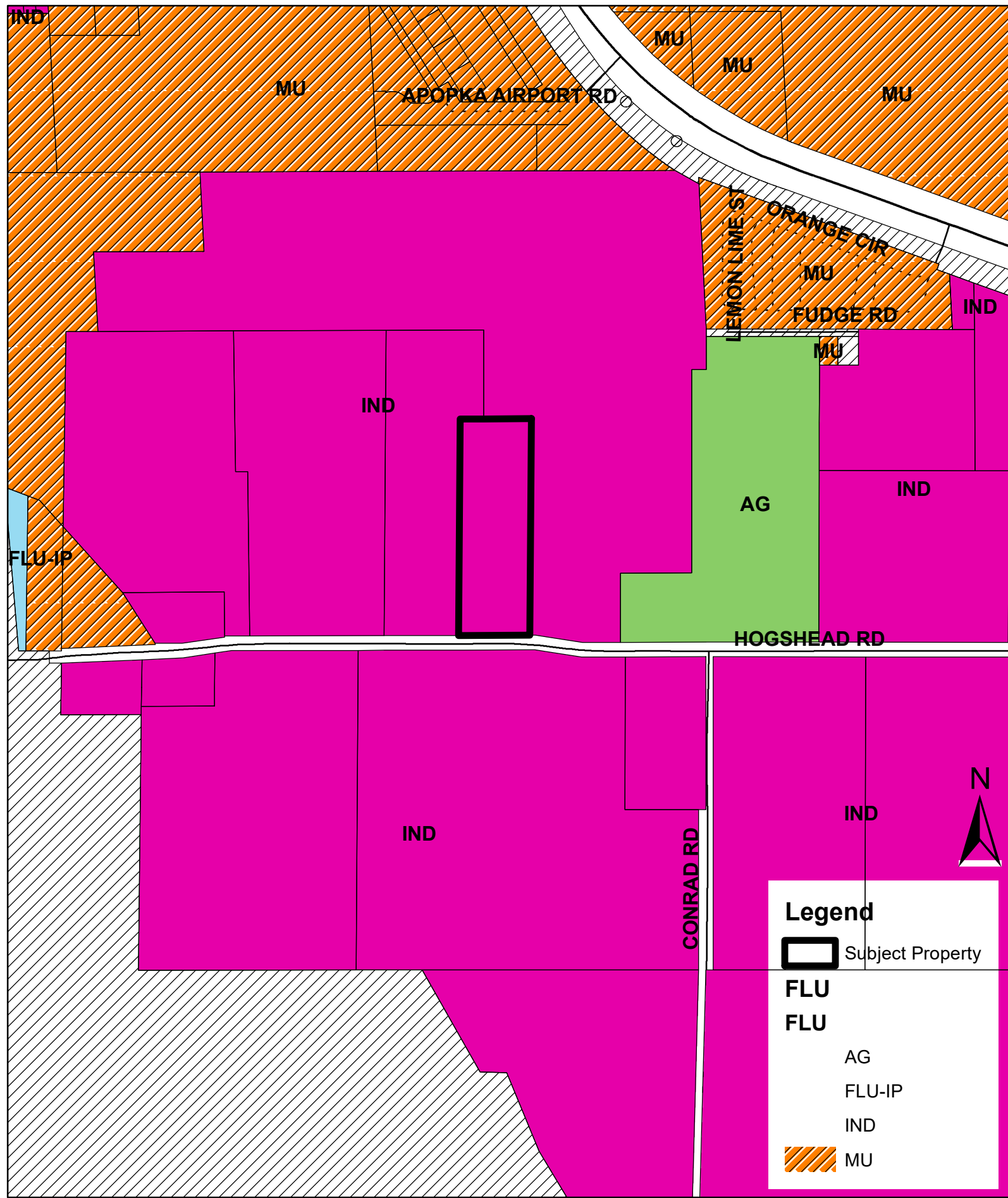
300'

Aerial



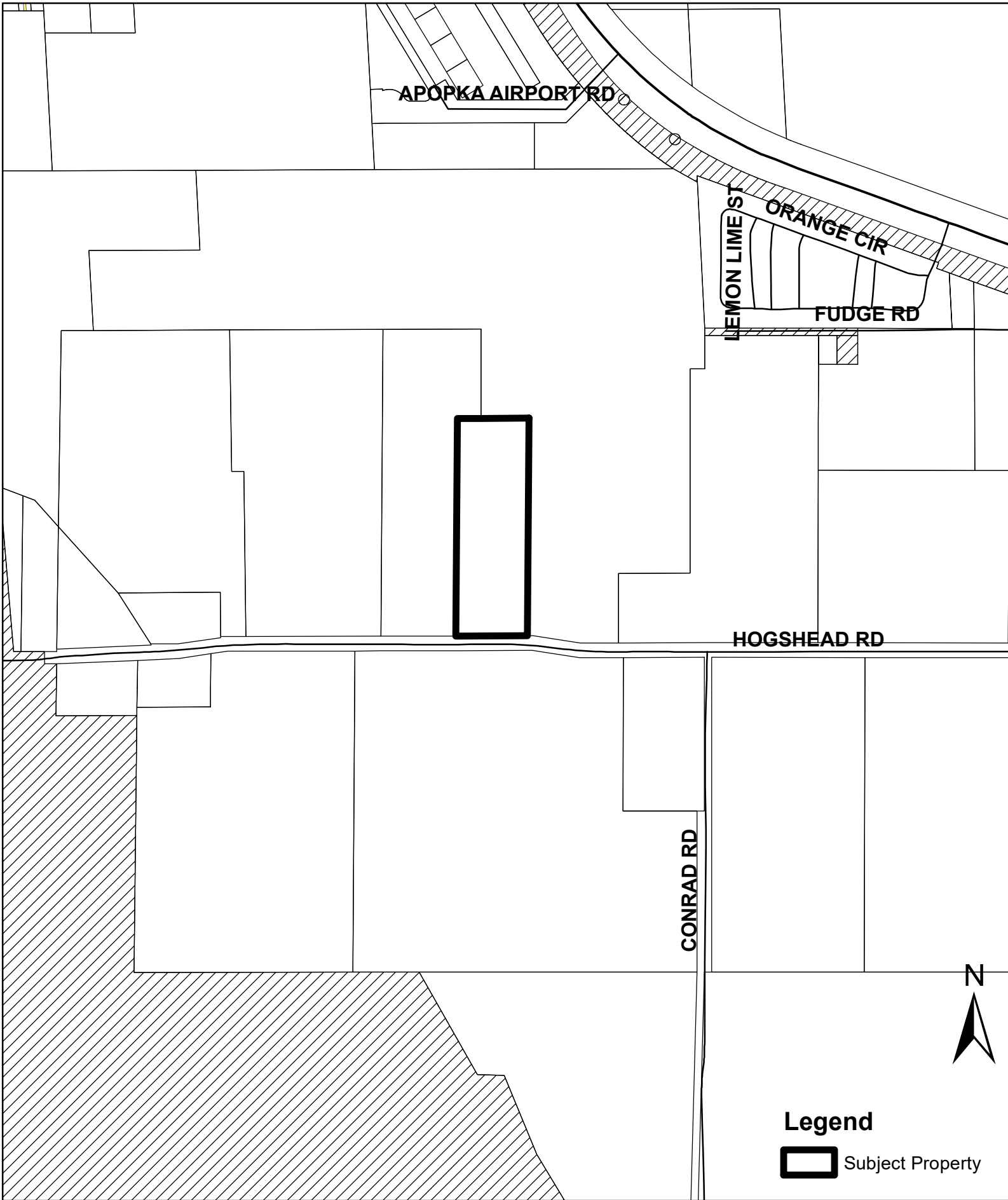
(THIS MAP IS FOR REFERENCE PURPOSES ONLY AND IS NOT TO SCALE)

Future Land Use



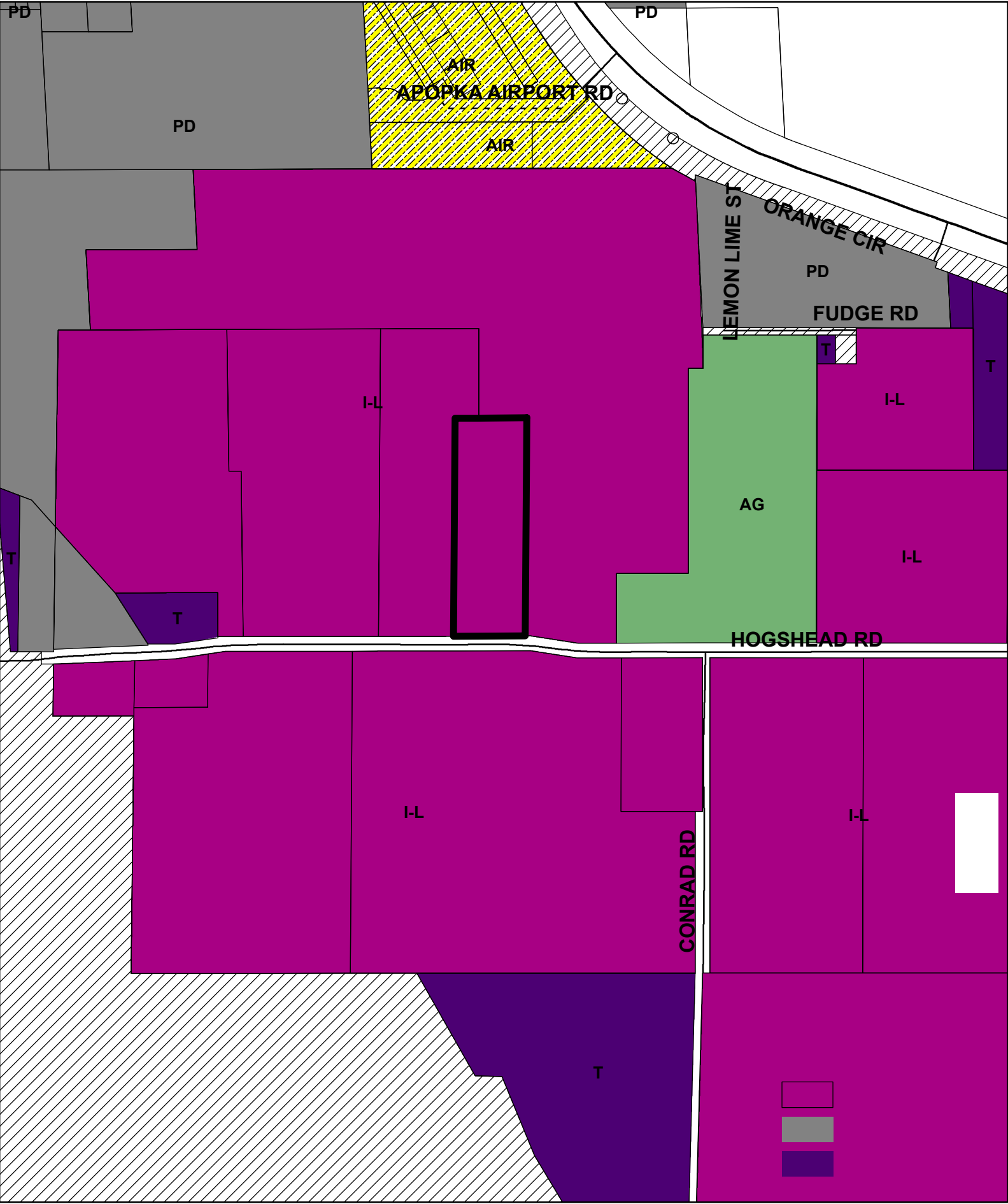
(THIS MAP IS FOR REFERENCE PURPOSES ONLY AND IS NOT TO SCALE)

Vicinity



(THIS MAP IS FOR REFERENCE PURPOSES ONLY AND IS NOT TO SCALE)

Zoning



(THIS MAP IS FOR REFERENCE PURPOSES ONLY AND IS NOT TO SCALE)



City of Apopka PLANNING COMMISSION STAFF REPORT

Section: PUBLIC HEARING

Item #: 4.

Meeting Date: August 8, 2023

Department: Community Development

SUBJECT:

Quasi Judicial - 4233 Hogshead Road - Special Exception

REQUEST:

Approve a Special Exception Use Permit to allow outdoor storage in the I-L (Light Industrial) Zoning District for a period not to exceed 12 months.

SUMMARY:

Zoning Report

This chart includes the relationships to adjacent properties.

Direction	Future Land Use	Zoning	Present Use
North	Industrial	I-L (Light Industrial)	Vacant
East	Industrial	I-L (Light Industrial)	Proposed outdoor storage facility
South	Industrial	I-L (Light Industrial)	Industrial warehouse
West	Industrial	I-L (Light Industrial)	Industrial storage

PROJECT SUMMARY:

The applicant is requesting a Special Exception to utilize the site for outdoor storage for a period not to exceed 12 months. Outdoor storage requires a Special Exception Use Permit within the I-L (Light Industrial) zoning district. The owner purchased the property for the purpose of building a maintenance facility for construction equipment and ancillary storage of the materials they use with their construction business. The twelve-month timeframe will allow the owner to have sufficient time to undertake the design and permitting of the proposed use, which is a maintenance facility for construction equipment and ancillary storage of materials used with the construction business. Prior to commencement of the use on the property, the applicant shall submit a Construction Site Plan which is required to comply with all site design and other standards to the greatest extent practicable as noted in the Land Development Code, including buffering. Buffering must be provided per the requirements of the Land Development Code, including landscaping buffer Type E, which is required for Special Exception uses under Land Development Code Table 5.2.5.B.3.D-2.

Per Land Development Code Section 2.5.1.G.4, a Special Exception is required to comply with the following standards:

- Will be consistent with the goals, objectives, and policies of the comprehensive plan;
- Will comply with all applicable zoning district standards;
- Will comply with all standards in Sec. 4.2.3, Standards Specific to Principal Uses, Standards for Specific Principal Uses;

- Will be appropriate for its location and is compatible with the general character of surrounding lands and the uses permitted in the zoning district;
- Will adequately screen, buffer, or otherwise minimize adverse visual impacts on adjacent lands;
- Will ensure that no site lighting source shall negatively impact adjacent properties and rights-of-way;
- Will maintain safe and convenient ingress and egress and traffic flow onto and through the site by vehicles and pedestrians, and safe road conditions around the site;
- Will avoid significant adverse odor, noise, glare, and vibration impacts on surrounding lands regarding refuse collection, service delivery, parking and loading, signs, lighting, and other site elements;
- Will not have an adverse impact on land values and the ability of neighboring lands to develop uses permitted in the zoning district;
- Will avoid significant deterioration of water and air resources, scenic resources, and other natural resources;
- Will not overburden existing public facilities and services, including, but not limited to, streets and other transportation facilities, schools, potable water facilities, sewage disposal, stormwater management, and police and fire protection facilities; and
- Will comply with all other relevant City, State, and federal laws and regulations.

PUBLIC HEARING SCHEDULE:

August 8, 2023 – Planning Commission (5:30 P.M.)

DULY ADVERTISED:

July 28, 2023 – Apopka Chief
 July 24, 2023 – Poster Placed on Property
 July 24, 2023 – Mailed Notices to Adjacent Property Owners

RECOMMENDED ACTION:

Development Review Committee: Recommends approval of a Special Exception to allow outdoor storage for a period not to exceed 12 months within the I-L (Light Industrial) zoning district, subject to the exhibits and findings of the staff report.

FUNDING SOURCE:

Not applicable

RECOMMENDED MOTION:

Approve a Special Exception to allow outdoor storage for a period not to exceed 12 months within the I-L (Light Industrial) zoning district, subject to the exhibits and findings of the staff report.

Planning Commission Role: Pursuant to the City of Apopka Code of Ordinances, Part III, Land Development Code, Article II, Section 2.3.2.B.1.a, the Planning Commission has the authority to take make decisions on special exception permits. Therefore, the Planning Commission may approve, deny or approve with conditions this application. An applicant may appeal the Planning Commission action to the City Council.

ATTACHMENTS:

1. Supporting documents

City of Apopka, Florida Parcel I.D. # 02-21-27-0000-00-025

by

G L SUMMITT
— ENGINEERING INC —

COMMENCE AT THE NORTHEAST CORNER OF SECTION 2,
TOWNSHIP 21 SOUTH, RANGE 27 EAST, ORANGE COUNTY,
FLORIDA; THENCE RUN S. 89°38'25" W., ALONG THE NORTH LINE
OF THE NORTHEAST QUARTER OF SAID SECTION 2, FOR 920.66
FEET, TO THE POINT OF BEGINNING OF TRACT 3; THENCE RUN S.
00°29'23" E. FOR 363.19 FEET; THENCE RUN S. 89°19'13" W. FOR
97.36 FEET; THENCE RUN S. 00°01'11" W. FOR 890.35 FEET TO A
POINT ON THE NORTHERLY RIGHT-OF-WAY LINE OF HOGSHEAD
ROAD; THENCE RUN S. 89°35'22" W. ALONG SAID RIGHT-OF-WAY
LINE, FOR 307.16 FEET TO THE WEST LINE OF THE NORTHEAST
QUARTER OF THE NORTHEAST QUARTER OF SAID SECTION 2;
THENCE RUN N. 00°01'11" E. ALONG SAID WEST LINE FOR 1254.19
FEET TO THE SAID NORTH LINE OF THE NORTHEAST QUARTER OF
SECTION 2; THENCE RUN N. 89°38'25" E. ALONG SAID NORTH LINE
OF THE NORTHEAST QUARTER OF SECTION 2 FOR 401.32 FEET, TO
THE POINT OF BEGINNING. CONTAINING 9.642 ACRES, MORE OR
LESS.

THE PROPOSED PROJECT CONSISTS OF A PROPOSED INDUSTRIAL USE WITH TEMP. OFFICE INCLUDING A PARKING AREA AND OPEN STORAGE AREA ACCESSORY TO THE TEMP. OFFICE USE.

Drawing Index

Owner
Capital Engines 12, LLC
7353 S EAGLE ST
ENGLEWOOD, CO 80112
Ph:
Fx:

Developer
Capital Engines 12, LLC
7353 S EAGLE ST
ENGLEWOOD, CO 80112
Ph:
Fx:

Surveyor
HLSM, LLC
302 Live Oaks Blvd.
Casselberry, Florida 32707
Ph: (407) 647-7346
Fx:

Civil Engineer
G L Summitt Engineering, Inc.
3667 Simonton Place
Lake Mary, FL 32746
Ph: (407) 323-0705
Fx: (407) 992-8650

Landscape Architect
Ravensdale Planning & Design, Inc.
5106 South Pointe Dr.
Inverness, Florida 34450
Ph: (407) 647-1213
Fx:

Architect
Ph:
Fx:

Drinking Water
City of Apopka
748 E. Cleveland St.
Apopka, Florida 32703
Ph: (407) 703-1731
Fx: (407) 703-1748

Sanitary Sewer
City of Apopka
748 E. Cleveland St.
Apopka, Florida 32703
Ph: (407) 703-1731
Fx: (407) 703-1748

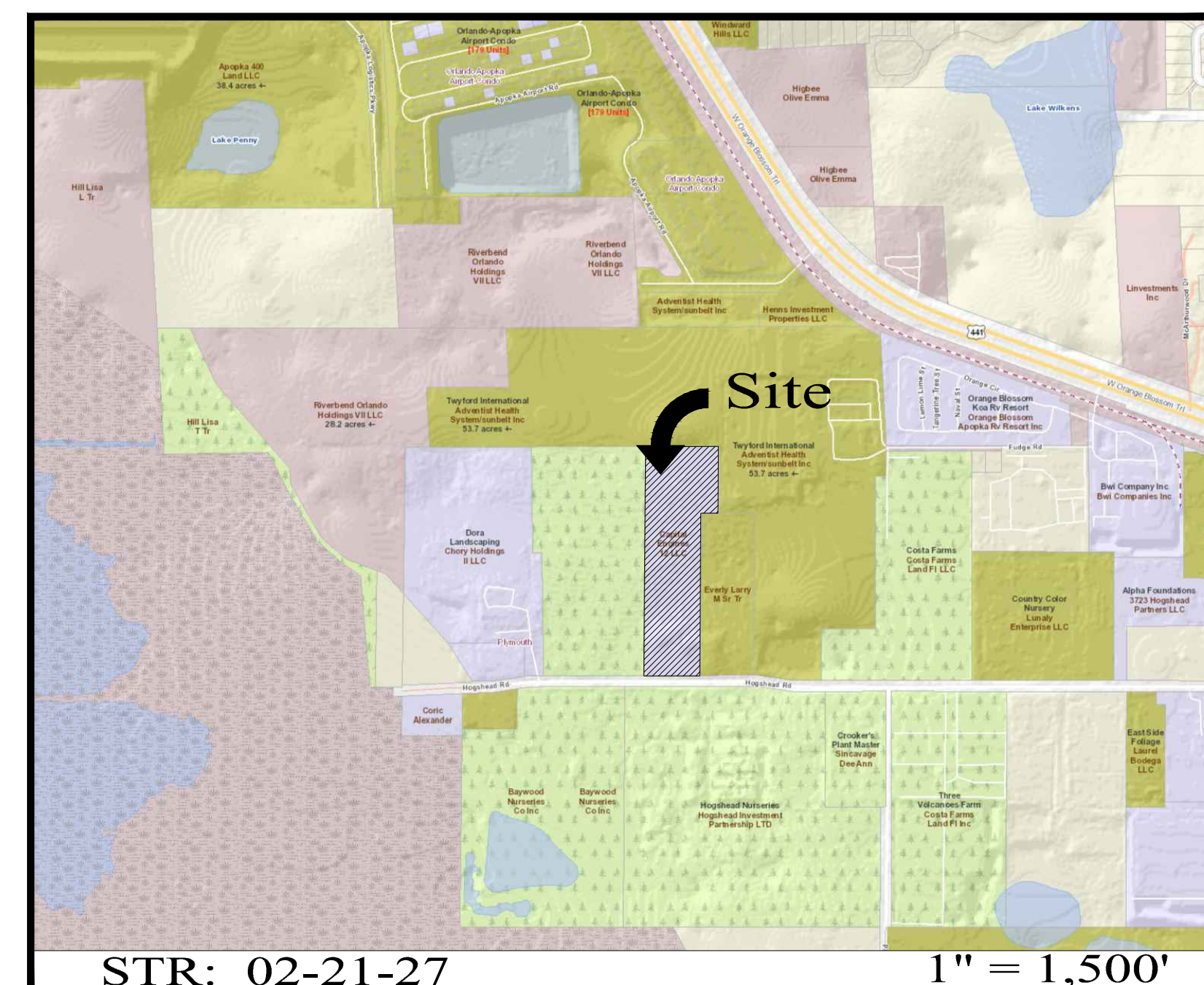
Garbage Disposal
City of Apopka
748 E. Cleveland St.
Apopka, Florida 32703
Ph: (407) 254-9900
Fx: (407) 254-9999

Reclaim Water

Electric Service
Duke Energy
3250 Bonnet Creek Rd Lake
Buena Vista, FL 32830
Ph: (407) 938-6621

Phone Provider
AT&T
1227 S. Division Ave.
Orlando, FL 34805
Ph: (407) 351-7100

Cable Provider
Spectrum Networks
100 Gordon St.
Sanford, Florida 32771
Ph: (321) 805-3081

[illegible]



No. 58775

Plans not valid unless Signed,
Dated and Sealed below.

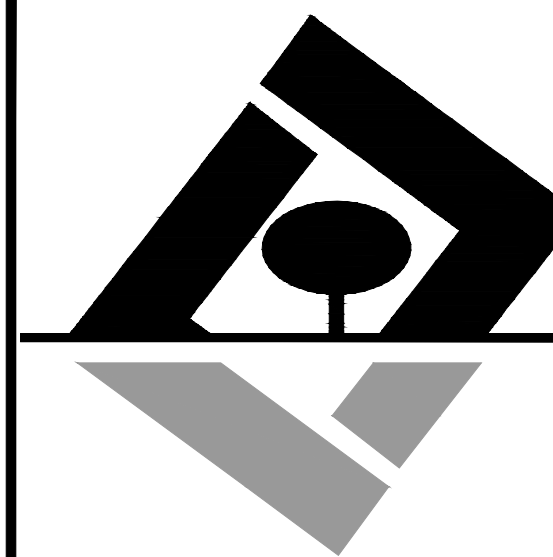
GEORGE F. MCINTOSH, P. E.

Date: May 17 2023
FL Registration #58775
Certificate of Authorization #29665

Revisions		
NO.	DATE	DESCRIPTION
1	05/11/2023	Special Exception Site Plan
2	/	/
3	/	/
4	/	/
5	/	/
6	/	/
7	/ / / / /	/ / / / /
8	/ / / / /	/ / / / /
9	/ / / / /	/ / / / /
10	/ / / / /	/ / / / /

SHEET NUMBER

1
OF
2



GL SUMMITT
—ENGINEERING INC—
Office: Lake Mary
3667 Simonton Place
Lake Mary, Florida 32746
phone: 407-323-0705
fax: 407-992-8650
www.GLSeng.com

This item has been digitally signed and sealed by Geoffrey L. Summitt, P.E. on
May 26 2023

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Capital Engines 12, LLC
7353 S EAGLE ST

Englewood, CO 80112

4233 Hogshead
Industrial Property
City of Apopka, Florida

Special Exception Plan

Coversheet

Plans not valid unless Signed,
Dated and Sealed below.

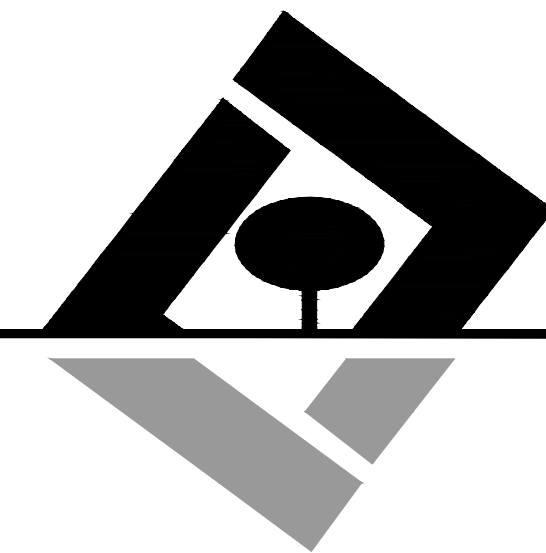
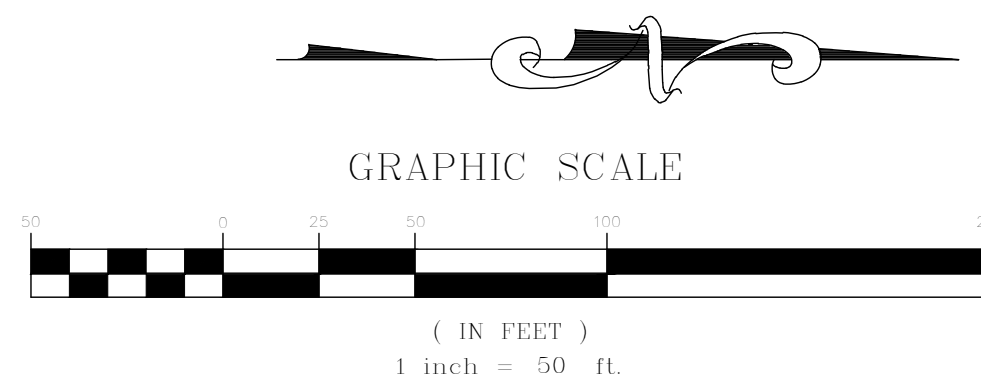
STATE OF
FLORIDA
DEPARTMENT OF
TRANSPORTATION
No. 58775

DATE: MAY 17 2023
FL REGISTRATION #58775
Certificate of Authorization #29665

JOE OFFREY, JR., ST. MARY, P. E.

Revisions		
NO.	DATE	DESCRIPTION
1	05/15/2017	Special Exception Site Plan
2	05/15/2017	_____
3	05/15/2017	_____
4	05/15/2017	_____
5	05/15/2017	_____
6	05/15/2017	_____
7	05/15/2017	_____
8	05/15/2017	_____
9	05/15/2017	_____
10	05/15/2017	_____

SHEET NUMBER
1 OF 2



G L SUMMITT
ENGINEERING INC.

Office: Lake Mary
3667 Simonton Place
Lake Mary, Florida 32746
phone: 407-323-0705
fax: 407-992-8650

www.GLSeng.com

Capital Engines 12, LLC
7353 S EAGLE ST
Englewood, CO 80112

4233 Hogshead
Industrial Property
City of Apopka, Florida

Special Exception
Plan

Special
Exception Site
Plan

Plans not valid unless Signed,
Dated and Sealed below.

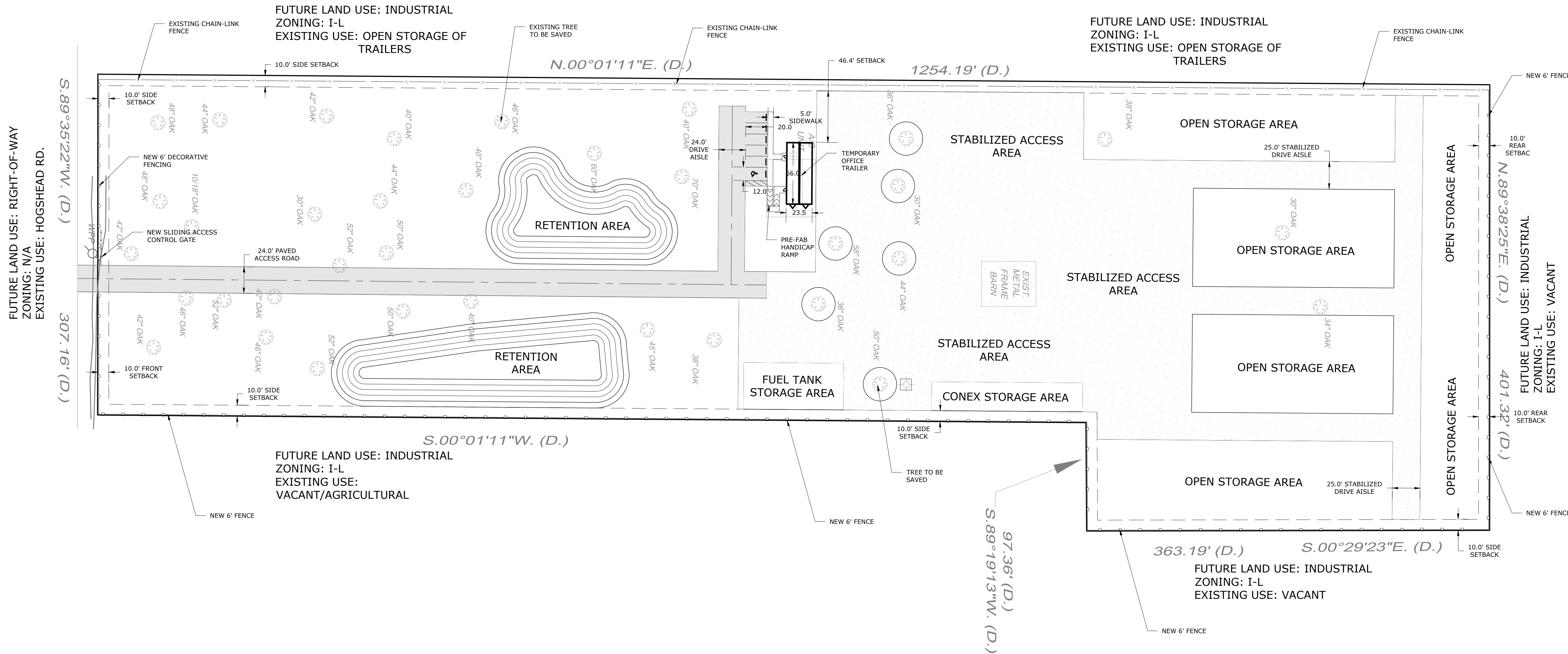
GEOFFREY L. SUMMITT, P.E.
Date: May 17, 2023
FL Registration #58775
Certificate of Authorization #29665

Revisions

NO.	DATE	DESCRIPTION
1	05/12/23	Special Exception Site Plan
2		
3		
4		
5		
6		
7		
8		
9		
10		

SHEET NUMBER

2 OF 2



SITE DATA:

Parcel I.D. #: 02-21-27-0000-00-025

Property FLU: Industrial
Property Zoning: I-L

Gross Land Area: 9.64 acres
Lakes/Wetland Area: 0.00 acres
Gross Developable Area: 9.64 acres
Right-of-Way Dedication: 0.00 acres
Net Developable Area: 9.64 acres

Stormwater Management Area: 0.75 acres
Right-of-Way Area: 0.00 acres
Public Open Space Tracts: 0.00 acres

Minimum Lot Area: 12,000 sqft.
Maximum Building Height: 35'
Minimum Lot Width: 100'
Minimum Lot Depth: N/A
Maximum F.A.R.: 40%
Minimum Open Space %: 5%

Setbacks:
Front: 10'
Side: 10'
Side Street: 15'
Rear: 10'; 30' (adjacent to residential zoned property)

Open Space Requirements:

Per Table 5.4.4: (Industrial 5% Developable Area)

9.64ac. * .05 = 0.48 acres (required)

Open Space Provided:

Retention Areas:	0.75 acres
Open Space:	2.50 acres
Total:	3.25 acres (0.48 required)

Major Street Setbacks:

Hogshead Rd. 25' (setback from right-of-way line)

Additional Notes:

- Billboards and pole signs shall be prohibited.
- There is no proposed 100 yr. Flood Plain encroachment.
- All Conservation Easements associated buffers area will be owned & maintained by the HOA with a development rights Easement dedicated to the City of Apopka via plat.
- The Property Owner will maintain and own all common area tracts as reflected in the tract table.
- Fire Protection will be provided by City of Apopka in accordance with the 2018 Florida Fire Prevention Code.
- The code encourages the use of "Green Building" principles for the construction of all buildings in the form-based code area. Items such as reusable building materials, light colored roof materials and building finishes, stormwater reuse and energy efficient windows, doors and HVAC equipment are all encouraged for use in construction.

Off-Street Parking:

Required Parking:

1 spaces per 500 sqft (Contractor Office): (1,200 sqft x 1 spaces/500sqft) = 2.4

Total Required Parking: 3
Provided Parking: 5 spaces
10x20 Paved Spaces: 5 spaces
Handicap Spaces: 1 space(s)
Total Parking Provided: 6 spaces

Phasing:

This project is to be developed in multiple phases:

Phase 1: Temporary Office with Open Storage Special Exception
Phase 2: Permanent Office/Maintenance Building (timing based on utility availability)

Traffic:

Large Equipment Maintenance: 192 d.u. * 9.57 trip/d.u. = 1,838 A.D.T.

Stormwater Management:

The project will meet the requirements of City of Apopka Land Development Code and the St. Johns River Water Management District.

Needed Fire Flow (NFF): (Based on FFPC 2018 Edition Chapter 18 & Annex I)

Type V Construction < 10,000: 1,500 gpm

Water, Sewer and Solid Waste Demand:

Water Demand:
0.40 ERU's * 350 gallons/day = 140 gallons/day (Well Provided)

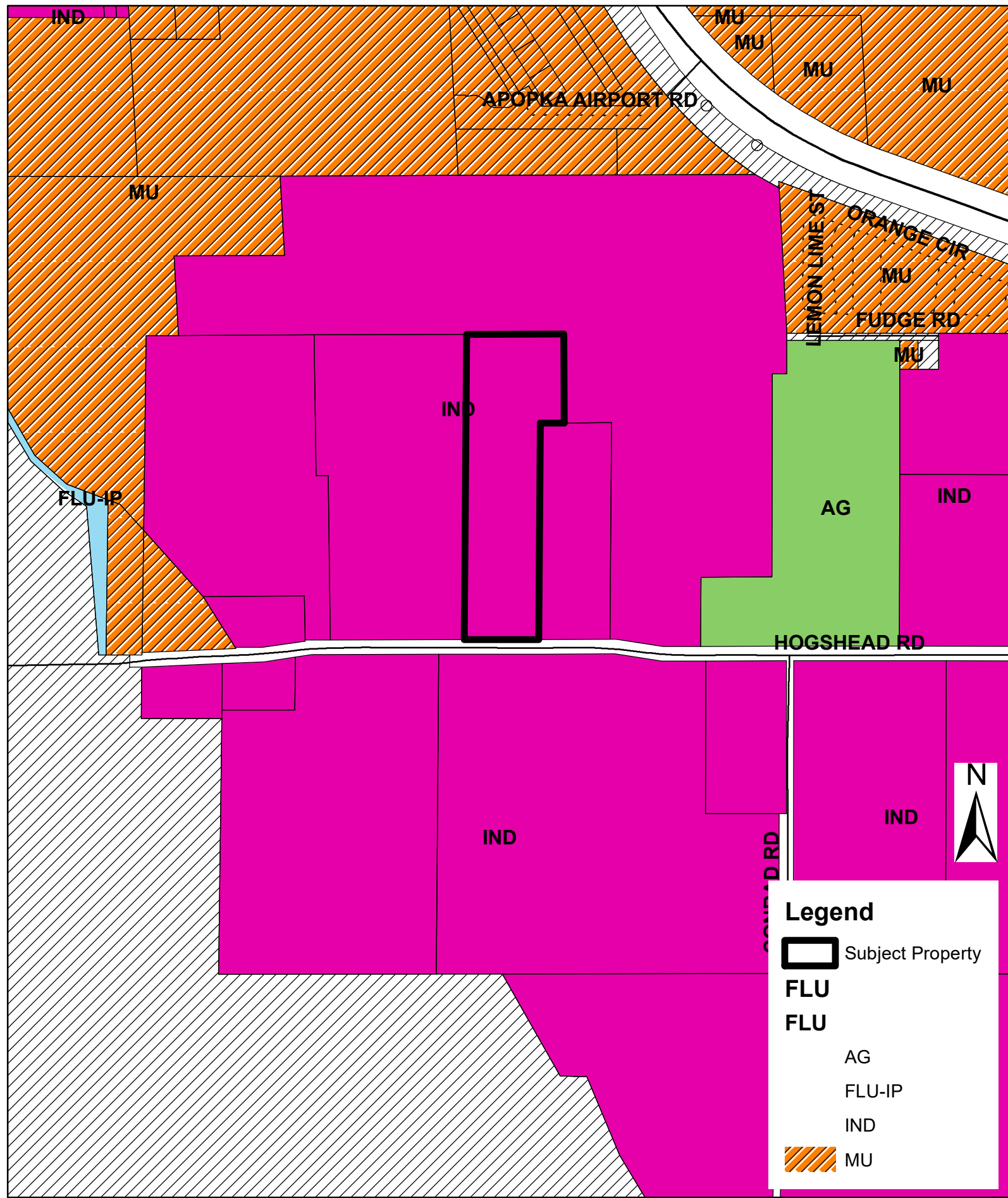
Sewer Demand:
0.40 ERU's * 300 gallons/day = 120 gallons/day (Storage Tank)

Aerial



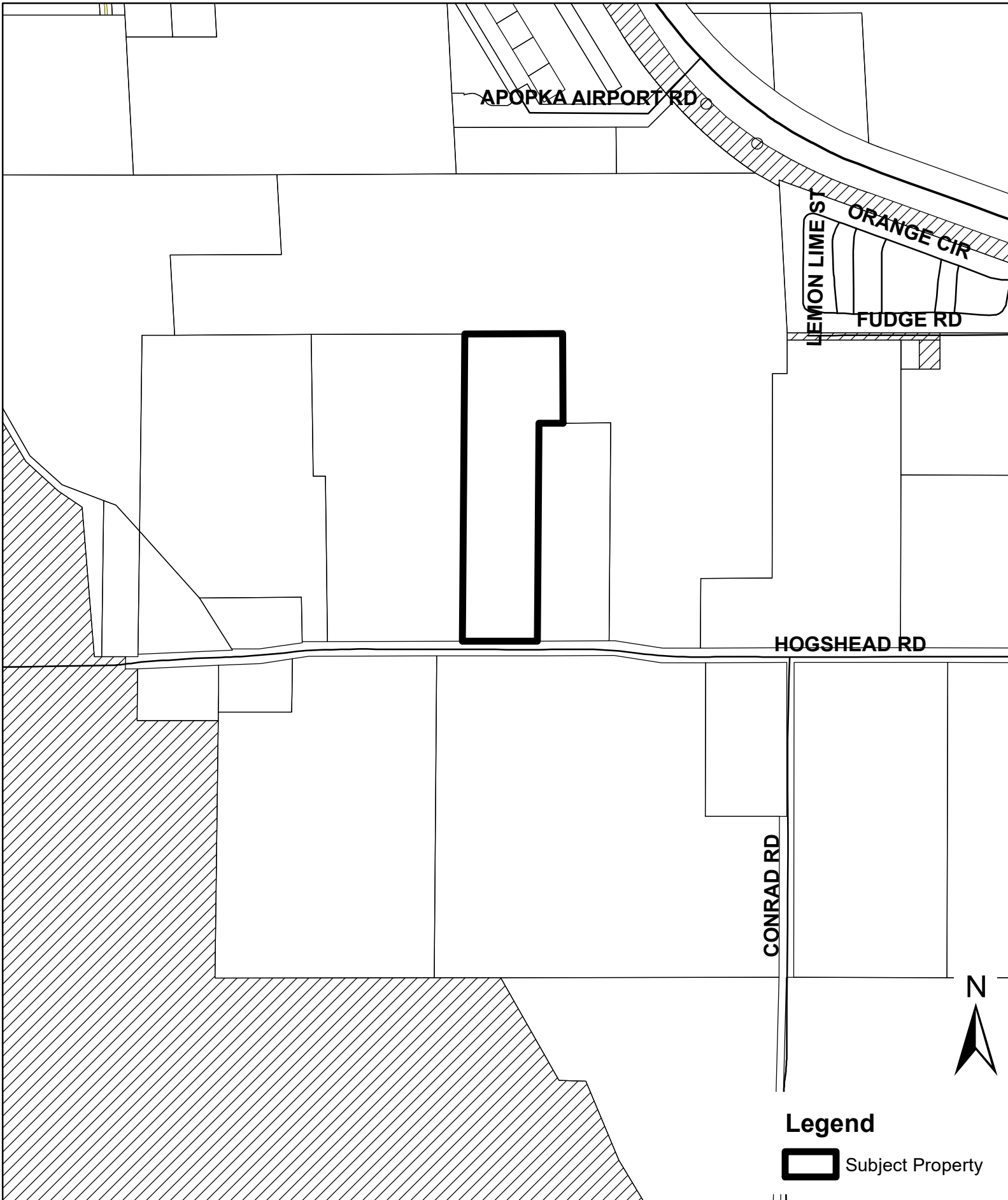
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Future Land Use



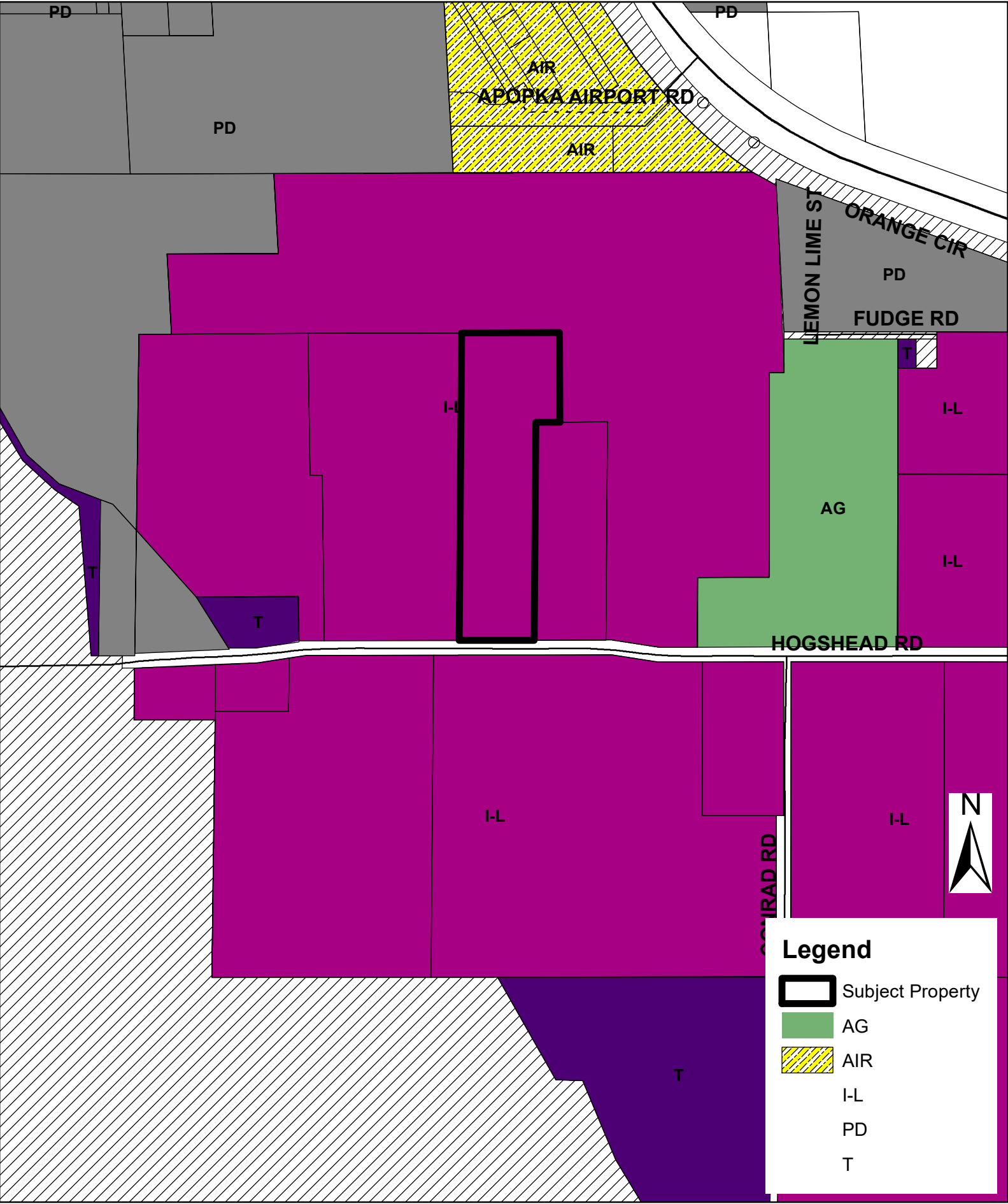
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Vicinity



(THIS MAP IS FOR REFERENCE PURPOSES ONLY AND IS NOT TO SCALE)

Zoning



(THIS MAP IS FOR REFERENCE PURPOSES ONLY AND IS NOT TO SCALE)



City of Apopka PLANNING COMMISSION STAFF REPORT

Section: PUBLIC HEARING

Item #: 5.

Meeting Date: August 8, 2023

Department: Community Development

SUBJECT:

Quasi Judicial – Shoppes at East Shore Retaining Walls – Variance

REQUEST:

Allow a maximum height for retaining walls up to ten feet in lieu of the six-foot height maximum within the Shoppes at East Shore.

SUMMARY:

Owner(s): Shoppes at East Shore, LLC

Applicant: Shoppes at East Shore, LLC c/o Jamie Bennett, Planning & Entitlements Manager and L. Jordan Draper, P.E.

Parcel Identification Numbers: 20-21-28-0000-00-021, 20-21-28-0000-00-024, 20-21-28-0000-00-025, and 20-21-28-0000-00-028

Location: Northeast corner of Ocoee Apopka Road and Keene Road

Future Land Use: Mixed-Use

Existing Use: Vacant

Zoning: Planned Development (PD)

Tract Size: 28.02+/- Acres

Zoning Report

This chart includes the relationships to adjacent properties.

Direction	Future Land Use	Zoning	Present Use
North	Mixed-Use	MU-ES-GT (Mixed-Use – East Shore – Gateway)	Emerson Park Townhomes
East	County Rural	County A-1 (Citrus Rural)	Single Family Residences
South	Office and County Rural	O (Office) and County A-1	Vacant and Orange County Waste Management
West	Residential High and HDR-25	PD (Planned Development) and T (Transitional)	Jefferson Apartments and Vacant

PROJECT SUMMARY:

The applicant is requesting a variance from Land Development Code (LDC) Section 5.5.11 Retaining Walls to allow a maximum height for retaining walls up to ten feet in lieu of the six-foot height maximum within the Shoppes at East Shore.

APPLICABLE CITY CODES:

- LDC Section 5.5.11 Retaining Walls
- LDC Section 2.5.5(A) Zoning Variance
-

VARIANCE PROCESS:

Per Land Development Code Section 2.5.5(A)(5), the Planning Commission shall make initial determination of the following to approve a variance (Step 1):

1. Section 2.5.5(A)(5)(1). Whether the need for the proposed variance arises out of the physical surroundings, shape, topographical condition, or other physical or environmental conditions that are unique to the specific property involved. If so, the Planning Commission shall make the findings in subsection b., below, based on the granting of the variance for that site alone.
2. Section 2.5.5(A)(5)(2). If the condition is common to numerous sites so that requests for similar variances are likely to be received, the Planning Commission shall make the required findings based on the cumulative effect of granting the variance to all who may apply.
3. Section 2.5.5(A)(5)(3). No nonconforming use of neighboring lands, structures, or buildings in other zoning districts shall be considered grounds for the authorization of a zoning variance.

Nine Variance Criteria Findings:

If the Planning Commission makes a positive determination of each item in Step 1 above, the second step is to make a finding on the nine criteria below. A zoning variance shall be approved only on a finding the applicant demonstrates there is competent substantial evidence in the record that on each of the following nine criteria and responses.

1. There are practical difficulties in carrying out the strict letter of the regulation [in] that the requested variance relates to a hardship due to characteristics of the land and not solely on the needs of the owner. There are practical difficulties in carrying out the strict letter of the relevant requirements of the LDC in that the requested variance relates to a hardship due to characteristics of the land and not solely the needs of the land owner.

Applicant's Response: The subject property, in its existing condition, contains upwards of 68 feet of elevation change. This change is best exemplified in the significant fall from the south-eastern boundary of the property at W. Keene Road (EL. 130') to the north-eastern boundary of the property (EL. 62'). The highest point of the site is along W. Keene Road reaching an elevation of 130'.

Given the extreme characteristics of the land by way of large elevation changes across the property, a number of retaining walls are required to meet existing road elevations at points of access, while maintaining ADA accessible sidewalks to the public right-of-way and avoiding impacting elevations of the abutting properties to the north and east. The scale of the project requires multiple points of access to the existing road network. More specifically, three points of access are proposed along Ocoee Apopka Road (EL 80', 82' and 86') and one point of access along W. Keene Road (EL 130'). Additionally, an intersection improvement is planned for the existing intersection of Ocoee Apopka Road and W. Keene Road (EL 77').

Section 5.5.11 of the City of Apopka Land Development Code (LDC), if followed strictly, would require additional sections of tiered walls on the northern and eastern boundaries of the site. Therefore, the subject variance request seeks a) increased slope of maintenance areas above and below retaining walls from 10:1 max slope to 4:1 max slope and b) increased height of retaining walls in select location (not to exceed 10-foot wall height). Approval of the requested variance would allow the development to maintain the current design without additional tiers, provide smoother grade transitions between uses in the development and maintain ADA access to the public right of ways.

Staff's Response: Staff has no objection.

2. The variance request is not based exclusively upon a desire to reduce the cost of developing the site.

Applicant's Response: The variance request is not based exclusively upon a desire to reduce the cost of development. If Sec. 5.5.11. was implemented strictly, additional tiers of retaining wall would be required on the site. However, the site is physically and topographically constrained, particularly in the locations of the proposed retaining walls. The desire of the requested variance is to exercise the reasonable use of the land and demonstrate the inability to add additional tiers of retaining wall. Therefore, the purpose of the variance request is not based

exclusively upon a desire to reduce the cost of development.

Staff's Response: Staff has no objection.

3. The proposed variance will not substantially increase congestion on surrounding public streets.

Applicant's Response: The variance request does not impact traffic generation, therefore does not increase congestion on the surrounding public streets.

Staff's Response: Staff has no objection.

4. The proposed variance will not substantially diminish property values in the area surrounding the site

Applicant's Response: The variance request will not substantially decrease or diminish surrounding property values. If approved, the retaining wall configurations would allow a smoother grade transition in key areas of the site, particularly on the northern and eastern perimeter, which abuts single family residential. As such, the variance request will not substantially diminish surrounding property values and may provide a better condition adjacent to neighboring properties than the Code requires (as written).

Staff's Response: Staff has no objection.

5. The proposed variance will not substantially alter the essential character of the area surrounding the site.

Applicant's Response: The variance requested will not substantially alter the essential character of the area surrounding the site. Developments along Ocoee Apopka Road, both north and south of the subject property, have constructed retaining walls of varying heights. Therefore, retaining walls are characteristic of this geographic area. Retaining walls taller than six feet and increased maintenance slopes are a reflection and function of the surrounding topography and fit the needs of mixed-use developments desired for this corridor.

Staff's Response: Staff has no objection.

6. The effect of the proposed variance is in harmony with the general intent of the LDC and the specific standards for which the variance is granted;

Applicant's Response: The requested variance for an increase in the maximum wall height from six feet to a maximum of 10 feet is well within industry and engineering standards for retaining wall maximum heights. The proposed walls will provide safety railings for fall protection, also in keeping with the safety standards of the Florida Building Code and the City of Apopka's LDC.

The request for increased slopes from a maximum of 10:1 to a maximum of 4:1 is generally in harmony with the LDC. A 4:1 slope is a design-standard, maintainable slope that should not impede the ability to provide periodic wall maintenance, as is the intent of the current code section.

Staff's Response: Staff has no objection.

7. Special conditions and circumstances do not result from the actions of the applicant.

Applicant's Response: The requested variance is a result of the existing characteristics of the land and abutting properties, not the actions of the applicant. No special conditions and circumstances shall result from approval and implementation of the subject request.

Staff's Response: Staff has no objection.

8. The proposed variance will not create safety hazards and other detriments to the public.**Applicant's Response:**

The proposed variance will not create safety hazards and other detriments to the public. The requested wall heights are within industry standards heights for retaining wall systems. Safety railings, per the LDC, will be installed on top of wall.

Staff's Response: Staff has no objection.

9. The variance is the minimum variance which will make possible the reasonable use of the land, building or structure.

Applicant's Response: The wall height and maintenance slope variance being requested is the minimum amount possible to prevent the need for additional wall tiers, while still meeting industry design standards for site development slopes and maintaining appropriate ADA access throughout the property and to public right of ways.

Staff's Response: Staff has no objection.

PUBLIC HEARING SCHEDULE:

August 8, 2023 – Planning Commission (5:30 P.M.)

DULY ADVERTISED:

July 21, 2023 – Apopka Chief and Mailed Notices to Adjacent Property Owners

July 24, 2023 – Placards on Placed on Property

Attachments:

- Shoppes at East Shore – Vicinity
- Shoppes at East Shore Retaining Walls – VAR Site Plan

FUNDING SOURCE:

Not applicable.

RECOMMENDED MOTION:

Development Review Committee:

The Development Review Committee (DRC) does not have any objection to this variance request.

Planning Commission Role:

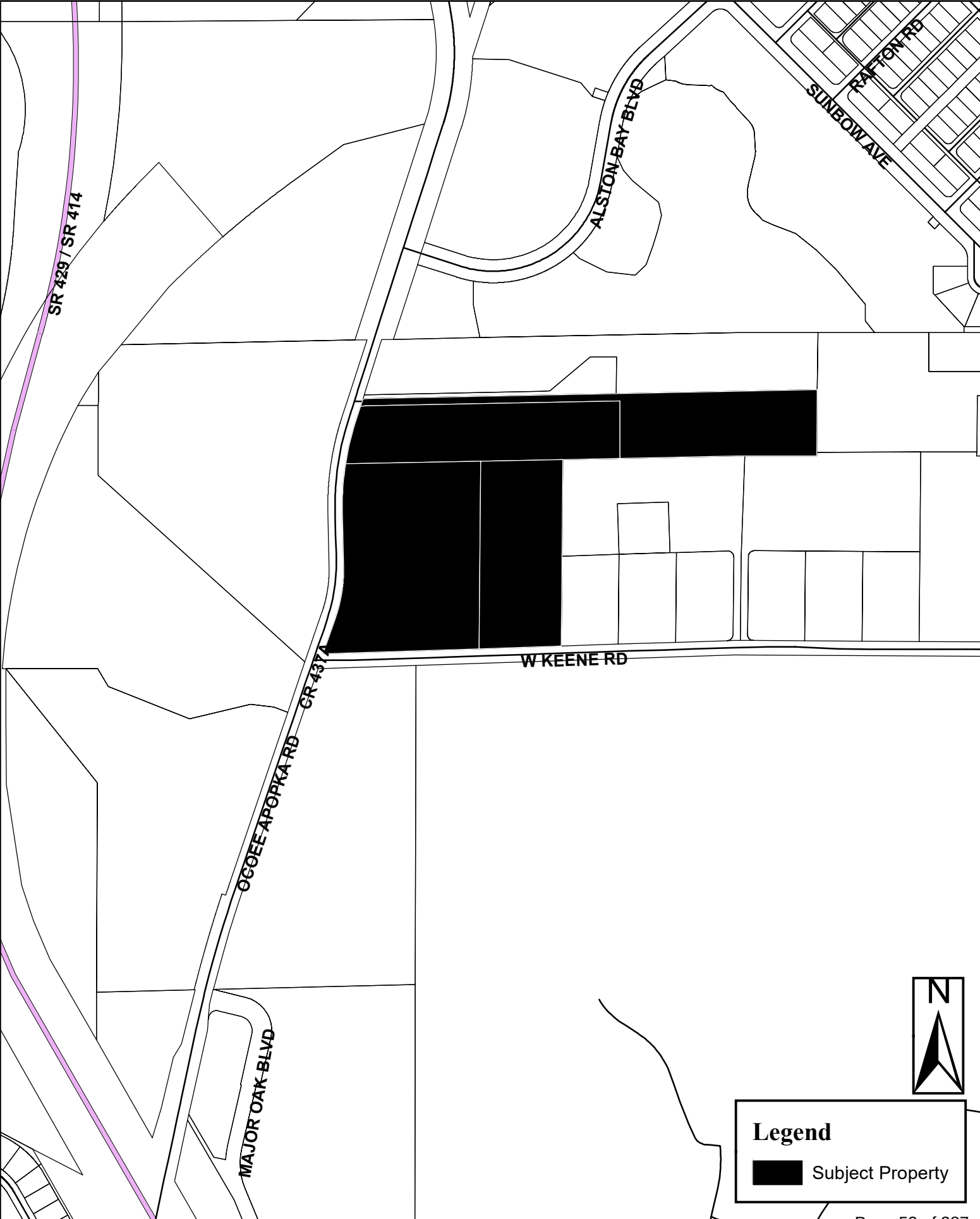
The Planning Commission shall review the application at a quasi-judicial hearing and render a decision based on the review standards in Section 2.5.5(A)(5) Standards. The Planning Commission decision shall be one of the following:

1. Approval of the variance;
2. Approval of the variance subject to modification and/or condition; or
3. Denial of the variance.

ATTACHMENTS:

1. Shoppes at East Shore - Vicinity
2. Shoppes at East Shore Retaining Walls - VAR Site Plan

Vicinity





City of Apopka PLANNING COMMISSION STAFF REPORT

Section: PUBLIC HEARING

Item #: 6.

Meeting Date: August 8, 2023

Department: Community Development

SUBJECT:

Quasi Judicial - Wyld Oaks Golden Gem/Neighborhood Properties - Special Exception

REQUEST:

Approve a Special Exception Use Permit to allow duplex residential use for the Wyld Oaks Golden Gem/Neighborhood Properties.

SUMMARY:

Owner(s): Kelly Park VB Development, LLC

Applicant: Lowndes Law Firm c/o Tara Tedrow, Esq.

Parcel Identification Numbers: 13-20-27-0000-00-072, 13-20-27-0000-00-037, 13-20-27-0000-00-059, 13-20-27-0000-00-036, 13-20-27-0000-00-038, 13-20-27-0000-00-056, 13-20-27-0000-00-024

Location: West of SR 429, east of Golden Gem Road and north of Capital Reef Way

Future Land Use: Mixed-Use

Existing Use: Vacant

Zoning: Kelly Park Interchange – Mixed-Use (KPI-MU); Neighborhood and Employment Overlay Districts

Tract Size: 39.78 +/- Acres

Proposed Use: Duplex use

Zoning Report

This chart includes the relationships to adjacent properties.

Direction	Future Land Use	Zoning	Present Use
North	Mixed-Use	Kelly Park Interchange – Mixed-Use (KPI-MU)	Wyld Oaks Interchange District
East	Mixed-Use	KPI-MU	Wyld Oaks Interchange District
South	Mixed-Use	KPI-MU	Parkview Preserve Residential Subdivision
West	County Rural	County A-1 (Citrus Rural)	Hubbard Construction Company

PROJECT SUMMARY:

The subject property is proposed to be added to the project boundary of the previously approved Wyld Oaks Development, formerly known as Kelly Park Crossing, located on the southwest corner of Kelly Park Road and SR 429. The Kelly Park Interchange – Form-Based Code (KPI-FBC) Regulating Plan indicates that the subject properties are within the Neighborhood and Employment Overlay Districts. According to the Code, duplex uses require a Special Exception Use Permit within the Neighborhood Overlay District. In order to satisfy this Code

standard, the applicant is requesting the Planning Commission to grant a Special Exception Use Permit to allow duplex use in the Neighborhood Overlay District. To the greatest extent practicable, the applicant is required to comply with all site design and other standards of the KPI-FBC and the Land Development Code (LDC). The current Master Plan for the Wyld Oaks Development was approved by the City Council on October 19, 2022. The Master Plan for Wyld Oaks was approved by City Council on July 19, 2023 and the amendment to the Development Agreement is being reviewed. Per Land Development Code Section 2.5.1.G.4, a Special Exception is required to comply with the following standards and responses:

1. Will be consistent with the goals, objectives, and policies of the comprehensive plan;
2. Will comply with all applicable zoning district standards;
3. Will comply with all standards in Sec. 4.2.3, Standards Specific to Principal Uses, Standards for Specific Principal Uses;
4. Will be appropriate for its location and is compatible with the general character of surrounding lands and the uses permitted in the zoning district;
5. Will adequately screen, buffer, or otherwise minimize adverse visual impacts on adjacent lands;
6. Will ensure that no site lighting source shall negatively impact adjacent properties and rights-of-way;
7. Will maintain safe and convenient ingress and egress and traffic flow onto and through the site by vehicles and pedestrians, and safe road conditions around the site;
8. Will avoid significant adverse odor, noise, glare, and vibration impacts on surrounding lands regarding refuse collection, service delivery, parking and loading, signs, lighting, and other site elements;
9. Will not have an adverse impact on land values and the ability of neighboring lands to develop uses permitted in the zoning district;
10. Will avoid significant deterioration of water and air resources, scenic resources, and other natural resources;
11. Will not overburden existing public facilities and services, including, but not limited to, streets and other transportation facilities, schools, potable water facilities, sewage disposal, stormwater management, and police and fire protection facilities; and
12. Will comply with all other relevant City, State, and federal laws and regulations.

PUBLIC HEARING SCHEDULE:

August 8, 2023 – Planning Commission (5:30 P.M.)

DULY ADVERTISED:

July 21, 2023 – Apopka Chief and Mailed Notices to Adjacent Property Owners

July 24, 2023 – Placards on Placed on Property

Attachments:

- Maps
- Wyld Oaks SPX – Master Plan and Responses to Criteria

FUNDING SOURCE:

Not applicable.

RECOMMENDED MOTION:

Development Review Committee:

Recommends approval of a Special Exception to allow duplex residential use in the Wyld Oaks Neighborhood Property, subject to the exhibits and findings of the staff report.

Recommended Motion – Planning Commission:

Approve a Special Exception to allow duplex residential use in the Wyld Oaks Neighborhood Property, subject to the exhibits and findings of the staff report.

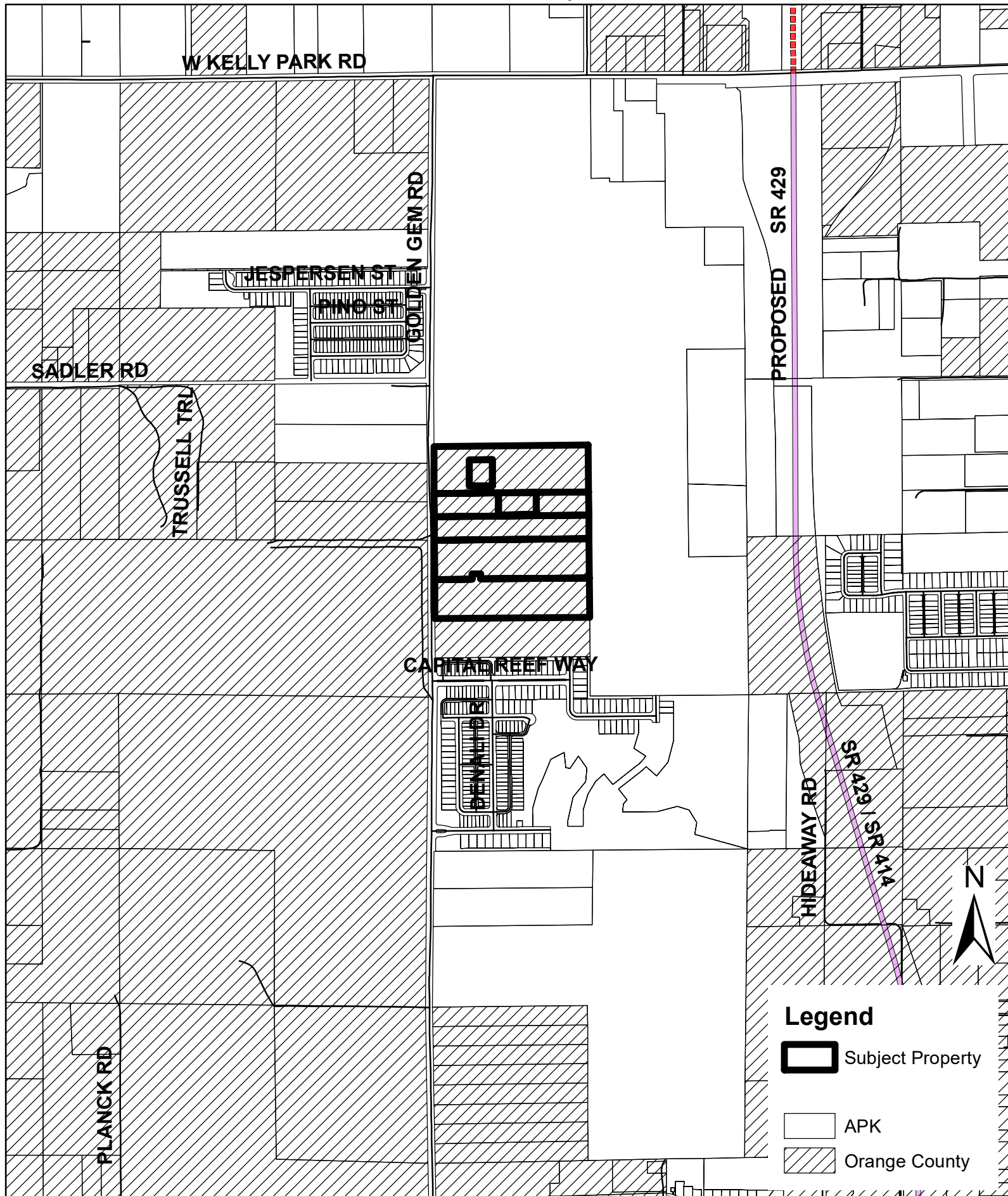
Planning Commission Role:

Pursuant to the City of Apopka Code of Ordinances, Part III, Land Development Code, Article II, Section 2.3.2.B.1.a, the Planning Commission has the authority to take make decisions on special exception permits. Therefore, the Planning Commission may approve, deny or approve with conditions this application. An applicant may appeal the Planning Commission action to the City Council.

ATTACHMENTS:

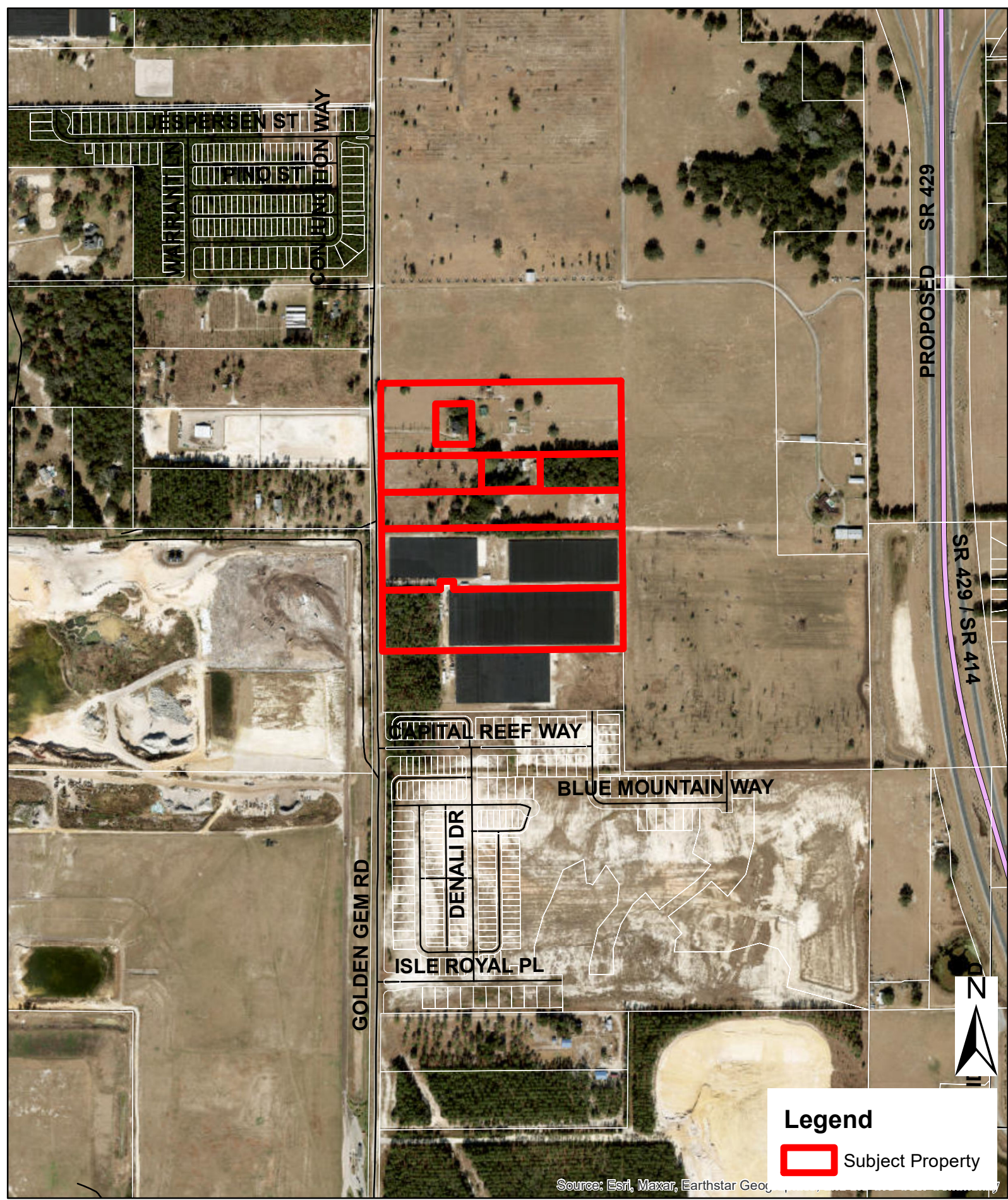
1. Maps
2. Wyld Oaks SPX – Master Plan and Responses to Criteria

Vicinity



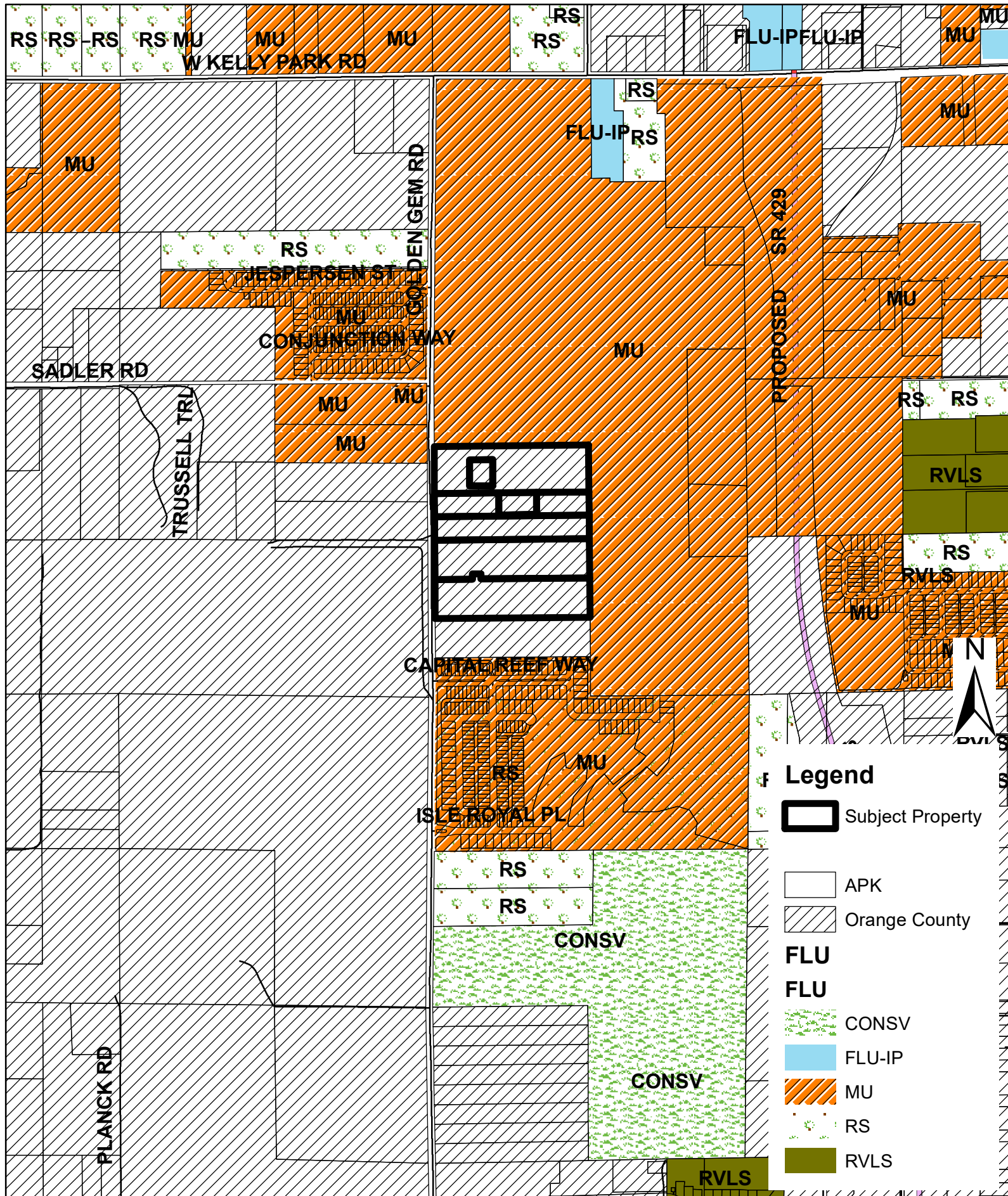
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Aerial



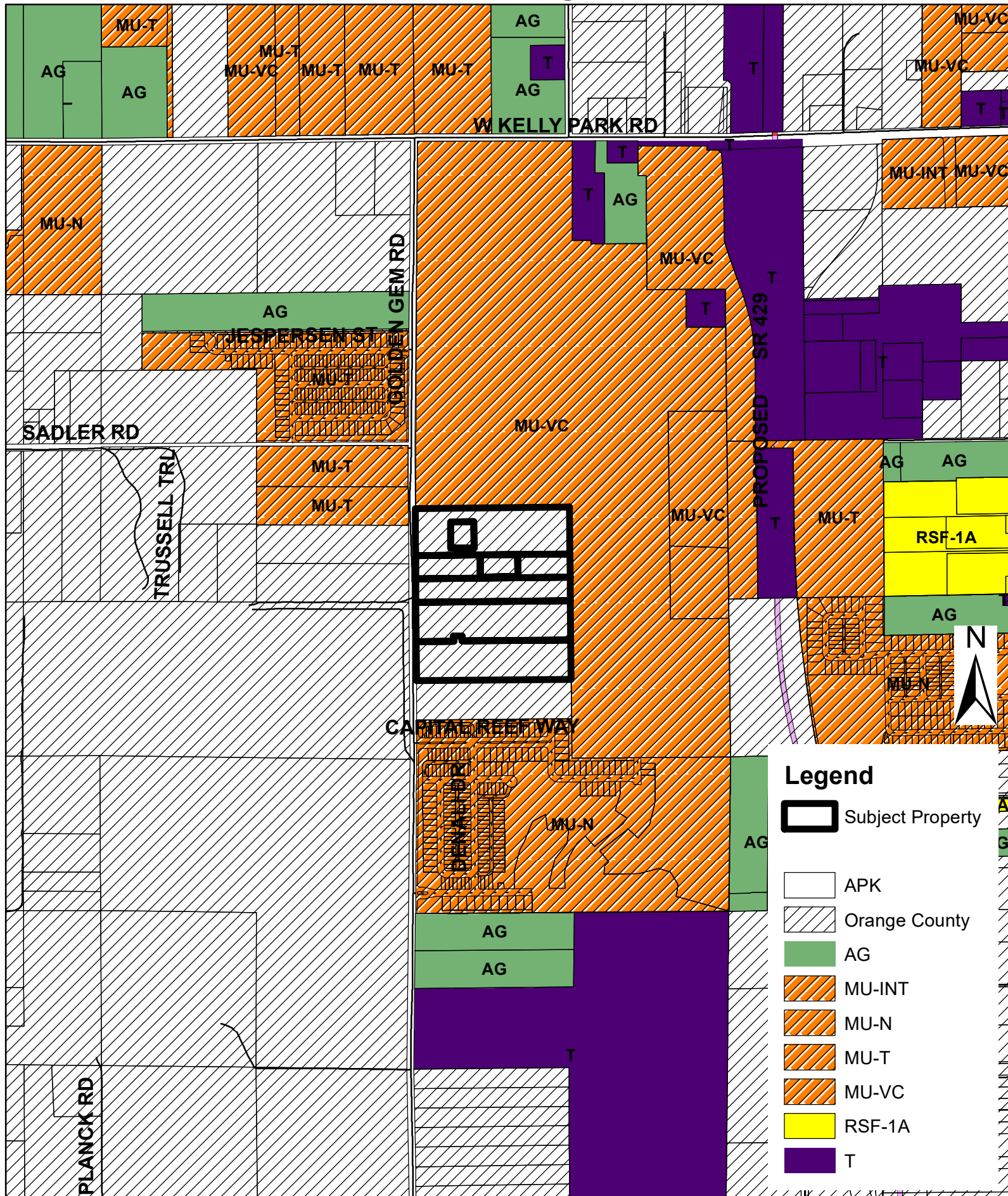
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Future Land Use



(THIS MAP IS FOR REFERENCE PURPOSES ONLY AND IS NOT TO SCALE)

Zoning

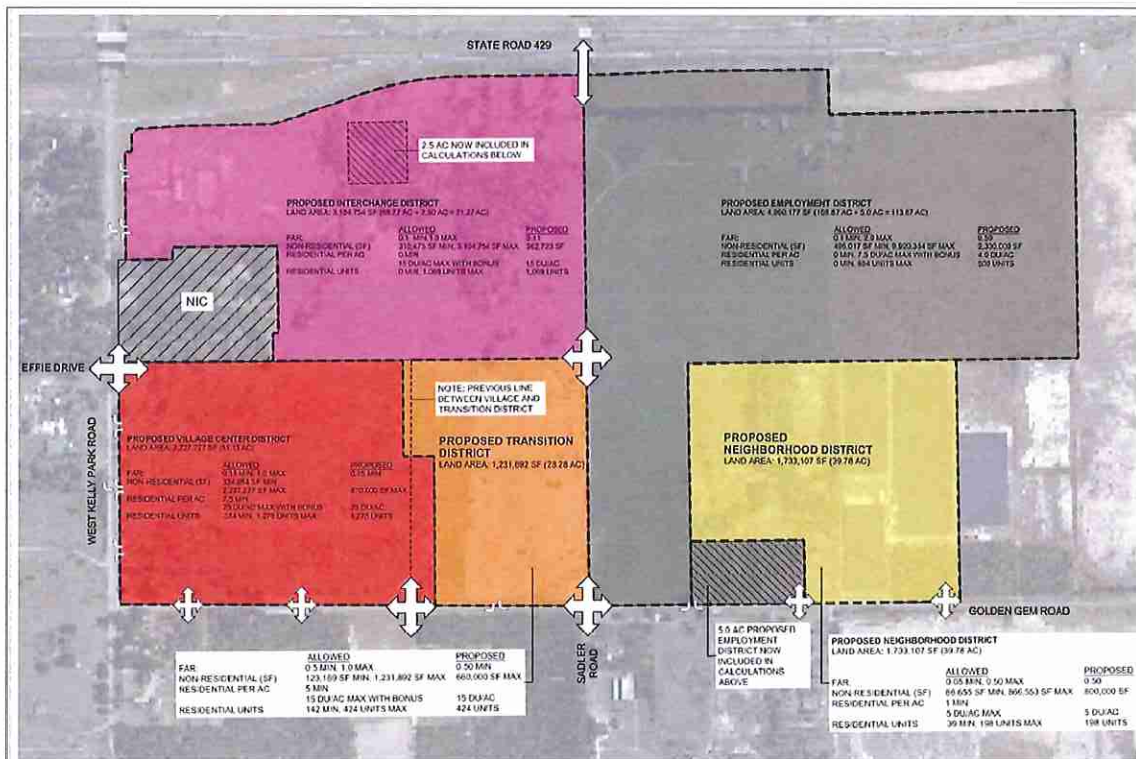


(THIS MAP IS FOR REFERENCE PURPOSES ONLY AND IS NOT TO SCALE)

CITY OF APOPKA SPECIAL EXCEPTION CRITERIA Land Development Code Section 2.5.1.E.3

1. Will be consistent with and furthers the goals, objectives and policies of the comprehensive plan and all other applicable City-adopted plans.

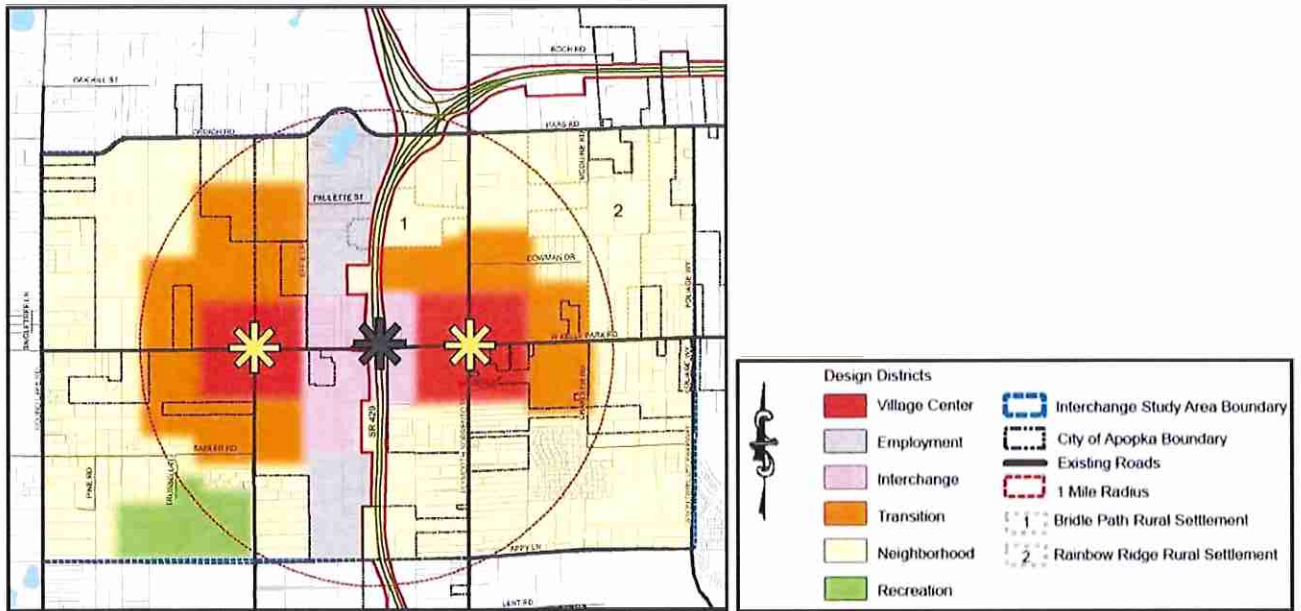
The applicant is requesting a special exception request for multifamily uses for approximately 68.77 total acres of the properties located on the eastside of Golden Gem Road, north of West Ponkan Road, south of West Kelly Park Road and west of State Road 429 and identified as of portions of Parcel IDs 13-20-27-0000-00-023, 13-20-27-0000-00-061 and 13-20-27-0000-00-005 (the "Properties"). The special exception request would cover those portions of the property labeled as "Proposed Interchange District" (including the hashed box parcel) in purple on the map below. The applicant is also requesting a special exception on Parcel IDs 13-20-27-0000-00-024, 13-20-27-0000-00-056, 13-20-27-0000-00-037, 13-20-27-0000-00-072, 13-20-27-0000-00-059, 13-20-27-0000-00-036, 13-20-27-0000-00-038 for the new Neighborhood District, shown in yellow below, to permit duplexes.



The proposed residential development is consistent with the City's Comprehensive Plan and the MU-KPI Special Purpose Zoning District. The Properties all fall within the one-mile radius of the Kelly Park (formerly called the Wekiva Park) Interchange Vision Plan.

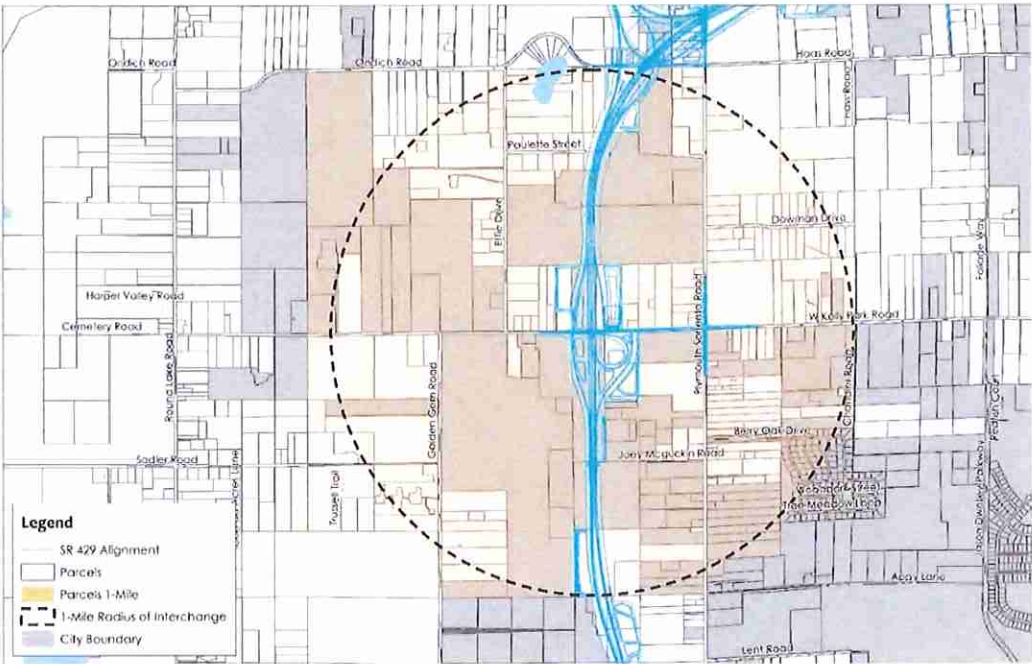
Per the City code, "[t]he Wekiva Parkway Interchange Vision Plan encompasses all properties within a one-mile radius of the proposed interchange of Wekiva Parkway at Kelly Park Road, measured from a circle around a presumed clover interchange. As noted in Policy 20.2 of the City's Comprehensive Plan, the one-mile configuration is intended to be a "logical, parcel-specific boundary consistent with the intent of capturing a one-mile radius." Therefore, if a site, or any portion of a site, is within the 1-mile radius, the entire site is included within the vision plan and is subject to the standards." The one-mile radius map is shown below and the Property is included in the same.

Kelly Park Interchange Vision Plan



The Properties also fall within the Kelly Park Interchange Form-Based Code Area, as shown below:

Kelly Park Interchange Form-Based Code Area



Under Table 4 in Appendix A, the Interchange and Neighborhood Districts have density requirements, amongst others, that must be met:

Table 4: Density, Intensity and Open Space					
	Village Center	Employment	Interchange	Transition	Neighborhood
Intensity (FAR)	- VC Core: - Min: 0.3 - Max: 1.0 - Average: 0.5 - Balance of VC: - Min: 0.25 - Max: 0.7 - Average: 0.35	Min: 0.1 Max: 0.5	Min: 0.1 Max: 0.75 (1.0 with a bonus)	Min: 0.5 Max: 0.75 (1.0 with a bonus)	Min: 0.05 Max: 0.5
Density (dwelling units/acre)	Min: 7.5 Max: 20 (25 with bonus*) Zone Average: 12	Min: 4 Max: 5 (7.5 with bonus*)	Min: 7.5 Max: 10 (15 with bonus*)	Min: 5 Max: 10 (15 with bonus*)	Min: 1 Max: 5
Open Space (min.)	10%	20%	15%	15%	20%

Additionally, under the City's Appendix A, the allowable residential uses are dictated by Table 2, which provides that every residential use in the Interchange District requires Special Exception approval, despite the Interchange District setting forth minimum density standards that also have to be met. The intent of the code was to permit residential uses. There appear to be some inconsistencies in how the code is written vs. the intent of the code- for example, Granny flats/guest suites are allowed by Special Exception as an ancillary use to a primary single-family use, but single family homes are prohibited in this district. Multi-family dwellings are the only viable residential option under Table 2 to permit the type of density both contemplated and required under the code.

Table 2: Uses Allowed in the Kelly Park Form-Based Code Area					
Uses	Village Center	Employment	Interchange	Transition	Neighborhood
RESIDENTIAL					
Assisted living facility	N	SE	N	P	N
Community residential home (7 to 14 residents)	N	SE	SE	SE	N
Dwellings, multi-family	P	P	SE	P	N
Dwellings, single-family	N	N	N	P	P
Granny flats/Guest suite above a garage, with single-family as primary use	N	SE	SE	P	P
Dwellings, duplex	N	N	N	P	SE
Live-Work Units	N	P	N	P	N
Nursing homes	N	SE	SE	P	N

Moreover, the use table is specific that a special exception is required for duplexes in the Neighborhood District.

Table 2: Uses Allowed in the Kelly Park Form-Based Code Area					
Uses	Village Center	Employment	Interchange	Transition	Neighborhood
Dwellings, duplex	N	N	N	P	SE

2. Is not in conflict with any portion of the Land Development Code.

The proposed development will not conflict with any portion of the Land Development Code and will be consistent with the MU-KPI zoning.

3. Addresses a demonstrated community need.

The requested residential uses will be integrated as part of one overall development program proposed by the Developer, which will reduce automobile dependence for residents and visitors once onsite. While growth will always bring new vehicle trips, the

mixed-use nature of the project will minimize traffic generation in the area with compact urban growth.

4. Is compatible with existing and proposed uses surrounding the subject land, and is the appropriate zoning district for the land.

The Properties will all be part of the Wyld Oaks Approved Master Plan property. The special exception uses on the Properties ensure compatibility and proper transitioning of uses between character zones, as well as the proper and required mix of uses contemplated under code. The Properties are also conveniently located near State Route 429 which is desirable for residents looking to relocate in the area.

5. Would result in a logical and orderly development pattern.

The Properties are part of an assemblage of parcels that will all be integrated into the Wyld Oaks Approved Master Plan community. The proposed special exception would promote development patterns for compact urban growth in line with the City's visioning for this area.

6. Would not adversely affect the property values in the area.

The proposed development will not adversely affect property values in the area. The property will be integrated into the Wyld Oaks Approved Master Plan and will help to raise property values in the area by activating older residential and underutilized agricultural properties. The proposed rezoning will create residential uses and promote development patterns for compact urban growth.

7. Would result in development that is adequately served by public facilities (roads, potable water, wastewater, solid waste, storm water, schools, parks, police, and fire and emergency medical facilities).

The proposed development will be part of the mixed-use master plan, provide adequate roads, water and wastewater pump stations to promote compact growth patterns. The development will allow for appropriate Levels of Service as encouraged by the Comprehensive Plan.

8. Would not result in significantly adverse impacts on the natural environment – including, but not limited to, water, air, noise, storm water management, wildlife, vegetation, wetlands, and natural functioning of the environment.

The proposed development will not result in adverse impacts on the natural environment consistent with the standards for the MU-KPI district and state permitting requirements.



City of Apopka PLANNING COMMISSION STAFF REPORT

Section: PUBLIC HEARING

Item #: 7.

Meeting Date: August 8, 2023

Department: Community Development

SUBJECT:

Land Development Code amendment, Ordinance Number 3021

REQUEST:

Recommend approval to the Apopka City Council of the Land Development Code amendments

SUMMARY:

On December 11, 2018, the Planning Commission recommended adoption to the City Council of the update to the Land Development Code. On March 6, 2019, the Apopka City Council formally adopted Ordinance Number 2700 approving the update of the Land Development Code (LDC).

Subsequent amendments to the Land Development Code have also been completed to update, clarify and amend the content of the LDC. The Planning Commission recommended approval of five previous “Glitch” amendments. The Apopka City Council has approved the following LDC amendments:

- Ordinance Number 2745 on January 15, 2020
- Ordinance Number 2775 on July 15, 2020
- Ordinance Number 2805 on November 18, 2020
- Ordinance Number 2877 on December 15, 2021
- Ordinance Number 2925 on May 18, 2022
- Ordinance Number 2994 on March 15, 2023

This request is for the seventh set of amendments that staff has identified for updating and clarification. This amendment affects Chapter 18, three of the 10 Articles and Appendix D. Because of the length of each section and sub-section being recommended for amendments, staff has provided a *Glitch Amendment #7 Summary List* (Exhibit “A”) and the full Ordinance Number 3021 (Exhibit “B”) for reference.

PUBLIC HEARING SCHEDULE:

August 8, 2023 – Planning Commission (5:30 P.M.)

September 6, 2023 – City Council (1:30 P.M.), First Reading

September 20, 2023 – City Council (7:00 P.M.), Second Reading and Adoption

DULY ADVERTISED:

August 4, 2023 – Apopka Chief

September 1, 2023 – Apopka Chief

Development Review Committee (DRC):

Recommends approval of Ordinance Number 3021 for the amendments to the LDC.

FUNDING SOURCE:

N/A

RECOMMENDED MOTION:

Approve the Amendment to the Land Development Code and forward to the Apopka City Council for consideration.

ATTACHMENTS:

1. LDC Glitch #7 Summary
2. Ord No 3021 - LDC Glitch 7 Amendments

Apopka Land Development Code “Glitch” Amendment # 7 Summary List

SECTION I.

Chapter 18 – Building and Building Regulations; Article III. – Permit Fees; Sec. 18-49. – Rejection, correction notice, stop work order, or citation fees, Code of Ordinances

- Amends the reinspection fees

PART III – Land Development Code

SECTION II.

Article 3 – ZONING DISTRICTS

SECTION 3.3.-RESIDENTIAL BASE ZONING DISTRICTS

3.3.7. - RMF: Residential Multi-Family District

C. Intensity and Dimensional Standards

- Amends the max. height to 35-55’
- Amends max. stories for one to five stories each.

SECTION III.

Article 3 – ZONING DISTRICTS

3.3.8. – RMU: Residential Mixed-Use District

C. Intensity and Dimensional Standards

- Amends the max. height to 35-55’
- Amends max. stories for one to five stories each.

SECTION IV.

Article 3 – ZONING DISTRICTS

SECTION 3.6. - SPECIAL PURPOSE BASE ZONING DISTRICTS

3.6.3. - MU-D: Mixed-Use Downtown District

C. Intensity and Dimensional Standards

- Amends setbacks, max. height

SECTION V.

Article 3 – ZONING DISTRICTS

SECTION 3.7. – PLANNED DEVELOPMENT DISTRICT

3.7.2. PD, Planned Development District

- Amends to require a mix of residential and non-residential uses. Avoid circumventing the LDC.

SECTION VI.

Article 4 – USE REGULATIONS

4.2. – Principal Uses

4.2.2.C. – Principal Use Table

- Amends the table to allow Utility Uses in the Institutional Zoning District

SECTION VII.

Article 4 – USE REGULATIONS

4.2. – Principal Uses

4.3.2.B. – Accessory Use and Structures Table

- Amends the table to allow a Home Occupation (BTR) to be allowed in three zoning districts: RMF, RMU, MHP and MU-D

SECTION VIII.

Article 5 – DEVELOPMENT STANDARDS

SECTION 5.1. - OFF-STREET PARKING, BICYCLE PARKING, AND LOADING STANDARDS

5.1.8. H. – Alternative surfacing materials for parking areas

- Adds a new section for alternative parking surfaces for minimal use area such as churches, and recreations areas.

SECTION IX.

Appendix D – DEVELOPMENT DESIGN GUIDELINES

3.2.3. Balconies and Porches

- New section added for requirements

ORDINANCE NO. 3021

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF APOPKA, FLORIDA, AMENDING CHAPTER 18, BUILDING AND BUILDING REGULATIONS, SECTION 18-49, THE CODE OF ORDINANCES OF THE CITY OF APOPKA; BY AMENDING PART III – LAND DEVELOPMENT CODE; ARTICLE 3 – ZONING DISTRICTS, SECTION 3.3 RESIDENTIAL BASE ZONING DISTRICTS, 3.3.7. RMF RESIDENTIAL MULTI-FAMILY DISTRICT; BY AMENDING PART III, ARTICLE 3 – ZONING DISTRICTS, SECTION 3.3. RESIDENTIAL BASE ZONING DISTRICT, 3.3.8. RESIDENTIAL MIXED-USE DISTRICT; BY AMENDING PART III, ARTICLE 3 – ZONING DISTRICTS, SECTION 3.6. SPECIAL PURPOSE ZONING DISTRICTS, 3.6.3. MIXED-USE DOWNTOWN DISTRICT; BY AMENDING PART III, ARTICLE 3 – ZONING DISTRICTS, SECTION 3.7. PLANNED DEVELOPMENT DISTRICT, 3.7.2. PLANNED DEVELOPMENT DISTRICT; BY AMENDING PART III, ARTICLE 4 – USE REGULATIONS, SECTION 4.2 PRINCIPAL USES, TABLE 4.2.2.C. PRINCIPAL USE TABLE; BY AMENDING PART III, ARTICLE 4 – USE REGULATIONS, SECTION 4.3. ACCESSORY USES AND STRUCTURES, TABLE 4.3.2.B. ACCESSORY USES AND STRUCTURES TABLE; BY AMENDING PART III, ARTICLE 5 – DEVELOPMENT STANDARDS, SECTION 5.1. OFF-STREET PARKING, BICYCLE PARKING AND LOADING STANDARDS, 5.1.8. OFF-STREET PARKING ALTERNATIVES, H. ALTERNATIVE SURFACING MATERIALS FOR PARKING AREAS; BY AMENDING PART III, APPENDIX D – DEVELOPMENT DESIGN GUIDELINES, 3. RESIDENTIAL DESIGN GUIDELINES, 3.2.3. BALCONIES AND PORCHES; PROVIDING FOR CODIFICATION; PROVIDING FOR SEVERABILITY; PROVIDING FOR CONFLICTS, AND SETTING AN EFFECTIVE DATE.

WHEREAS, Section 166.021(3), *Florida Statutes*, provides, in pertinent part, that “[t]he Legislature recognizes that pursuant to the grant of powers set forth in Section 2(b), Art. VIII of the State Constitution, the legislative body of each municipality has the power to enact legislation concerning any subject matter upon which the state legislature may act” except for certain very limited matters; and

WHEREAS, pursuant to Florida Law chartered municipalities have original jurisdiction over all streets and highways located within their boundaries; and

WHEREAS, The City of Apopka Code of Ordinances, Chapter 18 – Buildings and Building Regulations, permit fees are updated; and

WHEREAS, the City of Apopka Land Development Code requires amending periodically to include needed amendments to protect the health, safety, and welfare of all persons in the City; and

WHEREAS, City of Apopka Code of Ordinances, Florida, Part III – Land Development Code regulates the development and uses within the City of Apopka; and

1 **WHEREAS**, the City Council of the City of Apopka, Florida, has determined that the
2 continued protection of the health, safety, and welfare of its citizens, and keeping the Land
3 Development Code updated is for the benefit of the City, various Articles are being amended
4 accordingly.

5
6 **NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY**
7 **OF APOPKA, FLORIDA, AS FOLLOWS:**

8
9 **(Words in ~~strike-through~~ type are deletions; words in underscore type are additions;**
10 **asterisks**

11 **(****) indicate an omission from the existing text which is intended to remain unchanged.)**

12
13 **SECTION I:** Chapter 18 – Building and Building Regulations; Article III. – Permit Fees;
14 Sec. 18-49. – Rejection, correction notice, stop work order, or citation fees, Code of Ordinances,
15 City of Apopka is hereby amended to read:

16
17 **Sec. 18-49. - Rejection, correction notice, stop-work order, or citation fees.**

18 The following fees are established for rejections, correction notices, stop-work orders, or citing
19 code violations, whichever is applicable:

- 20 (1) Rejection or correction notices: ~~\$30.00~~ \$100.00. If a rejection or correction notice has
21 to be issued for the same violation on the same job or project a third time, the fee shall
22 be ~~\$120.00~~ \$150.00, as allowed by F.S. § 550.80(2)(c).
23 (2) Stop-work orders: \$250.00
24 (3) Citation fees, as per article V of this chapter, property maintenance code, are
25 established as follows:
26 a. Class I offense:\$ 50.00
27 b. Class II offense:150.00
28 c. Class III offense:200.00
29 (4) Beginning work without a permit shall be charged a fee of \$100.00 or double the
30 permit fee, whichever is greater.

31
32 **SECTION II:** Part III, Article 3: Zoning Districts, Section 3.3. Residential Base Zoning
33 Districts, 3.3.7.—RMF: Residential Multi-Family District – of the Land Development Code, Code
34 of Ordinances, City of Apopka is hereby amended to read as follows:

35
36 **Article 3 - ZONING DISTRICTS**

37 * * * *

38 **SECTION 3.3. - RESIDENTIAL BASE ZONING DISTRICTS**

39 * * * *

40 **3.3.7. - RMF: Residential Multi-Family District**

41 * * * *

42 **C. Intensity and Dimensional Standards**

Standard		Single-family [one du]	Two-Family & Townhome [4]	Multi-Family	All Other Uses
Lot Area, min. (sf.)		7,500	15,000	43,560	7,500
Living Area, min. (sf per unit)		1,500	1,500	750 (1 bd) 900 (2+ bd)	Not applicable
1	Lot Width, min. (ft.)	55 [3]	100 [3]	100	70
2	Front Yard Setback, min. (ft.)	25	25	25	25
3	Side Yard Setback, min. (ft.)	5 [1]	10 [1]	15 [1]	7.5
4	Corner Side Yard/Double Front Setback, min. (ft.)	25	25	25	25
5	Rear Yard Setback, min. (ft.)	20	20	25	25
Building Height, max. (ft.)		35	35	35 – 55 [5]	35
Density, max (du/acre)		[2]	[2]	[2]	Not applicable

Notes: sf. = square feet; ft. = feet; min.= minimum; max.= maximum; du = dwelling unit

[1] Minimum of 10 feet between structures, only applies to exterior units.

[2] Residential development north of Ponkan Road and west of Rock Springs Road (Park Avenue) shall be restricted to no more than two dwelling units an acre, unless otherwise authorized through the adopted Wekiva Parkway Interchange Plan. Refer to the Apopka Comprehensive Plan.

[3] Lots located on cul-de-sac and curves are allowed to reduce lot width by up to 40 percent of the minimum width at the property line, but are required to maintain a 55 feet width for Single-family or 100 feet width for Multi-family at the building line.

[4] Two-Family and Townhome units less than 55 feet wide must provide rear alley access rather than front loaded garages. Alley design is 18 feet minimum width: 14 feet paved, 2 feet each side curb and gutter area.

[5] One to two story max. is 35'; Three-story max. is 45'; Four-story max. is 55'; Five-story max. requires a special exception.

* * * *

SECTION III: Part III, Article 3: Zoning Districts, Section 3.3. Residential Base Zoning Districts, 3.3.8.—RMU: Residential Mixed-Use District – of the Land Development Code, Code of Ordinances, City of Apopka is hereby amended to read as follows:

3.3.8. - RMU: Residential Mixed-Use District

* * * *

C. Intensity and Dimensional Standards

Standard		Townhome [4]	Multi-Family	Other Uses
Lot Area, min. (sf.)		8,000	8,000	5,000
Living Area, min. (sf per unit)		1,350	750 (1 bd) 900 (2+ bd)	750
1	Lot Width, min. (ft.)	50 [3]	100	100
2	Front Yard Setback, min. (ft.)	15	15	15
3	Side Yard Setback, min. (ft.)	7.5 [1]	10 [1]	10 [1]
4	Corner Side Yard/Double Front Setback, min. (ft.)	7.5	20	10 [1]
5	Rear Yard Setback, min. (ft.)	20	25	25
Building Height, max. (ft.)		35	35 – 55 [5]	35
Density, max (du/acre)		[2]	[2]	[2]
Notes: sf. = square feet; ft. = feet; min.= minimum; max.= maximum; bd = bedroom [1] Only applies to the exterior units. [2] Residential development north of Ponkan Road and west of Rock Springs Road (Park Avenue) will be restricted to no more than two dwelling units an acre, unless otherwise authorized through the adopted Wekiva Parkway Interchange Plan. Refer to the Apopka Comprehensive Plan. [3] Lots located on cul-de-sac and curves are allowed to reduce lot width by up to 40 percent of the minimum width at the property line, but are required to maintain a 50 feet width for Townhome or 100 feet width for Multi-family at the building line. [4] Townhome units less than 55 feet wide must provide rear alley access rather than front loaded garages. Alley design is 18 feet minimum width: 14 feet paved, 2 feet each side curb and gutter area. [5] <u>One to two story max. is 35’; Three-story max. is 45’; Four-story max. is 55’; Five-story max. requires a special exception.</u>				

* * * *

SECTION IV: Part III, Article 3: Zoning Districts, Section 3.6. Special Purpose Zoning Districts, 3.6.3. MU-D: Mixed-Use Downtown District – of the Land Development Code, Code of Ordinances, City of Apopka is hereby amended to read as follows:

Article 3 - ZONING DISTRICTS

* * * *

SECTION 3.6. - SPECIAL PURPOSE BASE ZONING DISTRICTS

* * * *

3.6.3. - MU-D: Mixed-Use Downtown District

* * * *

C. Intensity and Dimensional Standards

Standard		Residential	All Other Uses [7]
Lot Area, min. (sf.)		5,000	Not applicable
Living Area, min. (sf)		1,350 SF 750 MF (1 bd) 900 MF (2+ bd)	Not applicable
1	Lot Width, min. (ft.)	50	Not applicable
2	Build-to-Line, min./max.(ft.)	20/25 [1] [2]	0 [3]
3	Building width at build-to-line, min. (% of lot width)	60 [2][4]	60
4	Front Yard Setback, min. (ft.)	See 2 above	Not applicable 10' or [1] [2]
5	Side Yard Setback, min. (ft.)	5	Not applicable [7]
6	Corner Side Yard Setback, min. (ft.)	Not applicable See 2 above	Not applicable 10' or [1] [2]
7	Rear Yard Setback, min. (ft.)	20	Not applicable [7]
8	Building Height, max. (ft.)	75 55	Not applicable 55
Density, max (dus/acre)		[5]	Not applicable
Floor Area Ratio (FAR), max.		Not applicable	2.0 [6]
Notes: sf. = square feet; ft. = feet; min.= minimum; max.= maximum [1] The area between the minimum and maximum build-to-lines that extends the width of the lot constitutes the build-to-zone. The front setback line of the principal structure shall be equal to or average of the existing neighboring structures on a specific block; the build-to line is intended to create an even building façade line along a street. [2] Where existing buildings along street frontage are all located behind the build-to-line, the buildings may not be extended to the rear or side unless they are first extended frontwards to comply with the maximum build-to-line standard, and the minimum building width at the build-to-line standard. [3] Setbacks up to 30 feet from the build-to-line are allowed for civic space or outdoor dining, as long as they demarcate the build-to-line by some additional feature. [4] The build-to-line width remaining where there are no buildings may be occupied by outdoor gathering spaces, outdoor dining areas, walkways, landscaped areas, stormwater management facilities that use low impact development techniques. [5] Applicable to a residential development, and the residential component of a mixed-use development. [6] Applicable to a nonresidential development and the nonresidential component of a mixed-use development. [7] "All Other Use" - for the <i>MU-D Mixed-Use Downtown</i>, please refer to the Comprehensive Plan's Future Land Use for the primary land use. (e.g. commercial, residential, industrial, mixed-use, etc.)			

The *MU-D* provides for mixed use opportunities. The various zoning districts that are outlined in [Article 1, Table 1.8.1](#) Transition to New Zoning Districts, shall provide the setback guidance within the MU-D for those various Comprehensive Plan Future Land Uses. A building setback line shall be 0 to 25 feet unless otherwise determined inappropriate for a specific site by the Community Development Director.

As an option, the Build-to-line may be adhered to in order to keep the existing setbacks in a block(s) to keep a new building or development compatible with the surrounding area. The Community Development Director shall make the final determination for setbacks.

* * * *

SECTION V: Part III, Article 3: Zoning Districts, Section 3.7. Planned Development District, 3.7.2. Planned Development District – of the Land Development Code, Code of Ordinances, City of Apopka is hereby amended to read as follows:

* * * *

3.7.2. - Planned Development District

A. Purpose. The purpose of the Planned Development - (PD) zoning district is to encourage innovative, integrated, and efficient land planning and physical design concepts. The planned development district is intended to achieve a high quality of development, environmental sensitivity, energy efficiency, and adequate public facilities and services, and other goals and objectives by:

(1) Reducing the inflexibility of zoning district standards that sometimes results from strict application of the base district, and development and form standards;

(2) Allowing greater flexibility in selecting: the form and design of development, the ways by which pedestrians and traffic circulate, how the development is located and designed to respect the natural features of the land and protect the environment, the location and integration of open space and civic space into the development, and design amenities;

(3) Encouraging a greater mix of land uses within the same development;

(4) Requires a mix of residential and non-residential uses;

~~(4)~~ (5) Allowing more efficient use of land, with smaller networks of streets and utilities;

~~(5)~~ (6) Providing pedestrian connections within the site and to the public right-of-way; and

~~(6)~~ (7) Promoting development forms and patterns that respect the character of established surrounding neighborhoods and other types of land uses.

* * * *

SECTION VI: Part III, Article 4: Use Regulations, Section 4.2 Principal Uses, 4.2.2 Principal Use Table – of the Land Development Code, Code of Ordinances, City of Apopka is hereby amended to read:

4.2.2. Principal Use Table

* * * *

C. Principal Use Table

Table 4.2.2.C: Principal Use Table																										
P= permitted use																										
A= allowed use in a PD district if approved as part of a PD Plan																										
S=allowed with approval of special exception																										
Blank cell = use is prohibited																										
Principal Use Category	Principal Use Type	Agricultural & Transitional Districts		Residential Districts							Commercial Districts					Industrial Districts		Special Purpose Districts						Planned Development District	Use-Specific Standards	
		AG	T	RCE	RSF-1A	RSF-1B	RTF	RMF	RMU	MHP	C-N	C-C	O	C-COR	C-R	I-L	I-H	MU-D	MU-ES			INST	PR	AIR		PD
																			NM	GT	RTE					
* * * *																										
Utility Uses	Solar energy collection facility (large-scale)	P														P	P					<u>P</u>			A	
	Utility facility, major	P	P						S			P		S	P	P	P	S			S	<u>P</u>			A	4.2.3.D.5.a
	Utility facility, minor	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	<u>P</u>			A	

* * * *

SECTION VII: Part III, Article 4: Use regulations, Section 4.3 Accessory Uses and Structures, 4.3.2 Accessory Uses and Structure Table – of the Land Development Code, Code of Ordinances, City of Apopka is hereby amended to read:

4.3.2. - Accessory Uses and Structures Table

* * * *

B: Accessory Use and Structures Table

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Table 4.3.2.B: Accessory Use and Structures Table																								
P = permitted accessory use or structure																								
A = allowed accessory use or structure in a PD district if approved as part of a PD Plan																								
Blank cell = accessory use or structure is prohibited																								
Accessory Uses and Structures	Agricul- tural & Transi- tional Districts		Residential Districts							Commercial Districts					Industrial Districts		Special Purpose Districts						Planned Development District	Use- Specific Standards
	A G	T	R C E	RSF -1A	RSF -1B	R T F	R M F	R M U	M H P	C - N	C - C	O	C - C O R	C - R	I - L	I - H	MU - D	MU-ES			I N S T	P R	AIR	
																		N M	G T	RTE				

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* * * *

Home occupation	P	P	P	P	P	P	P	P	P								P	P	P	P				A	4.3.4.B.9
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SECTION VIII: Part III, Article 5 – Development Standards, Section 5.1. Off-Street Parking, Bicycle Parking, and Loading Standards – of the Land Development Code, Code of Ordinances, City of Apopka is hereby amended to read:

Article 5 - DEVELOPMENT STANDARDS

* * * *

SECTION 5.1. - OFF-STREET PARKING, BICYCLE PARKING, AND LOADING STANDARDS

* * * *

5.1.8. - Off-Street Parking Alternatives

* * * *

H. Alternative surfacing materials for parking areas.

(a) Certain land uses, due to their unique character or due to the low volume of traffic produced, may provide parking surfaces of grass, wood mulch or other materials after obtaining approval from the Development Review Committee (DRC). In granting such a request, the DRC shall consider the following matters:

(1) The type of partially pervious material or type of wood mulch to be used for surfacing.

(2) The site characteristics of the parking lot, including but not limited to the elevation, slope, drainage, soil type and adjacent surface conditions.

(3) The type and amount of anticipated traffic flow in the parking lot.

(4) The parking area shall not be for storage of materials or vehicles, or overnight parking unless approved by the DRC.

(b) The following criteria shall be used in development and construction of an approved wood mulch parking area:

(1) Use shall be essentially for passive parking, i.e., not more than two ingress/egress movements per day per vehicle space. Such limited uses shall be determined by the DRC.

(2) Natural soil on the site must be sandy, with only enough clay to bind particles and preclude rutting or flowing.

(3) Soil percolation must absorb a minimum of three and one-half inches of rainfall per hour over the entire area to be mulched.

(4) Parking areas shall be graded as level as possible, with maximum slope in any direction not to exceed three percent, to preclude surface runoff from washing away mulch materials.

(5) Subsurface areas shall be cleared and grubbed to remove all living plant growth, and then be graded and treated with an approved herbicide to prevent further growth in areas to be mulched.

(6) Surfacing shall not be less than three inches of clean bark mulch, free from chips and sticks, after wetting and rolling.

(7) Mulched areas shall be contained by concrete ribbon curbing, pressure-treated timbers, or precast concrete bumper blocks laid end to end. For this purpose, concrete sidewalks at or between ends of rows of vehicle spaces, not less than five feet wide, may be used, as well as concrete entrance drives and curb cuts, where applicable.

(8) All mulch parking areas shall be maintained and resupplied with fresh mulch at least once per year.

(c) Minimum standards for any alternative surface materials for parking areas.

(1) Requirements for size of lot or parcel coverage, number of vehicle spaces and driving lanes shall be the same as that for conventionally paved parking areas. All circulation areas and drive isles shall be paved.

(2) The DRC shall have sole discretion in determining whether or not the use of wood mulch, or other materials such as paver block or turf block, shall be suitable and acceptable for any specific low volume parking location.

(3) Green areas (planters, with grass and shrubs or trees) shall comprise not less than 20 percent of the total parking area, including driveways and walkways, and shall be provided with automatic or manual irrigation facilities, equipped with rain sensors and backflow preventers, and with adequate pressure and coverage to enable periodic wetting of the mulched areas to keep the mulch sufficiently moist to prevent its being blown or strewn by winds or vehicle exhausts, or ignited by the latter.

(4) Landscape islands, parking space and lot dimensions shall be in accordance with the LDC.

(5) A minimum of 25 percent of the required parking spaces shall be paved in accordance with the Land Development code. Any extra parking spaces over the Code required number may also use the alternative surface materials as noted above. All Accessible parking spaces shall be paved in accordance with Florida Statutes and the LDC.

* * * *

SECTION IX: Part III, Appendix D – Development Design Guidelines

* * * *

3. – Residential Design Guidelines

* * * *

3.2.3. – Balconies and Porches

For any multi-residential buildings of two or more stories, balconies and porches shall adhere to the following standards:

(a) Balconies, canopies or other similar architectural features shall be used along all second story or taller facades which front any existing public right-of-way, and such features

shall make up at least fifty (50) percent of the lineal frontage along the right-of-way as determined by the City of Apopka's DRC-Development Review Committee

- (b) Balconies. Balconies shall consist of an outside space (not under heat or air conditioned) and shall be a minimum of 5-feet deep and minimum 6-feet wide (30 square feet).
Luxury size balconies shall be a minimum 5-feet deep and 12-feet wide (60 square feet).
Balconies may project from the facia of the principal building and cannot count toward the required minimum living area square feet. Balconies that are recessed into the building and flush with the exterior principal wall, may be counted toward the minimum living area square feet.

- (c) First Story Porch. An unscreened or screened covered porch shall be permitted on the first story of a residential building. Porches that are recessed into the building and flush with the exterior principal wall, may be counted toward the minimum living area square feet. Porches may project from the facia of the principal building and cannot count toward the required minimum living area square feet. A projecting porch may extend into the required front yard setback up to six (6) feet and into the required street side yard setback up to five (5) feet, provided that the following conditions are met:

1. The porch has a minimum depth and width of six (6) feet;
2. The porch does not extend more than half of any required setback
3. Is not within any utility easement;
4. The porch is constructed of materials similar to that of the principal facade; and
5. The porch design is consistent with the architectural style of the principal structure as determined by the Appearance Review Officer in accordance with generally accepted architectural standards.

- (c) Second Story Balconies. An unscreened or screened balcony may be permitted on the second story of a residential building. Such balcony may encroach up to six (6) feet into the required front yard setback and up to five (5) feet into the required street side yard setback, provided that the following conditions are met:

1. There is a first story porch directly below the second story balcony;
2. The second story balcony has a minimum depth of five (5) feet;
3. If covered, the second story balcony has a separate roof line which is compatible with the design of the principal structure;
4. The second story balcony is constructed of materials similar to that of the principal facade; and
5. The second story balcony is consistent with the architectural style of the principal structure as determined by the Community Development Director in accordance with generally accepted architectural standards.

- (d) Balconies three or more stories. Balconies on multi-story buildings three or more stores shall adhere to the following conditions:

1. Balconies must have a minimum depth of five (5) feet;

- 185 2. If covered, the balconies have a separate roof line which is compatible with the
186 design of the principal structure;
- 187 3. The balconies are constructed of materials similar to that of the principal facade;
188 and
- 189 4. The balconies are consistent with the architectural style of the principal structure as
190 determined by the Community Development Director in accordance with generally
191 accepted architectural standards.

192 (e) Porch Roof Projections. Roof projections (eaves) may encroach up to two (2) feet
193 beyond the porch or balcony into the required front or street side yard. Wherever a
194 porch or roof extends into the front yard or street side yard setbacks, as allowed by this
195 section, no other modification of front yard or street side yard setbacks may be
196 approved by the Zoning Official.

197 (f) Porch or balcony Screens. Screens on windows and doors shall be stretched, fitted, and
198 maintained without open rips or tears. Screens on porches, balconies or other
199 appurtenances shall be maintained in good repair.

200
201 **SECTION X: AUTHORIZING INCLUSION IN CODE.** The provisions of this
202 ordinance shall be included and incorporated into the Code of Ordinances of the City of Apopka,
203 as additions or amendments thereto

204
205 **SECTION XI: SEVERABILITY.** Should any word, phrase, sentence, subsection or section be
206 held by a court of competent jurisdiction to be illegal, void, unenforceable, or unconstitutional, then that word,
207 phrase, sentence, subsection or section so held shall be severed from this ordinance and all other words, phrases,
208 sentences, subsections, or sections shall remain in full force and effect.

209
210 **SECTION XII: CONFLICTING ORDINANCES.** All ordinances or part thereof, in conflict
211 herewith are, to the extent of such conflict, repealed.

212
213 **SECTION XIII: EFFECTIVE DATE.** That this ordinance and the rules, regulations,
214 provisions, requirements, orders and matters established and adopted hereby shall take effect and be in full
215 force and effect immediately upon its passage and adoption.

216
217 **PASSED UPON** at the first reading of the City Council, this 6th day of September, 2023.

218
219 **PASED UPON** at the second and final reading of the City Council, this 20th day of September
220 2023.

221
222
223
224 **ATTEST:**

225 **BRYAN NELSON**
226 Mayor

227 _____
228 SUSAN M. BONE
229 City Clerk

232 APPROVED as to legal sufficiency and form:

233

234

235

236 _____
City Attorney

237

238

239 DULY ADVERTISED FOR PUBLIC HEARING:

August 4, 2023

240

September 1, 2023



City of Apopka PLANNING COMMISSION STAFF REPORT

Section: SITE PLANS

Item #: 1.

Meeting Date: August 8, 2023

Department: Community Development

SUBJECT:

Floor and Décor Apopka – Major Development Plan

REQUEST:

Recommend approval of the Floor and Décor Apopka – Major Development Plan

SUMMARY:

Owner(s): Mid-Florida Freezer Properties, LLC

Applicant: Kimley-Horn and Associates, Inc. c/o Brian Ashby P.E.

Parcel Number(s): 06-21-28-7180-07-160, 06-21-28-7180-07-010, 06-21-28-7180-07-031 and 06-21-28-7180-07-100

Location: Southwest corner of Lake View Drive and U.S. 441

Future Land Use (FLU): Industrial (floor area ratio maximum of 0.60)

Zoning: I-L (Light Industrial)

Existing Use: Grocery store and warehouse

Proposed Use(s): Wholesale facility use

Tract Size: 5.72 +/- acres

Proposed Density/Intensity: 0.31 Floor Area Ratio

ZONING REPORT:

Direction	Future Land Use	Zoning	Present Use
North	County Commercial	County C-1 (Retail Commercial)	Automobile service station
East	County Commercial and County Low Medium Density	County C-1, County R-1	Vacant and Plymouth Heights Residential Subdivision
South	County Industrial	County Ind-2 (Industrial)	Industrial Warehouse
West	Industrial	I-L (Light Industrial)	Industrial Warehouse

PROJECT SUMMARY:

The Floor and Décor Apopka – Major Development Plan (MDP) proposes to construct a building with 77,901 square feet of area for a wholesale facility for surface flooring and related accessories on approximately 5.72 acres. While 70 parking spaces are required, the applicant is proposing a total of 120 parking spaces plus six accessible spaces. These parking spaces are dispersed on the north and south of the proposed building with the loading area located on the southern end. The proposed building height is 32 feet while the maximum permitted height is 45 feet.

The northern portion of the subject property currently houses a grocery store and warehouse, while the southern area is undeveloped and heavily wooded. The landscape plan proposes Red Maple and Oak trees within

landscaped parking islands and the perimeter of the project area. Oak trees embellish the frontage along U.S. 441 and a combination of Crape Myrtle and Red Maples are placed along Lake View Drive.

ACCESS/TRANSPORTATION:

The applicant is currently undergoing the vacation process for the Shepard Avenue right-of-way (ROW) with Orange County. A portion of the ROW will remain a public right-of-way, providing access to the adjacent western property. The Major Development Plan shows right-in and right-out access points located on U.S. 441 and Lake View Drive, as well as, access on Mayflower Avenue.

ORANGE COUNTY NOTIFICATION:

Orange County was notified at the time of the site plan submittal for this property through the DRC agenda distribution.

PUBLIC HEARING SCHEDULE:

August 8, 2023 – Planning Commission (5:30 P.M.)

September 6, 2023 – City Council (1:30 P.M.)

Attachments:

- Maps
- Floor and Décor Apopka – MDP
- Floor and Décor Apopka – Building Elevations
- Floor and Décor Apopka – TIA

FUNDING SOURCE:

Not applicable.

RECOMMENDED MOTION:

Development Review Committee:

Recommends approval of the Floor and Décor Apopka – Major Development Plan, subject to the findings in the staff report.

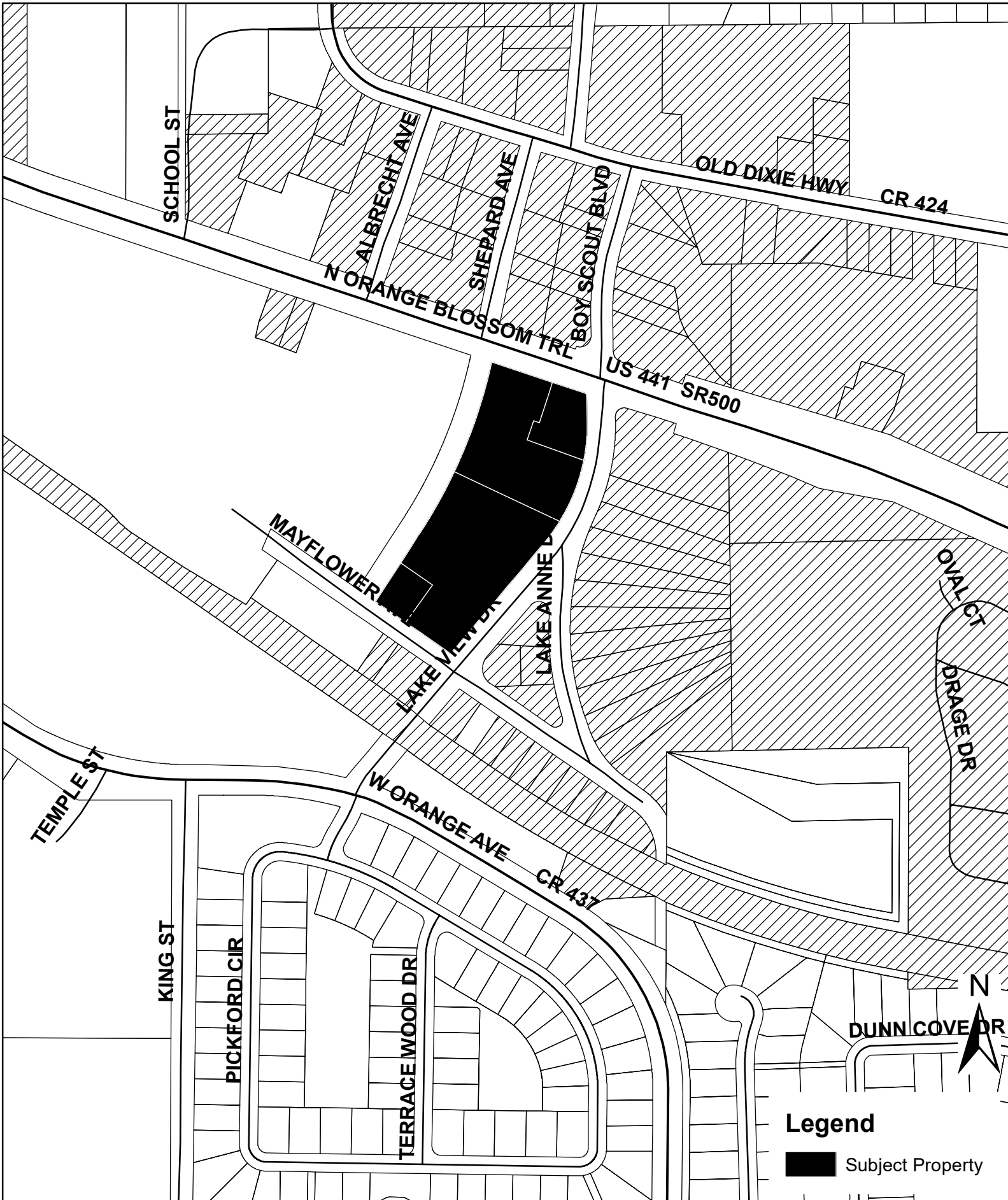
Recommended Motion – Planning Commission:

Recommend approval of the Floor and Décor Apopka – Major Development Plan, subject to the findings in the staff report.

ATTACHMENTS:

1. Maps
2. Floor and Décor Apopka – MDP
3. Floor and Décor Apopka – Building Elevations
4. Floor and Décor Apopka – TIA

Vicinity



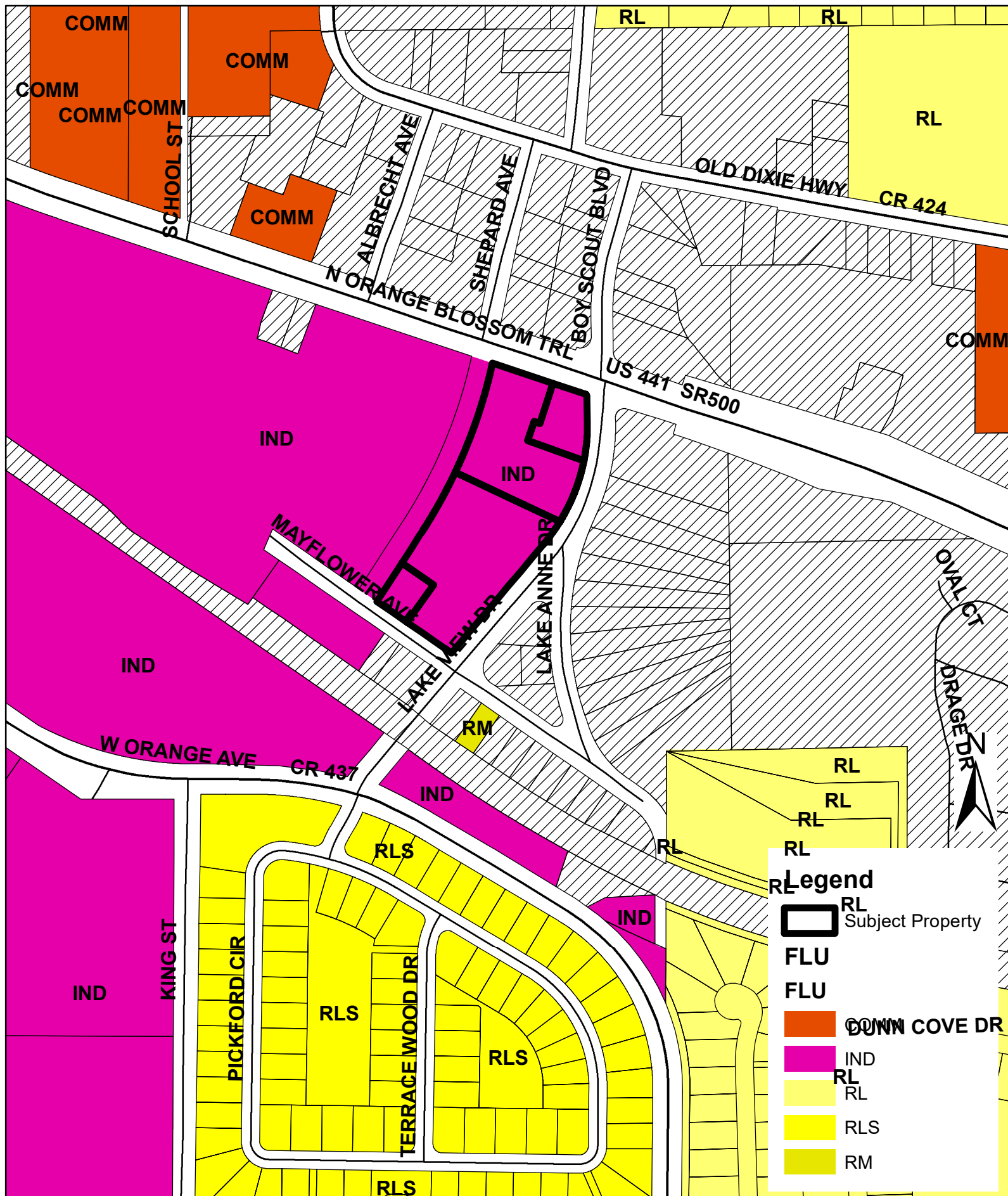
(THIS MAP IS FOR REFERENCE PURPOSES ONLY AND IS NOT TO SCALE)

Aerial



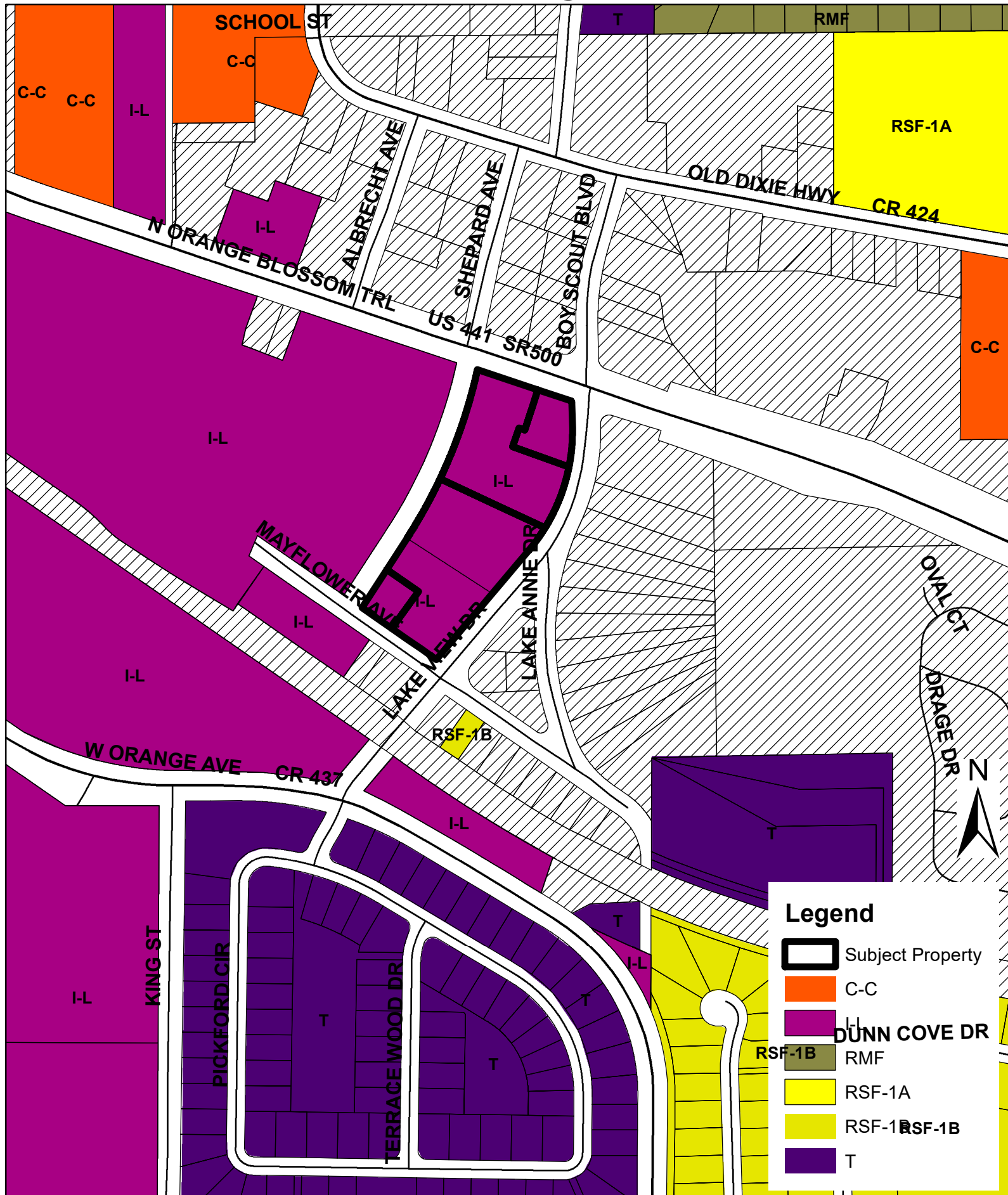
(THIS MAP IS FOR REFERENCE PURPOSES ONLY AND IS NOT TO SCALE)

Future Land Use



(THIS MAP IS FOR REFERENCE PURPOSES ONLY AND IS NOT TO SCALE)

Zoning



(THIS MAP IS FOR REFERENCE PURPOSES ONLY AND IS NOT TO SCALE)

MAJOR DEVELOPMENT PLAN

FOR FLOOR AND DECOR APOPKA

PARCEL I.D. #'s:

06-21-28-7180-07-100
06-21-28-7180-07-010
06-21-28-7180-07-160
06-21-28-7180-07-031

CITY OF APOPKA, FL 32703

JULY 10, 2023



6 CANDLER-APOPKA FINE SAND, 5 TO 12 PERCENT SLOPES
47 TAVARES-MILHOPPER FINE SANDS, 0 TO 5 PERCENT SLOPES

SOILS MAP

1" = 150'

LEGAL DESCRIPTION

(AS SURVEYED)

A PORTION OF:

A PARCEL OF LAND LOCATED IN SECTION 6, TOWNSHIP 21 SOUTH, RANGE 28 EAST, CITY OF APOPKA, ORANGE COUNTY, FLORIDA, BEING LOTS 1-30, BLOCK G, TOGETHER WITH A PORTION OF THE UNIMPROVED 864-FOOT RIGHT OF WAY OF SHEPARD AVENUE, ACCORDING TO THE PLAT OF PLYMOUTH DELLS, AS RECORDED IN PLAT BOOK O, PAGES 102-103, PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA, LESS AND EXCEPT RIGHT OF WAY TAKEN FOR ORANGE BLOSSOM TRAIL (U.S. HIGHWAY 441) PER FLORIDA DEPARTMENT OF TRANSPORTATION PROJECT NUMBER 7502-106, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGIN AT THE SOUTHEASTERLY CORNER OF LOT 20 OF BLOCK G, OF SAID PLYMOUTH DELLS; THENCE ALONG THE NORTHERLY RIGHT-OF-WAY OF MAYFLOWER AVENUE (864-FOOT PUBLIC RIGHT OF WAY PER PLAT BOOK O, PAGES 102-103, PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA), N85°11'40"W, A DISTANCE OF 277.27 FEET TO THE CENTERLINE OF SAID SHEPARD AVENUE; THENCE ALONG THE CENTERLINE OF SAID SHEPARD AVENUE, N32°19'31"E, A DISTANCE OF 234.27 FEET; THENCE CONTINUE ALONG THE CENTERLINE OF SAID SHEPARD AVENUE, NORTHEASTERLY ALONG THE ARC OF A CURVE TO THE LEFT (SAD CURVE HAVING A RADIUS OF 1377.88 FEET, A CENTRAL ANGLE OF 20°14'27" AND A CHORD BEARING AND DISTANCE OF N22°12'38"E, 484.15 FEET) FOR AN ARC DISTANCE OF 486.68 FEET TO THE SOUTHERLY RIGHT-OF-WAY OF ORANGE BLOSSOM TRAIL (U.S. HIGHWAY 441) (VARIABLE-WIDTH PUBLIC RIGHT OF WAY PER FLORIDA DEPARTMENT OF TRANSPORTATION PROJECT 7502-106); THENCE ALONG SAID SOUTHERLY RIGHT-OF-WAY, S71°32'06"E, A DISTANCE OF 306.71 FEET TO THE WESTERLY RIGHT-OF-WAY OF LAKE VIEW DRIVE (864-FOOT PUBLIC RIGHT OF WAY PER PLAT BOOK T, PAGE 19, PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA); THENCE ALONG SAID LAKE VIEW DRIVE, WESTERLY RIGHT-OF-WAY, THE FOLLOWING FIVE (5) COURSES: 1) SOUTHEASTERLY ALONG THE ARC OF A NON-TANGENT CURVE TO THE RIGHT (SAD CURVE HAVING A RADIUS OF 30.00 FEET, A CENTRAL ANGLE OF 13°43'11" AND A CHORD BEARING AND DISTANCE OF S89°27'50"E, 7.17 FEET) FOR AN ARC DISTANCE OF 7.18 FEET; 2) S89°27'50"E, A DISTANCE OF 18.63 FEET; 3) SOUTHWESTERLY ALONG THE ARC OF A CURVE TO THE RIGHT (SAD CURVE HAVING A RADIUS OF 302.17 FEET, A CENTRAL ANGLE OF 28°10'00" AND A CHORD BEARING AND DISTANCE OF S12°28'11"W, 227.35 FEET) FOR AN ARC DISTANCE OF 229.34 FEET; 4) SOUTHWESTERLY ALONG A COMPOUND CURVE TO THE RIGHT (SAD CURVE HAVING A RADIUS OF 622.10 FEET, A CENTRAL ANGLE OF 12°47'52" AND A CHORD BEARING AND DISTANCE OF S32°49'00"W, 138.17 FEET) FOR AN ARC DISTANCE OF 138.46 FEET; 5) S40°22'59"W, A DISTANCE OF 389.14 FEET TO THE POINT OF BEGINNING.

CONTAINING 5.718 ACRES (249880 SQUARE FEET) OF LAND, MORE OR LESS.

LEGAL DESCRIPTION

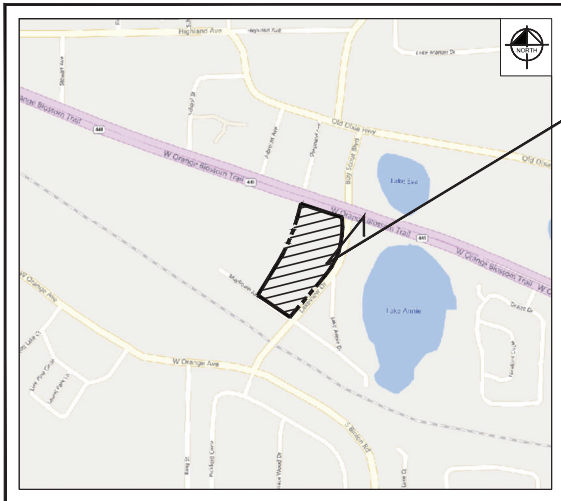
(AS PER TITLE COMMITMENT FILE # FL25221210JC/233993ATL)

ALL OF BLOCK G, PLYMOUTH DELLS, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK O, PAGES 102 AND B103, OF THE PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA.

SCOPE NARRATIVE

THE PROPOSED PROJECT IS A FLOOR AND DECOR AT THE CORNER OF W. ORANGE BLOSSOM TRAIL AND LAKE VIEW DRIVE. SITE DEMOLITION INCLUDES CLEARING AND GRUBBING OF EXISTING VEGETATION AND DEMOLITION OF EXISTING STRUCTURES. THIS PROJECT CONSISTS OF THE CONSTRUCTION OF A 77,901 SF BUILDING ON A 5.72 ACRE SITE. THE PROJECT INCLUDES PROPOSED PARKING, INFRASTRUCTURE, AND A STORM WATER MANAGEMENT SYSTEM.

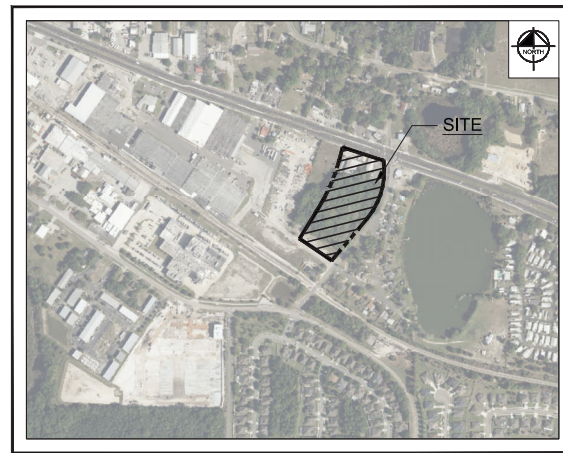
TRUCKS AND SEMI-TRAILERS SHALL NOT BE PARKED OR STORED WITHIN PUBLIC VIEW OVERNIGHT UNLESS IT IS TEMPORARY PARKING NOT TO EXCEED FORTY-EIGHT (48) HOURS FOR DELIVERY PURPOSES.



SECTION 6, TOWNSHIP 21S, RANGE 28E

VICINITY MAP

1" = 500'



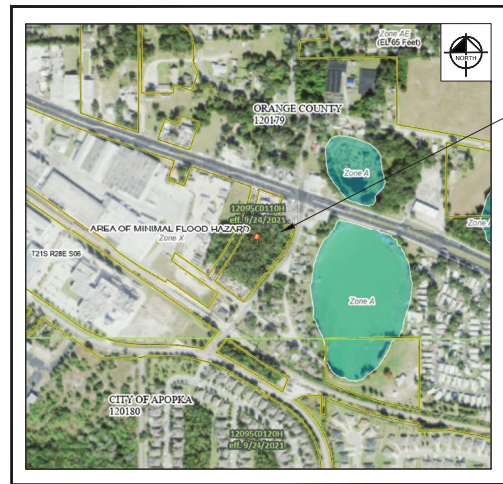
NOTE: THE SUBJECT PROPERTY IS LOCATED NORTH OF ORANGE BLOSSOM TRAIL (U.S. HWY 441) AND WEST OF LAKE VIEW DRIVE AND IS SUBJECT TO THE DENSITY REGULATIONS OF LDC 33.6 - RSPB-R.

AERIAL MAP

1" = 500'

SHEET INDEX

Sheet Number	Sheet Title
C0.0	COVER SHEET
C1.0	GENERAL NOTES
C2.0	STORMWATER POLLUTION PREVENTION PLAN
C2.1	EROSION CONTROL DETAILS
C3.0	EXISTING CONDITIONS AND DEMOLITION PLAN
C4.0	SITE PLAN
C5.0	PAVING AND GRADING PLAN
C5.1	DRAINAGE PLAN
C5.2	GRADING AND DRAINAGE DETAILS
C6.0	UTILITY PLAN
C6.1	LIFT STATION DETAIL
C6.2	FORCEMAIN PLAN AND PROFILE
C6.3	FORCEMAIN PLAN AND PROFILE
C7.0	GENERAL CONSTRUCTION DETAILS
C8.0	CITY OF APOPKA DETAILS
C8.1	CITY OF APOPKA DETAILS
C8.2	CITY OF APOPKA DETAILS
C8.3	ORANGE COUNTY DETAILS
L0.50	TREE MITIGATION PLAN
L0.51	TREE CANOPY COVERAGE
L0.52	TREE MITIGATION CALCULATIONS
L0.53	TREE MITIGATION SPECIFICATIONS
L1.00	LANDSCAPE PLAN
L1.50	LANDSCAPE DETAILS
L1.51	LANDSCAPE SPECIFICATIONS
L2.00	IRRIGATION PLAN
L2.50	IRRIGATION DETAILS
L2.51	IRRIGATION SPECIFICATIONS



12095C0110H MAP REVISED JANUARY 11, 2023

FEMA MAP

1" = 500'

PROPERTY OWNERS

PARCEL I.D.s: 06-21-28-7180-07-160

06-21-28-7180-07-100

06-21-28-7180-07-031

06-21-28-7180-07-010

FLOOR & DECOR OUTLETS OF AMERICA
2500 WINDY RIDGE PARKWAY, SE
ATLANTA, GEORGIA 30339

PROJECT TEAM

OWNER/DEVELOPER

FLOOR & DECOR OUTLETS OF AMERICA
ADDRESS: 2500 WINDY RIDGE PARKWAY, SE
ATLANTA, GEORGIA 30339

CIVIL ENGINEER

KIMLEY-HORN AND ASSOCIATES, INC.
189 S. ORANGE AVENUE, SUITE 1000
ORLANDO, FL 32801
CONTACT: BRIAN S. ASHBY
PHONE: (407) 898-1511
EMAIL: BRIAN.ASHBY@KIMLEY-HORN.COM

LANDSCAPE ARCHITECT

KIMLEY-HORN AND ASSOCIATES, INC.
189 S. ORANGE AVENUE, SUITE 1000
ORLANDO, FL 32801
CONTACT: MATT FRANKO
PHONE: (407) 898-1511
EMAIL: MATT.FRANKO@KIMLEY-HORN.COM

ARCHITECT

SBLM ARCHITECTS
33 WALT WHITMAN ROAD, SUITE 300A
HUNTINGTON STATION, NY 11746
PHONE: (631) 683-5588

UTILITY PROVIDERS

WATER AND SEWER

CITY OF APOPKA
COMMUNITY DEVELOPMENT DEPARTMENT
120 E. MAIN STREET, 2ND FLOOR
APOPKA, FLORIDA 32703
PHONE: (407) 703-1712

POWER

DUKE ENERGY
3250 BONNETT CREEK ROAD
PO BOX 10000
LAKE BUENA VISTA, FLORIDA 32830
PHONE: (407) 938-6619

SURVEYOR

LEADING EDGE LAND SERVICES, INC.
8802 EXCHANGE DR.
ORLANDO, FL 32809
CONTACT: JEFFERY D. HOFIUS
PHONE: (407) 351-6730
EMAIL: JHOFIUS@LEADINGEDGE.LS.COM

PREPARED BY

Kimley»Horn

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WWW.KIMLEY-HORN.COM CA 35106



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SBLM Architects AA-0003434
33 Walt Whitman Road, Suite 300A
Huntington Station, NY 11746
Telephone: 631 683 5588
Fax: 631 683 5591



A. V. SCHWAN & ASSOC.
STRUCTURAL ENGINEERS
600 East Thomas Rd, Suite 1
Scottsdale, Arizona 85251
(602) 265-4331



CODE CONSULTANTS, INC.
2645 WOODLAND PKWY, SUITE 200
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WWW.KIMLEY-HORN.COM

PROJECT

FLOOR & DECOR
APOPKA, FL

TBD SWC ORANGE BLOSSOM TRAIL &
LAKE VIEW DRIVE, FL 32712

ISSUE DATE: 04/25/2023
STORE NUMBER: T.B.D.
GROSS BLDG AREA: 77,901 SF
JOB NUMBER: 022172
PROTOTYPE: 2022 Q4

ISSUE

ISSUE SET	04/25/2023
CITY COMMENTS	06/09/2023
CITY COMMENTS	07/10/2023

SEAL



SHEET

COVER SHEET

DRAWN: BJW
CHECKED: BSA

| GENERAL
 | STORM DRAINAGE SYSTEM
 | PAVING, GRADING AND DRAINAGE
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 | | | | | | | | | | | |
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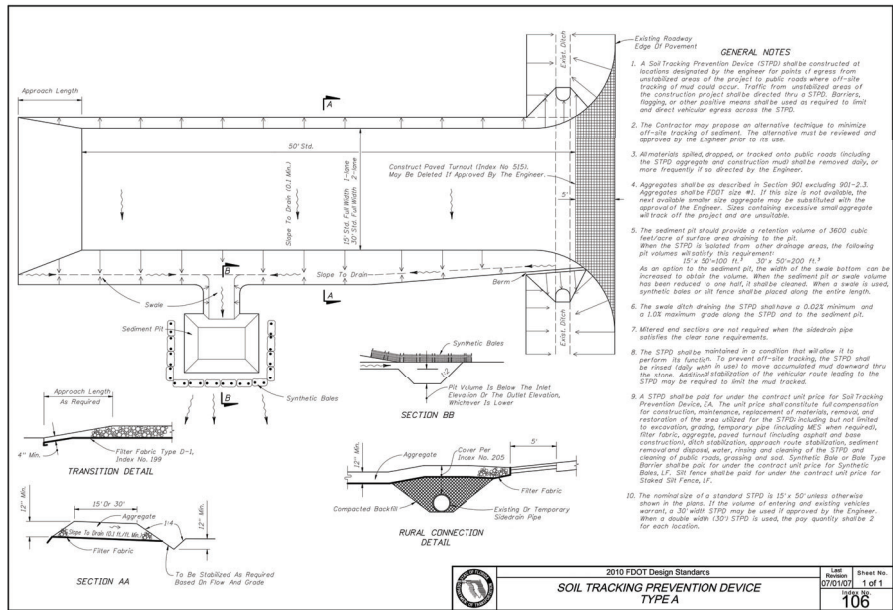
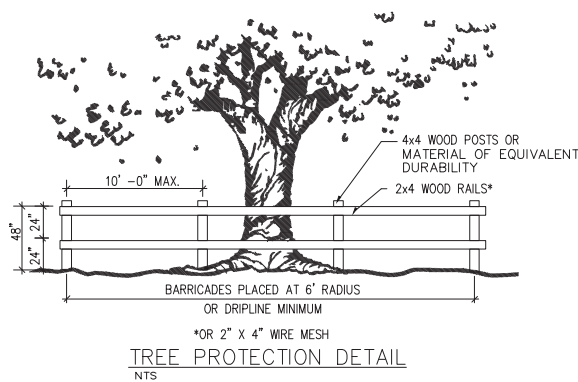
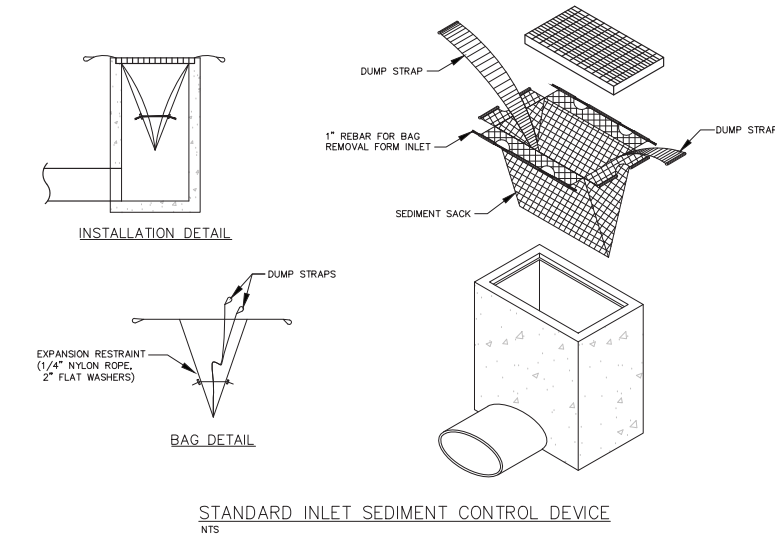
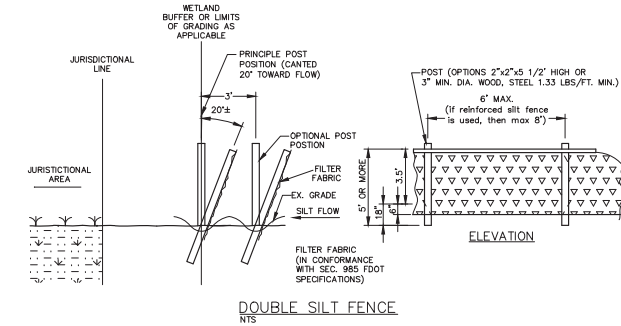
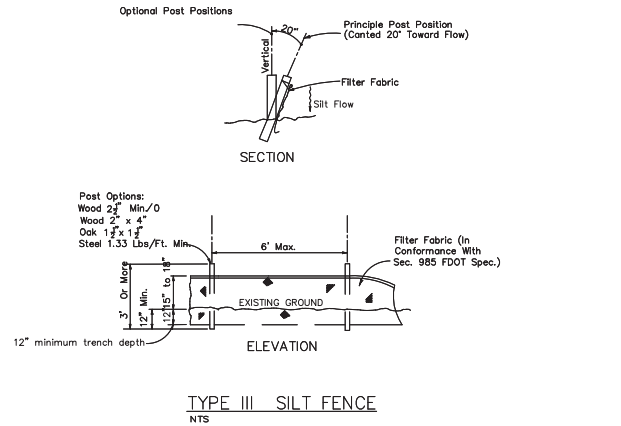
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| <div><div>1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND VERIFYING (HORIZONTALLY AND VERTICALLY) ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION AND FOR NOTIFYING THE VARIOUS UTILITY COMPANIES TO MAKE THE NECESSARY ARRANGEMENTS FOR ANY RELOCATION, TEMPORARY DISTRIBUTION SERVICE, OR CLARIFICATION OF ACTIVITY REGARDING SAID UTILITY. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING AN UNDERGROUND UTILITY. WHETHER SHOWN ON THESE PLANS OR FIELD LOCATED, ALL OTHER UTILITIES WHICH INTERFERE WITH THE PROPOSED CONSTRUCTION SHALL BE RELOCATED BY THE RESPECTIVE UTILITY COMPANIES AND THE CONTRACTOR SHALL COOPERATE WITH THEM DURING RELOCATION OPERATIONS, ANY DELAY OR INCONVENIENCE OF THE VARIOUS UTILITIES SHALL BE INCIDENTAL TO THE CONTRACT AND NO EXTRA COMPENSATION WILL BE ALLOWED. CONTRACTOR SHALL CALL "SUNSHINE ONE" AT 811 TO HAVE EXISTING UTILITIES LOCATED AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.</div><div>2. THE LOCATIONS OF ALL EXISTING UTILITIES, STORM DRAINAGE SYSTEMS, AND TOPOGRAPHIC FEATURES SHOWN ON THE PLANS HAVE BEEN OBTAINED FROM THE BEST AVAILABLE INFORMATION AND ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. SHOULD A DISCREPANCY arise BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS, WHICH WOULD APPROPRIATELY AFFECT THE EXECUTION OF THESE PLANS, THE CONTRACTOR SHALL HALT CONSTRUCTION AND NOTIFY THE ENGINEER IMMEDIATELY.</div><div>3. PRIOR TO THE INITIATION OF SITE CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ANY EXISTING UTILITIES INCLUDING GAS, WATER, ELECTRIC, CABLE TV, COMMUNICATIONS, SANITARY SEWERS AND STORM DRAINAGE SYSTEMS, ON AND / OR ADJACENT TO THE SITE. REMOVE OR CAP AS NECESSARY.</div><div>4. THE CONTRACTOR SHALL EXERCISE CAUTION IN AREAS OF BURIED UTILITIES AND SHALL CALL "SUNSHINE 811" AT 811 OR 1-800-432-4770 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION TO ARRANGE FOR FIELD LOCATIONS OF BURIED UTILITIES.</div><div>5. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING FACILITIES, ABOVE OR BELOW GROUND, THAT MAY OCCUR AS A RESULT OF THE WORK PERFORMED, BY THE CONTRACTOR OR SUB-CONTRACTORS, AS CALLED FOR IN THESE CONTRACT DOCUMENTS.</div><div>6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BECOME FAMILIAR WITH THE PERMIT AND INSPECTION REQUIREMENTS SPECIFIED BY THE VARIOUS GOVERNMENTAL AGENCIES AND THE ENGINEER. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, SUCH AS RIGHT OF WAY PERMIT(S), EXCAVATION/FILL PERMIT(S), FIRE PROTECTION PERMIT(S), OR UNDERGROUND UTILITY PERMIT(S), PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING ALL INSPECTION CRITERIA OF APPLICABLE AGENCIES, SCHEDULING OF INSPECTIONS, AND OBTAINING REQUIRED INSPECTIONS FROM AGENCY.</div><div>7. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, ON AND PRECAST AND MANUFACTURED ITEMS, TO THE OWNER'S ENGINEER FOR REVIEW. FAILURE TO OBTAIN APPROVAL BEFORE INSTALLATION MAY RESULT IN REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.</div><div>8. ALL UTILITY SERVICE STUB-OUTS (WATER, SANITARY SEWER, etc.) ARE TO BE INSTALLED WITHIN 5' OF BUILDING(S), UNLESS OTHERWISE NOTED ON PLANS.</div><div>9. CONTRACTOR TO COORDINATE WITH THE APPLICABLE ELECTRIC UTILITY SUPPLIER REGARDING ANY NECESSARY RELOCATION(S) OF UNDERGROUND AND/OR OVERHEAD ELECTRIC FACILITIES, AND FOR THE LOCATION AND INSTALLATION OF TRANSFORMER PAD(S) AND ASSOCIATED ELECTRIC FACILITIES.</div><div>10. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN AN R-D-W UTILIZATION PERMIT (IF REQUIRED) FOR CONSTRUCTION OF THE PROPOSED UTILITIES. THIS PERMIT MUST BE OBTAINED BY A DULY LICENSED PLUMBING CONTRACTOR (OR CLASS A GENERAL CONTRACTOR) PRIOR TO THE START OF CONSTRUCTION. THESE PLANS AND ANY SUBSEQUENT REVISIONS TO THESE PLANS, THAT ARE ISSUED BY THE ENGINEER, WILL BE SUBJECT TO THE APPROVAL CONDITIONS OF THIS PERMIT.</div><div>11. THE GRAPHIC INFORMATION DEPICTED ON THESE PLANS HAS BEEN COMPILED TO PROPORTION BY SCALE AS ACCURATELY AS POSSIBLE. HOWEVER, DUE TO REPRODUCTIVE DISTORTION, REDUCTION, AND/OR REVISIONS, INFORMATION CONTAINED HEREIN IS NOT INTENDED TO BE SCALED FOR CONSTRUCTION PURPOSES.</div><div>12. ALL SPECIFICATIONS AND DOCUMENTS REFERENCED HEREIN SHALL BE OF THE LATEST REVISION.</div><div>13. ALL UNDERGROUND UTILITIES MUST BE IN-PLACE, TESTED AND INSPECTED PRIOR TO BASE AND SURFACE CONSTRUCTION.</div><div>14. WORK PERFORMED UNDER THIS CONTRACT SHALL INTERFERE SMOOTHLY WITH ANY OTHER WORK BEING PERFORMED ON SITE BY OTHER CONTRACTORS/SUBCONTRACTORS AND UTILITY COMPANIES. IT WILL BE NECESSARY FOR THE GENERAL CONTRACTOR TO COORDINATE AND SCHEDULE HIS/HER ACTIVITIES ACCORDINGLY.</div><div>15. ALL DIMENSIONS ARE TO FACE OF CURB, UNLESS OTHERWISE NOTED.</div><div>16. ALL SIGNAGE MUST COMPLY WITH THE LAND DEVELOPMENT CODE OF THE CITY OF APOPKA, FLORIDA.</div><div>17. CONTRACTOR IS RESPONSIBLE FOR ALL DEWATERING ACTIVITIES NECESSARY TO PERFORM THE WORK WITHIN THESE PLANS.</div><div>18. THE CONTRACTOR SHALL RESTORE OFF-SITE CONSTRUCTION AREAS TO EQUAL AND/OR BETTER CONDITION THAN EXISTING PRIOR TO START OF CONSTRUCTION.</div><div>19. THE CONTRACTOR SHALL COMPLY WITH THE LEGAL LOAD RESTRICTIONS IN HAULING OF MATERIALS IN PUBLIC ROADS BEYOND THE LIMITS OF WORK. A SPECIAL PERMIT WILL NOT RELIEVE THE CONTRACTOR OF LIABILITY FOR THE DAMAGE WHICH MAY RESULT FROM THE MOVING OF MATERIAL AND EQUIPMENT.</div><div>20. SURVEY MONUMENTS OR BENCHMARKS, WHICH HAVE TO BE DISTURBED BY THIS WORK, SHALL BE REPLACED UPON COMPLETION OF WORK BY A LICENSED LAND SURVEYOR CURRENTLY REGISTERED IN THE STATE OF FLORIDA.</div><div>21. CONTRACTOR IS TO ADJUST ANY UTILITY ELEMENT MEANT TO BE FLUSH WITH GRADE (CLEAN OUT MANHOLES, CATCH BASINS, INLETS, ETC.) THAT IS AFFECTED BY SITE WORK OR GRADE CHANGES, WHETHER SPECIFICALLY NOTED ON PLANS OR NOT.</div><div>22. ALL WORK PERFORMED WITHIN THE FDOT RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH THE 2023-24 EDITIONS OF FDOT STANDARD PLANS, SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND THE 2017 UTILITY ACCOMMODATION MANUAL.</div></div> <div>TREES AND VEGETATION</div> <tr><td><div><div>1. THE CONTRACTOR IS TO MINIMIZE THE REMOVAL OF VEGETATION TO THE GREATEST EXTENT PRACTICAL. SEE DEMOLITION PLAN FOR TREES TO BE REMOVED. TREES IN CLOSE PROXIMITY TO CONSTRUCTION SHALL BE PROTECTED BY WOOD FENCING PER DETAIL ON SHEET C2.1.</div><div>2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF ALL LANDSCAPE BUFFERS AND RETENTION AND DETENTION FACILITIES UNTIL THE WORK HAS BEEN ACCEPTED BY THE OWNER. ALL DISTURBED AREAS SHALL BE RETURNED TO THEIR ORIGINAL CONDITION.</div></div></td><td><div><div>1. STANDARD INDEXES REFER TO THE LATEST EDITION OF F.D.O.T. "ROADWAY AND TRAFFIC DESIGN STANDARDS."</div><div>2. THE LATEST EDITION OF F.D.O.T. "DESIGN STANDARDS FOR DESIGN, CONSTRUCTION, MAINTENANCE, AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM" IS REFERRED TO FOR THE STRUCTURAL DESIGN OF DRAINAGE STRUCTURES SPECIFIED IN THESE PLANS, AS REFERENCED BY STANDARD INDEX. ALL SPECIALTY DRAINAGE STRUCTURES REQUIRE SEPARATE STRUCTURAL DESIGN, WHICH IS NOT INCLUDED IN THESE PLANS. STATION OFFSETS ARE TO THE CENTERLINE OF THE STRUCTURE TOP (I.E. DITCH BOTTOM INLET OR CURB INLET TOP), AS OPPOSED TO THE STRUCTURE BASE.</div><div>3. ALL STORM SEWER PIPE SHALL BE REINFORCED CONCRETE CLASS III (ASTM C-76) UNLESS OTHERWISE NOTED ON PLANS. ALL DRAINAGE STRUCTURES SHALL BE IN ACCORDANCE WITH F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS UNLESS OTHERWISE NOTED ON PLANS.</div><div>4. PIPE LENGTHS SHOWN ARE APPROXIMATE AND TO CENTER OF DRAINAGE STRUCTURES, WITH THE EXCEPTION OF MITERED END AND FLARED END JOINTCTIONS. LENGTHS OF PIPE SHOWN WHICH TERMINATE WITH MITERED END OR FLARED END SECTIONS ARE MEASURED TO THE DOWNSTREAM INVERT OF THE MITERED END OR FLARED END SECTION.</div><div>5. ALL DRAINAGE STRUCTURE GRATES AND COVERS, EITHER EXISTING OR PROPOSED, SHALL BE TRAFFIC RATED FOR H-20 LOADINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY NECESSARY UPGRADES TO EXISTING DRAINAGE STRUCTURES.</div><div>6. CONSTRUCTION OF THE STORMWATER MANAGEMENT SYSTEM MUST BE COMPLETE AND ALL DISTURBED AREAS STABILIZED IN ACCORDANCE WITH THE PERMITTED PLANS AND CONDITIONS PRIOR TO ANY OF THE FOLLOWING: ISSUANCE OF THE FIRST CERTIFICATE OF OCCUPANCY; INITIATION OF INTENDED USE OF THE INFRASTRUCTURE; OR TRANSFER OF RESPONSIBILITY FOR MAINTENANCE OF THE SYSTEM TO A LOCAL GOVERNMENT OR OTHER RESPONSIBLE ENTITY.</div><div>7. STORM WATER PIPES, STRUCTURES, MINIMUM COVER, AND INSTALLATION PROCEDURES TO BE IN ACCORDANCE WITH THE LAND DEVELOPMENT CODE OF THE CITY OF APOPKA, FLORIDA.</div><div>8. DURING CONSTRUCTION, NO DIRECT DISCHARGE OF WATER TO DOWNSTREAM RECEIVING WATERS WILL BE ALLOWED. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING WATER QUALITY AND SHALL ROUTE DISCHARGE WATER IN SUCH A MANNER AS TO ADEQUATELY REMOVE SILT PRIOR TO RUNOFF FROM THE SITE.</div></div><div>DRAINAGE SYSTEM TESTING AND INSPECTION</div><tr><td></td><td><div><div>1. 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 | <div><div>1. STANDARD INDEXES REFER TO THE LATEST EDITION OF F.D.O.T. "ROADWAY AND TRAFFIC DESIGN STANDARDS."</div><div>2. THE LATEST EDITION OF F.D.O.T. "DESIGN STANDARDS FOR DESIGN, CONSTRUCTION, MAINTENANCE, AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM" IS REFERRED TO FOR THE STRUCTURAL DESIGN OF DRAINAGE STRUCTURES SPECIFIED IN THESE PLANS, AS REFERENCED BY STANDARD INDEX. ALL SPECIALTY DRAINAGE STRUCTURES REQUIRE SEPARATE STRUCTURAL DESIGN, WHICH IS NOT INCLUDED IN THESE PLANS. STATION OFFSETS ARE TO THE CENTERLINE OF THE STRUCTURE TOP (I.E. DITCH BOTTOM INLET OR CURB INLET TOP), AS OPPOSED TO THE STRUCTURE BASE.</div><div>3. ALL STORM SEWER PIPE SHALL BE REINFORCED CONCRETE CLASS III (ASTM C-76) UNLESS OTHERWISE NOTED ON PLANS. ALL DRAINAGE STRUCTURES SHALL BE IN ACCORDANCE WITH F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS UNLESS OTHERWISE NOTED ON PLANS.</div><div>4. PIPE LENGTHS SHOWN ARE APPROXIMATE AND TO CENTER OF DRAINAGE STRUCTURES, WITH THE EXCEPTION OF MITERED END AND FLARED END JOINTCTIONS. LENGTHS OF PIPE SHOWN WHICH TERMINATE WITH MITERED END OR FLARED END SECTIONS ARE MEASURED TO THE DOWNSTREAM INVERT OF THE MITERED END OR FLARED END SECTION.</div><div>5. ALL DRAINAGE STRUCTURE GRATES AND COVERS, EITHER EXISTING OR PROPOSED, SHALL BE TRAFFIC RATED FOR H-20 LOADINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY NECESSARY UPGRADES TO EXISTING DRAINAGE STRUCTURES.</div><div>6. CONSTRUCTION OF THE STORMWATER MANAGEMENT SYSTEM MUST BE COMPLETE AND ALL DISTURBED AREAS STABILIZED IN ACCORDANCE WITH THE PERMITTED PLANS AND CONDITIONS PRIOR TO ANY OF THE FOLLOWING: ISSUANCE OF THE FIRST CERTIFICATE OF OCCUPANCY; INITIATION OF INTENDED USE OF THE INFRASTRUCTURE; OR TRANSFER OF RESPONSIBILITY FOR MAINTENANCE OF THE SYSTEM TO A LOCAL GOVERNMENT OR OTHER RESPONSIBLE ENTITY.</div><div>7. STORM WATER PIPES, STRUCTURES, MINIMUM COVER, AND INSTALLATION PROCEDURES TO BE IN ACCORDANCE WITH THE LAND DEVELOPMENT CODE OF THE CITY OF APOPKA, FLORIDA.</div><div>8. DURING CONSTRUCTION, NO DIRECT DISCHARGE OF WATER TO DOWNSTREAM RECEIVING WATERS WILL BE ALLOWED. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING WATER QUALITY AND SHALL ROUTE DISCHARGE WATER IN SUCH A MANNER AS TO ADEQUATELY REMOVE SILT PRIOR TO RUNOFF FROM THE SITE.</div></div> <div>DRAINAGE SYSTEM TESTING AND INSPECTION</div> <tr><td></td><td><div><div>1. THE STORM DRAINAGE PIPING SYSTEM SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE OWNER'S ENGINEER PRIOR TO THE PLACEMENT OF BACKFILL. CONTRACTOR TO NOTIFY THE ENGINEER 48 HOURS IN ADVANCE TO SCHEDULE INSPECTION.</div><div>2. THE CONTRACTOR SHALL MAINTAIN AND PROTECT FROM MUD, DIRT, DEBRIS, ETC. THE STORM DRAINAGE SYSTEM UNTIL FINAL ACCEPTANCE OF THE PROJECT. THE STORM SYSTEM WILL BE REINSPECTED BY THE OWNER'S ENGINEER PRIOR TO APPROVAL FOR CERTIFICATE OF OCCUPANCY PURPOSES. THE CONTRACTOR MAY BE REQUIRED TO RECLEAN PIPES AND INLETS AT THE CONTRACTORS EXPENSE AND PRIOR TO FINAL ACCEPTANCE.</div></div></td><td><div><div>1. ALL PAVING SHALL BE PERFORMED IN ACCORDANCE WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.</div><div>2. PROPOSED SPOT ELEVATIONS REPRESENT FINISHED PAVEMENT OR GROUND SURFACE GRADES, UNLESS OTHERWISE NOTED.</div><div>3. CONTRACTOR SHALL TRIM, PACK AND MATCH EXISTING PAVEMENT AT LOCATIONS WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT.</div><div>4. CURBING SHALL BE PLACED AT THE EDGES OF ALL PAVEMENT, UNLESS OTHERWISE NOTED. REFER TO THE LATEST EDITION OF F.D.O.T. "DESIGN STANDARDS" FOR DETAILS AND SPECIFICATIONS OF ALL F.D.O.T. TYPE CURB AND GUTTERS CALLED FOR IN THESE PLANS.</div><div>5. PRIOR TO CONSTRUCTING CONCRETE PAVEMENT, THE CONTRACTOR IS TO SUBMIT A PROPOSED JOINTING PATTERN TO THE SOILS ENGINEER FOR APPROVAL.</div><div>6. CONTRACTOR TO PROVIDE A 1/2" TO 1" BITUMINOUS EXPANSION
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 | <div><div>1. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING APPLICABLE TESTING WITH THE SOILS ENGINEER. TESTS WILL BE REQUIRED PURSUANT WITH THE SOILS REPORT. UPON COMPLETION OF WORK THE SOILS ENGINEER WILL SUBMIT CERTIFICATIONS TO THE OWNER AND OWNER'S ENGINEER STATING THAT ALL REQUIREMENTS HAVE BEEN MET.</div><div>2. A QUALIFIED TESTING LABORATORY SHALL PERFORM ALL TESTING NECESSARY TO ASSURE COMPLIANCE OF THE IN-PLACE MATERIALS AS REQUIRED BY THESE PLANS AND GEOTECHNICAL REPORT, THE VARIOUS AGENCIES AND PERMIT CONDITIONS. SHOULD ANY RETESTING BE REQUIRED DUE TO THE FAILURE OF ANY TESTS TO MEET THESE REQUIREMENTS, THE CONTRACTOR WILL BEAR ALL COSTS OF SAID RETESTING.</div></div>
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 | PAVEMENT MARKING AND SIGNAGE
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 | <div><div>1. THE INSTALLATION, SHAPE, AND SIZE OF ALL SIGNS AND THEIR LETTERING SHALL COMPLY WITH THE LATEST EDITIONS OF THE U.S. DEPARTMENT OF TRANSPORTATION "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND THE F.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND THE F.D.O.T. "DESIGN STANDARDS FOR DESIGN, CONSTRUCTION, MAINTENANCE, AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM", WHERE CONFLICTS EXIST BETWEEN THE PLANS AND THE ABOVE MENTIONED SPECIFICATIONS, THE MORE STRINGENT CRITERIA SHALL PREVAIL.</div></div>
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 | TEST, INSPECTION AND CLOSEOUT REQUIREMENTS
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 | <div><div>1. ALL GRAVITY SEWER PIPING SHALL BE SUBJECT TO A VISUAL INSPECTION BY THE OWNER'S ENGINEER AND APPLICABLE MUNICIPALITY/AGENCY. THE CONTRACTOR SHALL NOTIFY THE ENGINEER 48 HOURS IN ADVANCE TO SCHEDULE INSPECTION(S). THE CONTRACTOR SHALL BE RESPONSIBLE FOR COSTS ASSOCIATED WITH A TELEVIEWED INSPECTION (TV) OF THE PROPOSED GRAVITY SEWER LINE CONSTRUCTION. TV INSPECTION SHALL BE IN ACCORDANCE TO THE CITY OF APOPKA UTILITIES DESIGN AND CONSTRUCTION STANDARDS MANUAL. THE CONTRACTOR SHALL PROVIDE COPIES OF THE TV INSPECTION TAPE TO THE ENGINEER, THE OWNER AND THE APPLICABLE MUNICIPALITY/AGENCY.</div><div>2. THE CONTRACTOR SHALL PERFORM LEAKAGE TESTS ON ALL GRAVITY SEWERS PER THE CITY OF APOPKA UTILITIES DESIGN AND CONSTRUCTION STANDARDS MANUAL.</div><div>3. AN AS-BUILT SURVEY SHALL BE PREPARED IN ACCORDANCE WITH CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE (F.A.C.), PURSUANT TO CHAPTER 472, FLORIDA STATUTES (F.S.) SHALL BE REQUIRED.</div><div>4. THE CONTRACTOR SHALL PROVIDE UTILITY AS-BUILT AND GRADING/DRAINAGE AS-BUILT RECORD DRAWINGS BASED ON THE CIVIL DESIGN PLAN SHEETS. ALL AS-BUILTS SHALL BE OVERLAIN ON THE CIVIL DESIGN PLANS WITH THE DESIGN SHADED BACK AND THE AS-BUILT BOLD. THE AS-BUILTS SHALL BE SIGNED AND SEALED BY A REGISTERED LAND SURVEYOR.</div><div>5. THE UTILITY AS-BUILT SHALL INCLUDE ALL SANITARY SEWERS AND FORCE MAIN SYSTEMS, POTABLE AND RECLAIMED WATER MAIN SYSTEMS, METERS, VALVES, FORCE MAINS, GAS MAINS, AND IRRIGATION LINES (2-INCH AND LARGER). CONTRACTOR TO PROVIDE ALL UTILITY CROSSING INFORMATION ON THE AS-BUILT. THE UTILITY AS-BUILTS SHALL IDENTIFY ALL WATER MAIN CROSSINGS WITH STORM AND SANITARY LINES INDICATING TOP OF PIPE AND INVERTS OF THE ABOVE CROSSING PIPE ALONG WITH CLEARANCE DIMENSIONS. THIS SHALL ALSO BE DONE FOR SANITARY/STORM CROSSINGS. ALL TEMPORARY SAMPLE POINT NUMBER (TSP#) LOCATIONS SHALL ALSO BE NOTED ON THE AS-BUILT. CONTRACTOR TO ALSO PROVIDE AN AS-BUILT ASSET TABLE IDENTIFYING SIZE OF PIPE OR FITTING AS WELL AS DEPTH TO TOP OF PIPE AND NORTHING AND EASTING OF EACH FITTING/VALVE, ETC. AS-BUILT DRAWINGS SHALL PROVIDE GPS COORDINATES FOR SANITARY STRUCTURES.</div><div>6. THE GRADING/DRAINAGE AS-BUILT SHALL INCLUDE ALL CONSTRUCTED IMPROVEMENTS THAT HAVE LOCATION AND/OR ELEVATION INFORMATION CALLED-OUT ON THE PLANS. THE AS-BUILT SHALL CLEARLY PROVIDE THE SAME INFORMATION IDENTIFIED ON THE DESIGN DOCUMENTS AND ALSO THE CONSTRUCTED LOCATIONS AND ELEVATIONS AS-BUILT INFORMATION.</div><div>7. THE CONTRACTOR SHALL PROVIDE A SIGNED AND SEALED LETTER FROM THE INDEPENDENT TESTING AGENCY THAT STATES CONFORMANCE WITH THE CONTRACT DOCUMENT REQUIREMENTS FOR COMPACTION TESTING. THE CONTRACTOR IS TO PROMPTLY NOTIFY THE OWNER AND ENGINEER OF RECORD WHEN ANY TESTING OR INSPECTIONS ARE DEFICIENT OR IRREGULAR.</div></div>
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Page 91 of 387

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PROJECT

FLOOR & DECOR

APOPKA, FL

TBD SWC ORANGE BLOSSOM TRAIL & LAKE VIEW DRIVE, FL 32712

ISSUE DATE: 04/25/2023
STORE NUMBER: T.B.D.
GROSS BLDG AREA: 77,901 SF
JOB NUMBER: 022172
PROTOTYPE: 2022 Q4

ISSUE

ISSUE NO.	04/25/2023
CITY COMMENTS	06/09/2023
CITY COMMENTS	07/10/2023

SEAL



Brian S. Ashby

SHEET

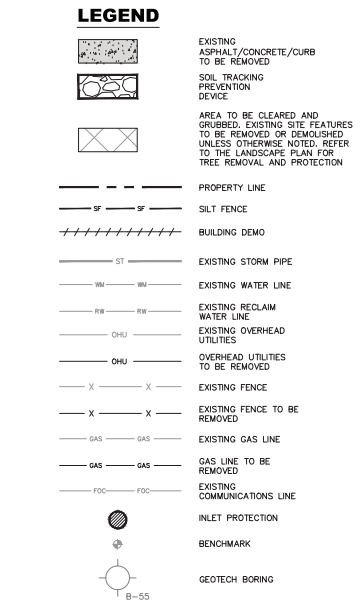
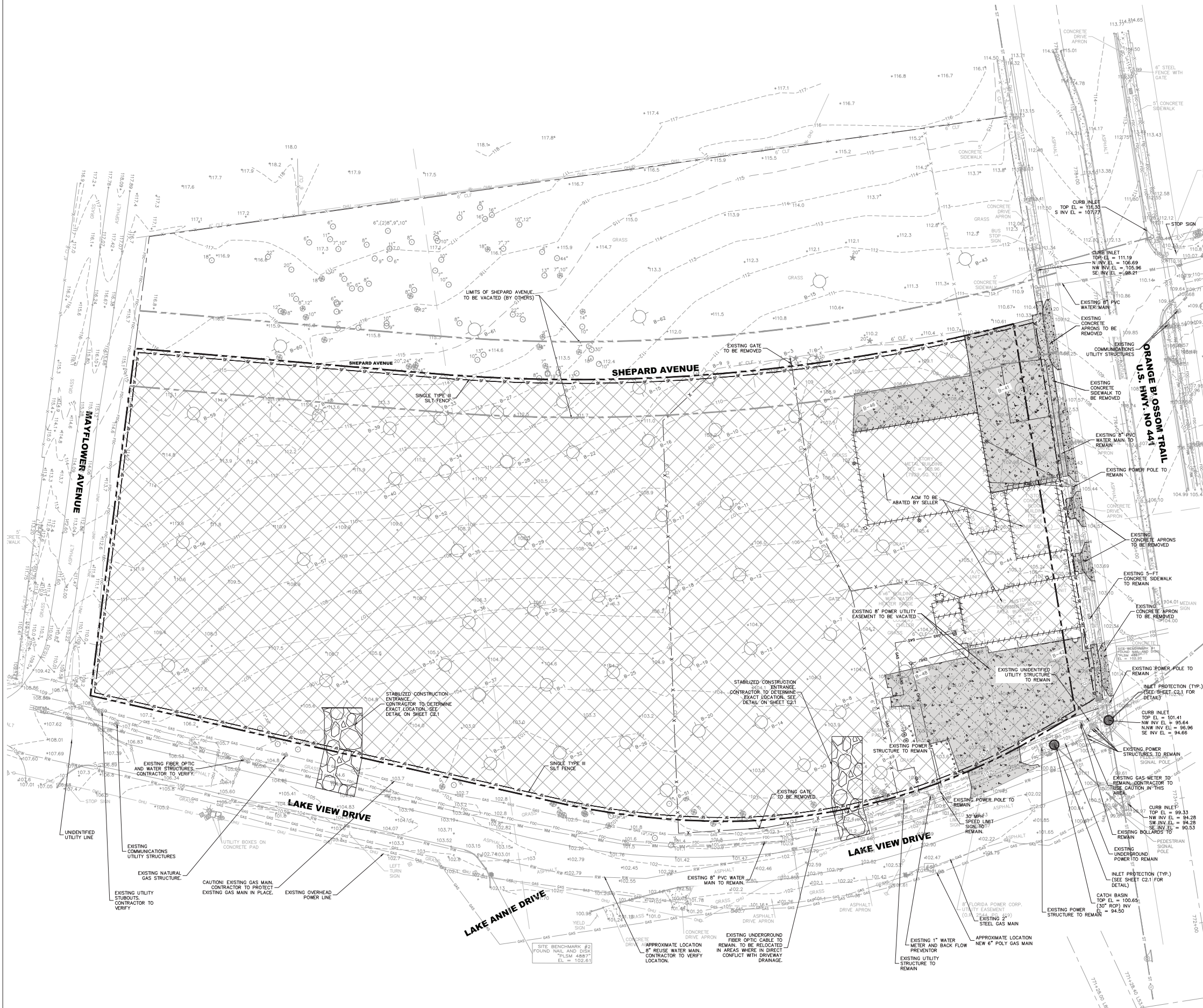
EROSION CONTROL
DETAILS

DRAWN: BLW
CHECKED: BSA

Always call 811 and follow the rules before you dig to
have underground utilities located and marked.



Plotted By: McKisson, Scott Sheet: Self-Floor and Decor APOPKA Layout: C3.0 EXISTING CONDITIONS AND DEMOLITION PLAN July 06, 2023 05:27:26pm K:\ORL-CAD\249257001-Floor & Decor APOPKA\CAD\CONSTR\PlanSheets\C3.0 EXISTING CONDITIONS & DEMOLITION.dwg



- NOTES**
- CONTRACTOR TO COORDINATE WITH UTILITY COMPANY FOR DEMOLITION REQUIREMENTS OF ELECTRICAL SYSTEMS.
 - CONTRACTOR SHALL UTILIZE BEST MANAGEMENT PRACTICES AS NEEDED TO PREVENT SYSTEM POLLUTION, EROSION, AND MANAGEMENT OF OFF-SITE DRAINAGE DURING TIME OF CONSTRUCTION.
 - REFER TO SWPPP SHEET C2.0 FOR ADDITIONAL NOTES AND DETAILS.
 - INSTALL AND MAINTAIN SILT FENCE AT LIMITS OF CONSTRUCTION. WIRE MESH REINFORCED SILT FENCE SHALL BE USED AT ALL POINTS ALONG PROPERTY BOUNDARY WITH OFF-SITE STORMWATER FLOWS. SEE DETAIL SHEET C2.1.
 - PROVIDE SOIL TRACKING PREVENTION DEVICE AT ALL CONSTRUCTION ACCESS POINTS. SEE DETAIL SHEET C2.1.
 - UTILIZE PERFORATED SOCK DRAIN (OR EQUIVALENT) IN FRONT OF EXISTING/PROPOSED CURB INLETS ADJACENT TO CONSTRUCTION ACTIVITIES. SEE DETAIL SHEET C2.1.
 - INSTALL AND MAINTAIN FILTER FABRIC UNDER GRATES OF EXISTING/PROPOSED INLETS. SEE SHEET C2.1.
 - CONTRACTOR TO ENSURE ADEQUATE COVER REMAINS OVER ALL EXISTING UTILITIES.
 - CONTRACTOR TO VERIFY EXISTING COVER OVER ALL UTILITIES BEFORE START OF CONSTRUCTION AND TO COORDINATE WITH THE ENGINEER OF RECORD PRIOR TO START OF CONSTRUCTION IF DESIGN DOES NOT PROVIDE 36" COVER.
 - ANY EXISTING WELLS (E.G. ARTESIAN, IRRIGATION, DRINKING, MONITORING, ETC.) DISCOVERED ON-SITE MUST BE PLUGGED BY A LICENSED WELL DRILLING CONTRACTOR IN A MANNER APPROVED BY ALL APPLICABLE JURISDICTIONAL AGENCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY WELL ABANDONMENT PERMITS REQUIRED. ANY WELL DISCOVERED DURING EARTHWORK OR EXCAVATION SHALL BE REPORTED TO THE APPROPRIATE JURISDICTIONAL AGENCIES, OWNER, AND OWNER'S ENGINEER WITHIN 24 HOURS AFTER DISCOVERY IS MADE.
 - THERE MAY BE ON-SITE UNDERGROUND UTILITIES (INCLUDING BUT NOT LIMITED TO IRRIGATION, SANITARY SEWER, POTABLE WATER LINES, NATURAL GAS LINES, ELECTRIC, TELEPHONE AND CABLE LINES) THAT WERE NOT LOCATED OR IDENTIFIED BY THE PROJECT SURVEYOR. PRIOR TO CONSTRUCTION START, CONTRACTOR SHALL FIELD VERIFY ALL EXISTING ON-SITE UTILITIES AND RIGHT-OF-WAY UTILITIES.
 - IF ANY SEPTIC TANKS OR DRAIN FIELDS ARE FOUND, CONTRACTOR SHALL FOLLOW ALL LOCAL, STATE, AND FEDERAL CODE REQUIREMENTS FOR REMOVAL.
 - IF EXISTING UTILITIES ARE DISCOVERED THAT ARE NOT IDENTIFIED BY THE CONSTRUCTION DOCUMENTS AND WILL BE IMPACTED BY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY PRIOR TO PROCEEDING WITH CONSTRUCTION.
 - CONTRACTOR TO MAINTAIN EXISTING OFF-SITE AND ON-SITE DRAINAGE PATTERNS THROUGHOUT CONSTRUCTION.
 - LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. THE EXISTING UTILITY INFORMATION SHOWN IS BASED ON THE TOPOGRAPHIC SURVEY PROVIDED BY LEADING EDGE LAND SERVICES, INC. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES AFFECTING THIS AREA PRIOR TO CONSTRUCTION BEGIN.
 - SURVEYOR: JEFFERY D. HOFUS
FL REGISTRATION NUMBER: 4610
DATE OF SURVEY: JANUARY 6, 2023
 - ELEVATIONS SHOWN ON THIS PLAN ARE RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM 88 (NAVD83) BASED ON THE FOLLOWING BENCHMARK:
SITE BENCHMARK NUMBER: 11" NAIL AND DISC IN NORTH EAST CORNER OF PROPERTY ON CONCRETE SIDEWALK & 55 FT SOUTH OF CENTERLINE OF ORANGE BLOSSOM TRAIL, 100 FT WEST OF THE CENTERLINE OF LAKE VIEW DRIVE.
ELEVATION = 102.20
 - THERE MAY BE AN ON-SITE SEPTIC SYSTEM. CONTRACTOR IS TO FOLLOW ALL LOCAL, STATE, AND FEDERAL REGULATIONS FOR THE ABANDONMENT AND REMOVAL OF THE SEPTIC SYSTEM.
 - CONTRACTOR TO FOLLOW ALL LOCAL, STATE, AND FEDERAL CODE REQUIREMENTS FOR THE REMOVAL OF ANY SEPTIC TANKS AND/OR DRAIN FIELDS IF THEY ARE FOUND ON SITE AT THE TIME OF CONSTRUCTION.

18. CONTRACTOR TO FOLLOW ALL LOCAL, STATE, AND FEDERAL CODE REQUIREMENTS FOR THE REMOVAL OF ANY SEPTIC TANKS AND/OR DRAIN FIELDS IF THEY ARE FOUND ON SITE AT THE TIME OF CONSTRUCTION.

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REGISTERED PROFESSIONAL CIVIL ENGINEER
REGISTERED PROFESSIONAL ELECTRICAL ENGINEER
REGISTERED PROFESSIONAL MECHANICAL ENGINEER
REGISTERED PROFESSIONAL CHEMICAL ENGINEER
REGISTERED PROFESSIONAL INDUSTRIAL ENGINEER
REGISTERED PROFESSIONAL AERONAUTICAL ENGINEER
REGISTERED PROFESSIONAL NUCLEAR ENGINEER
REGISTERED PROFESSIONAL METALLURGICAL ENGINEER
REGISTERED PROFESSIONAL MINING ENGINEER
REGISTERED PROFESSIONAL PETROLEUM ENGINEER
REGISTERED PROFESSIONAL AGRICULTURAL ENGINEER
REGISTERED PROFESSIONAL FORESTRY ENGINEER
REGISTERED PROFESSIONAL FISH AND WILDLIFE ENGINEER
REGISTERED PROFESSIONAL MARINE ENGINEER
REGISTERED PROFESSIONAL COASTAL AND OCEANOGRAPHIC ENGINEER
REGISTERED PROFESSIONAL POLYMER ENGINEER
REGISTERED PROFESSIONAL FOOD ENGINEER
REGISTERED PROFESSIONAL TEXTILE ENGINEER
REGISTERED PROFESSIONAL PAPER ENGINEER
REGISTERED PROFESSIONAL RUBBER ENGINEER
REGISTERED PROFESSIONAL PLASTIC ENGINEER
REGISTERED PROFESSIONAL GLASS ENGINEER
REGISTERED PROFESSIONAL CERAMIC ENGINEER
REGISTERED PROFESSIONAL COMPOSITE ENGINEER
REGISTERED PROFESSIONAL BIOMATERIALS ENGINEER
REGISTERED PROFESSIONAL NANOTECHNOLOGY ENGINEER
REGISTERED PROFESSIONAL SPACE ENGINEER
REGISTERED PROFESSIONAL AEROSPACE ENGINEER
REGISTERED PROFESSIONAL ROCKET ENGINEER
REGISTERED PROFESSIONAL MISSILE ENGINEER
REGISTERED PROFESSIONAL SPACECRAFT ENGINEER
REGISTERED PROFESSIONAL SPACE STATION ENGINEER
REGISTERED PROFESSIONAL SPACE SHUTTLE ENGINEER
REGISTERED PROFESSIONAL SPACECRAFT ENGINEER
REGISTERED PROFESSIONAL SPACE STATION ENGINEER
REGISTERED PROFESSIONAL SPACE SHUTTLE ENGINEER

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FLOOR&DECOR
APOPKA, FL

780 SWC ORANGE BLOSSOM TRAIL & LAKE VIEW DRIVE, FL 32712

ISSUE DATE: 04/25/2023
STORE NUMBER: T.B.D.
GROSS BLDG AREA: 77,901 SF
JOB NUMBER: 022172
PROTOTYPE: 2022 Q4

ISSUE

NO.	DATE	DESCRIPTION
1	04/25/2023	ISSUE FOR PERMITTING
2	04/25/2023	ISSUE FOR PERMITTING
3	04/25/2023	ISSUE FOR PERMITTING
4	04/25/2023	ISSUE FOR PERMITTING
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100	04/25/2023	ISSUE FOR PERMITTING

Brian S. Ashby
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FLORIDA
LICENSE NO. 80456
EXPIRATION DATE: 12/31/2024

EXISTING CONDITIONS AND DEMOLITION PLAN
DRAWN: BJW
CHECKED: BSA



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PROJECT

FLOOR & DECOR

APOKA, FL

780 SWC ORANGE BLOSSOM TRAIL & LAKE VIEW DRIVE, FL 32712

ISSUE DATE: 04/25/2023
STORE NUMBER: T.B.D.
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ISSUE

100% SET 04/25/2023
CITY COMMENTS 06/09/2023
CITY COMMENTS 07/10/2023

SEAL

Brian S Ashby

PROFESSIONAL ENGINEER
FLORIDA
No. 80456

SHEET

SITE PLAN

DRAWN: BJW
CHECKED: BSA

C4.0

Page 94 of 387



GRAPHIC SCALE IN FEET
0 15 30 60

LEGEND

- PROPERTY LINE
- ROAD DEDICATION
- BUILDING SETBACKS
- LANDSCAPE BUFFER
- ACCESS EASEMENT
- PROPOSED STEM WALL
- PARKING COUNT
- PROPOSED HEAVY DUTY ASPHALT PAVEMENT, SEE SHEET C7.0 FOR DETAIL
- PROPOSED HEAVY DUTY CONCRETE PAVEMENT, SEE SHEET C7.0 FOR DETAIL
- PROPOSED CONCRETE SIDEWALK, SEE SHEET C7.0 FOR DETAIL
- PROPOSED OPEN SPACE

SITE DATA

TOTAL AREA: 5.72 ACRES
EXISTING ZONING: I/L
EXISTING LAND USE: INDUSTRIAL
PROPOSED BUILDING AREA: 77,901 SF

F.A.R. CALCULATION:

MAX F.A.R.: 0.60
PROPOSED F.A.R.: 0.31

BUILDING CRITERIA:

MAX BUILDING HEIGHT: 45 FT
PROPOSED BUILDING HEIGHT: 32 FT
BUILDING SETBACKS: REQUIRED
NORTH PROPERTY LINE: 10 FT
EAST PROPERTY LINE: 15 FT
SOUTH PROPERTY LINE: 10 FT
WEST PROPERTY LINE: 10 FT

LANDSCAPE BUFFERS

NORTH PROPERTY LINE: REQUIRED
EAST PROPERTY LINE: 15 FT MIN.
SOUTH PROPERTY LINE: 15 FT MIN.
WEST PROPERTY LINE: 15 FT MIN.

REQUIRED PARKING

REQUIRED PARKING: 70 SPACES (0.89 SPACES/1000 SF)
(PER ALTERNATIVE PARKING ANALYSIS)

PROVIDED PARKING

STANDARD SPACES (9'x18'): 114 SPACES
ADA SPACES (12'x18'): 6 SPACES
TOTAL SPACES PROVIDED: 120 SPACES

REQUIRED BICYCLE PARKING

1 SPACE PER 1000 SF: 8 SPACES
PROVIDED SPACES: 8 SPACES

OVERALL IMPERVIOUS AREA:

BUILDING AREA: 1.79 AC
PAVEMENT/CONCRETE AREA: 2.30 AC
TOTAL IMPERVIOUS AREA: 4.09 AC (72%)

OPEN SPACE:

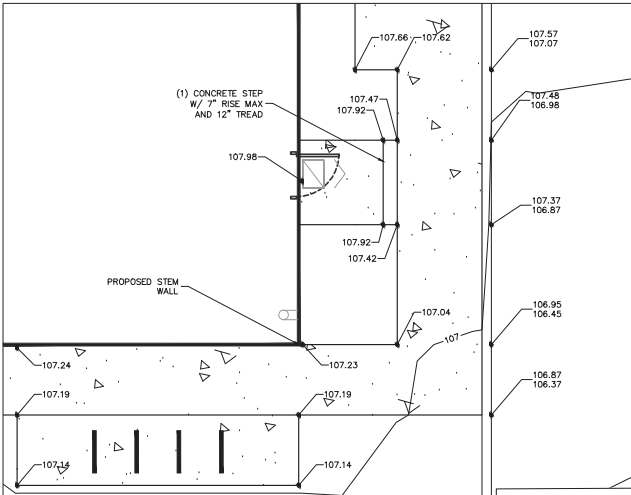
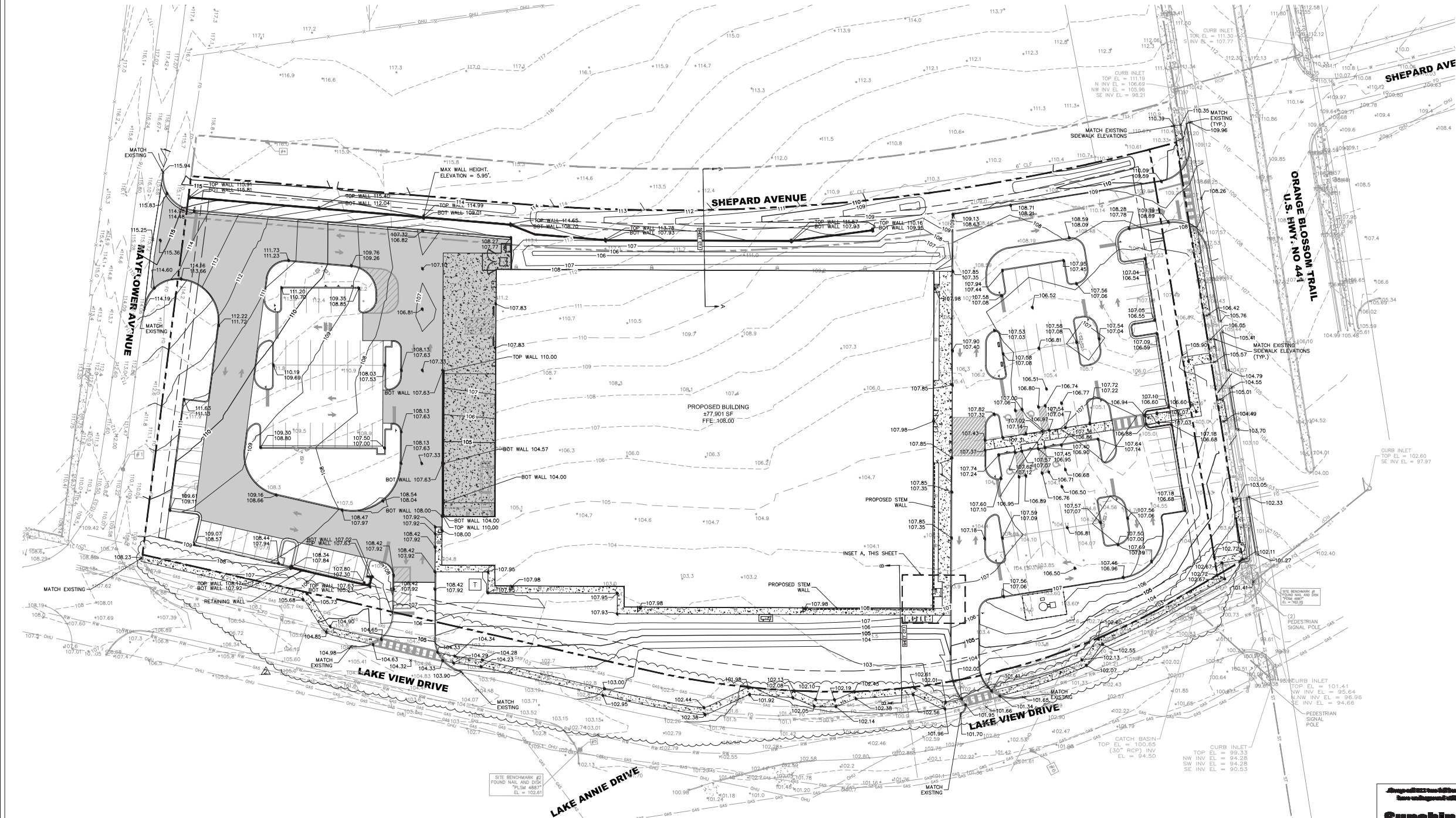
MINIMUM REQUIRED OPEN SPACE CALCULATION
5.72 AC X 5.0% = 0.29 AC
PROVIDED OPEN SPACE: 0.39 AC (6.82%) - LANDSCAPE AND TREE PRESERVATION AREA

GENERAL NOTES:

1. ALL RADII ARE TO BE 3' OR 10' UNLESS OTHERWISE NOTED.
2. ALL MEASUREMENTS TO FACE OF CURB UNLESS OTHERWISE NOTED.



Plotted By: McKisson, Scott Sheet: Set-Floor and Decor APOPKA Layout: C5.0 PAVING AND GRADING July 06, 2023 05:28:12pm K:\CPL_Civil\149257001-Floor & Decor APOPKA\CADD\COMST\PlanSheets\C5.0 PAVING AND GRADING PLAN.dwg



INSET A
N.T.S.

- GENERAL NOTES:
1. ALL EXISTING STRUCTURES, INCLUDING FENCING, TREES, ETC. WITHIN CONSTRUCTION AREA SHALL BE REMOVED AND DISPOSED OF SITE. ANY BURNING ON SITE SHALL BE SUBJECT TO LOCAL ORDINANCES. SEE SPECIFICATIONS.
 2. ALL DRAINAGE STRUCTURES SHALL BE PRE-CAST.
 3. ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC (H20) LOADING AND BE INSTALLED ACCORDINGLY.
 4. GENERAL CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES HAVING UNDERGROUND UTILITIES ON SITE OR IN RIGHT-OF-WAY PRIOR TO EXCAVATION. CONTRACTOR SHALL CONTACT UTILITY LOCATING COMPANY AND LOCATE ALL UTILITIES PRIOR TO GRADING START.
 5. SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED, INSPECTED AND APPROVED BY LOCAL AUTHORITIES.
 6. ALL CUT OR FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED OR PER JURISDICTIONAL REQUIREMENTS.
 7. EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES ARE TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
 8. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR OR REPLACE THE EXISTING STRUCTURE AS NECESSARY.
 9. ALL STORM PIPES ENTERING STRUCTURES SHALL BE GROUDED TO ASSURE CONNECTION AND STRUCTURE IS WATER TIGHT.
 10. ALL ROOF DRAINS SHALL BE CONNECTED TO THE STORM SYSTEM. IN AREAS NOT SUBJECT TO FREEZING, ROOF DRAINS CAN SPASH ON GRADE AND BE COLLECTED IN INLETS OR TREATED AS SURFACE RUNOFF.
 11. CONTRACTOR IS TO ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
 12. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO THE SAME.
 13. TOPOGRAPHIC INFORMATION TAKEN FROM: LEADING EDGE LAND SERVICES, INC. ON JANUARY 31, 2023.
 14. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO THE SAME.
 15. CONTRACTOR IS RESPONSIBLE FOR TEMPORARY ACCESS ROADS, MAINTAIN POSITIVE DRAINAGE THROUGHOUT CONSTRUCTION AND AVOID PONDING OR ROUTING.
 16. DETENTION POND, OUTFLOW DEVICES SHALL BE DESIGNATED TO LIMIT FLOWS TO CAPACITY LEVELS OF DOWNSTREAM DRAINAGE STRUCTURES.
 17. DEVIATIONS FROM RECOMMENDED PARKING LOT SLOPES SHALL BE APPROVED BY FLOOR & DECOR CONSTRUCTION AND DESIGN.
 18. CONTRACTOR TO PROVIDE FLOOR & DECOR CONSTRUCTION AND DESIGN, AND LOCAL AUTHORITY WITH AS-BUILT DRAWINGS. SEE REQUIREMENTS IN THIS SHEET.
 19. CONTRACTOR TO VERIFY I.A.S./A.D.A. COMPLIANCE PRIOR TO POURING CONCRETE. FOR ANY QUESTIONS, CONTACT CIVIL ENGINEER IMMEDIATELY.
 20. GRADES IN ALL ACCESSIBLE ROUTES, INCLUDING DRIVEWAY CROSSINGS, SHALL CONFORM TO ALL APPLICABLE A.D.A. AND T.A.S. STANDARDS. MAXIMUM RUNNING SLOPE FOR ALL PATHS IS 5%, MAX CROSS SLOPE FOR ALL PATHS IS 2%, FOR THE FIRST FIVE FEET FROM THE DOOR, A 2% SLOPE IN ALL DIRECTIONS (MAX) MUST BE MAINTAINED.
 21. IN GENERAL, THE MAXIMUM RUNNING SLOPE SHALL NOT EXCEED 5%, THE MINIMUM SLOPE SHALL NOT BE INFERIOR THAN 1.5% AND THE PREFERRED SLOPE SHALL BE 2.5%.
 22. REFER TO LANDSCAPE ARCHITECT PLANS FOR LANDSCAPE/HARDSCAPE DETAILS.
 23. CONTRACTOR TO VERIFY ENGINEERING PLANS MATCH ARCHITECTURAL/STRUCTURAL PLANS PRIOR TO CONSTRUCTION STAKING.
 24. LANDSCAPE AREAS ADJACENT TO BUILDING TO DRAIN AWAY FROM BUILDING AT A MINIMUM OF 2% SLOPE.
 25. AFTER PLACEMENT OF SUBGRADE AND PRIOR TO PLACEMENT OF PAVEMENT, CONTRACTOR SHALL TEST AND OBSERVE PAVEMENT AREAS FOR EVIDENCE OF PONDING. ALL AREAS SHALL ADEQUATELY DRAIN TOWARDS THE INTENDED STRUCTURE TO CONVEY STORM RUNOFF. CONTRACTOR SHALL IMMEDIATELY NOTIFY OWNER AND ENGINEER IF ANY DISCREPANCIES ARE DISCOVERED.
 26. CONCRETE VALLEY OUTER SHALL BE CONSTRUCTED IF ASPHALT PAVEMENT IS USED, REFER TO CONSTRUCTION DETAILS.
 27. FOR STORM SEWER PIPE PROFILES REFER TO DETAIL ON SHEET C7.0 FOR MORE INFORMATION.
 28. SEE PIPE PROFILES SHEET FOR INVERT ELEVATIONS (TYPICAL).
 29. SEE SHEET C3.0 FOR APPROXIMATE LOCATION OF EXISTING UTILITIES.
 30. ALL THE ELEVATIONS SHOWN ARE FINISHED GRADE ELEVATIONS. CONTRACTOR TO SUBTRACT PAVEMENT THICKNESS AND FLOOR SLAB THICKNESS FOR SUBGRADE ELEVATIONS.
 31. CONTRACTOR SHALL REFER TO ARCHITECTURAL AND PLUMBING PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF ALL VESTIBULES/ENTRIES, SIDEWALKS, EXIT PORCHES, RAMPS, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT UTILITY ENTRANCE LOCATIONS.
 32. TERMITE SPRAY IF NEEDED IS TO BE PROVIDED FOR FOUNDATION BY FOUNDATION CONTRACTOR.
 33. SITE PREPARATION TO BE PROVIDED BY CONTRACTOR TO INCLUDE:
 - A. PROTECTING EXISTING VEGETATION TO REMAIN.
 - B. REMOVING EXISTING VEGETATION.
 - C. CLEARING AND GRUBBING.
 - D. STRIPPING AND STOCKPILING TOPSOIL.
 - E. REMOVING ABOVE- AND BELOW-GRADE SITE IMPROVEMENTS.
 - F. DISCONNECTING, CAPPING OR SEALING SITE UTILITIES.
 - G. TEMPORARY EROSION AND SEDIMENTATION CONTROL.



GRAPHIC SCALE IN FEET
0 15 30 60

LEGEND

- PROPERTY BOUNDARY
- ROAD DEDICATION
- BUILDING SETBACK
- LANDSCAPE BUFFER
- EXISTING CONTOURS
- EXISTING SPOT ELEVATION
- EXISTING SPOT ELEVATION
- CONCRETE SIDEWALK (SEE SHEET C7.0 FOR DETAIL)
- HEAVY DUTY CONCRETE (SEE SHEET C7.0 FOR DETAIL)
- HEAVY DUTY ASPHALT (SEE SHEET C7.0 FOR DETAIL)



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PROJECT

FLOOR & DECOR

APOKA, FL

78D SWC ORANGE BLOSSOM TRAIL & LAKE VIEW DRIVE, FL 32712

ISSUE DATE: 04/25/2023
STORE NUMBER: T.B.D.
GROSS BLDG AREA: 77,901 SF
JOB NUMBER: 022172
PROTOTYPE: 2022 Q4

ISSUE

100% SET	04/25/2023
CITY COMMENTS	06/09/2023
CITY COMMENTS	09/10/2023

SEAL



Brian S. Ashby

SHEET

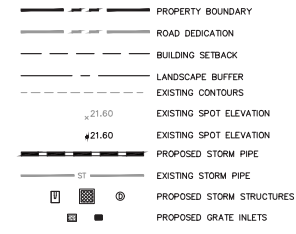
PAVING AND
GRADING PLAN

DRAWN: BJW
CHECKED: BSA

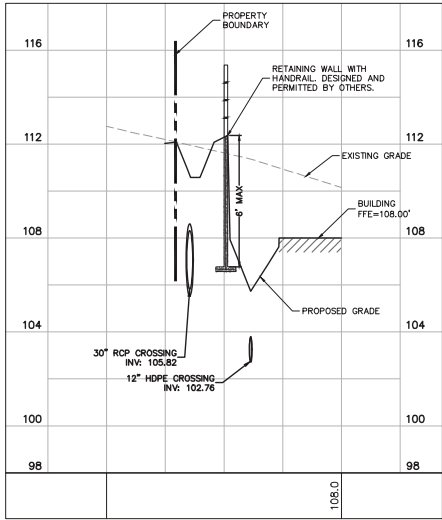


GENERAL NOTES:

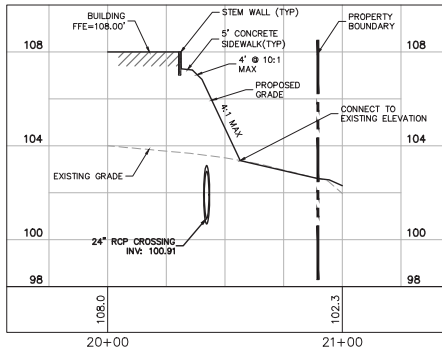
1. ALL EXISTING STRUCTURES, UNLESS OTHERWISE NOTED TO REMAIN, FENCING, TREES, ETC. WITHIN CONSTRUCTION AREA SHALL BE REMOVED AND DISPOSED OF. ANY BURNING ON SITE SHALL BE SUBJECT TO LOCAL ORDINANCES. SEE SPECIFICATIONS.
2. ALL DRAINAGE STRUCTURES SHALL BE PRE-CAST.
3. ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC (400) LOADING AND BE INSTALLED ACCORDINGLY.
4. GENERAL CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES HAVING UNDERGROUND UTILITIES ON SITE OR IN RIGHT-OF-WAY PRIOR TO EXCAVATION. CONTRACTOR SHALL NOTIFY ALL UTILITY LOCATING COMPANIES AND LOCATE ALL UTILITIES PRIOR TO GRADING STAKE.
5. SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED, INSPECTED AND APPROVED BY LOCAL AGENCIES.
6. ALL CUT OR FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED OR PER JURISDICTIONAL REQUIREMENTS.
7. EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED OUT 1 YEAR PRIOR TO SUE.
8. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION, IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR OR REPLACE THEM.
9. ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AND STRUCTURE IS WATER TIGHT.
10. ALL EXISTING DRAINAGE STRUCTURES SHALL BE DRAINAGE. ALL SHALL BE SUBJECT TO FREEZING, ROOF DRAINS CAN SPALL ON GRADE AND BE COLLECTED IN INLETS OR TREATED AS SURFACE RUNOFF.
11. CONTRACTOR IS TO ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
12. CONTRACTOR SHALL PROVIDE SLOPE DRAINAGE. ALL GRASSED AND PAVED AREAS SHALL BE MAINTAINED TO THE SAME.
13. TOPOGRAPHIC INFORMATION TAKEN FROM: LEADING EDGE SERVICES, INC. DATED JANUARY 31, 2023.
14. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE GOVERNING AGENCIES.
15. CONTRACTOR IS RESPONSIBLE FOR TEMPORARY ACCESS ROADS, MAINTAIN POSITIVE DRAINAGE THROUGHOUT CONSTRUCTION AND AVOID PONDING OR RUTTING.
16. ALL PONDING FROM LOW DEVICES SHALL BE DESIGNATED TO LIMIT FLOWS TO CAPACITY LEVELS OF DOWNSTREAM DRAINAGE STRUCTURES.
17. CONSTRUCTION FROM RECOMMENDED PARKING LOT SLOPES SHALL BE APPROVED BY FLOOR & DECOR CONSTRUCTION AND DESIGN.
18. CONTRACTOR TO PROVIDE FLOOR & DECOR CONSTRUCTION AND DESIGN, AND LOCAL AUTHORITY WITH AS-BUILT DRAWINGS, SEE REQUIREMENTS IN THIS SHEET.
19. CONTRACTOR SHALL COMPLY WITH A.D.A. COMPLIANCE PRIOR TO POURING CONCRETE. FOR ANY QUESTIONS, CONTACT CIVIL ENGINEER IMMEDIATELY.
20. ALL ACCESSIBLE ROUTES, INCLUDING DRIVEWAY CROSSINGS, SHALL CONFORM TO ALL APPLICABLE A.D.A. AND T.A. STANDARDS: MAXIMUM RUNNING SLOPE FOR ALL PATHS IS .5%, MAX CROSS SLOPE FOR ALL PATHS IS 2%, FOR THE FIRST FIVE FEET FROM THE CURB, A 2% SLOPE IN ALL DIRECTIONS MAX SHALL BE MAINTAINED.
21. IN THE GENERAL, THE MINIMUM SLOPE SHALL NOT EXCEED 5% FOR THE MINIMUM SLOPE SHALL NOT BE INFERIOR THAN 1.5% AND THE PREFERRED SLOPE SHALL BE 2.5%.
22. REFER TO LANDSCAPE ARCHITECT PLANS FOR LANDSCAPE/HARDSCAPE DETAILS.
23. CONTRACTOR TO VERIFY ENGINEERING PLANS MATCH ARCHITECTURAL/STRUCTURAL PLANS PRIOR TO CONSTRUCTION STAKING.
24. LANDSCAPE AREAS ADJACENT TO BUILDING TO DRAIN AWAY FROM BUILDING AT A MINIMUM OF 2% SLOPE.
25. IN THE GENERAL, THE MINIMUM SLOPE SHALL NOT EXCEED 5% FOR THE MINIMUM SLOPE SHALL NOT BE INFERIOR THAN 1.5% AND THE PREFERRED SLOPE SHALL BE 2.5%.
26. CONCRETE VALLEY GUTTER SHALL BE CONSTRUCTED IF ASPHALT PAVEMENT IS USED, REFER TO CONSTRUCTION DETAILS.
27. FOR STORM SEWER, SEE PIPESHEET FOR INVERT ELEVATIONS (TYPICAL).
28. SEE PIPESHEET FOR INVERT ELEVATIONS (TYPICAL).
29. SEE SHEET C-0 FOR APPROXIMATE LOCATION OF EXISTING UTILITIES.
30. CONTRACTOR SHALL SUBMIT PROPOSED CONSTRUCTION AND PLUMBING PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF ALL UTILITIES/ENTRIES, SIDEWALKS, EXIST PORCHES, RAMPS, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT UTILITY ENTRANCE LOCATIONS.
31. TEMP SPRAY IF NEEDED IS TO BE PROVIDED FOR FOUNDATION BY FOUNDATION CONTRACTOR.
32. SITE PREPARATION TO BE PROVIDED BY CONTRACTOR TO INCLUDE:
 - a. PROTECT EXISTING VEGETATION TO REMAIN.
 - b. REMOVING EXISTING VEGETATION.
 - c. CLEARING AND GRUBBING.
 - d. STRIPPING AND STRIPING TOPSOIL.
 - e. REMOVING ABOVE-AND-BELOW-GRADE SITE IMPROVEMENTS.
 - f. DISCONNECTING, CAPPING OR SEALING SITE UTILITIES.
 - g. TEMPORARY EROSION AND SEDIMENTATION CONTROL.



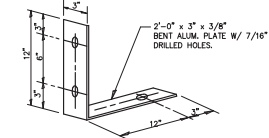
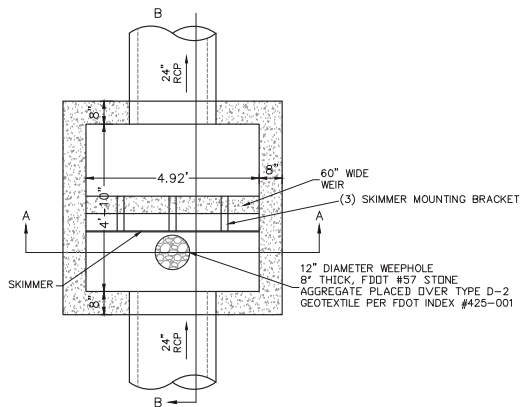
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SECTION A
N.T.S.

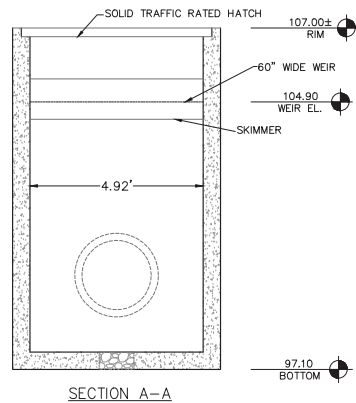


SECTION B
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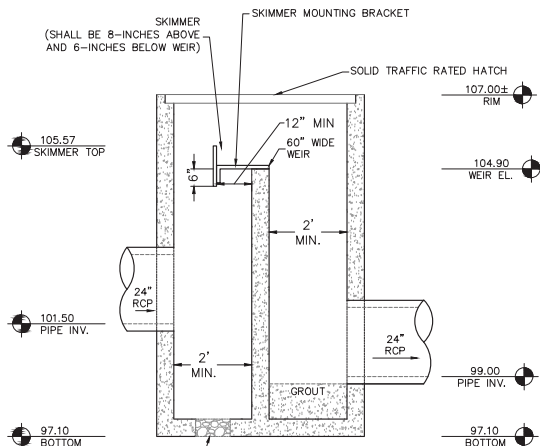


NOTE:
1. FASTEN SKIMMER BLADE TO MOUNTING STRAP W/3/8\"/>

SKIMMER MOUNTING BRACKET

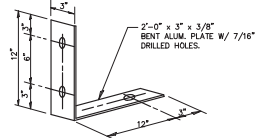
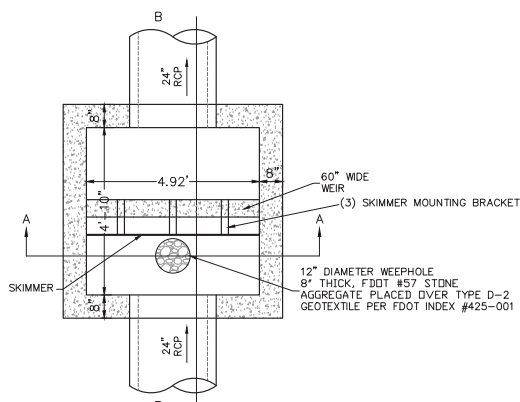


SECTION A-A



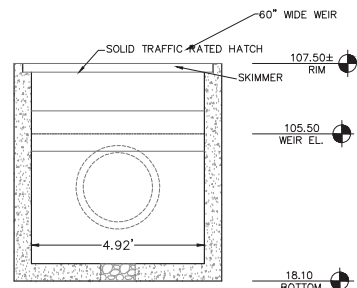
SECTION B-B

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USE (MOD.) TYPE "G" DITCH BOTTOM INLET
F.D.O.T. INDEX NO. 425-053 N.T.S.

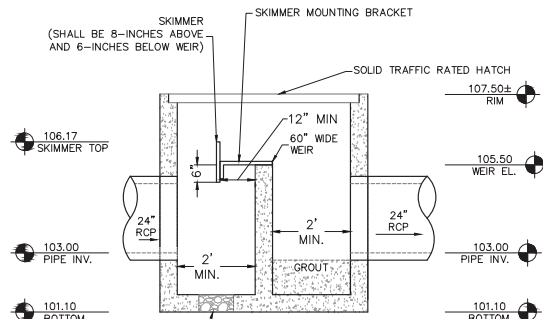


NOTE:
1. FASTEN SKIMMER BLADE TO MOUNTING STRAP W/3/8\"/>

SKIMMER MOUNTING BRACKET



SECTION A-A



SECTION B-B

DS-2 CONTROL STRUCTURE DETAIL
USE (MOD.) TYPE "G" DITCH BOTTOM INLET
F.D.O.T. INDEX NO. 425-053 N.T.S.



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PROJECT

FLOOR & DECOR
APOPKA, FL

78D SWC ORANGE BLOSSOM TRAIL &
LAKE VIEW DRIVE, FL 32712

ISSUE DATE: 04/25/2023
STORE NUMBER: T.B.D.
GROSS BLDG AREA: 77,901 SF
JOB NUMBER: 022172
PROTOTYPE: 2022 Q4

ISSUE

ISSUE SET	04/25/2023
CITY COMMENTS	06/09/2023
CITY COMMENTS	07/10/2023

SEAL

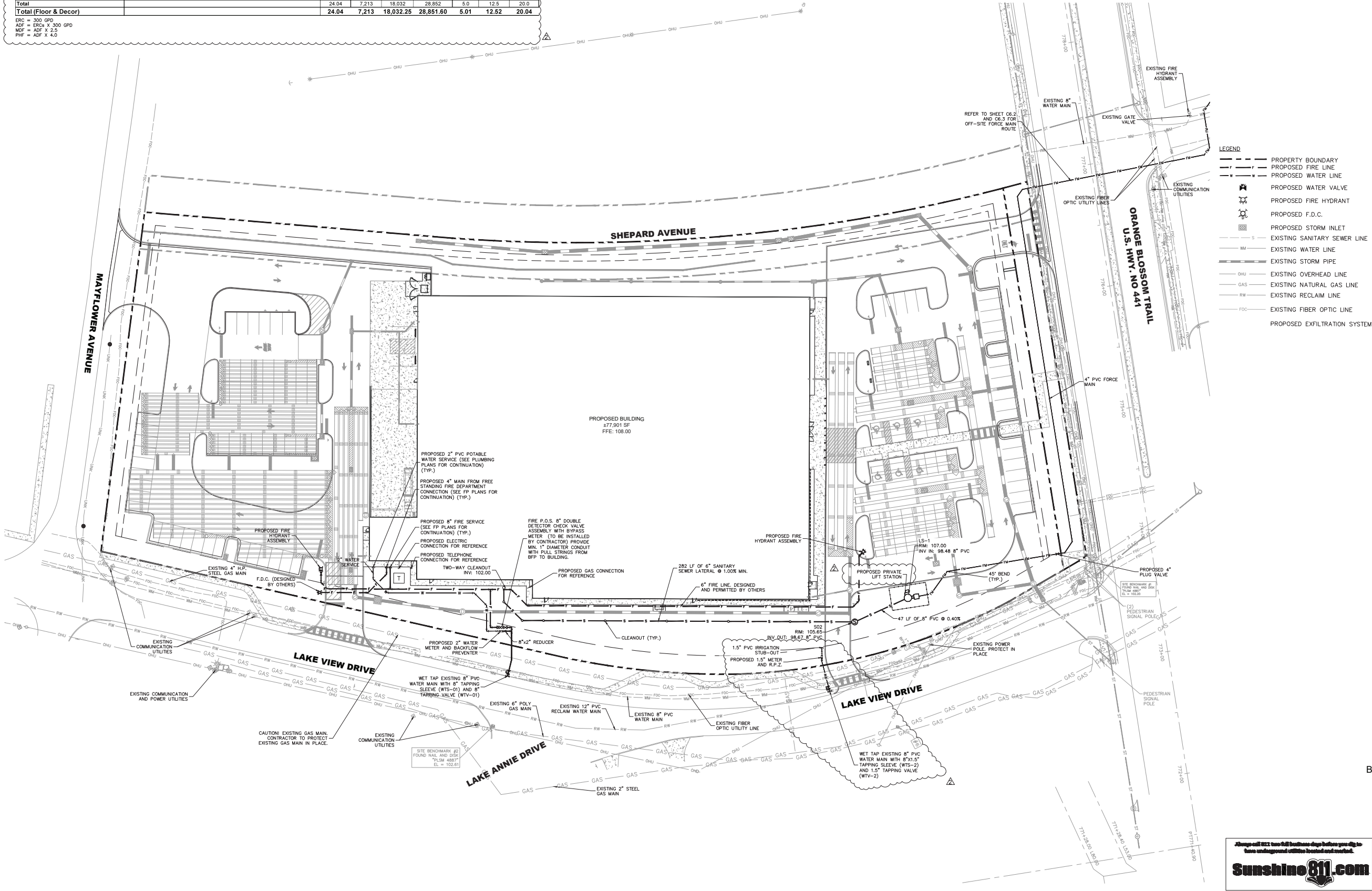


GRAVING AND
DRAINAGE DETAILS

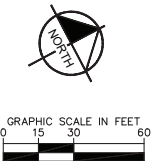
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CHECKED: BSA

Plotted By: Wagner, Blake Sheet Set: FLOOR AND DECOR #APOKA Layout: C6.0 UTILITY PLAN July 07, 2023 12:55:55pm K:\ORL_Civil\249257001-Floor & Decor APOKA\CADD\COMST\PlanSheets\C6.0 UTILITY PLAN.dwg

Building	QTY	Fixture Units	LEVEL OF SERVICE UNIT	ERC per UNIT	TOTAL ERCs	ADF	MDF	PHF	ADF	MDF	PHF
Floor & Decor - Potable Water Demand											
Retail/Warehouse	5	6	per water closet	0.500	15.00	5.250	13.125	21.000	3.6	9.1	14.6
	1	4	per urinal	0.333	1.33	466	1.166	1865	0.3	0.8	1.3
	7	1	per lavatory	0.083	0.58	203	508	813	0.1	0.4	0.6
	2	0.5	per drinking fountain	0.042	0.04	15	37	59	0.0	0.0	0.0
	3	5	per floor drain	0.417	6.26	2,189	5,473	8757	1.5	3.8	6.1
	1	1	per condensate drain	0.083	0.08	29	73	116	0.0	0.1	0.1
	1	3	per mop sink	0.250	0.75	263	656	1050	0.2	0.5	0.7
Total					24.04	8,415	21,038	33,660	5.8	14.6	23.4
Total (Floor & Decor)					24.04	8,415	21,037.63	33,660.20	5.84	14.61	23.38
ERC = 350 GPD ADF = ERC X 300 GPD MDF = ADF X 2.5 PHF = ADF X 4.0											
Building	QTY	Fixture Units	LEVEL OF SERVICE UNIT	ERC per UNIT	TOTAL ERCs	ADF	MDF	PHF	ADF	MDF	PHF
Floor & Decor - Wastewater Demand											
Retail/Warehouse	5	6	per water closet	0.500	15.00	4,500	11,250	18,000	3.1	7.8	12.5
	1	4	per urinal	0.333	1.33	400	999	1,598	0.3	0.7	1.1
	7	1	per lavatory	0.083	0.58	174	438	697	0.1	0.3	0.5
	2	0.5	per drinking fountain	0.042	0.04	13	32	50	0.0	0.0	0.0
	3	5	per floor drain	0.417	6.26	1,877	4,681	7,505	1.3	3.3	5.2
	1	1	per condensate drain	0.083	0.08	25	62	100	0.0	0.0	0.1
	1	3	per mop sink	0.250	0.75	225	563	900	0.2	0.4	0.6
Total					24.04	7,213	18,032.25	28,851.60	5.01	12.52	20.04
Total (Floor & Decor)					24.04	7,213	18,032.25	28,851.60	5.01	12.52	20.04
ERC = 300 GPD ADF = ERC X 300 GPD MDF = ADF X 2.5 PHF = ADF X 4.0											



- GENERAL UTILITY NOTES:
- CONTRACTOR TO CONFIRM UNDERGROUND UTILITY LOCATIONS, DEPTHS, AND SIZES PRIOR TO COMMENCING CONSTRUCTION.
 - CONTRACTOR TO COORDINATE PROPOSED TRANSFORMER LOCATIONS AND ELECTRIC SERVICE WITH POWER COMPANY AND OWNER. TRANSFORMERS AND SERVICE LINES SHOWN FOR INFORMATIONAL PURPOSES ONLY. DESIGNED & PERMITTED BY OTHERS. CONTRACTOR TO CONFIRM PAD AND BOLLARD REQUIREMENTS.
 - CONTRACTOR TO COORDINATE PROPOSED TELEPHONE SERVICE AND ROUTING WITH CABLE COMPANY AND OWNER. SERVICE CONNECTIONS SHOWN FOR INFORMATIONAL PURPOSES ONLY. DESIGNED & PERMITTED BY OTHERS.
 - CONTRACTOR TO COORDINATE PROPOSED GAS SERVICE AND ROUTING WITH GAS COMPANY AND OWNER. SERVICE CONNECTIONS SHOWN FOR INFORMATIONAL PURPOSES ONLY. DESIGNED & PERMITTED BY OTHERS.
 - ALL POTABLE WATER UTILITIES SHALL BE IN ACCORDANCE WITH THE CITY OF APOKA STANDARDS AND SPECIFICATIONS. CONTRACTOR SHALL BE RESPONSIBLE TO BE FAMILIAR WITH THESE STANDARDS.
 - REFER TO THE CITY OF APOKA STANDARD NOTES & DETAILS, SHEETS C8.0 - C8.3.
- GENERAL FIRE SERVICE NOTES:
- ALL UNDERGROUND MAINS SERVING FIRE HYDRANTS OR FIRE PROTECTION SPRINKLER SYSTEMS ON PRIVATE PROPERTY MUST BE PERMITTED PRIOR TO INSTALLATION. THE DRAWING SHALL INDICATE THAT ALL UNDERGROUND FIRE MAINS WILL BE INSTALLED IN ACCORDANCE WITH NFPA 24 (2013 EDITION, "STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES" (F.A.C. 69A-60.005(2)).
 - ALL FIRE SERVICE MAIN LOCATED DOWNSTREAM OF THE FIRE POINT OF SERVICE SHALL BE INSTALLED BY A QUALIFIED AND LICENSED CONTRACTOR. CONSTRUCTION AND MATERIALS SHALL COMPLY WITH APPLICABLE FIRE CODE. CONTRACTOR TO VERIFY REQUIREMENTS WITH THE CITY OF APOKA PRIOR TO SHOP DRAWING REVIEW.



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PROJECT

FLOOR&DECOR
APOKA, FL

TBD SWC ORANGE BLOSSOM TRAIL & LAKE VIEW DRIVE, FL 32712

ISSUE DATE: 04/25/2023
STORE NUMBER: T.B.D.
GROSS BLDG AREA: 77,901 SF
JOB NUMBER: 022172
PROTOTYPE: 2022 Q4

ISSUE

SEAL

Brian S. Ashby
BRIAN S. ASHBY
LICENSE
No. 84456
STATE OF FLORIDA
Professional Engineer
Civil Engineering

SHEET

UTILITY PLAN

DRAWN: BJW
CHECKED: BSA

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C6.0

Plotted By McKissen, Scott Sheet Set: FLOOR AND DECOR APOPKA Layout: C6.1 July 06, 2023 05:29:28pm K:\OEM_Col\249227001-Floor & Decor Asppka\CADD\CONSET\PlanSheets\C6.1 LIFT STATION DETAIL.dwg

SCOPE: Supply one complete H-20 LP Pre-Fab Lift Station, per design.
Pumps shall be capable of pumping domestic & commercial sewage.
Complete system shall be supplied by:
XYLEM, INC

NO SUBSTITUTIONS – NO ALTERNATES

The H-20 Load Rated Fiberglass Wetwell Must Be Manufactured By L.F. Manufacturing, Giddings, Texas, Which Includes A Written 20 Yr. Warranty
Certification of the wetwell H-20 load rating must be supplied with submittals.
H-20 certification must be signed and sealed by an engineer registered in the State of Florida.
After the H-20 load rated wetwell has been installed, the ASTM Certification Number and Serial Tracking Number must be visible.

PUMPS: The submersible pumps shall be manufactured by Flygt Corporation.
The pumps shall be installed in the H-20 LP FRP wetwell utilizing a dual slide rail system. The pumps shall be capable of handling solids, fibrous materials, heavy sludge, and other matter typically found in wastewater.
Major pump components shall be grey cast iron, ASTM A-48, Class 35B. The pump motor shall be NEMA B design and housed in an air-filled watertight chamber. The stator windings shall be insulated with moisture resistant Class H insulation by use of the trickle impregnation method. The motor shall be heat-shrink fit into the stator housing. The use of bolts, pins, or other fastening devices is not acceptable. The cable entry seal shall consist of a cylindrical elastomer grommet flanked by washers. Epoxies, silicones, or other sealing systems are not acceptable. Thermal switches set to open at 125 degrees C shall be embedded in the stator end coils to monitor the temperature of each phase winding. The motor horsepower shall be adequate so that the pump is non-overloading throughout the entire pump performance curve from shut-off through run-out.
The pump shall be provided with a dual mechanical seal. Both upper and lower seal assemblies shall consist of a stationary tungsten-carbide ring and a rotating tungsten-carbide ring. Other seal materials are not considered acceptable.*

DUPLEX CONTROL PANEL:

Control panel shall be assembled and built by a TUV (UL508A CERTIFIED) manufacturing facility.
The Enclosure shall be NEMA 4X, minimum 30" high x 30" wide x 10" deep Fiberglass with padlockable draw latches.
The enclosure shall have external mounting feet to allow for wall mounting. All hardware shall be stainless steel.

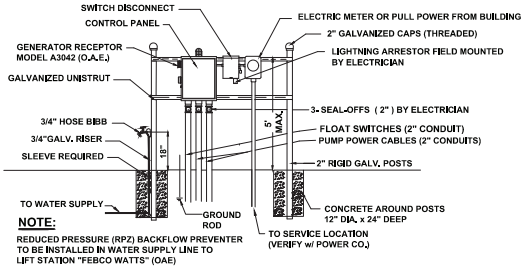
The following components shall be mounted through the enclosure:
1- ea. Red Alarm Beacon (Light)
1- ea. Alarm Horn
1- ea. Generator Receptacle w/ weatherproof cover
1- ea. Alarm Silence Pushbutton

The backpanel shall be fabricated from .125, 5052-H32 marine alloy aluminum. All components shall be mounted by machined stainless steel screws.

The following components shall be mounted to backpanel:
2- ea. Motor Contactors
1- ea. Volt Monitor (Single Phase) Phase Monitor (Three Phase)
1- ea. Control Transformer (208 Volt Only)
1- ea. Silence Relay
1- ea. Duplex Alternator
1- ea. Model BOAC5AH Battery Back-Up w/ Smart Charger (Per DEP)
20- ea. Terminals For Field Connections
6- ea. Terminals For Motor Connections (Single Phase Only)
3- ea. Grounding Lugs

The innerdoor shall be fabricated from .080, 5052-H32 marine alloy aluminum. The innerdoor shall have a continuous aluminum piano hinge.

The following components shall be mounted through the innerdoor:
1- ea. Main Circuit Breaker
1- ea. Emergency Circuit Breaker
1- ea. Mechanical Interlock For Emergency And Main Breakers
2- ea. Short Circuit Protectors
1- ea. Control Circuit Breaker
1- ea. Hand-Off-Auto Selector Switches
2- ea. Pump Run Pilot Lights
1- ea. Power On Pilot Light
2- ea. Elapse Time Meters (Non-Resettable)
1- ea. GFI Duplex Convenience Outlet



ELECTRICAL RISER (FOR REFERENCE ONLY)

COMPONENT SPECIFICATIONS:
All circuit breakers shall be molded thermal magnetic. The mechanical interlock shall prevent the normal and emergency main breakers being energized at the same time.
An emergency generator receptacle shall be supplied in accordance with DEP standards. The generator receptacle shall be adequately sized to meet the equipment operating conditions.
NEUTRAL TO BE SUPPLIED FOR BOTH 208V 3PHASE OR 208V SINGLE PHASE POWER

All motor short circuit protection devices must provide for undervoltage release and class 10 overload protection on all three phases. Visible trip indication, test, and reset capability must be provided without opening inner door.
Open frame, across the line, contactors shall be rated per IEC standards and properly sized per the motor requirements. Contactors shall provide for safe touch power and control terminals.
Lightning Arrestor shall meet or exceed the requirements of ANSI/IEEE Std. C62.21-1984 section 8.6.1. and 8.7.3 shall be supplied by electrician and mounted on the bottom side of the switch disconnect ahead of the pump control panel.
A voltage monitor shall be supplied for single phase service. A phase monitor shall be supplied for (3) phase service.
A green pilot light shall be supplied for each motor. The pilot light shall illuminate each time the motor is called to run. Each pump shall have an Elapse Time Meter to record the accumulated run time. The ETM shall be 2" diameter, non-resettable, six digit, totally encapsulated unit.
A Red pilot light shall be supplied for control power. The pilot light shall illuminate when the control power is available inside the control panel.
Relays shall be ice-cube plug in type. Relay contacts shall be rated 10 amp minimum, DPDT.
Twenty (20) terminals shall be supplied for field connections. The terminals shall be rated 25 amps minimum.
Each motors over-temperature contact shall be connected to the terminal strip and shall open a contact to de-energize the appropriate motor upon a high temperature within the motor.
A 15 Amp GFI duplex receptacle shall be supplied and mounted on the innerdoor.
Ground lugs shall be supplied and appropriately sized for each motor and for service entrance.
Nameplates for the innerdoor and back panel shall be of a graphic design, specifically depicting the intent for each device.

MISCELLANEOUS: All wiring on the backpanel shall be contained within the wiring duct. All wiring between the innerdoor and the backpanel shall be contained with in a plastic spiral wrap.
Each wire shall have a wire number at each end to correspond to the as built drawing for field troubleshooting.
The control panel shall be assembled by a TUV (UL508A Certified) manufacturing facility.

PUMP DATA		ELEVATIONS	
PRIMARY PUMP CAPACITY	108.00 GPM	TOP OF WETWELL	107.00
PRIMARY TDH	134.00 FT	INLET INVERT	98.48
SECONDARY PUMP CAPACITY	108.00 GPM	HIGH LEVEL ALARM (HLA)	97.98
SECONDARY TDH	134.00 FT	1st PUMP ON (LAG)	97.48
PUMP MANUFACTURER	FLYGT	1st PUMP ON (LEAD)	96.73
PUMP MODEL #	NP 3127	PUMPS OFF (OFF)	93.73
R.P.M.	3515	BOTTOM OF WETWELL	91.73
HORSEPOWER	11	WETWELL DIAMETER	48"
IMPELLER DIAMETER	155 mm		
ELECTRICAL/ VOLTS / PHASE	220 V/3		
FULL LOAD AMPS/ PER PUMP	28A		
PUMP DISCHARGE SIZE	3"		
SOLIDS HANDLING	3"		

* ELECTRICIAN NOTES:

1. DRAWING NOT TO SCALE
- * 2. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES
- * 3. ELECTRICIAN SHALL SEAL OFF CONDUIT RUNS
- * 4. ELECTRICIAN TO MOUNT LIGHTNING ARRESTOR AT SWITCH DISCONNECT
- * 5. CONTRACTOR SHALL VERIFY POWER SOURCE PRIOR TO ORDERING EQUIPMENT
- * 6. NEUTRAL TO BE SUPPLIED FOR 208V-3 PHASE OR 208V-SINGLE PHASE POWER.
- * 7. THE CONTROL PANEL SHALL INCLUDE INCLUDE A SOLID-STATE SOFT STARTER FOR EACH PUMP MOTOR. FOR LIFT STATIONS THAT ARE 25-HP AND ABOVE USE ALTISTART 48.

ITT FLYGT, LLC / H-20 LP 01-21-13

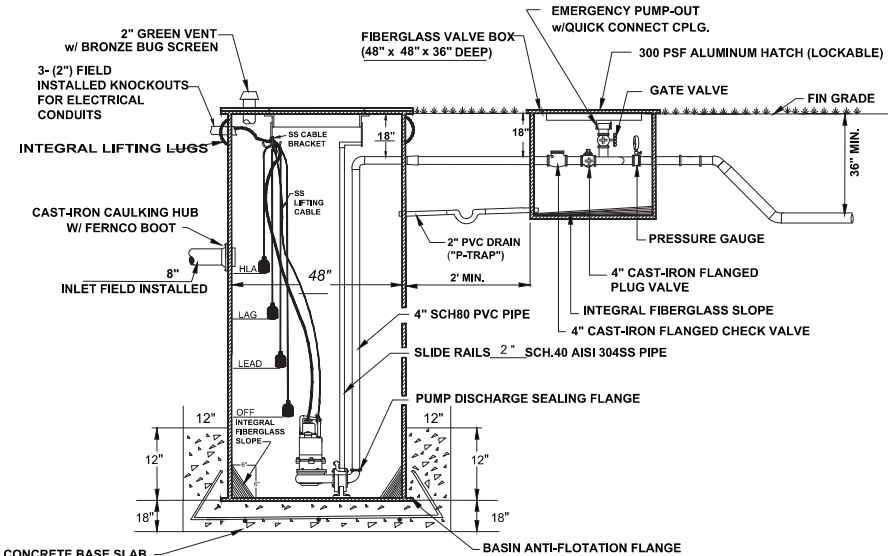
FASTNERS & APPURTANCES: All fasteners, lifting cables, float cable bracket, hinges, and appurtenances shall be made of AISI 304SS.
A 304SS slide/latch assembly shall be provided for holding the doors open on the wetwell and valve box.
Slide rails shall be made of SCH 40 AISI 304SS pipe.
Pump lifting cables shall be made of AISI 304 SS.

H-20 LOAD RATED WETWELL WITH LIFTING LUGS:
The fiberglass wetwell must be H-20 load rated with integral lifting lugs, fiberglass slope in bottom of wetwell and valve box.
Certification of the H-20 load rating must be supplied at the time of submittals to Engineer.
The wetwell shall be manufactured of fiberglass reinforced polyester (FRP) of depth and diameter as shown on the lift station elevation detail. The wall thickness shall be adequate for the depth of the wetwell to maintain the H-20 LOAD RATING.

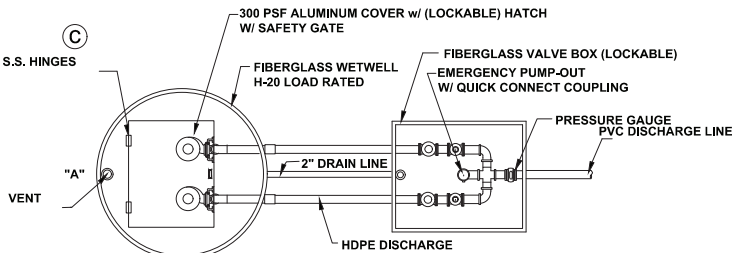
EXECUTION:
Installation shall be in strict accordance with the manufacturer's recommendations in the locations shown on the drawing.

INSPECTION & TESTING: A factory representative shall be provide for a one (1) time start-up and shall have complete knowledge of the proper operation and maintenance of complete system.
Megger the motors. The pump motors shall be megged out prior to the start-up to ensure that the insulation of the pump motor/cable is intact.
The pump controls and pumps shall be checked for mechanical reliability and proper operation.

LIFT STATION PLAN



LIFT STATION SECTION



NOTE: PUMP CONTROL PANEL SHALL BE LOCATED 3 FEET MINIMUM FROM WETWELL PERIMETER AT POINT "A"



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PROJECT

FLOOR & DECOR
APOPKA, FL

78D SWC ORANGE BLOSSOM TRAIL &
LAKE VIEW DRIVE, FL 32712

ISSUE DATE: 04/25/2023
STORE NUMBER: T.B.D.
GROSS BLDG AREA: 77,901 SF
JOB NUMBER: 022172
PROTOTYPE: 2022 Q4

ISSUE

ISSN SET	04/25/2023
CITY COMMENTS	06/09/2023
CITY COMMENTS	07/10/2023

SEAL

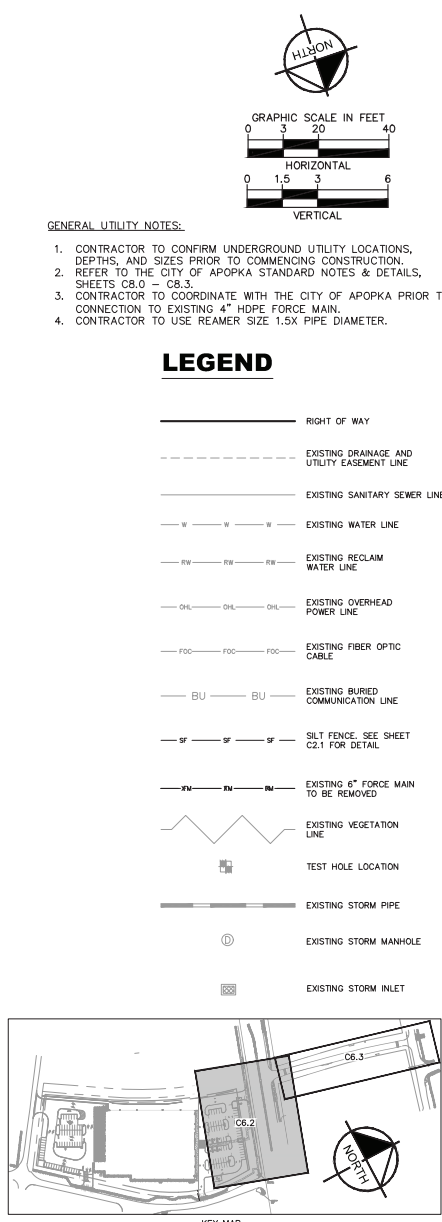


Brian S. Ashby

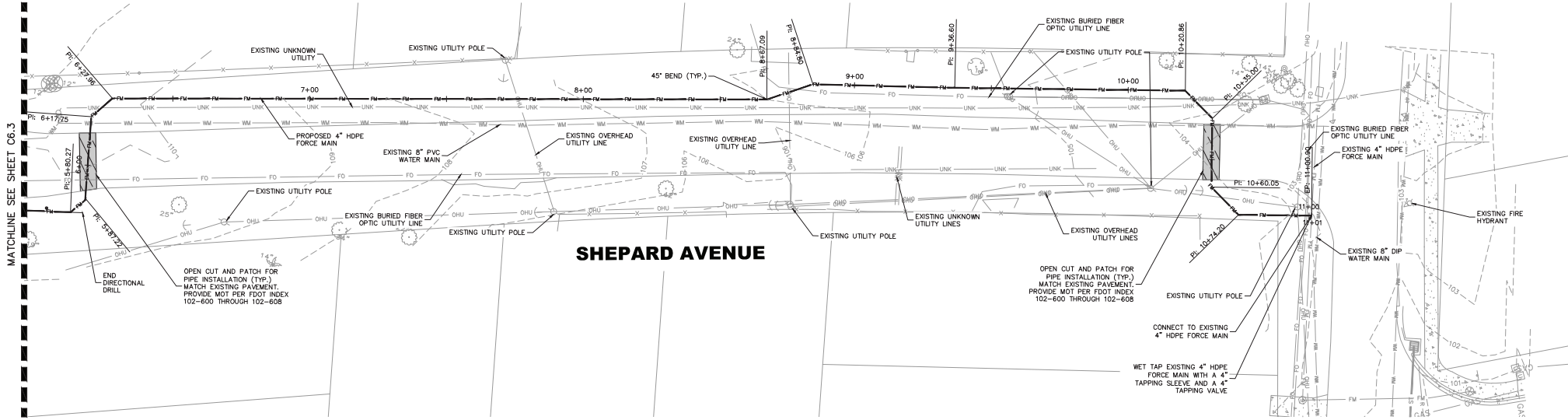
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LIFT STATION DETAIL

DRAWN: BJW
CHECKED: BSA



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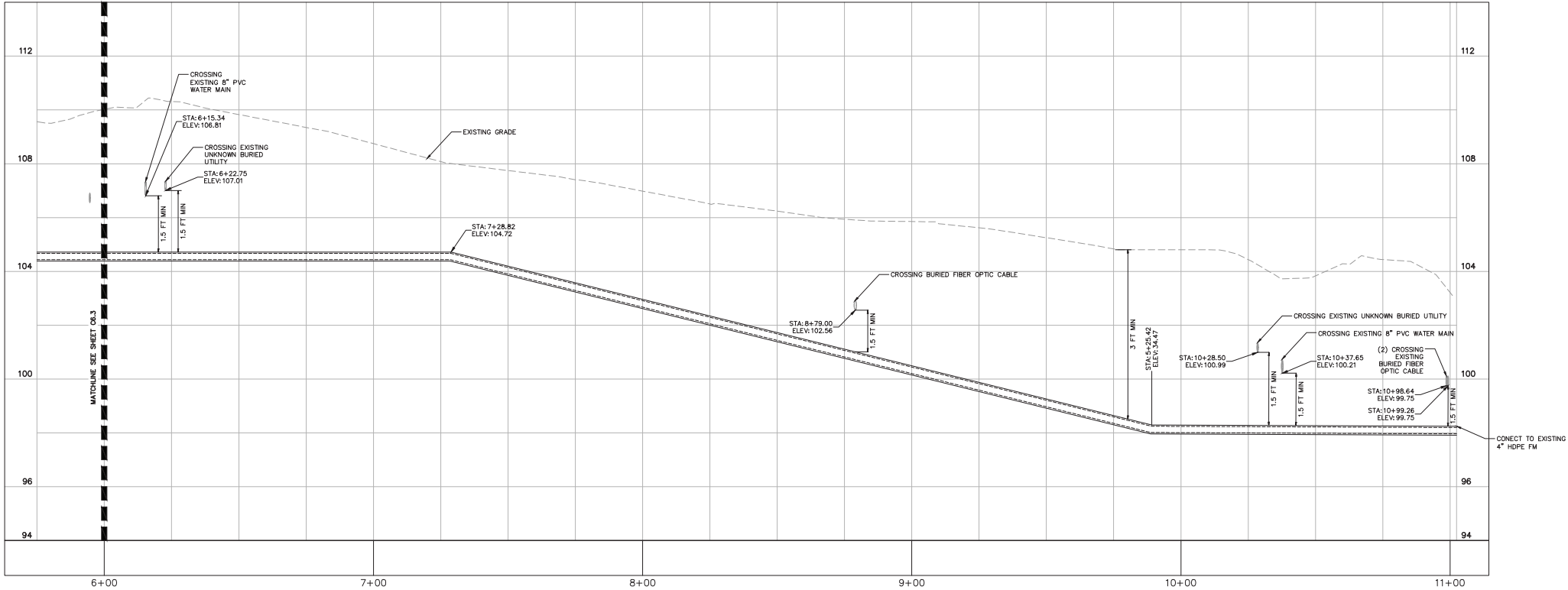
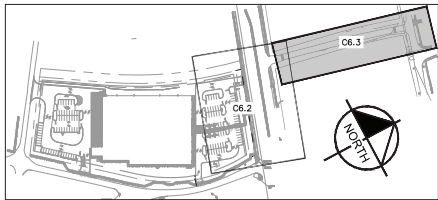


GENERAL UTILITY NOTES:

1. CONTRACTOR TO CONFIRM UNDERGROUND UTILITY LOCATIONS, DEPTHS, AND SIZES PRIOR TO COMMENCING CONSTRUCTION.
2. REFER TO THE CITY OF APOPKA STANDARD NOTES & DETAILS, SHEETS C6.0 - C6.3.
3. CONTRACTOR TO COORDINATE WITH THE CITY OF APOPKA PRIOR TO CONNECTION TO EXISTING 4" HDPE FORCE MAIN.
4. CONTRACTOR TO USE REAMER SIZE 1.5X PIPE DIAMETER.

LEGEND

- RIGHT OF WAY
- EXISTING DRAINAGE AND UTILITY EASEMENT LINE
- EXISTING SANITARY SEWER LINE
- EXISTING WATER LINE
- EXISTING RECLAIM WATER LINE
- EXISTING OVERHEAD POWER LINE
- EXISTING FIBER OPTIC CABLE
- EXISTING BURIED COMMUNICATION LINE
- SILT FENCE. SEE SHEET C2.1 FOR DETAIL
- EXISTING 6" FORCE MAIN TO BE REMOVED
- EXISTING VEGETATION LINE
- TEST HOLE LOCATION
- EXISTING STORM PIPE
- EXISTING STORM MANHOLE
- EXISTING STORM INLET



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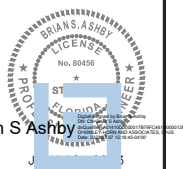
TBD SWC ORANGE BLOSSOM TRAIL &
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CITY COMMENTS	06/09/2023
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SEAL



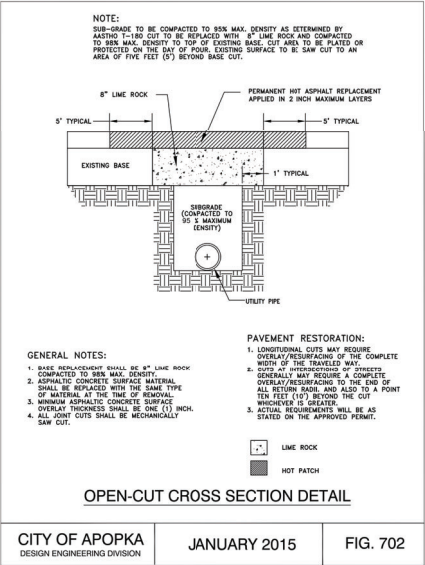
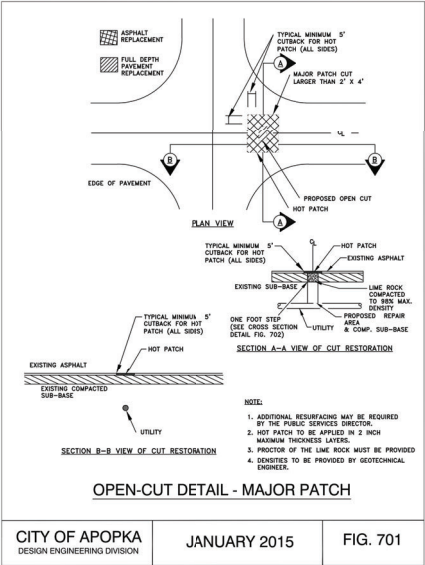
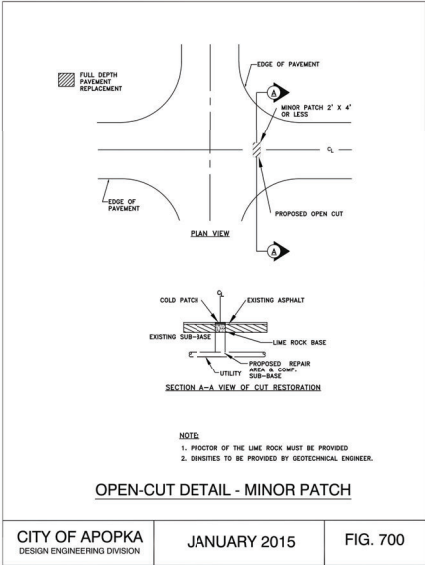
SHEET

FORCEMAIN PLAN
AND PROFILE

DRAWN: BJW
CHECKED: BSA



Plotted By: McKisson, Scott Sheet: Set-FLOOR AND DECOR APOPKA Layout: C8.2 CITY OF APOPKA DETAILS July 06, 2023 05:31:11pm K:\URL_Civil\449257001-Floor & Decor Aposka\CADD\COMST\PlanSheets\C8.0 CITY OF APOPKA DETAILS.dwg



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FLOOR & DECOR
APOPKA, FL

TBD SWC ORANGE BLOSSOM TRAIL &
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ISSUE

ISSUE NO.	DATE
1	04/25/2023
2	06/09/2023
3	07/10/2023

SEAL

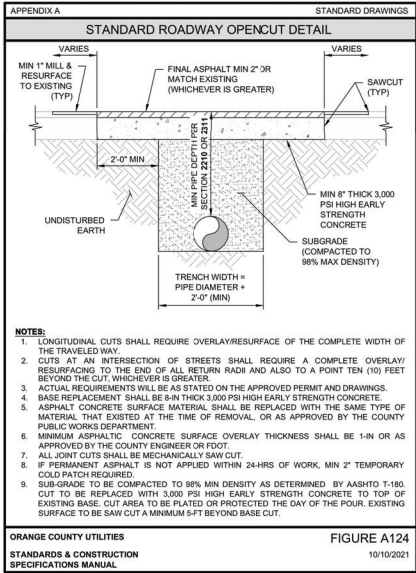
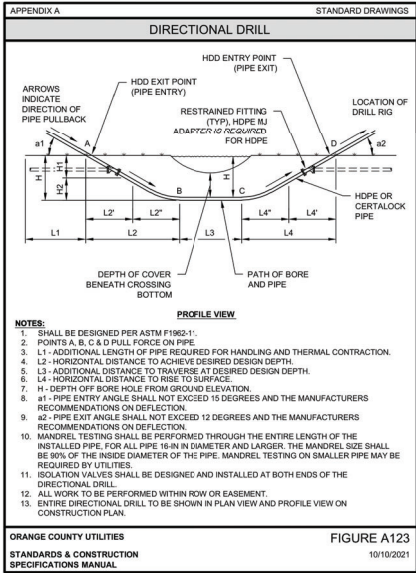
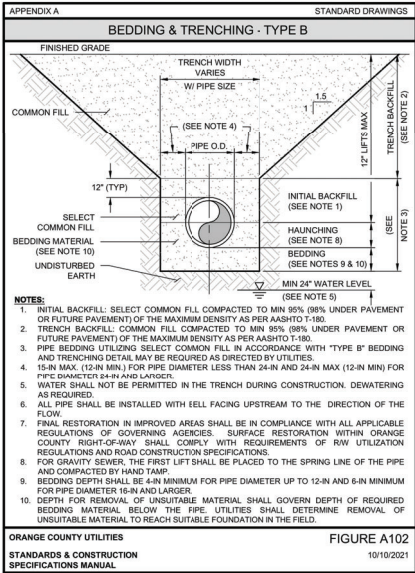
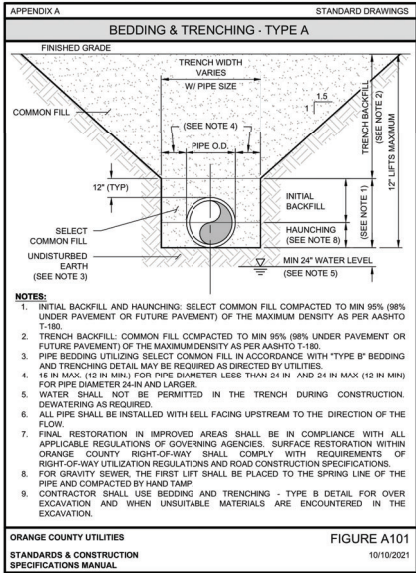
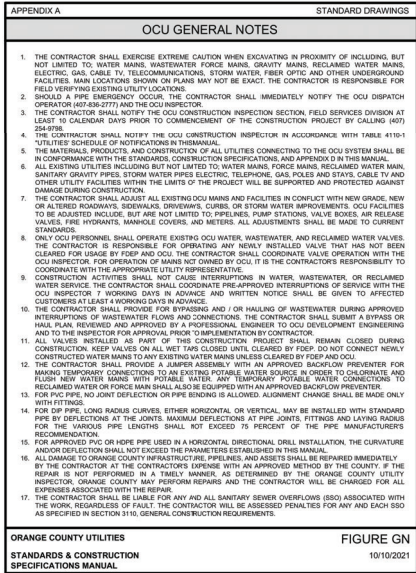
JULY 10, 2023

SHEET

**CITY OF APOPKA
DETAILS**

DRAWN: BJW
CHECKED: BSA





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APOPKA, FL

T8D SWC ORANGE BLOSSOM TRAIL & LAKE VIEW DRIVE, FL 32712

ISSUE DATE: 04/25/2023
STORE NUMBER: T.B.D.
GROSS BLDG AREA: 77,901 SF
JOB NUMBER: 022172
PROTOTYPE: 2022 Q4

ISSUE

100% SET	04/25/2023
CITY COMMENTS	06/09/2023
CITY COMMENTS	07/10/2023

SEAL

JULY 10, 2023

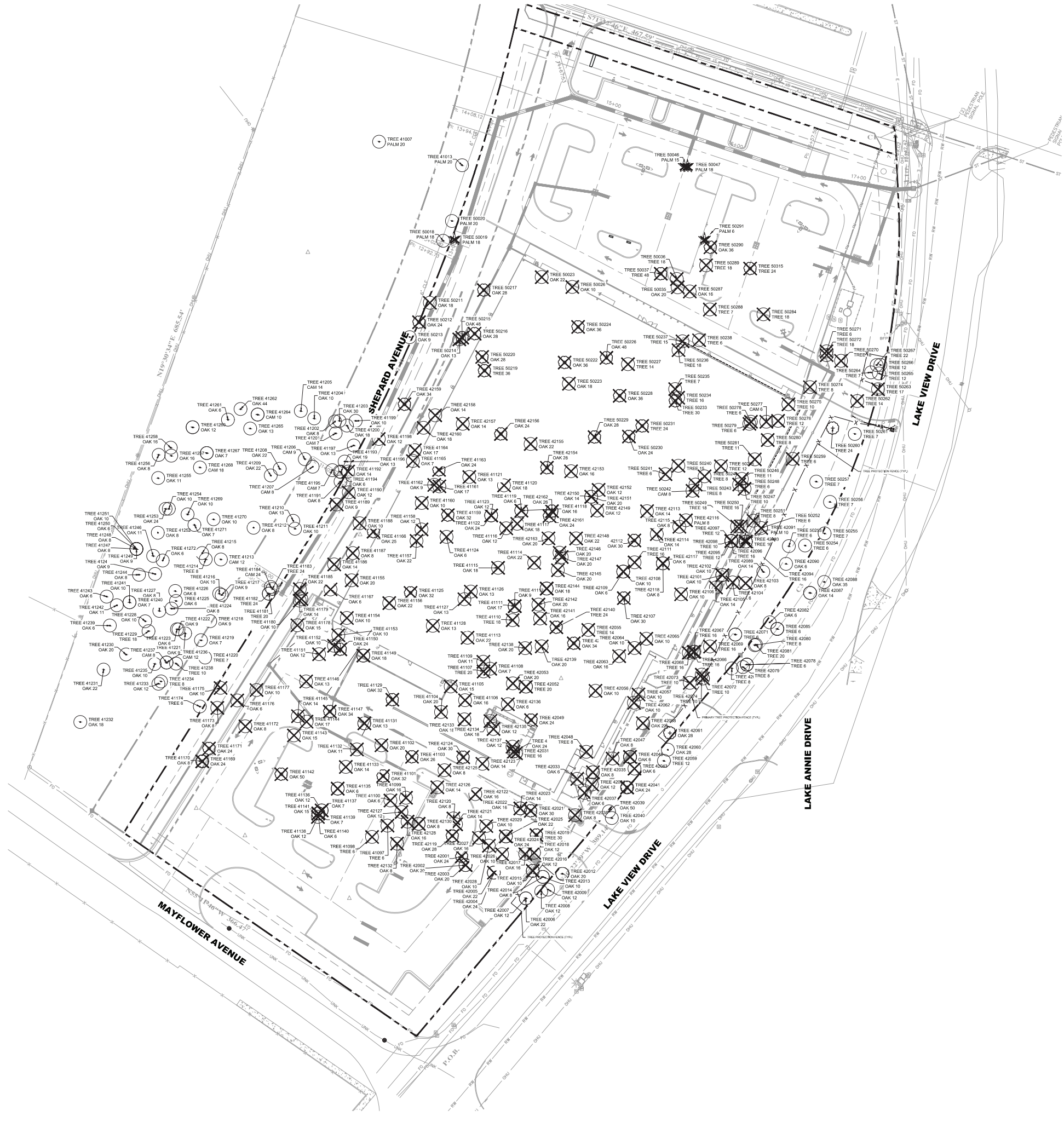
SHEET

ORANGE COUNTY
DETAILS

DRAWN: BJW
CHECKED: BSA

Always call 811 from all business days before you dig to
know underground utilities located and marked.





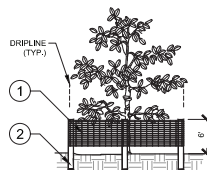
LEGEND

- SPECIMEN TREE TO REMAIN
- SPECIMEN TREE TO BE REMOVED
- TREE TO REMAIN
- TREE TO BE REMOVED
- PALM TO BE REMOVED

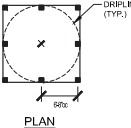


GRAPHIC SCALE IN FEET
0 15 30 60

NOTE:
ALL TREES ARE TO BE PROTECTED FROM DAMAGE. NO
VEHICULAR PARKING, STORAGE OF MATERIALS OR
EQUIPMENT, CLEANING OF EQUIPMENT, EQUIPMENT WASH
OUT OR ANY OTHER ACTION WHICH MAY CAUSE AN ADVERSE
AFFECT ON EXISTING OR FUTURE PLANTING IS TO OCCUR IN
OR AROUND TREES IN LANDSCAPE AREAS WHICH MAY BE
AFFECTED.



ELEVATION



PLAN



1
L0.50 TREE PROTECTION FENCING
ELEVATION / PLAN

- 6" PERIMETER PLUS" CONSTRUCTION FENCE BY CONVED PLASTICS OR OWNERS REPRESENTATIVE APPROVED EQUAL. SUBMIT PRODUCT INFORMATION FOR APPROVAL PRIOR TO INSTALLATION.
- 6" TALL METAL "T" POSTS OR 2" X 4" PRESSURE TREATED WOOD POSTS WITH 24" BURIAL BELOW GRADE.

INSTALLATION NOTES:

- POST SELECTION SHOULD BE BASED ON EXPECTED STRENGTH NEEDS AND THE LENGTH OF TIME FENCE WILL BE IN PLACE. FLEXIBLE FIBERGLASS ROD POSTS ARE RECOMMENDED FOR PARKS, ATHLETIC EVENTS AND CROWD CONTROL INSTALLATIONS. METAL "T" POSTS OR TREATED WOOD POSTS ARE TYPICALLY USED FOR CONSTRUCTION AND OTHER APPLICATIONS.
- POSTS SHOULD BE DRIVEN INTO THE GROUND TO A DEPTH OF 1/3 OF THE HEIGHT OF THE POST. FOR EXAMPLE, A 6' POST SHOULD BE SET AT LEAST 2' INTO THE GROUND.
- SPACE POSTS EVERY 6' (MIN) TO 8' (MAX).
- SECURE FENCING TO POST WITH NYLON CABLE TIES (AVAILABLE FROM CONVED PLASTICS). WOOD STRIPS MAY BE ALSO BE USED TO PROVIDE ADDITIONAL SUPPORT AND PROTECTION BETWEEN TIES AND POSTS.

NOTE: IF WIRE TIES ARE USED, AVOID DIRECT CONTACT WITH FENCE. WIRE MAY DAMAGE FENCE OVER TIME.



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PROJECT

FLOOR & DECOR
APOPKA, FL

78D SWC ORANGE BLOSSOM TRAIL &
LAKE VIEW DRIVE, FL 32712

ISSUE DATE: 04/25/2023
STORE NUMBER: T.B.D.
GROSS BLDG AREA: 77,901 SF
JOB NUMBER: 022172
PROTOTYPE: 2022 Q4

ISSUE

DATE	04/25/2023
CITY COMMENTS	06/09/2023
CITY COMMENTS	07/10/2023

SEAL



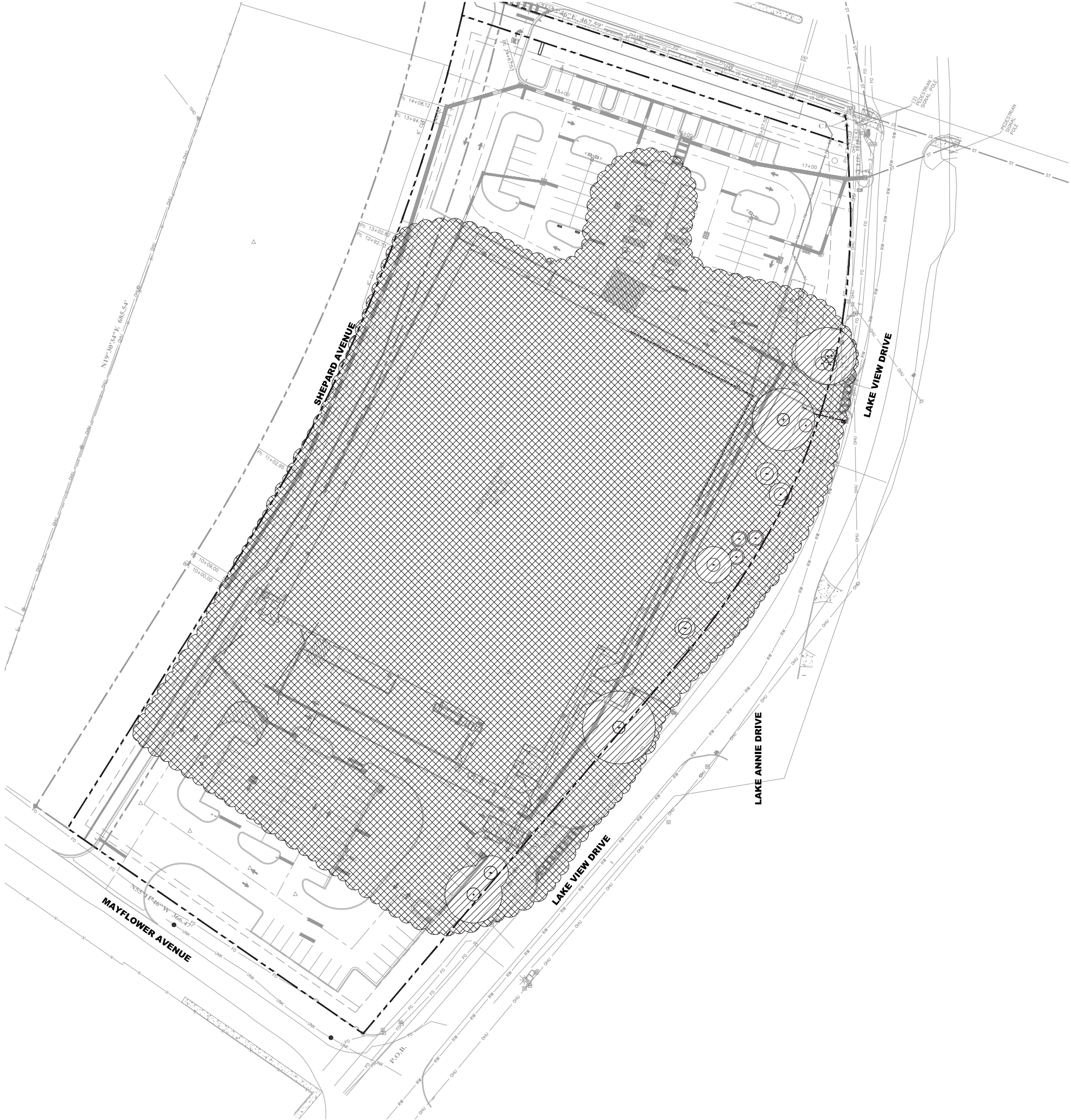
07/10/2023

SHEET
TREE MITIGATION
PLAN

DRAWN: JTD
CHECKED: MTF



Plotted By:Dumbauld, Jimmy Sheet Set:FLOOR AND DECOR APOPKA Layout:LO.51 July 07, 2023 09:08:39am K:\CPL_Civil\248257001-Floor & Decor Aposka\CADD\CONST\PlanSheets\LO.50 TREE MITIGATION PLAN.dwg



TREE CANOPY COVERAGE

TOTAL SITE AREA: 343,873 SF
TOTAL EXISTING CANOPY COVERAGE: 193,125 SF
= 80% EXISTING SITE CANOPY COVERAGE

TREE CANOPY AREA TO BE REMOVED: 183,675 SF

TREE CANOPY AREA TO BE PRESERVED: 9,450 SF

SITE CANOPY RETENTION % = 5%
SITE CANOPY RETENTION % REQUIRED = 4%
(PER TABLE 5.3.7.9.2.C OF CITY OF APOPKA LAND DEVELOPMENT CODE)
SITE ZONING = C-COR



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PROJECT

FLOOR & DECOR

APOPKA, FL

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CITY COMMENTS	06/09/2023
CITY COMMENTS	07/10/2023

SEAL



07/10/2023

SHEET
TREE CANOPY
COVERAGE

DRAWN: JTD
CHECKED: MTF

Always call 811 two full business days before you dig to
have underground utilities located and marked.



NUMBER	DBH	SPECIES	STATUS	SPECIMEN
41007		20 PALM	OFF-SITE	
41013		20 PALM	OFF-SITE	
41097		6 TREE	REMOVED	
41098		6 TREE	REMOVED	
41099		16 OAK	REMOVED	
41100		6 OAK	REMOVED	
41101		32 OAK	REMOVED	Yes
41102		20 OAK	REMOVED	
41103		26 OAK	REMOVED	Yes
41104		20 OAK	REMOVED	
41105		15 OAK	REMOVED	
41106		16 OAK	REMOVED	
41107		20 TREE	REMOVED	
41108		7 OAK	REMOVED	
41109		11 OAK	REMOVED	
41110		18 TREE	REMOVED	
41111		17 OAK	REMOVED	
41112		9 OAK	REMOVED	
41113		22 OAK	REMOVED	
41114		22 OAK	REMOVED	
41115		18 OAK	REMOVED	
41116		12 OAK	REMOVED	
41117		18 OAK	REMOVED	
41118		16 OAK	REMOVED	
41119		6 OAK	REMOVED	
41120		18 OAK	REMOVED	
41121		13 OAK	REMOVED	
41122		24 OAK	REMOVED	Yes
41123		12 OAK	REMOVED	
41124		6 OAK	REMOVED	
41125		32 OAK	REMOVED	Yes
41126		13 OAK	REMOVED	
41127		13 OAK	REMOVED	
41128		13 OAK	REMOVED	
41129		32 OAK	REMOVED	Yes
41130		18 OAK	REMOVED	
41131		13 OAK	REMOVED	
41132		11 OAK	REMOVED	
41133		14 OAK	REMOVED	
41134		7 OAK	REMOVED	
41135		6 OAK	REMOVED	
41136		12 OAK	REMOVED	
41137		7 OAK	REMOVED	
41138		12 OAK	REMOVED	
41139		7 OAK	REMOVED	
41140		6 OAK	REMOVED	
41141		15 OAK	REMOVED	
41142		50 OAK 5	REMOVED	Yes
41143		15 OAK	REMOVED	
41144		17 OAK	REMOVED	
41145		14 OAK	REMOVED	
41146		13 OAK	REMOVED	
41147		34 OAK	REMOVED	Yes
41148		10 OAK	REMOVED	
41149		18 OAK	REMOVED	
41150		24 OAK	REMOVED	Yes
41151		12 OAK	REMOVED	
41152		10 OAK	REMOVED	
41153		10 OAK	REMOVED	
41154		10 OAK	REMOVED	
41155		20 OAK	REMOVED	
41156		22 OAK	REMOVED	
41157		22 OAK	REMOVED	
41158		12 OAK	REMOVED	
41159		32 OAK	REMOVED	Yes
41160		10 OAK	REMOVED	
41161		17 OAK	REMOVED	
41162		9 OAK	REMOVED	
41163		24 OAK	REMOVED	Yes
41164		17 OAK	REMOVED	
41165		7 OAK	REMOVED	
41166		25 OAK 5	REMOVED	Yes
41167		6 OAK	REMOVED	
41169		24 OAK	REMOVED	Yes
41170		8 OAK	REMOVED	
41171		24 OAK	REMOVED	Yes
41172		8 OAK	REMOVED	
41173		8 OAK	REMOVED	
41174		6 TREE	OFF-SITE	
41175		10 OAK	REMOVED	
41176		6 OAK	REMOVED	
41177		10 OAK	REMOVED	
41178		15 OAK	REMOVED	
41179		14 OAK	REMOVED	
41180		10 OAK	REMOVED	
41181		20 TREE	OFF-SITE	
41182		24 TREE	OFF-SITE	
41183		24 TREE	OFF-SITE	
41184		24 CAM	OFF-SITE	
41185		22 OAK	REMOVED	
41186		14 OAK	REMOVED	
41187		8 OAK	REMOVED	
41188		10 OAK	REMOVED	
41189		9 OAK	REMOVED	
41190		12 OAK	REMOVED	
41191		8 OAK	OFF-SITE	Yes
41192		14 OAK	REMOVED	Yes
41193		19 OAK	OFF-SITE	
41194		6 OAK	OFF-SITE	
41195		7 CAM	OFF-SITE	

NUMBER	DBH	SPECIES	STATUS	SPECIMEN
41196		13 OAK	OFF-SITE	
41197		13 OAK	OFF-SITE	
41198		12 OAK	REMOVED	
41199		10 OAK	OFF-SITE	
41200		18 OAK	REMOVED	
41201		7 CAM	OFF-SITE	
41202		8 OAK	OFF-SITE	
41203		30 OAK	OFF-SITE	
41204		10 OAK	OFF-SITE	
41205		14 CAM	OFF-SITE	
41206		9 CAM	OFF-SITE	
41207		8 CAM	OFF-SITE	
41208		22 OAK	OFF-SITE	
41209		22 OAK	OFF-SITE	
41210		13 OAK	OFF-SITE	
41211		10 OAK	OFF-SITE	
41212		8 OAK	OFF-SITE	
41213		12 CAM	OFF-SITE	
41214		8 TREE	PRESERVED	
41215		8 OAK	OFF-SITE	
41216		10 OAK	OFF-SITE	
41217		9 OAK	OFF-SITE	
41218		9 OAK	OFF-SITE	
41219		7 OAK	OFF-SITE	
41220		7 TREE	OFF-SITE	
41221		9 OAK	OFF-SITE	
41222		9 OAK	OFF-SITE	
41223		6 OAK	OFF-SITE	
41224		8 OAK	OFF-SITE	
41225		6 OAK	OFF-SITE	
41226		8 OAK	OFF-SITE	
41227		8 OAK	OFF-SITE	
41228		10 OAK	OFF-SITE	
41229		18 TREE	OFF-SITE	
41230		20 OAK	OFF-SITE	
41231		22 OAK	OFF-SITE	
41232		18 OAK	REMOVED	
41233		12 OAK	OFF-SITE	
41234		8 TREE	OFF-SITE	
41235		10 OAK	OFF-SITE	
41236		12 CAM	OFF-SITE	
41237		8 CAM	OFF-SITE	
41238		10 TREE	OFF-SITE	
41239		6 OAK	REMOVED	
41240		7 OAK	OFF-SITE	
41241		10 OAK	OFF-SITE	
41242		11 OAK	OFF-SITE	
41243		6 OAK	OFF-SITE	
41244		8 OAK	OFF-SITE	
41245		9 OAK	OFF-SITE	
41246		11 OAK	OFF-SITE	
41247		8 OAK	OFF-SITE	
41248		8 OAK	REMOVED	
41249		9 OAK	OFF-SITE	
41250		6 OAK	OFF-SITE	
41251		10 OAK	OFF-SITE	
41252		8 OAK	OFF-SITE	
41253		24 OAK	OFF-SITE	
41254		10 OAK	OFF-SITE	
41255		11 OAK	OFF-SITE	
41256		8 OAK	OFF-SITE	
41257		16 OAK	OFF-SITE	
41258		16 OAK	OFF-SITE	
41259		10 OAK	OFF-SITE	
41260		10 PALM	REMOVED	
41261		6 OAK	OFF-SITE	
41262		44 OAK	REMOVED	
41263		7 CAM	OFF-SITE	
41264		10 CAM	REMOVED	
41265		13 OAK	OFF-SITE	
41266		7 OAK	OFF-SITE	
41267		7 OAK	OFF-SITE	
41268		18 CAM	OFF-SITE	
41269		10 OAK	OFF-SITE	
41270		10 OAK	OFF-SITE	
41271		7 OAK	REMOVED	
41272		6 OAK	OFF-SITE	
42001		24 OAK	REMOVED	Yes
42002		20 OAK	REMOVED	
42003		20 OAK	REMOVED	
42004		24 OAK	REMOVED	Yes
42005		22 OAK	REMOVED	
42006		22 OAK	PRESERVED	
42007		12 OAK	PRESERVED	
42008		12 OAK	OFF-SITE	
42009		12 OAK	OFF-SITE	
42010		22 OAK	OFF-SITE	
42011		20 OAK	OFF-SITE	
42012		20 OAK	OFF-SITE	
42013		10 OAK	PRESERVED	
42014		8 OAK	PRESERVED	
42015		10 OAK	REMOVED	
42016		12 OAK	REMOVED	
42017		16 OAK	REMOVED	
42018		12 OAK	REMOVED	
42019		30 TREE	REMOVED	Yes
42021		30 OAK	REMOVED	Yes
42022		16 OAK	REMOVED	
42023		14 OAK	REMOVED	
42024		24 OAK	REMOVED	Yes

NUMBER	DBH	SPECIES	STATUS	SPECIMEN
42025		22 OAK	REMOVED	
42026		10 OAK	REMOVED	
42027		16 OAK	REMOVED	
42028		10 OAK	REMOVED	
42029		10 OAK	REMOVED	
42031		16 TREE	REMOVED	
42032		24 OAK	REMOVED	Yes
42033		6 OAK	REMOVED	
42034		12 OAK	REMOVED	
42035		8 OAK	PRESERVED	
42036		6 OAK	REMOVED	
42037		6 OAK	REMOVED	
42038		8 OAK	REMOVED	
42039		50 OAK 5	OFF-SITE	
42040		10 OAK	OFF-SITE	
42041		24 OAK	REMOVED	Yes
42042		6 OAK	REMOVED	
42043		6 OAK	REMOVED	
42044		6 OAK	PRESERVED	
42045		6 OAK	PRESERVED	
42046		10 OAK	REMOVED	
42047		8 OAK	REMOVED	
42048		8 TREE	REMOVED	
42049		24 OAK	REMOVED	Yes
42050		24 TREE	REMOVED	Yes
42051		20 TREE	REMOVED	
42052		20 OAK	REMOVED	
42053		20 OAK	REMOVED	
42054		34 OAK	REMOVED	Yes
42055		14 TREE	REMOVED	
42056		10 OAK	REMOVED	
42057		10 OAK	REMOVED	
42058		22 OAK	REMOVED	
42059		12 TREE	OFF-SITE	
42060		28 OAK	OFF-SITE	
42061		28 OAK	PRESERVED	Yes
42062		10 OAK	REMOVED	
42063		16 OAK	REMOVED	
42064		10 OAK	REMOVED	
42065		10 OAK	REMOVED	
42066		16 TREE	REMOVED	
42067		16 TREE	REMOVED	
42068		16 TREE	REMOVED	
42069		16 TREE	REMOVED	
42070		6 TREE	PRESERVED	
42071		6 TREE	PRESERVED	
42072		10 TREE	REMOVED	
42073		10 TREE	REMOVED	
42074		10 TREE	REMOVED	
42075		8 TREE	OFF-SITE	
42076		10 TREE	OFF-SITE	
42077		12 TREE	OFF-SITE	
42078		6 TREE	OFF-SITE	
42079		8 TREE	OFF-SITE	
42080		8 TREE	OFF-SITE	
42081		20 TREE	OFF-SITE	
42082		6 OAK	OFF-SITE	
42083		8 TREE	OFF-SITE	
42084		6 TREE	OFF-SITE	
42085		6 TREE	OFF-SITE	
42086		12 OAK	OFF-SITE	
42087		14 OAK	OFF-SITE	
42088		35 OAK 5	OFF-SITE	
42089		14 OAK	PRESERVED	
42090		6 OAK	PRESERVED	
42091		10 PALM	REMOVED	
42092		12 TREE	PRESERVED	
42093		16 TREE	REMOVED	
42094		16 TREE	REMOVED	
42095		12 TREE	REMOVED	
42096		16 TREE	REMOVED	
42097		12 TREE	REMOVED	
42098		10 TREE	REMOVED	
42101		10 OAK	REMOVED	
42102		10 OAK	REMOVED	
42103		8 OAK	REMOVED	
42104		6 OAK	REMOVED	
42105		14 OAK	REMOVED	
42106		10 OAK	REMOVED	
42107		30 OAK	REMOVED	Yes
42108		10 OAK	REMOVED	
42109		6 OAK	REMOVED	
42111		16 TREE	REMOVED	
42112		30 OAK	REMOVED	Yes
42113		14 OAK	REMOVED	
42114		14 OAK	REMOVED	
42115		8 OAK	REMOVED	
42116		8 PALM	REMOVED	
42117		6 OAK	REMOVED	
42118		8 OAK	REMOVED	
42119		28 OAK	REMOVED	Yes
42120		8 OAK	REMOVED	
42121		14 OAK	REMOVED	
42122		16 OAK	REMOVED	
42123		14 OAK	REMOVED	
42124		30 OAK	REMOVED	Yes
42125		8 OAK	REMOVED	
42126		14 OAK	REMOVED	
42127		12 OAK	REMOVED	
42128		16 OAK	REMOVED	
42129		12 OAK	REMOVED	

NUMBER	DBH	SPECIES	STATUS	SPECIMEN
42130		8 OAK	REMOVED	
42132		8 OAK	REMOVED	
42133		18 OAK	REMOVED	
42134		18 OAK	REMOVED	
42135		12 OAK	REMOVED	
42136		6 OAK	REMOVED	
42137		12 OAK	REMOVED	
42138		20 OAK	REMOVED	
42139		20 OAK	REMOVED	
42140		24 TREE	REMOVED	Yes
42141		16 OAK	REMOVED	
42142		20 OAK	REMOVED	
42143		18 OAK	REMOVED	
42144		18 OAK	REMOVED	
42145		20 OAK	REMOVED	
42146		20 OAK	REMOVED	
42147		20 OAK	REMOVED	
42148		22 OAK	REMOVED	
42149		12 OAK	REMOVED	
42150		14 OAK	REMOVED	
42151		20 OAK	REMOVED	
42152		12 OAK	REMOVED	
42153		16 OAK	REMOVED	
42154		28 OAK	REMOVED	Yes
42155		22 OAK	REMOVED	
42156		24 OAK	REMOVED	Yes
42157		14 OAK	REMOVED	
42158		14 OAK	REMOVED	
42159		34 OAK	REMOVED	Yes
42160		18 OAK	REMOVED	
42161		24 OAK	REMOVED	Yes
42162		26 OAK	REMOVED	Yes
42163		20 OAK	REMOVED	
50018		18 PALM	OFF-SITE	
50019		18 PALM	REMOVED	
50020		20 PALM	OFF-SITE	
50023		22 OAK	REMOVED	
50026		10 OAK	REMOVED	
50035		20 OAK	REMOVED	
50036		18 TREE	REMOVED	
50037		48 TREE	REMOVED	Yes
50046		15 PALM	REMOVED	
50047		18 PALM	REMOVED	
50211		18 OAK	REMOVED	
50212		24 OAK	REMOVED	Yes
50213		9 OAK	OFF-SITE	
50214		13 OAK	REMOVED	
50215		48 OAK	REMOVED	Yes
50216		28 OAK	REMOVED	Yes
50217		28 OAK	REMOVED	Yes
50219		36 TREE	REMOVED	Yes
50220		28 OAK	REMOVED	Yes
50222		36 OAK	REMOVED	Yes
50223		18 OAK	REMOVED	
50224		36 OAK	REMOVED	Yes
50226		48 OAK	REMOVED	Yes
50227		14 TREE	REMOVED	
50228		36 OAK	REMOVED	Yes
50229		28 OAK	REMOVED	Yes
50230		24 OAK	REMOVED	Yes
50231		24 TREE	REMOVED	Yes
50233		30 TREE	REMOVED	Yes
50234		16 TREE	REMOVED	
50235		7 TREE	REMOVED	
50236		18 TREE	REMOVED	
50237		15 TREE	REMOVED	
50238		6 TREE	REMOVED	
50240		15 TREE	REMOVED	
50241		6 TREE	REMOVED	
50242		8 CAM	REMOVED	
50243		8 TREE	REMOVED	
50244		8 TREE	REMOVED	
50245		12 TREE	REMOVED	
50246		11 TREE	REMOVED	
50247		10 TREE	REMOVED	
50248		6 TREE	REMOVED	
50249		18 TREE	REMOVED	
50250		16 TREE	REMOVED	
50251		8 TREE	REMOVED	
50252		6 TREE	REMOVED	
50253		6 TREE	PRESERVED	
50254		6 TREE	PRESERVED	
50255		7 TREE	OFF-SITE	
50256		7 TREE	PRESERVED	
50257		7 TREE	PRESERVED	
50259		6 TREE	REMOVED	
50260		24 TREE	PRESERVED	Yes
50261		7 TREE	PRESERVED	
50262		14 TREE	REMOVED	
50263		17 TREE	REMOVED	
50264		7 TREE	PRESERVED	
50265		12 TREE	PRESERVED	
50266		12 TREE	PRESERVED	
50267		22 TREE	PRESERVED	
50270		18 TREE	REMOVED	
50271		6 TREE	REMOVED	
50272		18 TREE	REMOVED	
50274		8 TREE	REMOVED	
50275		10 TREE	REMOVED	
50276		12 TREE	REMOVED	
50277		6 CAM	REMOVED	
50278		6 TREE	REMOVED	
50279		6 TREE	REMOVED	
50280		8 TREE	REMOVED	
50281		11 TREE	REMOVED	
50284		18 TREE	REMOVED	
50287		16 OAK	REMOVED	
50288		7 TREE	REMOVED	
50289		18 TREE	REMOVED	
50290		36 OAK	REMOVED	Yes
50291		6 PALM	REMOVED	
50315		24 TREE	REMOVED	Yes

TREE MITIGATION SPECIFICATIONS

- GENERAL
1. CONTRACTOR SHALL ADHERE TO ALL TREE PROTECTION REQUIREMENTS LISTED IN THESE SPECIFICATIONS AND/OR THOSE LISTED IN THE CITY OR COUNTY ZONING CODE. TREE PROTECTION (LATEST EDITION, WHICHEVER IS MORE STRINGENT SHALL APPLY).
2. CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION PROCEDURES WITH THE PROJECT ARBORIST PRIOR TO BEGINNING WORK.
3. NO BRUSH SUBJECT TO EROSION MUST BE ADEQUATELY STABILIZED WITH VEGETATION MATERIAL THAT WILL WITHIN A REASONABLE TIME PREVENT EROSION AND SOIL DISTURBANCE.
4. NO GRASS, BUILDING MATERIAL, WIRES OR OTHER ATTACHMENTS OF ANY KIND SHALL BE ATTACHED TO ANY TREE OR PALM. GUY WIRES DESIGNED TO PROTECT TREES ARE EXCLUDED FROM THIS PROHIBITION.
5. EXISTING TREE LOCATIONS AND SIZES ARE ESTIMATES AND ARE BASED ON A SURVEY PROVIDED BY THE OWNER SELECTED SURVEYOR.
6. CONTRACTOR SHALL COORDINATE TREE REMOVAL WITH PERMITTING AGENCY AND PROJECT ARBORIST PRIOR TO CONSTRUCTION. CONSTRUCTION MAY BE STOPPED OR CAUSE TO BE REMOVED ANY PROTECTED TREE OR PALM WITHOUT FIRST HAVING PROCURED A PERMIT AS PROVIDED BY THE APPROPRIATE PERMITTING AGENCY.
7. FOR PROTECTED TREES OR PALMS BEING REMOVED, THE CONTRACTOR MUST GIVE THE PERMITTING AGENCY REASONABLE OPPORTUNITY TO RELOCATE TREES DESIGNATED FOR REMOVAL. TO ANOTHER SITE AT THE PERMITTING AGENCY'S EXPENSE.
8. CONTRACTOR IS RESPONSIBLE FOR POSSESSING ALL REQUIRED APPLICATOR LICENSES, BUSINESS REGISTRATIONS AND INSURANCE, AND PESTICIDE LABELS, AND NECESSARY DATA SAFETY SHEETS. THE CONTRACTOR IS ALSO RESPONSIBLE FOR HAVING ALL SPILL CONTAINMENT MATERIALS AND REQUIRED PERSONNEL PROTECTIVE EQUIPMENT FOR PESTICIDE APPLICATIONS AND ACCIDENTAL SPILLS ON SITE AT ALL TIMES. THE OWNER RESERVES THE RIGHT TO INSPECT EACH APPLICATOR AND HAVE THESE MATERIALS PRESENTED BEFORE AND DURING ANY PESTICIDE TREATMENT.
9. WHERE TRAFFIC AREAS ARE PROPOSED WITHIN THE Drip Line of PROTECTED TREES AND LESS THAN FOUR (4) INCHES OF GRADE CHANGE IS REQUIRED, PERMISSIBLE SURFACES THAT ALLOW LEAK AND WATER INTO THE SOIL SHOULD BE USED IN LIEU OF ASPHALT OR OTHER SUCH IMPERVIOUS SURFACES.
10. TREE WELLS OF AN APPROVED DESIGN SHALL BE CONSTRUCTED AROUND ALL TREES TO BE PRESERVED WHEN MORE THAN FOUR INCHES OF FILL IS TO BE DEPOSITED WITHIN THE Drip Line AREA OF THOSE TREES. COORDINATE WITH PROJECT ARBORIST.
11. THE SEQUENCE OF TREE MITIGATION AND PRESERVATION MEASURES IS IMPERATIVE TO THE HEALTH AND SURVIVABILITY OF THE SUBJECT TREES AND SHALL BE COORDINATED WITH THE OWNER SELECTED PROJECT ARBORIST. THE DESIRED SEQUENCE IS OUTLINED BELOW:
- a. TREE PROTECTION FENCING.
- b. ROOT PRUNING AND ROOT BARRIERS.
- c. CLEARING.
- d. TREE CANOPY PRUNING.
- e. FERTILIZATION.
- f. INSECTICIDE.
- g. IRRIGATION.
- B. TREE PROTECTION FENCING
1. PRIOR TO THE ERECTION OF ANY TREE PROTECTION FENCING, ALL FOREIGN SURFACE MATERIAL, TRASH OR DEBRIS SHALL BE REMOVED FROM THE AREA TO BE ENCLOSED BY THE FENCING. AFTER ERECTION OF THE FENCING NO SUCH MATERIAL OR LITTER SHALL BE PERMITTED TO REMAIN WITHIN THE PROTECTED AREA.
2. TREE PROTECTION FENCING SHALL BE PLACED AROUND ALL PROTECTED TREES TO CREATE A PROTECTIVE ROOT ZONE AND SHALL REMAIN IN PLACE UNTIL SITE CLARIFICATION, LAND ALLOCATION, AND CONSTRUCTION ACTIVITIES ARE COMPLETE.
3. NATIVE GROUND COVER AND UNDERSTORY VEGETATION EXISTING WITHIN THE PROTECTED AREA SHALL REMAIN THROUGHOUT CONSTRUCTION. OTHER DESIRED VEGETATION AND INVASIVE PLANT SPECIES SHALL BE REMOVED ONLY BY MANUAL LABOR UTILIZING HAND TOOLS, OR BY OTHER METHODS APPROVED BY THE PROJECT ARBORIST.
4. TREE PROTECTION FENCING TYPES AND LOCATIONS SHALL BE ERECTED AS SHOWN ON THE TREE MITIGATION PLANS AND DETAILS OR AS REQUESTED BY LOCAL AGENCY.
5. FINAL LOCATIONS SHALL BE COORDINATED WITH AND APPROVED BY THE PROJECT ARBORIST.
6. NO MATERIALS, EQUIPMENT, SPILL, WASTE OR WASHOUT WATER MAY BE STORED, DEPOSITED, OR PARKED WITHIN 20 FEET OF THE TREE PROTECTION ZONE.
7. EROSION CONTROL DEVICES SUCH AS SILT FENCING, DEBRIS BARRIERS, AND WATER DIVERSION STRUCTURES SHALL BE INSTALLED TO PREVENT SILTATION AND/OR EROSION WITHIN THE TREE PROTECTION ZONE.
8. CONSTRUCTION ACTIVITY SHALL NOT DESTROY OR IRREVERSIBLY HARM THE ROOT SYSTEM OF PROTECTED TREES, POST HOLES AND TRENCHES LOCATED CLOSE TO PROTECTED TREES SHALL BE ADJUSTED TO AVOID DAMAGE TO MAJOR ROOTS.
9. DO NOT INSTALL CONDUIT, DRIP OR IRRIGATION LINES, OR ANY UTILITY LINE WITHIN THE TREE PROTECTION ZONE WITHOUT THE APPROVAL OF THE PROJECT ARBORIST. IF LINES MUST TRAVERSE THE PROTECTION AREA, THEY SHALL BE TUNNELED OR BORED UNDER THE TREE.
10. CONTRACTORS ACCESS TO FENCED TREE PROTECTION AREAS WILL BE PERMITTED ONLY WITH APPROVAL OF THE PROJECT ARBORIST.
11. EXCAVATION OR GRADING REQUIRED WITHIN THE PROTECTED AREA SHALL BE LIMITED TO THREE (3) INCHES OF CUT OR FILL.
12. STRUCTURES AND UNDERGROUND FEATURES TO BE REMOVED WITHIN THE TREE PROTECTION ZONE SHALL BE COORDINATED WITH THE PROJECT ARBORIST.
13. TREE PROTECTION FENCING AROUND TREES TO BE RELOCATED SHALL BE ERECTED UNTIL THE TREE IS READY TO BE RELOCATED AND NEW FENCING SHALL BE ERECTED AT THE TREES NEW LOCATION AND WILL REMAIN IN PLACE UNTIL ALL CONSTRUCTION ACTIVITIES ARE COMPLETE.
14. IF ANY DAMAGE TO TREE PROTECTION FENCING SHOULD OCCUR BY ACCIDENT OR NEGLIGENCE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMMEDIATE REPAIRS.
15. IF TEMPORARY Haul, OR ACCESS ROADS MUST PASS OVER THE PROTECTED AREA OF TREES TO BE PRESERVED, A ROAD BED OF SIX (6) INCHES OF MULCH OR GRAVEL SHALL BE CREATED TO PROTECT THE SOIL. THE ROAD BED MATERIAL SHALL BE REPILED AS NECESSARY TO MAINTAIN A SIX (6) INCH ROAD BED AT ALL TIMES. CONTRACTOR SHALL REMOVE ALL SUCH MATERIALS FROM THE SITE AS SOON AS TEMPORARY ACCESS IS NO LONGER NECESSARY.
16. CONTRACTOR SHALL COORDINATE WITH THE PROJECT ARBORIST PRIOR TO THE REMOVAL OF ALL TREE PROTECTION FENCING.
- C. ROOT PRUNING/TRENCHING
1. TRENCHING LOCATIONS SHALL BE APPROVED IN THE FIELD BY THE PROJECT ARBORIST.
2. TRENCHING EQUIPMENT THAT WILL TURN AT HIGH RPM'S IS PREFERRED, AND SHALL BE APPROVED BY THE PROJECT ARBORIST. APPROVED EQUIPMENT WILL BE USED TO PERFORM ALL ROOT PRUNING OPERATIONS. A MINIMUM DEPTH OF THREE FEET IS REQUIRED.
3. INSTALL ROOT BARRIER WHERE DESIGNATED. SEE TREE MITIGATION PLAN AND DETAIL SHEETS.
4. THE TRENCH SHALL BE BACKFILLED WITH PREVIOUSLY EXCAVATED SOIL AND COMPACTED IMMEDIATELY.
5. TREES TO BE RELOCATED SHALL BE ROOT PRUNED A MINIMUM OF TWELVE (12) WEEKS PRIOR TO TREE RELOCATION.
6. WHEN THE ROOT ZONE WILL BE DISTURBED, AFFECTED ROOTS MUST BE SEVERED BY CLEAN PRUNING CUTS AT THE POINT WHERE CONSTRUCTION IMPACTS THE ROOTS.
- D. CLEARING
1. ANY BRUSH CLEARING REQUIRED WITHIN THE TREE PROTECTION ZONE SHALL BE ACCOMPLISHED WITH HAND-OPERATED EQUIPMENT.
2. CONTRACTOR SHALL CLEAR ALL TREE PROTECTION AREAS OF VINES, SHRUBS, GROUND COVERS, WEEDS, SAPLINGS, AND INVASIVES LISTED ON THE LATEST EDITION OF THE FLORIDA EXOTIC PEST PLANT COUNCIL'S LIST OF INVASIVE SPECIES.
3. PROJECT ARBORIST MUST APPROVE METHODS OTHER THAN HAND CLEARING.

1 TYPICAL TREE MITIGATION NOTES

- A TWO (2) INCH LAYER OF MULCH SHALL BE APPLIED OVER THE SURFACE OF EXPOSED ROOTS OF PROTECTED TREES DURING THE SITE CLEARING PHASE.
- E. TREE CANOPY PRUNING**
1. TREE PRUNING SPECIFICATIONS SHALL BE DEFINED BASED ON SPECIFIC RECOMMENDATIONS OF THE PROJECT ARBORIST. INFORMATION PRESENTED BELOW SHOULD BE USED AS A GUIDELINE.
2. CONTRACTOR SHALL VISIT THE SITE WITH THE PROJECT ARBORIST TO VERIFY THE EXTENT OF REQUIRED PRUNING.
3. ALL PRUNING SHALL BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS OF A QUALIFIED INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA) CERTIFIED ARBORIST OR AN AMERICAN SOCIETY OF CONSULTING ARBORISTS (ASCA) REGISTERED CONSULTING ARBORIST (RCA).
4. AT LEAST ONE MEMBER OF THE PRUNING CREW SHALL BE AN ISA CERTIFIED ARBORIST.
5. WHILE IN THE TREE, THE ARBORIST SHALL PERFORM AN AERIAL INSPECTION TO IDENTIFY DEFECTS THAT REQUIRE TREATMENT. ANY ADDITIONAL WORK NEEDED SHALL BE REPORTED TO THE OWNER.
6. PRUNING CUTS SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE ANSI A300 PRUNING STANDARD, AMERICAN NATIONAL STANDARD FOR TREE CARE OPERATIONS AND WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF ANSI Z133.1 SAFETY STANDARD. PRUNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ISAs "BEST MANAGEMENT PRACTICES: TREE PRUNING".
7. WHERE TEMPORARY CLEARANCE IS NEEDED FOR ACCESS, BRANCHES SHALL BE TIED BACK TO HOLD THEM OUT OF THE CLEARANCE ZONE.
8. NO MORE THAN 20 PERCENT OF LIVE FOLIAGE SHALL BE REMOVED WITH ANY TREE.
9. ALL TREES WITHIN THE PROJECT AREA SHALL BE PRUNED AS FOLLOWS:
- a. LIVE BRANCH PRUNING SHOULD BE PERFORMED ONLY WHEN THE DANGER OF INSECT OR DISEASE INFESTATION IS NOT PRESENT.
- b. REMOVE STUBS, CUTTING OUTSIDE THE WOUND WOOD TISSUE THAT HAS FORMED AROUND THE BRANCH.
- c. CLEANING, FOR THE SELECTIVE REMOVAL OF DEAD, DISEASED, BROKEN, OR CROSSING BRANCHES DOWN TO ONE INCH IN DIAMETER OR AS DIRECTED BY THE PROJECT ARBORIST.
- d. PRUNING CUTS LARGER THAN 4 INCHES IN DIAMETER, EXCEPT FOR DEAD WOOD, SHALL BE AVOIDED.
- e. PRUNING CUTS THAT EXPOSE HARDWOOD SHALL BE AVOIDED WHENEVER POSSIBLE.
- f. ALL TREES WITH CROWNS THAT PROJECT INTO PARKING LOT/ROADWAY AREAS SHALL BE RAISED TO 14 FEET ABOVE FINISHED GRADE.
- g. ALL TREES WITH CROWNS THAT PROJECT INTO SIDEWALK AREAS SHALL BE RAISED TO A HEIGHT OF 8 FEET ABOVE FINISHED GRADE.
10. TREES, WHO'S ROOT SYSTEMS WILL BE IMPACTED SHALL RECEIVE THE FOLLOWING PRUNING TO COMPENSATE FOR ROOT LOSS:
- a. THE LOCATION AND SIZE OF BRANCHES FOR REDUCTION SHALL BE DEFINED BY THE PROJECT ARBORIST.
- b. REDUCTION, OR THE SELECTIVE PRUNING TO REDUCE TREE HEIGHT OR SPREAD.
- c. REDUCE END WEIGHT ON HEAVY, HORIZONTAL BRANCHES BY SELECTIVELY REMOVING SMALL DIAMETER BRANCHES, NO LARGER THAN TWO (2) 3 INCHES, NEAR THE END OF SCAFFOLD BRANCHES.
- d. RAISING SHALL CONSIST OF SELECTIVE PRUNING TO PROVIDE VERTICAL CLEARANCE.
- 10. PROPOSED/REPLACEMENT TREES**
- a. PRUNING SHALL BE LIMITED TO CLEANING,
11. BRUSH SHALL BE CHIPPED AND SPREAD (ONLY WHEN DISEASE OR INSECT INFESTATION IS NOT PRESENT) UNDERNEATH TREES WITHIN THE TREE PROTECTION ZONE TO A MAXIMUM DEPTH OF THREE (3) INCHES, LEAVING THE TRUNK CLEAR OF MULCH.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL EXCESS DEBRIS ON A DAILY BASIS.
- F. FERTILIZATION**
1. CONTRACTOR SHALL COORDINATE FERTILIZATION PLAN, FOLLOWING BEST MANAGEMENT PRACTICES WITH THE PROJECT ARBORIST PRIOR TO COMMENCEMENT OF WORK.
2. EVERY EFFORT SHALL BE MADE TO UTILIZE CHEMICALS OF AN ORGANIC OR BIODEGRADABLE NATURE IN ORDER TO PROTECT THE LEAST IMPACT TO THE NATURAL ENVIRONMENT. CONTRACTOR IS RESPONSIBLE FOR MIXING, APPLYING, AND DISPOSAL OF ALL CHEMICALS IN ACCORDANCE WITH STRICT ADHERENCE TO MANUFACTURER'S SPECIFICATIONS, COORDINATE WITH PROJECT ARBORIST FOR FURTHER INFORMATION.
3. ONLY TREES AFFECTED BY CONSTRUCTION OR AS SHOWN ON THE TREE MITIGATION PLAN AND TREE INVENTORY SCHEDULE SHALL BE TREATED.
4. TREES SPECIFIED TO RECEIVE FERTILIZER SHALL BE TREATED AS FOLLOWS.
- a. MIX FERTILIZER ACCORDING TO MANUFACTURER'S SPECIFICATIONS INTO A TANK WITH AGITATION CAPABILITY.
- b. MIX WETTING AGENT ACCORDING TO MANUFACTURER'S SPECIFICATIONS INTO SAME TANK WITH FERTILIZER, AGITATE MIX.
- c. INJECT THE MIXTURE WITH A HYDRAULIC INJECTION SYSTEM INTO THE UPPER 6-12 INCHES OF SOIL WITH A SOL PROBE. INJECT AT THE RATE OF ONE THIRD (1/3) GALLON AT EACH INJECTION SITE.
- d. THE CRITICAL ROOT ZONE AREA PLUS 2' BEYOND THE CRITICAL ROOT ZONE SHALL BE INJECTED, BUT NOT BEYOND ROOT PRUNING LOCATIONS.
- e. FERTILIZER SHALL BE INSTALLED PRIOR TO THE INSTALLATION OF ANY AERATION SYSTEMS.
- f. EMPTY PRODUCT CONTAINERS SHALL BE STOCKPILED FOR INSPECTION BY THE PROJECT ARBORIST PRIOR TO DISPOSAL.
- G. INSECTICIDE**
1. NOTIFY PROJECT ARBORIST IF ANY INFESTATION IS NOTICED.
2. FOLLOW PROJECT ARBORIST'S RECOMMENDED PROCEDURES.
3. FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS CONCERNING APPLICATION. READ ALL WARNING LABELS.
4. ANY PETS, AS WELL AS, THE PETS FOOD AND WATER BOWLS SHOULD BE REMOVED FROM THE AREA AND ANY SWIMMING POOLS SHOULD BE COVERED. COORDINATE WITH PROJECT ARBORIST FOR FURTHER INSTRUCTION.
5. ENSURE COMPLETE COVERAGE AND REAPPLY 3-6 MONTHS AFTER INITIAL APPLICATION UTILIZING SAME PROCEDURE.
- H. IRRIGATION**
1. EVERY EFFORT SHALL BE MADE TO WATER THE PRESERVED TREES AND TRANSPLANTS. CONTRACTOR SHALL IRRIGATE BY HAND OR BY TEMPORARY IRRIGATION.
2. IRRIGATE AS REQUIRED BY PROJECT ARBORIST UNTIL PERMANENT IRRIGATION IS INSTALLED AND OPERATING.
3. UNDERGROUND IRRIGATION SHALL NOT BE INSTALLED WITHIN THE DRP LINES OF EXISTING TREES UNLESS ROOT PROTECTION MEASURES ARE PROVIDED AND APPROVED BY PROJECT ARBORIST.
- I. TREE REMOVALS**
1. PRIOR TO AND DURING LAND CLEARING, INCLUDING GRUBBING, ALL TREES TO BE REMOVED SHALL BE CLEARLY MARKED BY PROJECT ARBORIST WITH RED SURVEY RIBBONS AT 36 INCHES MINIMUM ABOVE GRADE.
2. CONTRACTOR SHALL REMOVE ALL TREES AS SHOWN ON THE TREE MITIGATION PLANS AFTER THE TREE PROTECTION FENCING IS INSTALLED.
3. TREES SHOWN TO BE REMOVED SHALL BE FELLED WITH A CHAIN SAW AND STUMP GRINDING 6" BELOW SURFACE. ANY TREE SHOWN TO BE REMOVED THAT IS IN AN AREA WHERE COMPACTION IS CRITICAL SHALL BE FELLED WITH A CHAIN SAW AND STUMP REMOVED BY CONTRACTOR.
4. ALL WOOD AND STUMPS FROM REMOVALS SHALL BE HAULED FROM THE SITE THE SAME DAY, EXCEPT FOR TOPS. ALL TOPS ARE TO BE MOVED AND STOCKPILED OR HAULED DIRECTLY TO MULCHED AREAS FOR RELOCATED TREES IF SCHEDULING PERMITS. TOPS

- SHALL BE CHIPPED AND PLACED IN THE TREE PROTECTION ZONE TO A DEPTH OF THREE (3) INCHES. ALL EXCESS WOOD CHIPS SHALL BE REMOVED FROM THE SITE AFTER TRANSPORTATION TO AN APPROPRIATE DISPOSAL SITE.
- ALL BURN PITS, IF APPLICABLE, MUST BE APPROVED BY THE PROJECT ARBORIST AND OWNER.
- TREES TO BE REMOVED THAT HAVE BRANCHES EXTENDING INTO THE CANOPY OF TREES TO REMAIN MUST BE REMOVED BY A QUALIFIED ISA CERTIFIED ARBORIST AND NOT BY DEMOLITION OR CONSTRUCTION CONTRACTORS. THE QUALIFIED ARBORIST SHALL REMOVE THE TREE IN A MANNER THAT CAUSES NO DAMAGE TO THE TREE CANOPY OR UNDERSTORY VEGETATION TO REMAIN. ANY OTHER TREES TO BE REMOVED THAT ARE NOT IN THE TREE PROTECTION ZONE SHALL BE REMOVED BY A QUALIFIED ISA CERTIFIED ARBORIST. THE TREES SHALL BE CUT NEAR GROUND LEVEL AND THE STUMP GROUND DOWN.
- PSIOL
- CONTRACTOR SHALL COORDINATE ALL EARTHWORK OPERATIONS WITHIN TREE PROTECTION AREAS WITH THE PROJECT ARBORIST PRIOR TO BEGINNING WORK.
- ALL TOPSOIL SHALL BE NATURAL, FERTILE, FINE LOAMY SOIL POSSESSING CHARACTERISTICS OF REPRESENTATIVE TOPSOIL IN THE VEGETY THAT PRODUCES HEAVY GROWTH.
- ALL TOPSOIL PH RANGE OF 5.5 TO 7.0, 35-45% ORGANIC MATERIAL, MINIMUM, FINE SUBSOL, OBJECTIONABLE WEEDS, LITTER, SOBS, STEFF JAIL, STONES LARGER THAN ONE (1) INCH IN DIAMETER, STUAPS, ROOTS, TRASH, TOXIC SUBSTANCES, OR ANY OTHER MATERIAL WHICH MAY BE HARMFUL TO PLANT GROWTH.
- VERIFY AMOUNT STOCKPILED IF ANY, AND SUPPLY ADDITIONAL AS NEEDED FROM NATURALLY WELL-DRAINED STEPS ON TOPSOIL OCCURS AT LEAST FOUR (4) INCHES DEEP. DO NOT OBTAIN TOPSOIL FROM SOGS OR MARSHES.
- PROJECT ARBORIST SHALL APPROVE ALL TOPSOIL, PRIOR TO PLACEMENT.
- PAR
- PAIR OF DAMAGED TREES
- IF DAMAGE TO ANY TREE SHOULD OCCUR BY ACCIDENT OR NEGLIGENCE DURING THE CONSTRUCTION PERIOD, THE PROJECT ARBORIST SHALL ASSESS THE DAMAGE AND MAKE RECOMMENDATIONS TO THE OWNER FOR REPAIR BY THE CONTRACTOR.
- IF A TREE DESIGNATED TO BE SAVED IS REMOVED FROM THE SITE WITHOUT PERMISSION OF THE OWNER'S REPRESENTATIVE, THE PROJECT ARBORIST SHALL APPRAISE THE TREE AND MAKE RECOMMENDATIONS TO THE OWNER FOR REPLACEMENT BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT OF THE TREE AND ANY FEES THAT MAY BE ASSESSED TO THE OWNER BY THE GOVERNING AGENCY.



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—PROJECT

FLOOR & DECOR

APOPKA, FL

TBD SWC ORANGE BLOSSOM TRAIL

ISSUE DATE: 04/25/2023
STORE NUMBER: T.B.D.
GROSS BLDG AREA : 77,901 SF
JOB NUMBER: 022172
PROTOTYPE: 2022 Q4

—ISSUE

	100% SET	04/25/
	CITY COMMENTS	06/09/
	CITY COMMENTS	07/10/

—SEAL—

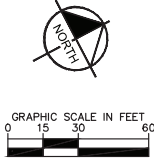


07/10/2023

—SHEE

TREE MITIGATION SPECIFICATIONS

DRAWN: JTD
CHECKED: MTF



PLANT SCHEDULE									
TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE		
	AF	1	ACER RUBRUM 'FLORIDA FLAME' STRAIGHT, SINGLE LEADER, FULL, FL #1	FLORIDA FLAME RED MAPLE	FG	3" CAL MIN	14' HT, 6"		
	QS	7	QUERCUS SHUMARDII STRAIGHT, SINGLE LEADER, FULL, FL #1	SHUMARD OAK	FG	3" CAL MIN	14' HT, 6"		
	QV	57	QUERCUS VIRGINIANA STRAIGHT, SINGLE LEADER, FULL, FL #1	SOUTHERN LIVE OAK	FG	3" CAL MIN	14' HT, 6"		
UNDERSTORY TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE		
	LITR	10	LAGERSTROEMIA INDICA X FAURIEI 'TUSCARORA' MULTI-TRUNK, 5 TRUNKS, FULL, FLORIDA #1	TUSCARORA CRAPE MYRTLE MULTI-TRUNK	FG	5" CAL, TOT.	8' HT MIN		
	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE		
PALM									
	SP	24	SABAL PALMETTO STRAIGHT, SUJOK, HURRICANE CUT, FL #1	SABAL PALM	FG	-	12' - 18' OC		
	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE		
SHRUBS									
	DC	117	DURANTA ERECTA 'CUBAN GOLD' FULL	CUBAN GOLD DURANTA	3 GAL	38" OC	14" FULL		
	LP	191	LOROPETALUM CHINENSE RUBRUM 'PLUM DELIGHT' TM	PURPLE LEAF FRINGE FLOWER	3 GAL	32" OC	24" HT MIN		
	PM	194	PODOCARPUS MACROPHYLLUS FULL TO BASE, CLOSELY MATCHING	PODOCARPUS	7 GAL	30" OC	36" HT MIN		
	RA	154	RHAPHIOLEPS INDICA 'ALBA' FULL	WHITE INDIAN HAWTHORN	3 GAL	38" OC	24" HT MIN		
	ST	89	SCHOFFERIA ARBORICOLA 'TRINETTE' FULL	SCHOFFERIA	3 GAL	38" OC	24" FULL		
	VO	690	VIBURNUM ODO RATISSIMUM FULL	SWEET VIBURNUM	7 GAL	36" OC	36" HT MIN		
	ZF	91	ZAMIA FLORIDANA FULL	COONTIE PALM	3 GAL	30" OC	18" FULL		
	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	SPACING	SIZE		
GROUND COVERS									
	MC	185	MUNHBERGERIA CAPILLARIS FULL	PINK MOULY	3 GAL	38" OC	12" FULL		
	PE	84	PASPALUM QUADRIFOLIUM FULL	EVERGREEN PASPALUM	3 GAL	36" OC	24" FULL		
CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	SPACING			
GROUND COVERS									
	EB	355	EVOLVULUS RUBRERATUS 'BLUE DAZE' FULL	BLUE DAZE	3 GAL	12" SPRD MIN	24" OC		
	TMJ	910	TRACHELOSPERMUM ASIATICUM 'MINIMA' FULL	MINIMA JASMINE	3 GAL	12" FULL	18" OC		
CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	SPACING			
SOD									
	PA	45,520 SF	PASPALUM NOTATUM 'ARGENTINE' NICKER TIGHT - 100% HYBRID TYPHOID RESISTANT	ARGENTINE BAHIA GRASS	SOD	-	-		
	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	SPACING		

LANDSCAPE NOTES:	BUT NOT LIMITED TO: WATERING, SPRAYING, MULCHING, FERTILIZING, ETC.) ALL OF THE PLANT MATERIALS AND LAWN FOR THE WARRANTY PERIOD.
1. ALL LANDSCAPE MATERIAL TO BE FLORIDA GRADE #1 OR BETTER QUALITY	1. ANY PLANT MATERIAL WHICH IS DISEASED, DISTRESSED, DEAD, OR RECTIFIED PRIOR TO SUBSTANTIAL COMPLETION SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AND SIZE AND PLANTED AND WATERED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
2. ALL LANDSCAPING AREAS ARE TO RECEIVE A MINIMUM OF 4" OF TOPSOIL.	2. THE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANT MATERIAL FOR WARRANTY PERIOD. THE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENT DURING THE NORMAL PLANTING SEASON.
3. ALL PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS, AND FREE OF PESTS AND DISEASE.	3. STANDARDS SET FORTH IN "AMERICAN STANDARD FOR NURSERY STOCK" REPRESENT GUIDELINE SPECIFICATIONS ONLY AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIAL.
4. ALL MATERIALS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT BEFORE, DURING, AND AFTER INSTALLATION.	4. ALL LANDSCAPING SHALL BE INSTALLED ACCORDING TO SOUND NURSERY PRACTICES, AND SHALL BE FLORIDA NO. 1 OR BETTER AS GIVEN IN ORDINANCES AND REGULATIONS OF THE CITY OF MIAMI, FLORIDA, AND THE STATE OF FLORIDA DEPARTMENT OF AGRICULTURE.
5. ALL TREES MUST BE GUVED OR STAKED AS SHOWN IN THE DETAILS.	5. ALL INVASIVE EXOTIC SPECIES AND PROHIBITED TREE SPECIES SHALL BE REMOVED FROM THE SITE PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REMOVE ALL ADJACENT EXISTING TREES.
6. ALL PLANTING AREAS SHALL BE COMPLETELY MULCHED AS SPECIFIED.	6. ALL LANDSCAPE AREAS WILL BE PROVIDED WITH PERMANENT AUTOMATIC IRRIGATION SYSTEM.
7. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL AVOID DAMAGE TO ANY UTILITIES DURING THE COURSE OF THE WORK. WORKS OF EXISTING BURIED UTILITY LINES SHOWN ON THE PLANS ARE BASED UPON RECORD DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF UTILITIES PRIOR TO CONSTRUCTION (PERIOD 3) TO REPAIR ANY AND ALL DAMAGE TO UTILITIES. STRUCTURAL APPURTENANCES, ETC., WHICH OCCURS AS A RESULT OF THE CONSTRUCTION.	7. TREE SUPPORT MATERIALS ARE TO BE REMOVED FROM EACH TREE ONCE IT IS ESTABLISHED (AS DETERMINED BY LANDSCAPE ARCHITECT).
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON THESE PLANS BEFORE PRICING THE WORK.	8. ALL PLANT SPECIFICATIONS IN THE PLANT SCHEDULE SHALL BE CONSIDERED THE MINIMUM ALLOWABLE SPECIFICATIONS. CONTRACTOR SHALL PROCURE PLANT MATERIALS AND SPECIES AS NECESSARY TO MEET THE MOST STRINGENT
9. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING SCHEDULE AND PROTECTION BETWEEN DELIVERY AND PLANTS TO MAINTAIN HEALTHY PLANT CONDITIONS.	
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULLY MAINTAINING (INCLUDING	

BUT NOT LIMITED TO: WATERING, SPRAYING, MULCHING, FERTILIZING, ETC.) ALL OF THE PLANT MATERIALS AND LAWN FOR THE WARRANTY PERIOD.

15. ANY PLANT MATERIAL WHICH IS DISEASED, DISTRESSED, DEAD, OR REJECTED (POTENTIAL FOR SUBSTITUTION) SHALL BE REMOVED IMMEDIATELY AND REPLACED DURING THE NORMAL PLANTING SEASON.
16. THE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANT MATERIAL FOR A MINIMUM OF ONE YEAR. THE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS DURING THE NORMAL PLANTING SEASON.
17. STANDARDS SET FORTH IN "AMERICAN STANDARD FOR NURSERY STOCK" (AMERICAN NURSERY AND LANDSCAPE ASSOCIATION) SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIAL.
18. ALL LANDSCAPING SHALL BE INSTALLED ACCORDING TO SOUND NURSERY PRACTICES, AND SHALL BE FLORIDA NO. 1 OR BETTER AS GIVEN IN "ORARDS AND STANDARDS FOR NURSERY STOCK, PARTS I AND II" OF THE STATE OF FLORIDA, DEPARTMENT OF AGRICULTURE.
19. ALL INVASIVE / EXOTIC SPECIES AND PROHIBITED TREE SPECIES SHALL BE REMOVED IMMEDIATELY AND REPLACED WITH BALLS TO THE EXTENT POSSIBLE WITH NO DAMAGE TO ADJACENT EXISTING TREES.
20. ALL LANDSCAPE AREAS WILL BE PROVIDED WITH PERMANENT AUTOMATIC IRRIGATION SYSTEM.
21. TREE SUPPORT MATERIALS ARE TO BE REMOVED FROM EACH TREE ONCE IT IS FULLY GROWN AND APPROVED BY THE LANDSCAPE CONTRACTOR.
22. ALL PLANT SPECIFICATIONS IN THE PLANT SCHEDULE SHALL BE CONSIDERED THE MINIMUM ALLOWABLE SPECIFICATIONS. CONTRACTOR SHALL PROCURE PLANT MATERIALS AND UPSIZE AS NECESSARY TO MEET THE MOST STRINGENT SPECIFICATIONS.

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—PROJECT

АПОПКА, FL

TBD SWC ORANGE BLOSSOM TRAIL
LAKE VIEW DRIVE, FL 32712

ISSUE DATE: 04/25/2023
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GROSS BLDG AREA : 77,901 SF
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—ISSUE

	100% SET	04/25/
1	CITY COMMENTS	06/09/
2	CITY COMMENTS	07/10/

—SEAL—



07/10/2023

—SHEE

LANDSCAPE PLAN

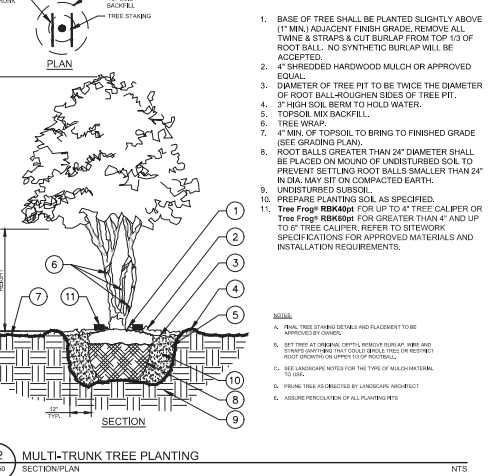
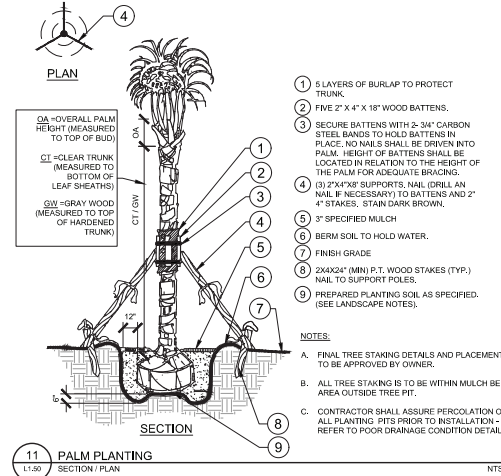
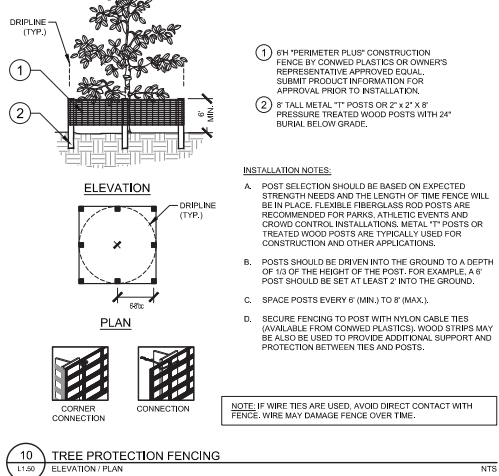
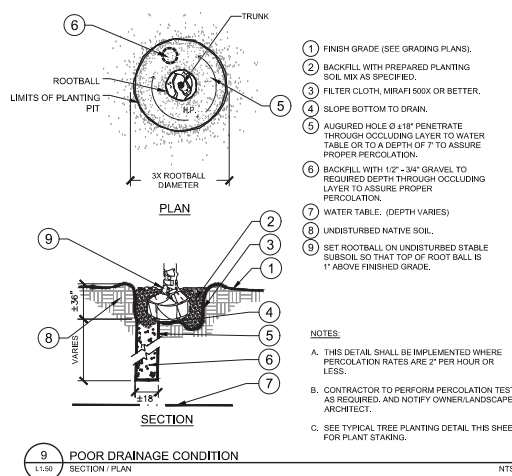
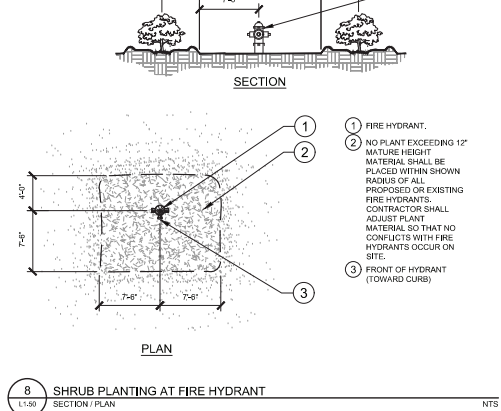
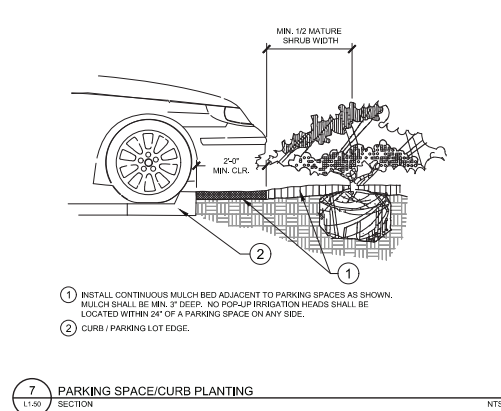
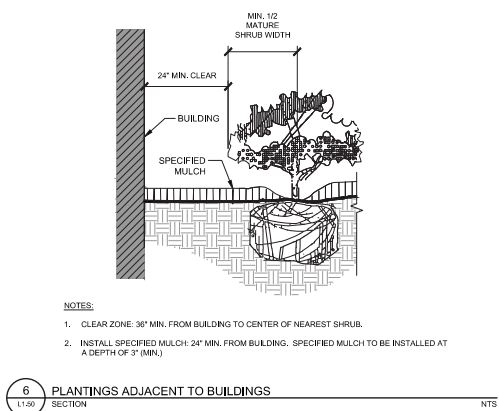
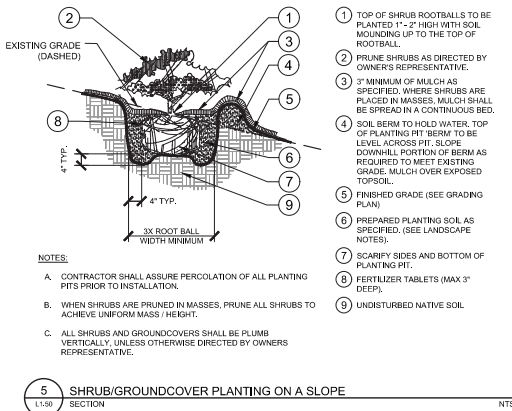
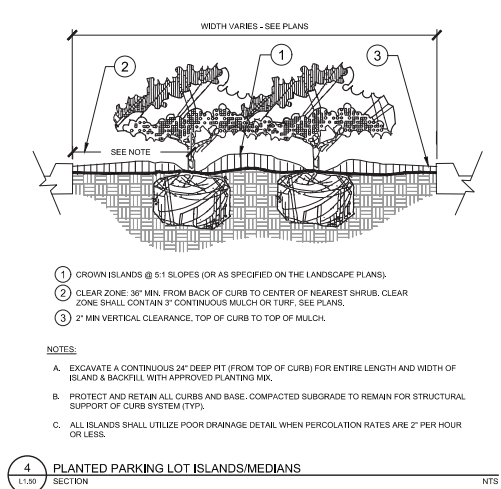
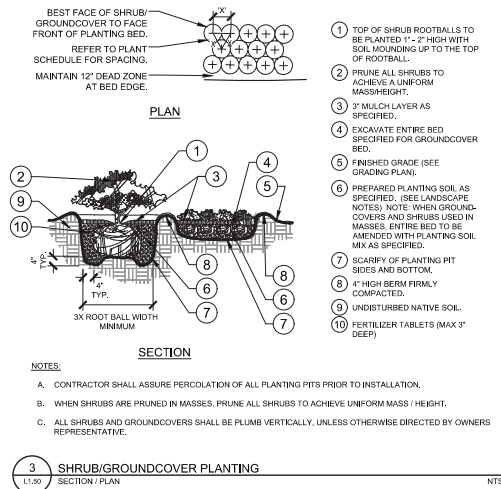
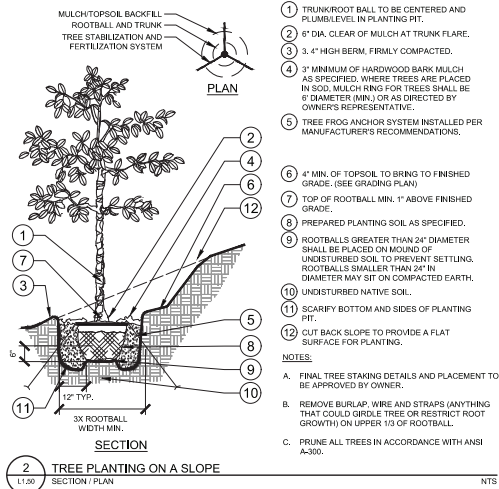
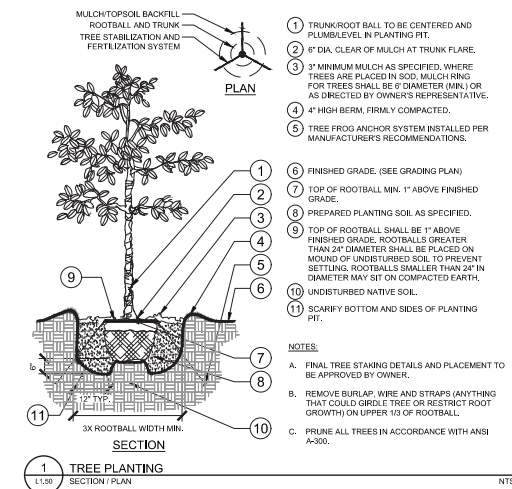
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**Always call ERI two full business days before you dig to
have underground utilities located and marked.**

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Page 111 of 387

Plotted By: Dumbauld, Jimmy Sheet: Set: FLOOR AND DECOR APOKA Layout: L1.50 July 07, 2023 09:09:43am K:\C:\Cv\249257001-Floor & Decor APOKA\CADD\CONST\PlanSheets\L1.00 LANDSCAPE PLAN.dwg



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PARKWAY, SE
ATLANTA, GA 30339



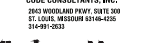
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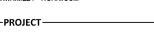
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78D SWC ORANGE BLOSSOM TRAIL &
LAKE VIEW DRIVE, FL 32712

ISSUE DATE: 04/25/2023
STORE NUMBER: T.B.D.
GROSS BLDG AREA: 77,901 SF
JOB NUMBER: 022172
PROTOTYPE: 2022 Q4

DATE	BY	REVISION
04/25/2023	JTD	ISSUED FOR PERMIT
06/09/2023	JTD	REVISED PER CITY COMMENTS
07/10/2023	JTD	REVISED PER CITY COMMENTS

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Plotted By: Dumbauld, Jimmy Sheet: Set: FLOOR AND DECOR APOPKA Layout: L1.51 July 07, 2023 09:09:48am K:\CPL_Civil\1419257001-Floor & Decor APOPKA\CADD\CONSTR\PlanSheets\L1.00 LANDSCAPE PLAN.dwg

GENERAL LANDSCAPE SPECIFICATIONS AND NOTES

- A. SCOPE OF WORK
1. THE WORK CONSISTS OF: FURNISHING ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, AND ANY OTHER APPURTENANCES NECESSARY FOR THE COMPLETION OF THIS PROJECT AS SHOWN ON THE DRAWINGS, AS INCLUDED IN THE PLANT LIST, AND AS SPECIFIED HEREIN.
2. WORK SHALL INCLUDE MAINTENANCE AND WATERING OF ALL CONTRACT PLANTING AREAS UNTIL CERTIFICATION OF ACCEPTANCE BY THE OWNER.
- B. PROTECTION OF EXISTING STRUCTURES
1. ALL EXISTING BUILDINGS, WALKS, WALLS, PAVING, PIPING, OTHER SITE CONSTRUCTION ITEMS, AND PLANTING ALREADY COMPLETED OR ESTABLISHED AND DESIGNATED TO REMAIN SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. ALL DAMAGE RESULTING FROM NEGLIGENCE SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER, AT NO COST TO THE OWNER.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL NECESSARY BMP DEVICES ACCORDING TO ALL REGULATORY AGENCY'S STANDARDS THROUGHOUT THE DURATION OF ALL CONSTRUCTION ACTIVITIES.
3. THE CONTRACTOR SHALL SUBMIT A DETAILED PROJECT SPECIFIC WORK ZONE TRAFFIC CONTROL PLAN UNLESS THE WORK REQUIRES NOTHING MORE THAN A DIRECT APPLICATION OF FOOT DESIGN STANDARDS. INDEX 600. IF A DIRECT APPLICATION OF INDEX 600 IS PROPOSED, THE CONTRACTOR SHALL SUBMIT IN WRITING A STATEMENT INDICATING THE STANDARD INDEX AND PAGE NUMBER NO. LESS THAN 10 BUSINESS DAYS PRIOR TO START OF CONSTRUCTION, WHEN A DIRECT APPLICATION OF FOOT STANDARD INDEX 600 IS NOT ACCEPTABLE A PROJECT SPECIFIC WORK ZONE TRAFFIC CONTROL PLAN SHALL BE PREPARED BY A FLORIDA PROFESSIONAL ENGINEER WHO HAS SUCCESSFULLY COMPLETED ADVANCED TRAINING IN MAINTENANCE OF TRAFFIC, AS DEEMED BY FOOT FOR APPROVAL BY THE COUNTY ENGINEER'S REPRESENTATIVE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES, WHETHER PUBLIC OR PRIVATE, PRIOR TO EXCAVATION, THE INFORMATION AND DATA SHOWN WITH RESPECT TO EXISTING UNDERGROUND FACILITIES AT OR CONTIGUOUS TO THE SITE IS APPROXIMATE AND BASED ON INFORMATION FURNISHED BY THE OWNER OF SUCH UNDERGROUND FACILITIES OR ON PHYSICAL APPURTENANCES OBSERVED IN THE FIELD. THE OWNER AND DESIGN PROFESSIONAL SHALL NOT BE RESPONSIBLE FOR THE ACCURACY AND COMPLETENESS OF ANY SUCH INFORMATION OR DATA. THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR REVIEWING AND CHECKING ALL SUCH INFORMATION AND DATA, LOCATING ALL UNDERGROUND FACILITIES DURING CONSTRUCTION, THE SAFETY AND PROTECTION THEREOF, REPAIRING ANY DAMAGE THEREBY RESULTING FROM THE WORK. THE COST OF ALL WILL BE CONSIDERED AS HAVING BEEN INCLUDED IN THE CONTRACT PRICE. THE CONTRACTOR SHALL NOTIFY ANY AFFECTED UTILITY COMPANIES OR AGENCIES IN WRITING AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.
- C. PROTECTION OF EXISTING PLANT MATERIALS
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UNAUTHORIZED CUTTING OR DAMAGE TO TREES AND SHRUBS EXISTING OR OTHERWISE CAUSED BY CARELESS EQUIPMENT OPERATION, MATERIAL STOCKPILING, ETC.. THIS SHALL INCLUDE CONNECTION BY DRIVING OR PARKING INSIDE THE DRIPLINE AND SPILLING OIL, GASOLINE, OR OTHER DELETERIOUS MATERIALS WITHIN THE DRIPLINE. NO MATERIALS SHALL BE BURNED ON SITE. EXISTING TREES KILLED OR DAMAGED SO THAT THEY ARE MISAPPEAR AND UNBRIGHTLY SHALL BE REPLACED AT THE COST TO THE CONTRACTOR OF THREE HUNDRED DOLLARS (\$300) PER CALIPER INCH ON AN ESCALATING SCALE WHICH ADDS AN ADDITIONAL TWENTY (20) PERCENT PER INCH OVER FOUR INCHES CALIPER AS FIXED AND AGREED. ADJUSTED DAMAGES. CALIPER SHALL BE MEASURED SIX (6) INCHES ABOVE GROUND LEVEL FOR TREES UP TO AND INCLUDING FOUR (4) INCHES IN CALIPER AND TWELVE (12) INCHES ABOVE GROUND LEVEL FOR TREES OVER FOUR (4) INCHES IN CALIPER.
2. SEE TREE MITIGATION PLAN AND NOTES, IF APPLICABLE.
- D. MATERIALS
1. GENERAL
- MATERIAL SAMPLES LISTED BELOW SHALL BE SUBMITTED FOR APPROVAL, ON SITE OR AS DETERMINED BY THE OWNER. UPON APPROVAL, DELIVERY OF MATERIALS MAY COMMENCE.
- | MATERIAL | SAMPLE SIZE |
|------------|--|
| MULCH | ONE (1) CUBIC FOOT |
| TOPSOL MIX | ONE (1) CUBIC FOOT |
| PLANTS | ONE (1) OF EACH VARIETY (OR TAGGED IN NURSERY) |
2. PLANT MATERIALS
- a. PLANT SPECIES AND SIZE SHALL CONFORM TO THOSE INDICATED ON THE DRAWINGS. ALL NURSERY STOCK SHALL BE IN ACCORDANCE WITH GRASSES AND STANDARDS FOR NURSERY PLANTS, LATEST EDITION, PUBLISHED BY THE FLORIDA DIVISION OF AGRICULTURE AND CONSUMER SERVICES. ALL PLANTS SHALL BE FLORIDA GRADE NO. 1, OR BETTER AS DETERMINED BY THE FLORIDA DIVISION OF PLANT INDUSTRY. ALL PLANTS SHALL BE HEALTHY, VIGOROUS, SOUND, WELL-BRANCHED, AND FREE OF DISEASE AND INSECTS. INSECT EGGS AND LARVAE AND SHALL HAVE ADEQUATE ROOT SYSTEMS. TREES FOR PLANTING IN ROWS SHALL BE UNIFORM IN SIZE AND SHAPE. ALL MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE OWNER. WHERE ANY REQUIREMENTS ARE OMITTED FROM THE PLANT LIST, THE PLANTS FURNISHED SHALL BE NORMAL FOR THE VARIETY. PLANTS SHALL BE PRUNED PRIOR TO DELIVERY ONLY WITH APPROVAL FROM OWNER OR OWNERS REPRESENTATIVE. NO SUBSTITUTIONS SHALL BE MADE WITHOUT WRITTEN PERMISSION FROM THE OWNERS REPRESENTATIVE.
- b. MEASUREMENTS: THE HEIGHT AND/OR WIDTH OF TREES SHALL BE MEASURED FROM THE GROUND OR ACROSS THE NORMAL SPREAD OF BRANCHED WITH THE PLANTS IN THEIR NORMAL POSITION. THIS MEASUREMENT SHALL NOT INCLUDE THE IMMEDIATE TERMINAL GROWTH. PLANTS LARGER IN SIZE THAN THOSE SPECIFIED IN THE PLANT LIST MAY BE USED IF APPROVED BY THE OWNER. IF THE USE OF LARGER PLANTS IS APPROVED, THE BALL OR EARTH OR SPREAD OF ROOTS SHALL BE INCREASED IN PROPORTION TO THE SIZE OF THE PLANT.
- c. INSPECTION: PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL AT THE PLACE OF GROWTH, OR UPON DELIVERY TO THE SITE, AS DETERMINED BY THE OWNER FOR QUALITY, SIZE, AND VARIETY. SUCH APPROVAL SHALL NOT IMPAIR THE RIGHT OF INSPECTION AND REJECTION AT THE SITE DURING PROGRESS OF THE WORK OR AFTER COMPLETION FOR SIZE AND CONDITION OF ROOT BALLS OR ROOTS, LATENT DEFECTS OR INJURIES. REJECTED PLANTS SHALL BE REMOVED IMMEDIATELY FROM THE SITE. NOTICE REQUESTING INSPECTION SHALL BE SUBMITTED IN WRITING BY THE CONTRACTOR AT LEAST ONE (1) WEEK PRIOR TO ANTICIPATED DATE.
- E. SOIL MIXTURE (PLANTING MEDIUM, PLANTING MIX, TOPSOL MIX)
1. CONTRACTOR SHALL TEST EXISTING SOIL, AND AMEND AS NECESSARY IN ACCORDANCE WITH THE GUIDELINES BELOW:
2. SOIL MIXTURE (PLANTING MEDIUM FOR PLANT PITS) SHALL CONSIST OF TWO PARTS OF TOPSOL AND ONE PART SAND, AS DESCRIBED BELOW. CONTRACTOR TO SUBMIT SAMPLES AND PH TESTING RESULTS OF SOIL MIXTURE FOR OWNERS REPRESENTATIVE APPROVAL PRIOR TO PLANT INSTALLATION OPERATIONS COMMENCE.
3. TOPSOL FOR USE IN PREPARING SOIL MIXTURE FOR BACKFILLING PLANT PITS SHALL BE FERTILE, FRAGILE, AND OF A LOAMY CHARACTER, REASONABLY FREE OF SUBSOL, CLAY LUMPS, BRUSH WEEDS AND OTHER LITTER, FREE OF ROOTS, STUMPS, STONES LARGER THAN 1" IN ANY DIRECTION, AND OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH. IT SHALL CONTAIN THREE (3) TO FIVE (5) PERCENT DECOMPOSED ORGANIC MATTER AND HAVE A PH BETWEEN 6.5 AND 7.5.
- b. SAND SHALL BE COARSE, CLEAN, WELL-DRAINING, NATIVE SAND.
2. TREES SHALL BE PLANTED IN THE EXISTING NATIVE SOIL, ON SITE, UNLESS DETERMINED TO BE UNSUITABLE - AT WHICH POINT THE CONTRACTOR SHALL CONTACT OWNERS REPRESENTATIVE TO DISCUSS ALTERNATE RECOMMENDATION PRIOR TO PLANTING.
- F. WATER
1. WATER NECESSARY FOR PLANTING AND MAINTENANCE SHALL BE OF SATISFACTORY QUALITY TO SUSTAIN ADEQUATE PLANT GROWTH AND SHALL NOT CONTAIN HARMFUL, NATURAL OR MANMADE ELEMENTS DETRIMENTAL TO PLANTS. WHICHEVER IS GREATER, CULTIVATE ALL PLANTING AREAS TO A MINIMUM DEPTH OF 6" REMOVE AND DISPOSE ALL DEBRIS. MIX TOP 4" THE PLANTING SOIL MIXTURE AS SPECIFIED IN SECTION E. THOROUGHLY WATER ALL PLANTS AFTER INSTALLATION.
2. PROVIDE A THREE (3) INCH MINIMUM LAYER OF SPECIFIED MULCH OVER THE ENTIRE AREA OF EACH SHRUB BED, GROUND COVER, VINE BED, AND TREE PIT (6" MINIMUM) PLANTED UNDER THIS CONTRACT.
- G. WATERING/IRRIGATION RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.
- H. FERTILIZER
- CONTRACTOR SHALL PROVIDE FERTILIZER APPLICATION SCHEDULE TO OWNER, AS APPLICABLE TO SOIL TYPE, PLANT INSTALLATION TYPE, AND SITE'S PROPOSED USE. SUGGESTED FERTILIZER TYPES SHALL BE ORGANIC OR OTHERWISE NATURALLY-DERIVED.
- * FERTILIZER RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.
- I. MULCH
1. MULCH MATERIAL SHALL BE MOISTENED AT THE TIME OF APPLICATION TO PREVENT WIND DISPLACEMENT, AND APPLIED AT A DEPTH OF THREE (3) INCHES. CLEAR MULCH FROM EACH PLANT'S CROWN (BASE). MULCH SHALL BE "FLORIMULCH," EUCALYPTUS MULCH, OR SIMILAR SUSTAINABLY HARVESTED MULCH UNLESS SPECIFIED OTHERWISE.
2. PROVIDE A THREE (3) INCH MINIMUM LAYER OF SPECIFIED MULCH OVER THE ENTIRE AREA OF EACH SHRUB BED, GROUND COVER, VINE BED, AND TREE PIT (6" MINIMUM) PLANTED UNDER THIS CONTRACT.
- L. DIGGING AND HANDLING
1. PROTECT ROOTS ON ROOT BALLS OF PLANTS AT ALL TIMES FROM SUN, DRYING WINDS, WATER AND FREEZING, AS NECESSARY UNTIL PLANTING. PLANT MATERIALS SHALL BE ADEQUATELY PACKED TO PREVENT DAMAGE DURING TRANSIT. TREES TRANSPORTED MORE THAN TEN (10) MILES OR WHICH ARE NOT PLANTED WITHIN THREE (3) DAYS OF DELIVERY TO THE SITE SHALL BE SPRAYED WITH AN ANTI-TRANSPIRANT PRODUCT ("WILT-PRO") OR EQUAL TO MINIMIZE TRANSPIRATIONAL WATER LOSS.
2. BALLED AND BURLAPPED (BAB) AND FIELD GROWN (FG) PLANTS SHALL BE DUG WITH FIRM, NATURAL BALLS OF SOIL, OF SUFFICIENT SIZE TO ENCOMPASS THE FIBROUS AND FEEDING ROOTS OF THE PLANTS. NO PLANTS MOVED WITH A ROOT BALL SHALL BE PLANTED IF THE BALL IS CRACKED OR BROKEN. PLANTS SHALL NOT BE HANDLED BY STEMS.

3. PLANTS MARKED "BFI" IN THE PLANT LIST SHALL BE DUG WITH BARE ROOTS. CARE SHALL BE EXERCISED THAT THE ROOTS DO NOT DRY OUT DURING TRANSPORTATION AND PRIOR TO PLANTING.
4. PROTECTION OF PALMS: ONLY A MINIMUM OF FRONDS SHALL BE REMOVED FROM THE CROWN OF THE PALM TREES TO FACILITATE MOVING AND HANDLING. CLEAR TRUNK (CT) SHALL BE AS SPECIFIED AFTER THE MINIMUM OF FRONDS HAVE BEEN REMOVED. ALL PALMS SHALL BE BRACED PER PALM PLANTING DETAIL.
5. EXCAVATION OF TREE PITS SHALL BE PERFORMED USING EXTREME CARE TO AVOID DAMAGE TO SURFACE AND SUBSURFACE ELEMENTS SUCH AS UTILITIES OR HARDSCAPE ELEMENTS, FOOTERS AND PREPARED SUB-BASES.
- J. CONTAINER GROWN STOCK
1. ALL CONTAINER GROWN MATERIAL SHALL BE HEALTHY, VIGOROUS, WELL-ROOTED PLANTS ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE SOLD. THE PLANTS SHALL HAVE TOPS WHICH ARE OF GOOD QUALITY AND ARE IN A HEALTHY GROWING CONDITION.
2. AN ESTABLISHED CONTAINER GROWN PLANT SHALL BE TRANSPLANTED INTO A CONTAINER AND GROWN IN THAT CONTAINER SUFFICIENTLY LONG ENOUGH FOR THE NEW FIBROUS ROOTS TO HAVE DEVELOPED SO THAT THE ROOT MASS WILL RETAIN ITS SHAPE AND HOLD TOGETHER WHEN REMOVED FROM THE CONTAINER. CONTAINER GROWN STOCK SHALL NOT BE HANDLED BY THEIR STEMS.
3. ROOT BOUND PLANTS ARE NOT ACCEPTABLE AND WILL BE REJECTED.
4. RPO - "ROOTS PLUS GROWER" CONTAINER PRODUCTS SHALL BE USED WHERE SPECIFIED.
- K. COLLECTED STOCK
- WHEN THE USE OF COLLECTED STOCK IS PERMITTED AS INDICATED BY THE OWNER OR OWNERS REPRESENTATIVE, THE MINIMUM SIZES OF ROOTBALLS SHALL BE EQUAL TO THAT SPECIFIED FOR THE NEXT LARGER SIZE OF NURSERY GROWN STOCK OF THE SAME VARIETY.
- L. NATIVE STOCK
- PLANTS COLLECTED FROM WILD OR IN THE STANDS SHALL BE CONSIDERED NURSERY GROWN WHEN THEY HAVE BEEN SUCCESSFULLY RE-ESTABLISHED IN A NURSERY ROW AND GROWN UNDER REGULAR NURSERY CULTURAL PRACTICES FOR A MINIMUM OF TWO (2) GROWING SEASONS AND HAVE ATTAINED ADEQUATE ROOT AND TOP GROWTH TO INDICATE FULL RECOVERY FROM TRANSPLANTING INTO THE NURSERY ROW.
- M. MATERIALS LIST
- QUANTITIES NECESSARY TO COMPLETE THE WORK ON THE DRAWINGS SHALL BE FURNISHED BY THE CONTRACTOR. QUANTITY ESTIMATES HAVE BEEN MADE CAREFULLY, BUT THE LANDSCAPE ARCHITECT OR OWNER ASSUMES NO LIABILITY FOR OMISSIONS OR ERRORS. SHOULD A DISCREPANCY OCCUR BETWEEN THE PLANS AND THE PLANT LIST QUANTITY, THE OWNERS REPRESENTATIVE SHALL BE NOTIFIED FOR CLARIFICATION PRIOR TO BIDDING OR INSTALLATION. ALL DIMENSIONS AND/OR SIZES SPECIFIED SHALL BE THE MINIMUM ACCEPTABLE SIZE.
- N. FINE GRADING
1. FINE GRADING UNDER THIS CONTRACT SHALL CONSIST OF FINAL FINISHED GRADING OF LAWN AND PLANTING AREAS THAT HAVE BEEN ROUGH GRADED BY OTHERS, BEING AS SHOWN ON THE DRAWINGS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR SHALL FINE GRADE THE LAWN AND PLANTING AREAS TO BRING THE ROUGH GRADE UP TO FINAL FINISHED GRADE ALLOWING FOR THICKNESS OF SOD AND/OR MULCH DEPTH. CONTRACTOR SHALL FINE GRADE BY HAND AND/OR WITH ALL EQUIPMENT NECESSARY INCLUDING A GRADING TRACTOR WITH FRONT-LOADER FOR TRANSPORTING SOIL WITHIN THE SITE.
3. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED FOR POSITIVE DRAINAGE TO SURFACE/SUBSURFACE STORM DRAIN SYSTEMS, AREAS ADJACENT TO BUILDINGS SHALL SLOPE AWAY FROM THE BUILDINGS. REFER TO CIVIL ENGINEERS PLAN FOR FINAL GRADES, IF APPLICABLE.
- O. PLANTING PROCEDURES
1. CLEANING UP BEFORE COMMENCING WORK: THE CONTRACTOR SHALL CLEAN WORK AND SURROUNDING AREAS OF ALL RUBBISH OR OBJECTABLE MATTER DAILY. ALL MORTAR, CEMENT, AND TOXIC MATERIAL SHALL BE REMOVED FROM THE SURFACE OF ALL PLANT BEDS. THESE MATERIALS SHALL NOT BE MIXED WITH THE SOIL. SHOULD THE CONTRACTOR FIND SUCH SOIL CONDITIONS BENEATH THE SOIL WHICH WILL IN ANY WAY ADVERSELY AFFECT THE PLANT GROWTH, HE SHALL IMMEDIATELY CALL IT TO THE ATTENTION OF THE OWNERS REPRESENTATIVE. FAILURE TO DO SO BEFORE PLANTING SHALL MAKE THE CORRECTIVE MEASURES THE RESPONSIBILITY OF THE CONTRACTOR.
2. VERIFY LOCATIONS OF ALL UTILITIES, CONDUITS, SUPPLY LINES AND CABLES, INCLUDING BUT NOT LIMITED TO: ELECTRIC, GAS LINES AND TANKS, WATER, SANITARY SEWER, STORMWATER SYSTEMS, CABLE, AND TELEPHONE. PROPERTY MAINTAIN AND PROTECT EXISTING UTILITIES. CALL SUNSHINE STATE ONE CALL OF FLORIDA, INC. (811) TO LOCATE UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
3. SUBGRADE EXCAVATION: CONTRACTOR IS RESPONSIBLE TO REMOVE ALL EXISTING AND IMPORTED LIMEROCK AND LIMEROCK SUB-BASE FROM ALL LANDSCAPE PLANTING AREAS TO A MINIMUM DEPTH OF 3" OR TO NATIVE SOIL. CONTRACTOR IS RESPONSIBLE TO BACKFILL THESE PLANTING AREAS WITH FINE FINISHED GRADE WITH CLEAN TOPSOL FROM AN ON-SITE SOURCE OR AN IMPORTED SOURCE. IF LIMEROCK OR OTHER ADVERSE CONDITIONS OCCUR IN PLANTED AREAS AFTER 36" DEEP EXCAVATION BY THE CONTRACTOR, AND POSITIVE DRAINAGE CAN NOT BE ACHIEVED, CONTRACTOR SHALL UTILIZE POOR DRAINAGE CONDITION PLANTING DETAIL.
4. FURNISH NURSERY'S CERTIFICATE OF COMPLIANCE WITH ALL REQUIREMENTS AS SPECIFIED HEREIN, INSPECT AND SELECT PLANT MATERIALS BEFORE PLANTS ARE DUG AT NURSERY OR GROWING SITE.
5. COMPLY WITH APPLICABLE FEDERAL, STATE, COUNTY, AND LOCAL REGULATIONS GOVERNING LANDSCAPE MATERIALS AND WORK, CONFORM TO ACCEPTED HORTICULTURAL PRACTICES AS USED IN THE TRADE. UPON ARRIVAL AT THE SITE, PLANTS SHALL BE THOROUGHLY WATERED AND PROPERLY MAINTAINED UNTIL PLANTED. PLANTS STORED ON-SITE SHALL NOT REMAIN UNPLANTED OR APPROPRIATELY HEALED IN FOR A PERIOD EXCEEDING TWENTY-FOUR (24) HOURS. AT ALL TIMES WORKMANLIKE METHODS CUSTOMARY IN GOOD HORTICULTURAL PRACTICES SHALL BE EXERCISED.
6. THE WORK SHALL BE COORDINATED WITH OTHER TRADES TO PREVENT CONFLICTS, COORDINATE PLANTING WITH IRRIGATION WORK TO ASSURE AVAILABILITY OF WATER AND PROPER LOCATION OF IRRIGATION APPURTENANCES AND PLANTS.
7. ALL PLANTING PITS SHALL BE EXCAVATED TO SIZE AND DEPTH IN ACCORDANCE WITH THE USA STANDARD FOR NURSERY STOCK 280.1, UNLESS SHOWN OTHERWISE ON THE DRAWINGS, AND BACK FILLED WITH THE PREPARED PLANTING SOIL MIXTURE AS SPECIFIED IN SECTION E. TEST ALL TREE PITS WITH WATER BEFORE PLANTING TO ASSURE PROPER DRAINAGE. PERCOLATION IS AVAILABLE. NO ALLOWANCE WILL BE MADE FOR LOST PLANTS DUE TO IMPROPER DRAINAGE. IF POOR DRAINAGE EXISTS, UTILIZE "POOR DRAINAGE CONDITION" PLANTING DETAIL. TREES SHALL BE SET PLUMB AND HOLD IN POSITION UNTIL THE PLANTING MIXTURE HAS BEEN FLOUED INTO PLACE WITH A BLOW. FULL HOSE STREAM. ALL PLANTING SHALL BE PERFORMED BY PERSONNEL FAMILIAR WITH PLANTING PROCEDURES AND UNDER THE SUPERVISION OF A QUALIFIED LANDSCAPE FOREMAN. PROPER "JETTING" BY SHALL BE ASSURED TO ELIMINATE AIR POCKETS AROUND THE ROOTS. "JET STICK" OR EQUAL IS RECOMMENDED.
8. TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO BUILDINGS AND BUILDING STRUCTURES WHILE INSTALLING TREES.
9. SOIL MIXTURE SHALL BE AS SPECIFIED IN SECTION E OF THESE SPECIFICATIONS.
10. TREES AND SHRUBS SHALL BE SET STRAIGHT AT AN ELEVATION THAT, AFTER SETTLEMENT, THE PLANT CROWN WILL STAND ONE (1) TO TWO (2) INCHES ABOVE GRADE. EACH PLANT SHALL BE SET IN THE CENTER OF THE PIT. PLANTING SOIL MIXTURE SHALL BE BACK FILLED, THOROUGHLY TAMPED AROUND THE BALL, AND SETTLED BY WATER (AFTER TAMING).
11. AMEND FINE AND OAK PLANT PITS WITH ECTOMYCORRHIZAL SOIL APPLICATION PER MANUFACTURERS RECOMMENDATION. ALL OTHER PLANT PITS SHALL BE AMENDED WITH ENDOMYCORRHIZAL SOIL APPLICATION PER MANUFACTURERS RECOMMENDATION. PRODUCE INFORMATION SUBMITTAL PRIOR TO INOCULATION.
12. FILL HOLE WITH SOIL MIXTURE, MAKING CERTAIN ALL SOIL IS SATURATED. TO DO THIS, FILL HOLE WITH WATER AND ALLOW TO SOAK MINIMUM TWENTY (20) MINUTES. STIRRING IF NECESSARY TO GET SOIL THOROUGHLY WET. PACK LIGHTLY WITH FEET. ADD MORE WET SOIL MIXTURE. DO NOT COVER TOP OF BALL WITH SOIL MIXTURE. ALL BURLAP, ROPE, WIRES, BASKETS, ETC., SHALL BE REMOVED FROM THE SIDES AND TOPS OF BALLS, BUT NO BURLAP SHALL BE PULLED FROM UNDERNEATH.
13. TREES SHALL BE PRUNED, AT THE DISCRETION OF THE OWNER OR OWNERS REPRESENTATIVE, TO PRESERVE THE NATURAL CHARACTER OF THE PLANT. ALL SOFT WOOD OR SUCKER GROWTH AND ALL BROKEN OR EXCISELY DAMAGED BRANCHES SHALL BE REMOVED WITH A CLEAN CUT. ALL PRUNING TO BE PERFORMED BY CERTIFIED ARBORIST, IN ACCORDANCE WITH ANSI A-300.
14. SHRUBS AND GROUND COVER PLANTS SHALL BE EVENLY SPACED IN ACCORDANCE WITH THE DRAWINGS AND AS INDICATED ON THE PLANT LIST. MATERIALS INSTALLED SHALL MEET MINIMUM SPECIMEN REQUIREMENTS OR QUANTITIES SHOWN ON PLANS, WHICHEVER IS GREATER. CULTIVATE ALL PLANTING AREAS TO A MINIMUM DEPTH OF 6" REMOVE AND DISPOSE ALL DEBRIS. MIX TOP 4" THE PLANTING SOIL MIXTURE AS SPECIFIED IN SECTION E. THOROUGHLY WATER ALL PLANTS AFTER INSTALLATION.
15. TREE GUYING AND BRACING SHALL BE INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH THE PLANS TO INSURE STABILITY AND MAINTAIN TREES IN AN UPRIGHT POSITION. IF THE CONTRACTOR AND OWNER DECIDE TO WAND THE TREE GUYING AND BRACING, THE OWNER SHALL NOTIFY THE PROJECT LANDSCAPE ARCHITECT IN WRITING AND AGREE TO INDEMNIFY AND HOLD HARMLESS THE PROJECT LANDSCAPE ARCHITECT IN THE EVENT UNSUPPORTED TREES PLANTED UNDER THIS CONTRACT FALL AND DAMAGE PERSON OR PROPERTY.
16. ALL PLANT BEDS SHALL BE KEPT FREE OF NOXIOUS WEEDS UNTIL FINAL ACCEPTANCE OF WORK. IF DIRECTED BY THE OWNER, "ROUND-UP" SHALL BE APPLIED FOR WEED CONTROL. BY QUALIFIED PERSONNEL TO ALL PLANTING AREAS IN SPOT APPLICATIONS PER MANUFACTURERS PRECAUTIONS AND SPECIFICATIONS. PRIOR TO FINAL INSPECTION, TREAT ALL PLANTING BEDS WITH AN APPROVED PRE-EMERGENT HERBICIDE AT AN APPLICATION RATE RECOMMENDED BY THE MANUFACTURER, (AS ALLOWED BY JURISDICTIONAL AUTHORITY).
- P. LAWN BODDING

1. THE WORK CONSISTS OF LAWN BED PREPARATION, SOIL PREPARATION, AND SODDING COMPLETE, IN STRICT ACCORDANCE WITH THE SPECIFICATIONS AND THE APPLICABLE DRAWINGS TO PRODUCE A TURF GRASS LAWN ACCEPTABLE TO THE OWNER.
2. ALL AREAS THAT ARE TO BE SODDED SHALL BE CLEARED OF ANY ROUGH GRASS, WEEDS, AND DEBRIS BY MEANS OF A SOD CUTTER TO A DEPTH OF THREE (3) INCHES, AND THE GROUND BROUGHT TO AN EVEN GRADE. THE ENTIRE SURFACE SHALL BE MULCHED WITH A ROLLER WEDGING WREN GRADE. MORE THAN ONE-HUNDRED (100) POUNDS PER FOOT OF WIDTH. DURING THE ROLLING, ALL DEPRESSIONS CAUSED BY SETTLEMENT SHALL BE FILLED WITH ADDITIONAL SOIL, AND THE SURFACE SHALL BE REGRADED AND ROLLED UNTIL PRESENTING A SMOOTH AND EVEN FINISH TO THE REQUIRED GRADE.

1
L1.51 TYPICAL LANDSCAPE SPECIFICATIONS (FLORIDA)



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PROJECT



APOPKA, FL

78D SWC ORANGE BLOSSOM TRAIL & LAKE VIEW DRIVE, FL 32712

ISSUE DATE: 04/25/2023
STORE NUMBER: T.B.D.
GROSS BLDG AREA: 77,901 SF
JOB NUMBER: 022172
PROTOTYPE: 2022 Q4

ISSUE

100% SET	04/25/2023
CITY COMMENTS	06/09/2023
CITY COMMENTS	07/10/2023



07/10/2023

SHEET

LANDSCAPE SPECIFICATIONS

DRAWN: JTD
CHECKED: MTF

Always call 811. Use all caution signs before you call to have underground utilities located and marked.

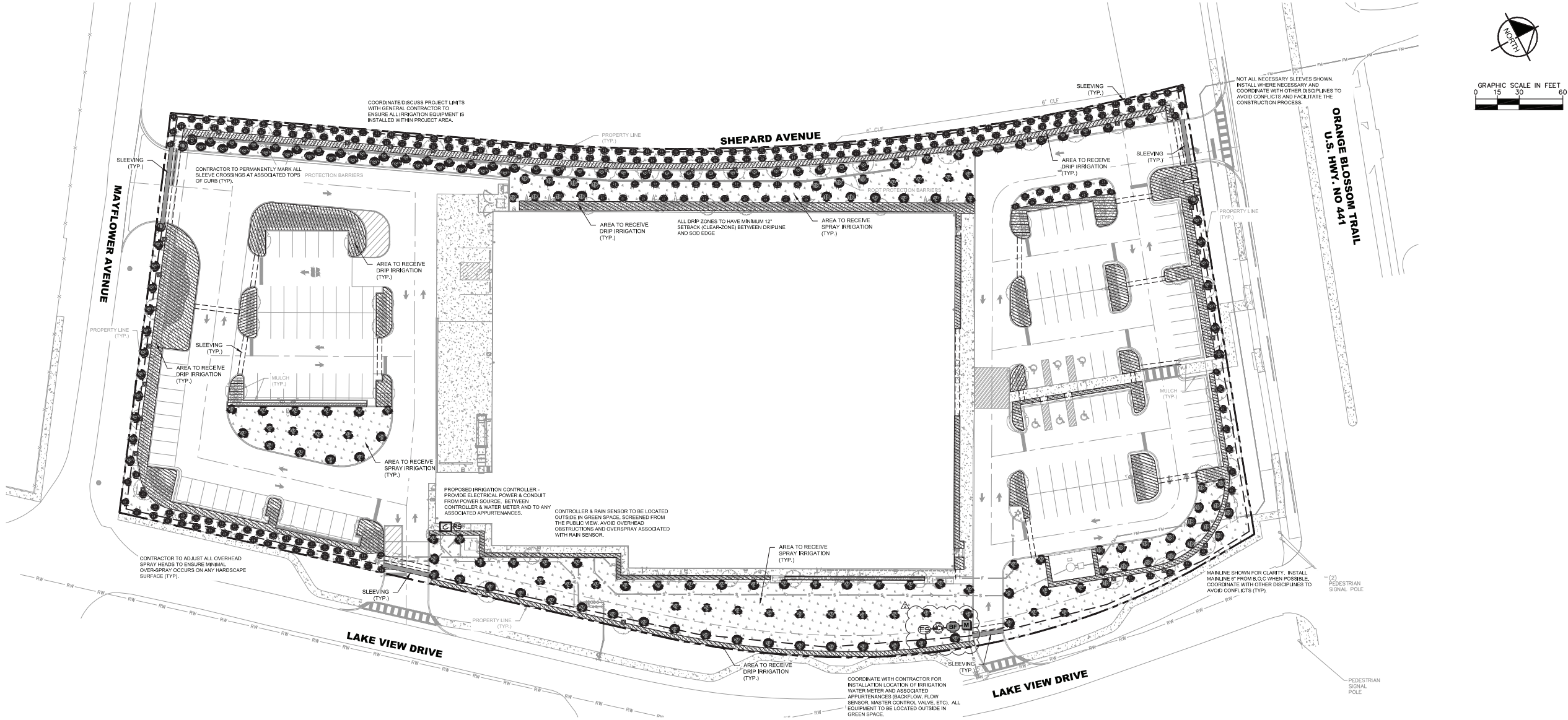


Plotted By:Dumbauld, Jimmy Sheet Set:FLOOR AND DECOR APOPKA Layout:L2.00 July 07, 2023 08:10:16am K:\CRL_Civil\2492257001-Floor & Decor Apopka\CADD\CONSTR\PlanSheets\L2.00 IRRIGATION PLAN.dwg

IRRIGATION CONTRACTOR IS RESPONSIBLE FOR PERFORMING ALL NECESSARY MODIFICATIONS REQUIRED TO MEET THE SCHEMATIC INTENT OF THESE PLANS PRIOR TO SUBMITTING PROPOSAL. THESE PLANS OUTLINE THE OVERALL LAYOUT OF THE SYSTEM AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ZONE THE SYSTEM ACCORDINGLY BASED ON FLOW AND PRESSURE AVAILABLE. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE FOLLOWING BUT NOT LIMITED TO AVAILABLE FLOW, AVAILABLE PRESSURE, CONNECTION ASSEMBLY, CAPACITY OF THE SYSTEM.

IRRIGATION NOTES

1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, EQUIPMENT QUANTITIES, ETC. PRIOR TO BEGINNING WORK.
2. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES IN PLANS OR SPECIFICATIONS PRIOR TO BEGINNING OR CONTINUING WORK.
3. THE CONTRACTOR SHALL MAKE NO SUBSTITUTIONS, DELETIONS, OR ADDITIONS TO THIS PLAN WITHOUT APPROVAL OF THE LANDSCAPE ARCHITECT.
4. ALL CONSTRUCTION SHALL CONFORM TO CITY, COUNTY, STATE, AND FEDERAL REQUIREMENTS. IT SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO ENSURE THAT ALL IRRIGATION EQUIPMENT MEETS GOVERNMENT REGULATIONS. CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS OR APPROVALS.
5. THIS PLAN IS SCHEMATIC AND DUE TO THE NATURE OF CONSTRUCTION SLIGHT FIELD MODIFICATIONS MAY BE NECESSARY TO IMPLEMENT PLAN.
6. CONTRACTOR TO VERIFY ACTUAL AVAILABLE WATER PRESSURE BEFORE BEGINNING INSTALLATION. CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT IF AVAILABLE WATER PRESSURE WILL NOT ALLOW SYSTEM MODIFICATION TO BE POSSIBLE.
7. IRRIGATION SYSTEMS CONNECTED TO POTABLE WATER SUPPLY, SHALL HAVE A BACKFLOW PREVENTER INSTALLED.
8. WHERE APPLICABLE IRRIGATION HEADS ARE TO BE ADJUSTED FOR COMPLETE COVERAGE WITH MINIMUM OVER SPRAY BEYOND LANDSCAPE AREAS.
9. EXISTING TREES TO REMAIN ARE TO BE PROTECTED FROM DAMAGE. DO NOT TRENCH OR EXCAVATE WITHIN THE CRITICAL ROOT ZONE OF ANY TREE.
10. ALL IRRIGATION SLEEVING TO BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR. ELECTRICAL WIRES FOR IRRIGATION VALVES AND IRRIGATION LINES ARE TO BE PLACED IN SEPARATE SLEEVES.
11. IRRIGATION CONTRACTOR SHALL REVIEW WINTERIZATION PROCEDURES FOR IRRIGATION SYSTEM WITH OWNER'S REPRESENTATIVE.
12. ALL PLANT MATERIAL IN TREE HOLDING AREAS SHALL BE MANUALLY WATERED/IRRIGATED TO KEEP MOIST UNTIL PLANTED.
13. CONTRACTOR TO PROVIDE PERMANENT BENCHMARKS ON ALL CURB LINES AT RELATED SLEEVE LOCATIONS (TYP.).
14. THE IRRIGATION SYSTEM SHALL BE DESIGNED AND INSTALLED TO MINIMIZE ROOT DISTURBANCE IN EXISTING TREES.
15. IRRIGATION SPRAYS AND ROTORS ARE NOT COMBINED ON THE SAME CONTROL VALVE CIRCUIT - LANDSCAPE BEDS AND TURF ON SEPARATE CIRCUITS.



IRRIGATION SCHEDULE				
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI	DETAIL
	RAIN BIRD RAIN-STRIP RD-08-SAM-64-HP TURF ROTARY, 6-14" HAND ADJUSTABLE MULTI-STREAM ROTARY W/ RD1800 TURF SPRAY BODY ON 6" POP-UP, WITH CHECK VALVE AND 45 PSI IN-STEM PRESSURE REGULATOR, 1/2" NPT FEMALE THREADED INLET, W/ NON-POTABLE PURPLE CAP.	77	40	
	RAIN BIRD RAIN-4 RD-08-SAM-64-HP TURF ROTARY, 6-14" 45-270 DEGREES AND 360 DEGREES, HAND ADJUSTABLE MULTI-STREAM ROTARY W/ RD1800 TURF SPRAY BODY ON 6" POP-UP, WITH CHECK VALVE AND 45 PSI IN-STEM PRESSURE REGULATOR, 1/2" NPT FEMALE THREADED INLET, W/ NON-POTABLE PURPLE CAP.	228	40	
	RAIN BIRD RAIN-11 RD-08-SAM-64-HP TURF ROTARY, 13-18" 45-270 DEGREES AND 360 DEGREES, HAND ADJUSTABLE MULTI-STREAM ROTARY W/ RD1800 TURF SPRAY BODY ON 6" POP-UP, WITH CHECK VALVE AND 45 PSI IN-STEM PRESSURE REGULATOR, 1/2" NPT FEMALE THREADED INLET, W/ NON-POTABLE PURPLE CAP.	31	40	
	RAIN BIRD RAIN-24 RD-08-SAM-64-HP TURF ROTARY, 17-24" 45-270 DEGREES AND 360 DEGREES, HAND ADJUSTABLE MULTI-STREAM ROTARY W/ RD1800 TURF SPRAY BODY ON 6" POP-UP, WITH CHECK VALVE AND 45 PSI IN-STEM PRESSURE REGULATOR, 1/2" NPT FEMALE THREADED INLET, W/ NON-POTABLE PURPLE CAP.	85	40	
	RAIN BIRD 1800-1400 FLOOD 1401 FIXED FLOW RATE (0.25-2.0 GPM), FULL CIRCLE BUBBLER, 1/2" RPT.	47	20	
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY		DETAIL
	AREA TO RECEIVE DRIP LINE RAIN BIRD XFD-09-12-HP XFD ON-SURFACE PRESSURE COMPENSATING LANDSCAPE DRIP LINE, 0.9 GPH EMITTERS AT 12" O.C., DRIP LINE LATERALS SPACED AT 12" APART, WITH EMITTERS OFFSET FOR TRIANGULAR PATTERN, UV RESISTANT, SPECIFY XFI INSERT FITTINGS.	20,468 L.F.		
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY		DETAIL
	RAIN BIRD PESB-PRS-D 1-1/2" 1"IN, 1-1/2"IN, 2IN, PLASTIC INDUSTRIAL MASTER VALVES, LOW FLOW OPERATING CAPABILITY, GLOBE CONSTRUCTION, WITH PRESSURE REGULATING MODULE, AND SCRUBBER TECHNOLOGY FOR RELIABLE PERFORMANCE IN DIRTY WATER IRRIGATION APPLICATIONS.	1		
	FEBCO 785 1-1/2" PRESSURE VACUUM BREAKER, BRASS WITH BALL VALVE SOV, INSTALL 12" (305MM) ABOVE HIGHEST DOWNSTREAM OUTLET AND THE HIGHEST POINT IN THE DOWNSTREAM PIPING.	1		
	RAIN BIRD ESPLVME2 12 STATION TRADITIONALLY-WIRED COMMERCIAL CONTROLLER, INDOOR/OUTDOOR, PLASTIC WALL-MOUNT ENCLOSURE.	1		
	RAIN BIRD RAINGAUGE RAIN SENSOR FOR MAXIMOM OR SITECONTROL, CUSTOMIZES WEATHER DATA BY PROVIDING SITE-SPECIFIC RAINFALL MEASUREMENTS, AND SENDING TO CENTRAL CONTROLLER DAILY.	1		
	RAIN BIRD FS-1547 1-1/2"IN FLOW SENSOR, PLASTIC PVC MODEL, SUGGESTED OPERATING RANGE 5.0 GPM TO 100.0 GPM, SIZE FOR FLOW NOT ACCORDING TO PIPE SIZE. RAIN BIRD COMPATIBLE CONTROLLERS: ESPLVME2(1) LXD1 LXM2(2) 1 M3, OR CONTROLLERS ACCEPTING CUSTOM K-FACTOR AND OFFSET. INSTALL IN RAIN BIRD VALVE BOX.	1		
	WATER METER 1-1/2" REUSE	1		
	IRRIGATION MAINLINE: PVC SCHEDULE 40	2,204 L.F.		
	PIPE SLEEVE: PVC SCHEDULE 40 - LATERAL LINES	508.8 L.F.		
	PIPE SLEEVE: PVC SCHEDULE 40 - MAINLINE	137.0 L.F.		

FLOW TOTALS
Area for DripLine: 307.1
Rain Bird: 23.8
Turf Rotary: 354.5
Total: 685.0 GPM

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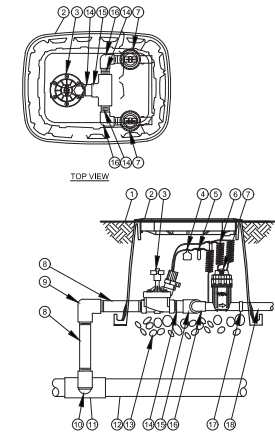
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SHEET

IRRIGATION PLAN

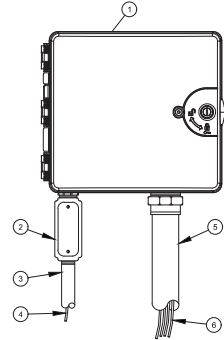
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1 COMMERCIAL CONTROL DRIP ZONE VALVE KIT
SECTION / PLAN
L2.50 NTS

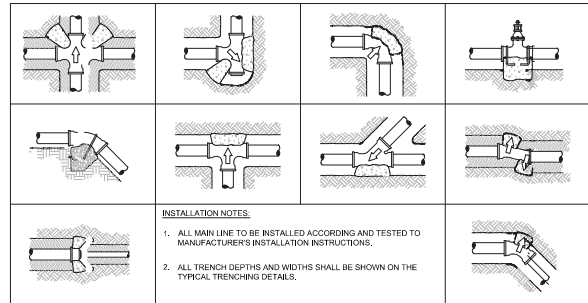
- 1 FINISH GRADE/TOP OF MULCH
- 2 VALVE BOX WITH COVER
- 3 REMOTE CONTROL VALVE
- 4 ID TAG
- 5 WATERPROOF CONNECTION
- 6 30-INCH LINEAR LENGTH OF WIRE, COILED
- 7 PRESSURE REGULATING QUICK CHECK BASKET FILTER
- 8 PVC SCH 80 NIPPLE (LENGTH AS REQUIRED)
- 9 PVC SCH 40 ELL
- 10 PVC SCH 80 NIPPLE (2-INCH LENGTH, HIDDEN) AND PVC SCH 40 ELL
- 11 PVC SCH 40 TEE OR ELL
- 12 MAINLINE PIPE
- 13 3/4-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL
- 14 PVC SCH 80 NIPPLE, CLOSE
- 15 PVC SCH 40 TEE
- 16 PVC SCH 40 ELL
- 17 PVC SCH 40 FEMALE ADAPTOR
- 18 LATERAL PIPE



2 TYPICAL CONTROLLER
ELEVATION
L2.50 NTS

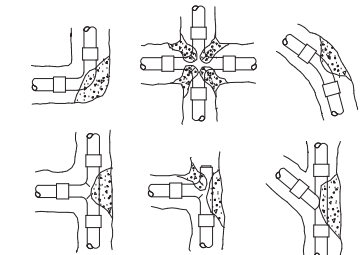
- 1 IRRIGATION CONTROLLER
- 2 CONTROLLER (OWNER TO SPECIFY WALL MOUNT OR STAINLESS STEEL PEDESTAL MOUNT). INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
- 3 JUNCTION BOX
- 4 1-INCH CONDUIT AND FITTINGS TO POWER SUPPLY
- 5 POWER SUPPLY WIRE
- 6 2-INCH CONDUIT AND FITTINGS FOR STATION WIRES
- 7 WIRES TO REMOTE CONTROL VALVES

- NOTES:
1. FOR EASE OF INSTALLATION INTO A CONTROLLER WITH MORE THAN 24 STATIONS, INSTALL A JUNCTION BOX AT THE BASE OF CONTROLLER AND TRANSITION LARGER VALVE AND COMMON WIRES FROM FIELD TO 18 AWG MULTI-CONDUCTOR WIRE TO BE USED IN CONTROLLER.
 2. USE STEEL CONDUIT FOR ABOVE GRADE AND SCH 40 PVC CONDUIT FOR BELOW GRADE CONDITIONS.
 3. PROVIDE PROPER GROUNDING COMPONENTS TO ACHIEVE GROUND RESISTANCE OF 10 OHMS OR LESS.



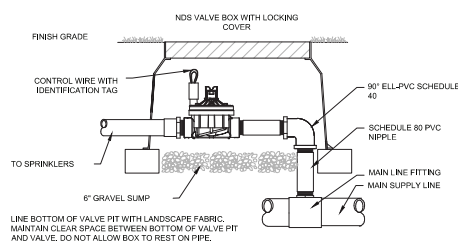
3 TYPICAL THRUST BLOCK
SECTION
L2.50 NTS

- INSTALLATION NOTES:
1. ALL MAIN LINE TO BE INSTALLED ACCORDING AND TESTED TO MANUFACTURER'S INSTALLATION INSTRUCTIONS.
 2. ALL TRENCH DEPTHS AND WIDTHS SHALL BE SHOWN ON THE TYPICAL TRENCHING DETAILS.

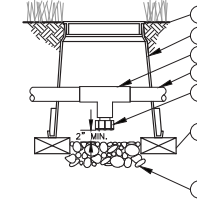


- INSTALLATION NOTES:
1. 3000 PSI CONCRETE OR BETTER IS TO BE USED FOR THRUST BLOCKS.
 2. FOR 45°/90° FITTINGS, MINIMUM OF 2 CUBIC FEET OF CONCRETE TO BE USED.
 3. FOR 22-1/2" FITTINGS, MINIMUM OF 0.5 CUBIC FEET OF CONCRETE TO BE USED.
 4. FOR TEES, MINIMUM OF 2 CUBIC FEET OF CONCRETE TO BE USED. THRUST BLOCKS REQUIRED FOR IRRIGATION MAINLINE 2 1/2" AND LARGER.

4 THRUST BLOCK REINFORCEMENT
SECTION
L2.50 NTS

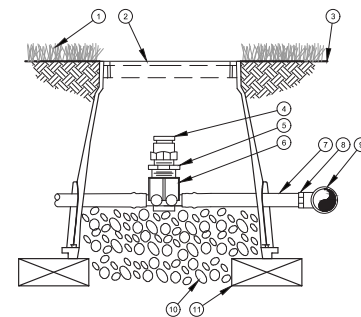


5 TYPICAL CONTROL VALVE
SECTION
L2.50 NTS



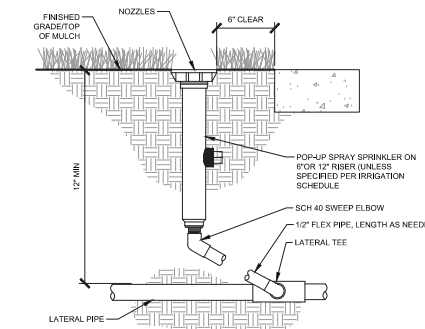
6 DRAIN VALVE
SECTION
L2.50 NTS

- 1 FINISH GRADE/TOP OF MULCH
- 2 VALVE BOX WITH COVER
- 3 PVC SCH 40 TEE
- 4 PVC LATERAL PIPE
- 5 FILTERED DRAIN VALVE
- 6 BRICK (1 OF 2)
- 7 6-INCH MINIMUM DEPTH OF 3/4-INCH WASHED GRAVEL

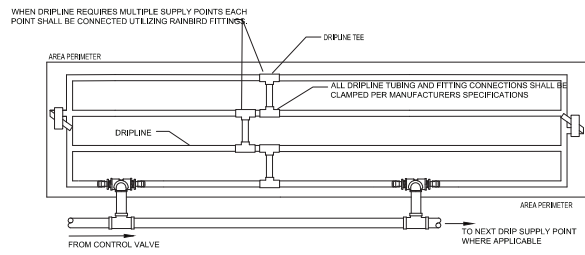


7 AIR RELIEF VALVE IN XFS DRIP LINE
SECTION
L2.50 NTS

- 1 TURF GRASS
- 2 VALVE BOX LID
- 3 FINISH GRADE
- 4 1/2" AIR RELIEF VALVE TO BE INSTALLED AT HIGH POINTS IN DRIP ZONE
- 5 1/2" x 3/4" PVC REDUCER BUSHING
- 6 BARB X FEMALE THREAD CONNECTOR
- 7 1/2" BLANK DRIPLINE TUBING
- 8 BARB X MALE THREAD CONNECTOR
- 9 PVC TEE CONNECTED TO PVC HEADER PIPE
- 10 3" MINIMUM DEPTH OF 3/4" WASHED GRAVEL
- 11 BRICK (1 OF 2)

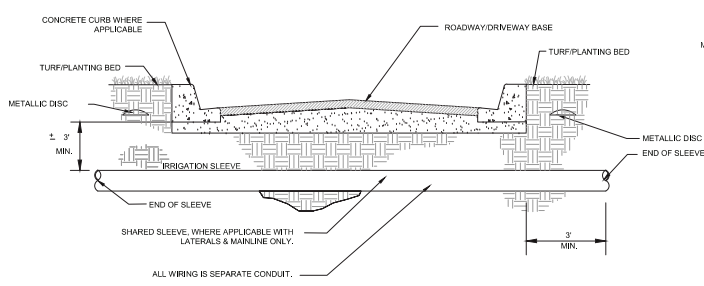


8 TYPICAL SPRAY / ROTAR HEAD
SECTION
L2.50 NTS

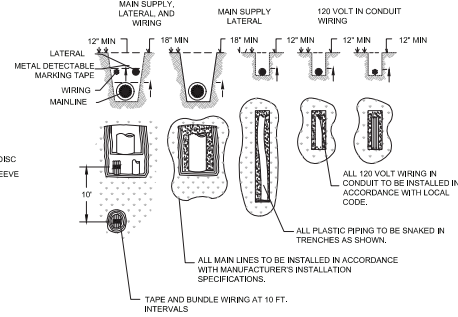


9 TYPICAL DRIP LINE
PLAN
L2.50 NTS

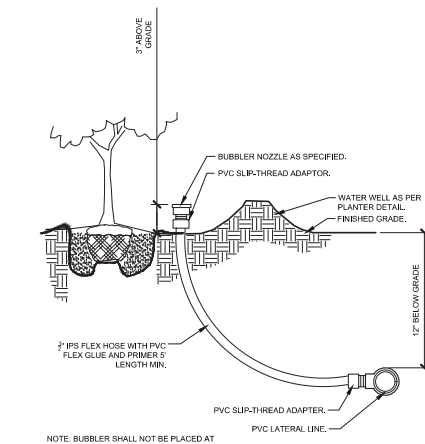
- NOTE:
1. DRIP TUBING TO BE ROUTED IN THE PLANT MATERIAL BED WITH AT MAXIMUM LATERAL SPACING OF 16 INCHES.
 2. DRIP TUBING TO BE INSTALLED IN A GRID PATTERN. DRIP TUBING SHALL NOT BE INSTALLED IN A LONG CONTINUOUS RUN.
 3. CONTRACTOR TO REFER TO IRRIGATION PLAN FOR LOCATION OF CONTROL VALVES THAT UTILIZE MULTIPLE DRIPLINE SUPPLY CONNECTIONS (IF SHOWN).



10 TYPICAL SLEEVE
SECTION
L2.50 NTS



11 TYPICAL TRENCHING
SECTION / PLAN
L2.50 NTS



12 TYPICAL BUBBLER
SECTION
L2.50 NTS



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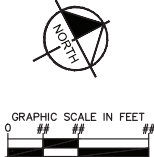
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IRRIGATION SYSTEM NOTES:

1. THE IRRIGATION MAINLINE LAYOUT IS DIAGRAMMATIC. ANY CHANGES MADE IN THE IRRIGATION MAINLINE DUE TO FIELD CONDITIONS OR CONTRACTOR'S SUBMITTED DESIGN SHALL BE IN ACCORDANCE WITH THESE STANDARDS.
2. SET SPRAY HEADS 6" AND ROTORS 12" IN FROM BACK OF CURB OR 24" IF PAVEMENT HAS NO CURB.
3. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR PERFORMING ALL NECESSARY MODIFICATIONS REQUIRED TO MEET THE SCHEMATIC INTENT OF THESE PLANS PRIOR TO SUBMITTING PROPOSAL. THESE PLANS OUTLINE THE OVERALL LAYOUT THE SYSTEM AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ZONE THE SYSTEM ACCORDINGLY BASED ON FLOW AND PRESSURE AVAILABLE. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE FOLLOWING BUT NOT LIMITED TO AVAILABLE FLOW, AVAILABLE PRESSURE, CONNECTION ASSEMBLY, CAPACITY OF THE SYSTEM.
4. CONTRACTOR TO PROVIDE NEW AUTOMATIC CONTROLLER FOR PROPOSED SYSTEM (NO BATTERY OPERATED CONTROLLERS ALLOWED). COORDINATE LOCATION WITH OWNER.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AUTOMATIC RAIN SENSOR. COORDINATE LOCATION W/ OWNER.
6. IRRIGATION SHALL NOT BE COMBINED ON A SINGLE ZONE AND SHALL BE ZONED ACCORDING TO IRRIGATION TYPE, PRECIPITATION RATE, AND THE SYSTEM'S AVAILABLE WATER / PRESSURE. CONTRACTOR TO SUBMIT SHOP DRAWINGS TO OWNER FOR REVIEW PRIOR TO INSTALLATION.
7. VERIFY LOCATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF IRRIGATION SYSTEM. ALL UTILITIES AND STRUCTURES MAY NOT BE SHOWN ON THESE PLANS-CONTRACTOR SHALL FIELD VERIFY.
8. CONTRACTOR TO FIELD VERIFY ALL POINT OF CONNECTION SOURCE INFORMATION INCLUDING PSI AND GPM PRIOR TO CONSTRUCTION.
9. INSTALLATION OF WORK SHALL BE COORDINATED WITH OTHER CONTRACTORS IN SUCH A MANNER AS TO ALLOW FOR A SPEEDY AND ORDERLY COMPLETION OF ALL WORK ON-SITE.
10. CONTRACTOR SHALL COORDINATE WITH THE PLANTING PLAN FOR PLANTER BED AND TREE LOCATIONS TO ENSURE ALL PLANT MATERIAL IS COVERED BY 100% HEAD-TO-HEAD IRRIGATION.
11. CONTRACTOR SHALL PROVIDE "AS-BUILT" DRAWINGS OF THE FINAL INSTALLATION TO OWNER AT SUBSTANTIAL COMPLETION BEFORE RECEIVING FINAL PAYMENT.
12. PRODUCTS SHALL BE AS SPECIFIED OR APPROVED EQUAL.

PRE-APPROVED MANUFACTURERS:

1. TOTO
2. HUNTER
3. RAINGIRD

13. IRRIGATION CONTRACTOR SHALL SECURE ANY AND ALL NECESSARY PERMITS FOR THE WORK PRIOR TO COMMENCEMENT OF HIS OPERATIONS ON-SITE. COPIES OF THE PERMITS SHALL BE SENT TO THE OWNER/GENERAL CONTRACTOR. WORK IN THE R.O.W. SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF LOCAL AND/OR STATE JURISDICTION.
14. LOCATE ALL IRRIGATION LINES WITHIN LANDSCAPED AREAS WHENEVER POSSIBLE. ALL LINES UNDER PAVEMENT MUST BE SLEEVED WITHIN SCH. 40 PVC 2x SIZE OF PIPE AND FREE OF STONES/DEBRIS. ALL VALVES SHALL BE LOCATED WITHIN LANDSCAPED AREAS.
15. MAINLINE SHALL NOT BE LOCATED WITHOUT PRIOR APPROVAL OF THE OWNERS REPRESENTATIVE.
16. THE IRRIGATION CONTRACTOR SHALL BE DIRECTLY RESPONSIBLE FOR SLEEVING AND DIRECTIONAL BORES.
17. ALL SLEEVES UTILIZED BY THE IRRIGATION CONTRACTOR WHETHER INSTALLED BY HIM OR NOT, SHALL BE LOCATED ON THE "AS-BUILT" DRAWINGS. THE DEPTH BELOW FINISH GRADE, TO THE NEAREST FOOT OF EACH END OF THE SLEEVE SHALL BE NOTED AT EACH SLEEVE LOCATION ON THE "AS-BUILT" DRAWINGS. ALL SLEEVES ON PLAN FOR WALL PENETRATIONS AND UNDER SIDEWALKS SHALL BE SIZED TWO PIPE SIZES GREATER THAN THE PIPE IT CARRIES.
18. ALL PRESSURIZED MAINLINES AND LATERALS UNDER PAVEMENT SHALL BE WITHIN SCH. 40 PVC SLEEVES. WHERE ELECTRIC OR HYDRAULIC VALVE CONTROL LINES PASS THROUGH A SLEEVE WITH OTHER MAIN OR LATERAL LINES THEY SHALL BE CONTAINED WITHIN A SEPARATE, SMALLER CONDUIT.
19. NUMBER THE TOP OF ALL VALVE BOX LIDS WITH MINIMUM 1" HEIGHT BLACK LETTERS TO CORRESPOND TO AUTOMATIC AND GATE VALVE DESIGNATIONS. ALL HOSE BIBB VALVE BOXES SHALL BE LABELED IN A SIMILAR MANNER WITH THE DESIGNATION "HB", LETTER OUTSIDE OF TIME CLOCK CABINETS TO CORRESPOND WITH IRRIGATION CLOCK PROGRAM DESIGNATION.
20. THE IRRIGATION CONTRACTOR SHALL INSTALL A COLOR CODED METAL DETECTABLE MARKING TAPE WHICH CLEARLY NOTES: "CAUTION: IRRIGATION LINE BURIED BELOW". THE TAPE SHALL BE INSTALLED THE FULL LENGTH OF THE IRRIGATION MAINLINE.
21. ELECTRIC SERVICE TO THE CONTROLLER SHALL BE PROVIDED BY THE GENERAL CONTRACTOR.
22. ALL 24 VAC WIRING FROM DECODER TO VALVE SHALL BE OF DIRECT BURIAL COPPER WIRE. MAXIMUM LENGTH OF WIRE FROM DECODER TO VALVE SHALL NOT EXCEED 400 FEET. AS FOLLOWS:
CONTROL WIRES - #14
COMMON WIRES - #14
23. ALL VALVES, SPLICES WITHIN CONTROL LINES, AND QUICK COUPLERS SHALL BE LOCATED WITHIN NDS VALVE BOXES AS FOLLOWS:
-RECTANGULAR 12"x17" HEAVY DUTY BOX, (PURPLE COVER FOR REUSE TO BE PROVIDED WHERE APPROPRIATE).
24. ALL IRRIGATION HEADS/DRIIP TUBING SHALL BE LOCATED ONE (1) FOOT FROM BACK OF CURB WHEN NEXT TO A ROADWAY. (THIS SHALL NOT INCLUDE PARKING AREAS OR DRIVE AISLES).
25. HEADS, LATERALS, EMITTERS, AND VALVES ARE NOT SHOWN, BUT ARE NECESSARY FOR A FULLY FUNCTIONING IRRIGATION SYSTEM.
26. LOCATE ALL VALVES IN PLANTING BEDS WITH A MINIMUM OF 3'-0" FROM BACK OF CURB OR EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED. PIPE SIZES ON EITHER SIDE OF SECTION VALVES CONNECTING MAINLINE TO SECTION LATERAL SHALL BE ONE (1) PIPE SIZE LARGER THAN VALVE SIZE, WHERE MAINLINES RUN PARALLEL TO PAVEMENT OR CURBING, THE MAINLINE SHALL BE OFFSET 2'-0" FROM THE EDGE OF PAVEMENT OR CURB.
27. IRRIGATION ZONES SHALL BE SEPARATED FOR HIGH AND LOW WATER USE REQUIREMENTS AND OPERATED ON DIFFERENT WATERING CYCLES. BUBBLERS, DRIPLINE, AND SPRAY HEADS SHALL BE SEPARATED ON DIFFERENT VALVES. AT NO TIME SHALL MULTIPLE IRRIGATION HEAD TYPES BE LOCATED ON THE SAME VALVE.
28. ALL DRIP ZONES SHALL BE INSTALLED WITH A FLUSH VALVE AND AIR RELIEF VALVE. IN THE EVENT THAT A DRIP ZONE HAS MORE THAN ONE HIGH OR LOW POINT, MORE THAN ONE AIR RELIEF VALVE OR FLUSH VALVE WILL BE REQUIRED FOR THAT ZONE. DRIPLINE SHALL PROVIDE 0.9 GPH EMITTERS, 12" O.C. WITH 12" LINE SPACING AT A MINIMUM.
29. ALL WIRING FOR CONNECTION OF THE VALVES TO THE CONTROLLER SHALL FOLLOW MANUFACTURERS SPECIFICATIONS. IF REQUIRED, ALL WIRING FOR A TWO WIRE PATH SHALL BE WITH RED/BLUE TWISTED PAIR 14 AWG. ELECTRIC CONTROL LINES FROM THE DECODER TO THE SOLENOID VALVES SHALL BE TWISTED PAIR 18 AWG. ALL DECODERS SHALL BE GROUNDED EVERY 1,000 L.F. OR EVERY 10 DEVICES. ALL WIRE SHALL BE FURNISHED IN MINIMUM 2,500 REELS AND SPLICING SHALL BE MINIMIZED. BURY SPLICE KIT. ALL 24 VOLT WIRING SHALL BE DONE IN ACCORDANCE WITH EXISTING CODES. SPLICING SHALL BE IN VALVE BOXES OR CONTROLLERS ONLY. IRRIGATION SYSTEM CONTROL SHALL BE TWO WIRE PATH. CONTRACTOR SHALL FOLLOW ALL MANUFACTURERS REQUIREMENTS FOR THIS INSTALLATION. TWO WIRE SYSTEM SHALL HAVE 2-WAY COMMUNICATIONS FIELD PROGRAMMABILITY, STATION SPECIFICATIONS AND INTEGRATED SURGE PROTECTION.
30. ALL CONTROL WIRE SHALL BE INSTALLED IN A 1/2" ELECTRICAL CONDUIT.
31. SMALLEST DIAMETER LATERAL PIPE SHALL BE 3/4".
32. IRRIGATION SYSTEM SHALL BE CAPABLE OF SUPPLYING AN AVERAGE OF 1.05" OF WATER PER WEEK WITHIN WATERING RESTRICTIONS AS APPLICABLE.
33. IRRIGATION SYSTEM SHALL NOT BE INSTALLED THROUGH EXISTING, OR PRESERVED PLANT COMMUNITIES. DO NOT TRENCH THROUGH EXISTING ROOT SYSTEMS OF ANY VEGETATION INTENDED TO BE PRESERVED.
34. CONTRACTOR TO MINIMIZE IRRIGATION OVERTHROW TO IMPERVIOUS AND NATURAL AREAS THROUGH FIELD ADJUSTMENTS TO INDIVIDUAL HEADS.
35. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED BY THE CONTRACTOR TO THE CONDITION DENOTED ON THE LANDSCAPE PLAN.
36. IRRIGATION PIPING INSTALLED UNDER ROADS AND SIDEWALKS SHALL BE IN SCHEDULE 40 PVC SLEEVING AT 2X THE PIPE SIZE. ALL SLEEVING SHALL BE FREE OF STONES AND DEBRIS.
37. IRRIGATION SOURCE TO BE EITHER WELL, POTABLE, OR NON-POTABLE WATER. IRRIGATION CONTRACTOR TO VERIFY SOURCE PRIOR TO DESIGN.
38. POINT OF CONNECTION TO BE DETERMINED BY OWNER. IRRIGATION SYSTEM CONNECTIONS TO THE LOCAL JURISDICTION SERVICE SHALL COMPLY WITH ALL APPLICABLE CODES.
39. IRRIGATION CONNECTION MAY REQUIRE BACKFLOW PREVENTION, VERIFY WITH LOCAL JURISDICTION.
40. IRRIGATION SYSTEM SHALL COMPLY WITH THE LOCAL JURISDICTION LAND DEVELOPMENT CODE.

1
L2.51 TYPICAL SCHEMATIC IRRIGATION NOTES



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PROJECT

FLOOR&DECOR

APOKA, FL

TBD SWC ORANGE BLOSSOM TRAIL &
LAKE VIEW DRIVE, FL 32712

ISSUE DATE: 04/25/2023
STORE NUMBER: T.B.D.
GROSS BLDG AREA: 77,901 SF
JOB NUMBER: 022172
PROTOTYPE: 2022 Q4

ISSUE

ISSUE SET	04/25/2023
CITY COMMENTS	06/09/2023
CITY COMMENTS	07/10/2023

SEAL



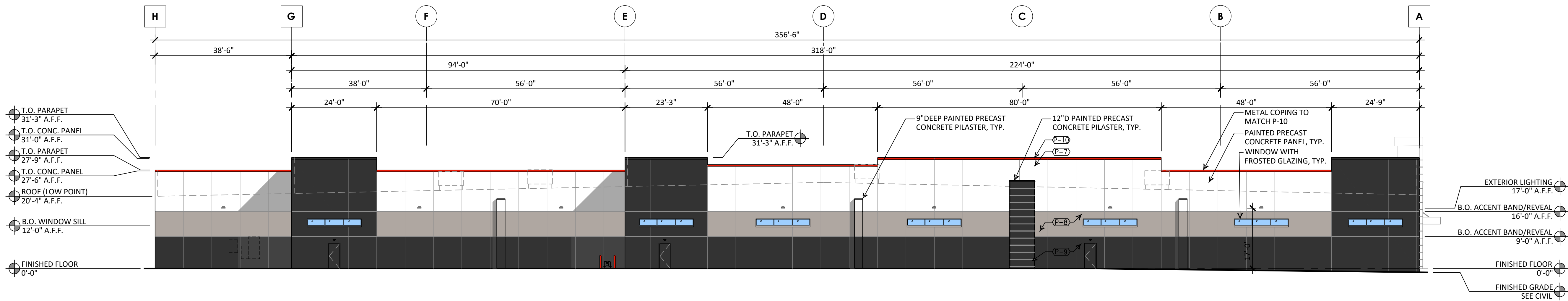
07/10/2023

SHEET

**IRRIGATION
SPECIFICATIONS**

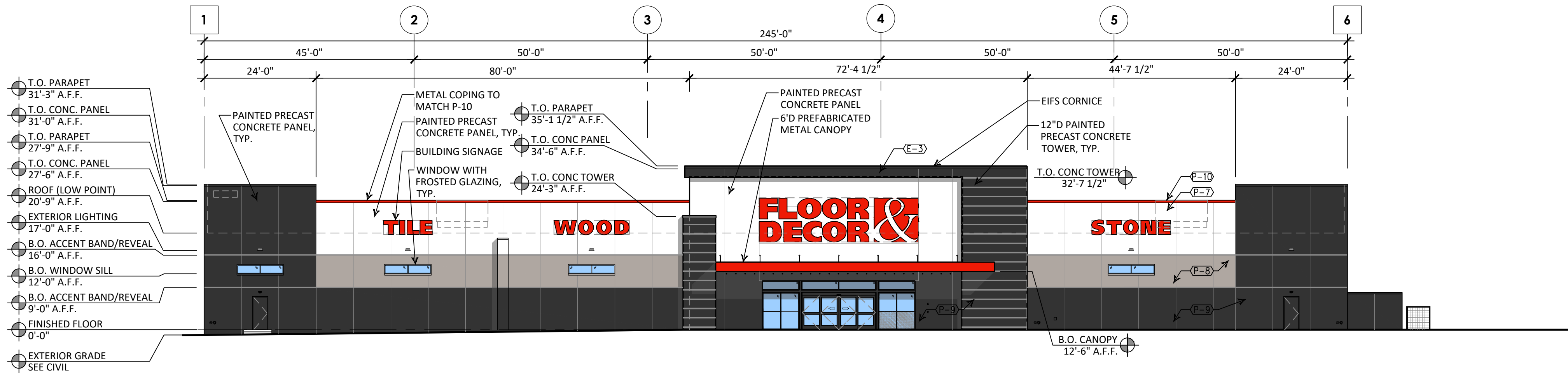
DRAWN: JTD
CHECKED: MTF





LEFT (EAST) FACADE FENESTRATION CALC.	
	FENESTRATION
WINDOW	15'-4"
WINDOW	15'-4"
WINDOW	15'-4"
WINDOW	15'-4"
WINDOW	15'-4"
WINDOW	15'-4"
WINDOW	15'-4"
WINDOW	15'-4"
TOTAL PROPOSED	107'-4"
TOTAL FACADE LENGTH	358'-8"
TOTAL REQUIRED	106'-11 3/8" 30% MIN.

4 LEFT SIDE ELEVATION (EAST)
SCALE: 1/16" = 1'-0"

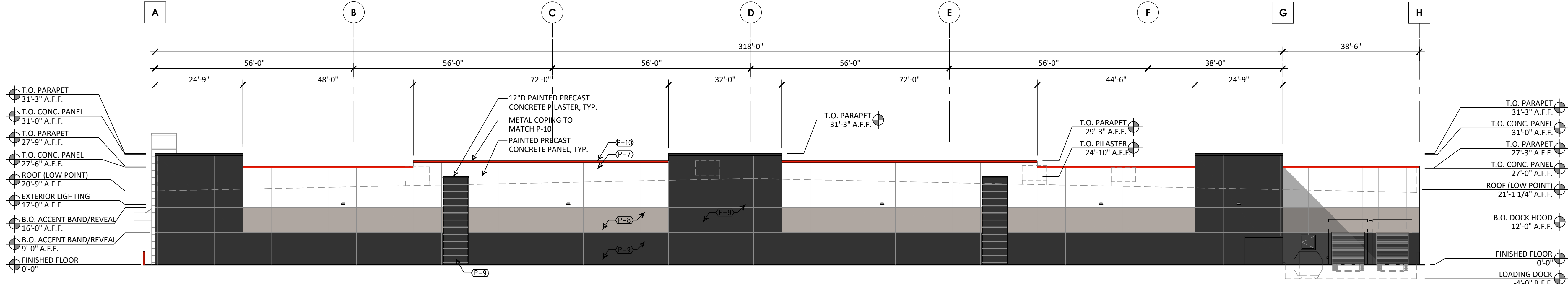


FINISH SCHEDULE

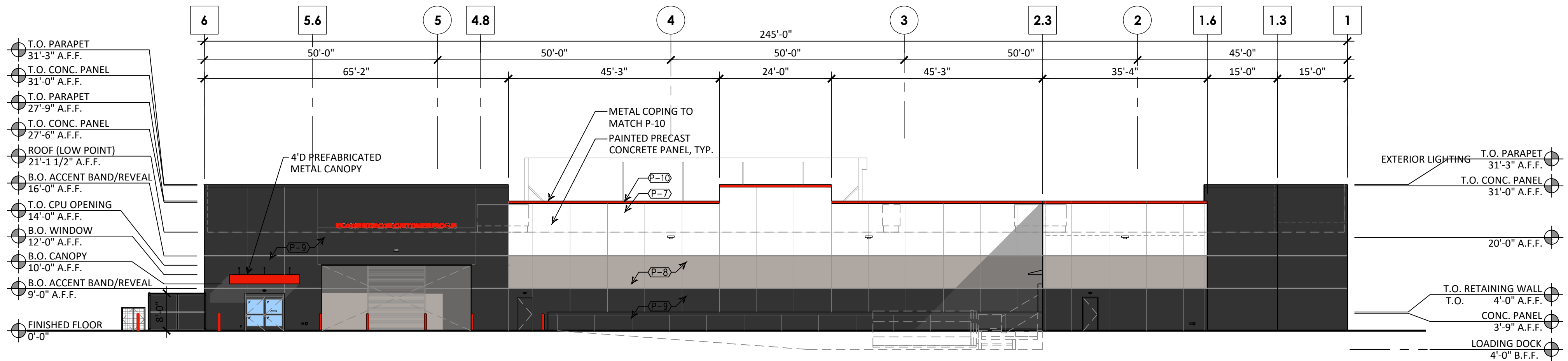
MARK	MATERIAL	MANUFACTURER	COLOR	FINISH
E-1	T.A.F.S.	DRYVIT	DRYVIT COLOR TO MATCH SW 7757 HIGH REFLECTIVE WHITE	LYMESTONE
E-2	E.I.F.S.	DRYVIT	DRYVIT COLOR TO MATCH SW 7044 AMAZING GRAY	LYMESTONE
E-3	E.I.F.S.	DRYVIT	DRYVIT COLOR TO MATCH SW 7048 URBANE BRONZE	LYMESTONE
P-7	PAINT	SHERWIN WILLIAMS	SW 7757 HIGH REFLECTIVE WHITE	SATIN
P-8	PAINT	SHERWIN WILLIAMS	SW 7044 AMAZING GRAY	SATIN
P-9	PAINT	SHERWIN WILLIAMS	SW 7048 URBANE BRONZE	SATIN
P-10	PAINT	SHERWIN WILLIAMS	SW 6868 REAL RED	SATIN

FRONT FACADE FENESTRATION CALC.	
	FENESTRATION
FRONT ENTRY	32'-9"
WINDOW	10'-0"
WINDOW	10'-0"
WINDOW	10'-0"
WINDOW	10'-0"
DOOR	3'-4"
DOOR	3'-4"
TOTAL PROPOSED	79'-9"
TOTAL FACADE LENGTH	245'-0"
TOTAL REQUIRED	73'-8" 30% MIN.

3 FRONT ELEVATION (NORTH)
SCALE: 1/16" = 1'-0"



2 RIGHT SIDE ELEVATION (WEST)
SCALE: 1/16" = 1'-0"



1 REAR ELEVATION (SOUTH)
SCALE: 1/16" = 1'-0"

Floor & Décor

Traffic Impact Analysis

City of Apopka, FL

March 2023

Kimley»Horn

TRAFFIC IMPACT ANALYSIS

Floor & Décor

City of Apopka, FL

Prepared for:

CenterPoint Integrated Solutions, LLC

Prepared by:

Kimley-Horn and Associates, Inc.

JAMES MICHAEL TAYLOR, P.E.

STATE OF FLORIDA,
PROFESSIONAL ENGINEER,
LICENSE NO. 69979

THIS ITEM HAS BEEN DIGITALLY SIGNED
AND SEALED BY
JAMES MICHAEL TAYLOR, P.E. ON THE
DATE INDICATED HERE.

PRINTED COPIES OF THIS DOCUMENT ARE
NOT CONSIDERED SIGNED AND SEALED
AND THE SIGNATURE MUST BE VERIFIED
ON ANY ELECTRONIC COPIES.

Digitally signed by James
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horn.com
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-04'00'

March 2023

James M. Taylor, P.E.

PE #69979

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Appendix B: Turning Movement Counts
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Appendix H: CFRPM Model Output
Appendix I: NCHRP Report 457
Appendix J: Parking Study

1.0 INTRODUCTION

Kimley-Horn has been retained by CenterPoint Integrated Solutions, LLC to analyze and document the traffic impacts associated with the development of the Floor & Decor development to be located south of US-441 and west of Lake View Drive, in the City of Apopka, Florida.

The project will be developed on a ±5.72-acre site associated with an assemblage of four (4) parcels (Parcel ID: 06-21-28-7180-07-100, 06-21-28-7180-07-010, 06-21-28-7180-07-160, and 06-21-28-7180-07-031), as well as a portion of Parcel ID 06-21-28-7172-02-011. The project is anticipated to consist of a 77,860 square-foot building, to be built out by Year 2025.

Access to the project site will be provided via four (4) driveways, listed below. The precise locations of these driveways will be coordinated with the City and FDOT.

- W. Orange Blossom Trail
 - o One (1) right-in/right-out driveway
- Lake View Drive
 - o One (1) proposed ingress only driveway
 - o One (1) proposed full-access driveway
- Mayflower Avenue
 - o One (1) proposed full-access driveway

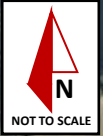
Figure 1 shows the project site location. Project driveways and site layout are shown in the site plan provided in **Appendix A**.

1.1 STUDY AREA

The study area includes the project driveways and the following off-site intersections.

1. US 441 (W. Orange Blossom Trail) & Lake View Drive (signalized)
2. US 441 (W. Orange Blossom Trail) & Plymouth Sorrento Road (signalized)
3. Lake View Drive/Lake Heiniger Drive & Binion Road/W Orange Avenue (stop-controlled)

Figure 1 displays the project location and study intersections.



LEGEND

- Study Intersections
- Project Access Points
- Project Location

Figure 1: Project Location and Study Area
Floor & Decor | Apopka, Florida

March 2023
Project No.: 249257001

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2.0 EXISTING CONDITIONS ANALYSIS – YEAR 2023

2.1 EXISTING DATA

Turning movement counts (TMCs) for the PM peak period (4:00 PM to 6:00 PM) were collected at the study intersections on January 31, 2023, and are provided in **Appendix B**.

The raw turning movement counts were adjusted using the seasonal factor from FDOT's Florida Traffic Online (FTO) database. Relevant seasonal factor data is provided in **Appendix C**. Development of existing turning movement counts are shown in the volume development worksheets provided in **Appendix D**.

Signal timings were provided by Orange County for the intersections of US 441 & Lake View Drive and US 441 & Plymouth-Sorrento Road Road, provided in **Appendix E**.

2.2 EXISTING INTERSECTION CONDITIONS

An intersection operational analysis was performed for Year 2023 existing conditions during the PM peak hour using procedures outlined in the *Highway Capacity Manual 6th Edition* with Synchro (v11) software. Intersection level of service (LOS) and maximum volume-to-capacity (v/c) ratios for existing PM peak hour conditions are provided in **Table 2**. Synchro outputs are provided in **Appendix F**.

As shown in **Table 1**, all study area intersections are expected to operate at LOS E or better with v/c ratios of less than one with the exception of the following deficiencies:

- The northbound approach at the intersection of US-441 & Lake View Dr / Boy Scout Blvd operates with LOS F, but has an acceptable v/c ratio.
- The southbound approach at the intersection of US-441 and & Plymouth Sorrento Rd operates with LOS F, but has an acceptable v/c ratio.

Table 1: Existing Intersection Conditions (PM Peak Hour)

Existing Condition - 2022						
Intersection		Control Type	Approach	PM Peak Hour		
				Max Level of Service	Max V/C Ratio	Max V/C Movement
1	US-441 & Lake View Dr / Boy Scout Rd	Signalized	EB	B	0.47	EBT/R
			WB	B	0.46	WBL
			NB	F	0.98	NBL/T/R
			SB	D	0.46	SBL/T/R
			Overall	C (28.6 s)	0.98	NBL/T/R
2	US-441 & Plymouth Sorrento Rd	Signalized	EB	A	0.31	EBT
			WB	A	0.44	WBT/R
			NB	-	-	-
			SB	F	0.86	SBL
			Overall	B (13.0 s)	0.86	SBL
3	W Orange Ave / N Binion Rd & Lake View Dr / Pickford Cir	Unsignalized (AWSC)	EB	C	0.63	EBL/T/R
			WB	B	0.55	WBL/T/R
			NB	A	0.02	NBL/T/R
			SB	B	0.42	SBL/T/R
			Overall	-	0.63	EBL/T/R

3.0 DEVELOPMENT TRAFFIC

The Floor & Decor development is proposed to consist of ±77,860 gross floor area. Buildout of the proposed development is anticipated in 2025. The latest industry standards were referenced to evaluate the amount of new external trips to be generated by the site at buildout. The adopted regional travel demand model was used to forecast the distribution of trips throughout the study area.

3.1 TRIP GENERATION

Trip generation for the proposed project was calculated per procedures published in the 11th Edition of the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*. Land Use Code (LUC) 862 – Home Improvement Superstore was used for the proposed development.

Pass-by reductions were taken using procedures published in the ITE Trip Generation Manual, 11th Edition. Relevant excerpts from the *Trip Generation Manual* are included in **Appendix G**.

For the purposes of providing the most conservative analysis possible, the store was assumed to have a gross floor area (GFA) of 80,000 GFA.

Table 3 provides the Daily and PM peak hour trip generation summary for the project. The proposed site is anticipated to generate 1,426 daily trips and 106 PM peak hour trips (52 inbound and 54 outbound).

Table 2: Trip Generation Summary

	Land Use	ITE LUC ¹	Size	Units	Trip Generation Equation	Daily				
						Total	In ¹		Out ¹	
Daily	Home Improvement Superstore	862	80	KSF	$T = 30.74 * X$	2,459	50%	1,230	50%	1,229
	Total Generated Trips					2,459	1,230		1,229	
	<i>Pass by Trips² =</i>	42.0%	<i>of external home improvement superstore trips</i>			1,033	517		516	
	New External Trips					1,426	713		713	
PM Peak Hour	Land Use	ITE LUC ¹	Size	Units	Trip Generation Equation	PM Peak Hour				
						Total	In ¹		Out ¹	
	Home Improvement Superstore	862	80	KSF	$T = 2.29 * X$	183	49%	90	51%	93
	Total Generated Trips					183	90		93	
	<i>Pass by Trips² =</i>	42.0%	<i>of external home improvement superstore trips</i>			77	38		39	
	New External Trips					106	52		54	

Note: ¹ Vehicle trip rate, directional splits, and pass-by rate per ITE Trip Generation, 11th Edition

² Pass-by trip reduction based on ITE Trip Generation Handbook, 3rd Edition

3.2 TRIP DISTRIBUTION

Projected traffic demand of project trips on study roadways was derived with use of 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 (CFRPMv7) model set and situated within the existing roadway network. 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 based on engineering judgement. The resulting model plot showing percent of daily project distribution with manual adjustments is provided in **Appendix H**.

Daily model project distribution was referenced to manually assign project distribution at study area intersections and driveways in general accordance with model output. **Figure 2** shows the intersection movement project distribution generated by the proposed development within the study area.

3.3 TRIP ASSIGNMENT

Project trips were assigned onto study area roadways and intersections based on project trip distribution percentages. **Figure 3** shows project movements at the study area intersections generated by the proposed development during the PM peak hour.

3.4 PASS-BY

A pass-by reduction was applied to the trips generated by the development. Pass-by traffic was assumed to use Project Driveway 1 on US-441, and Project Driveways 2 and 3 on Lake View Dr, as shown in **Figure 4**.

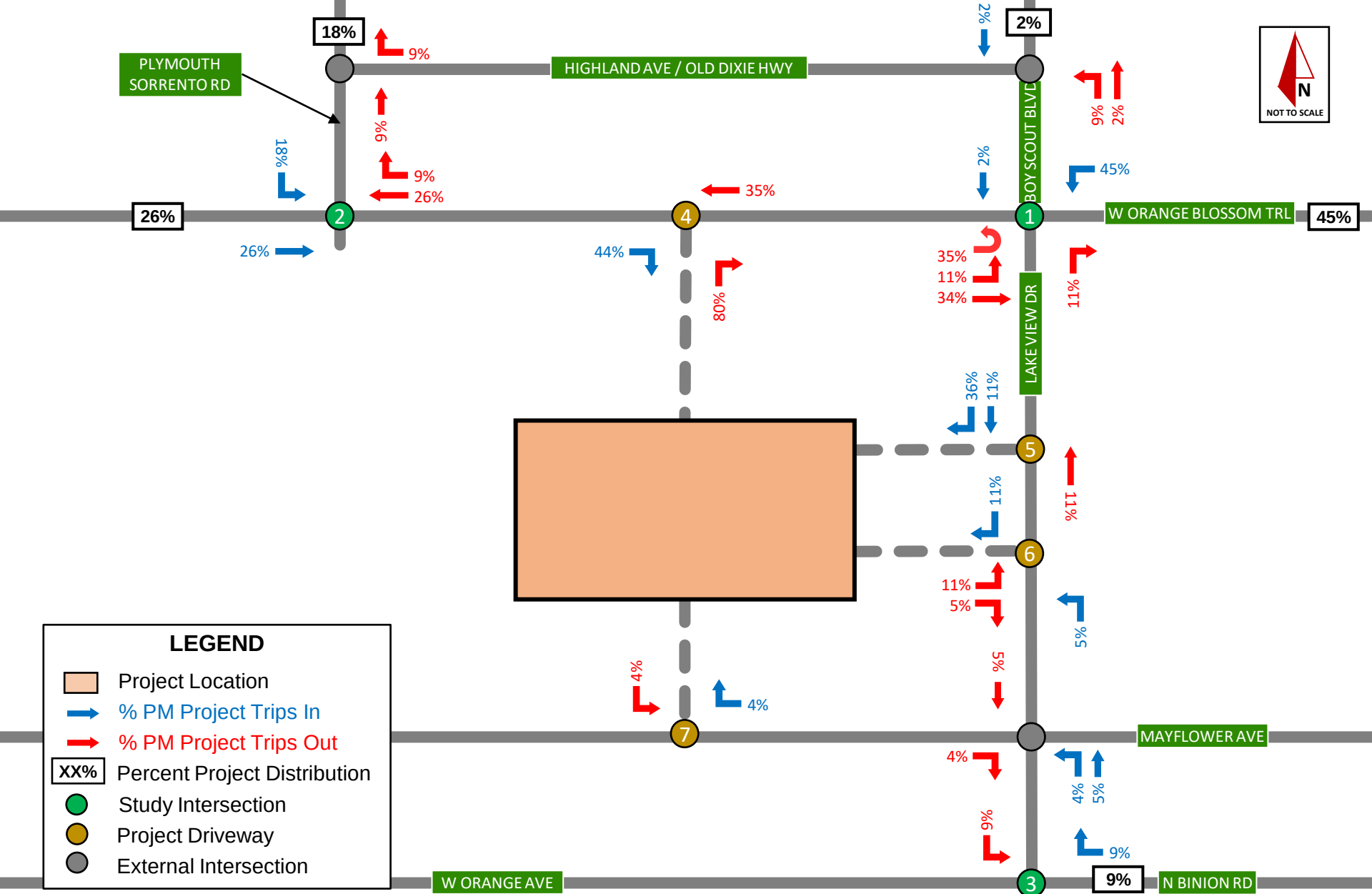


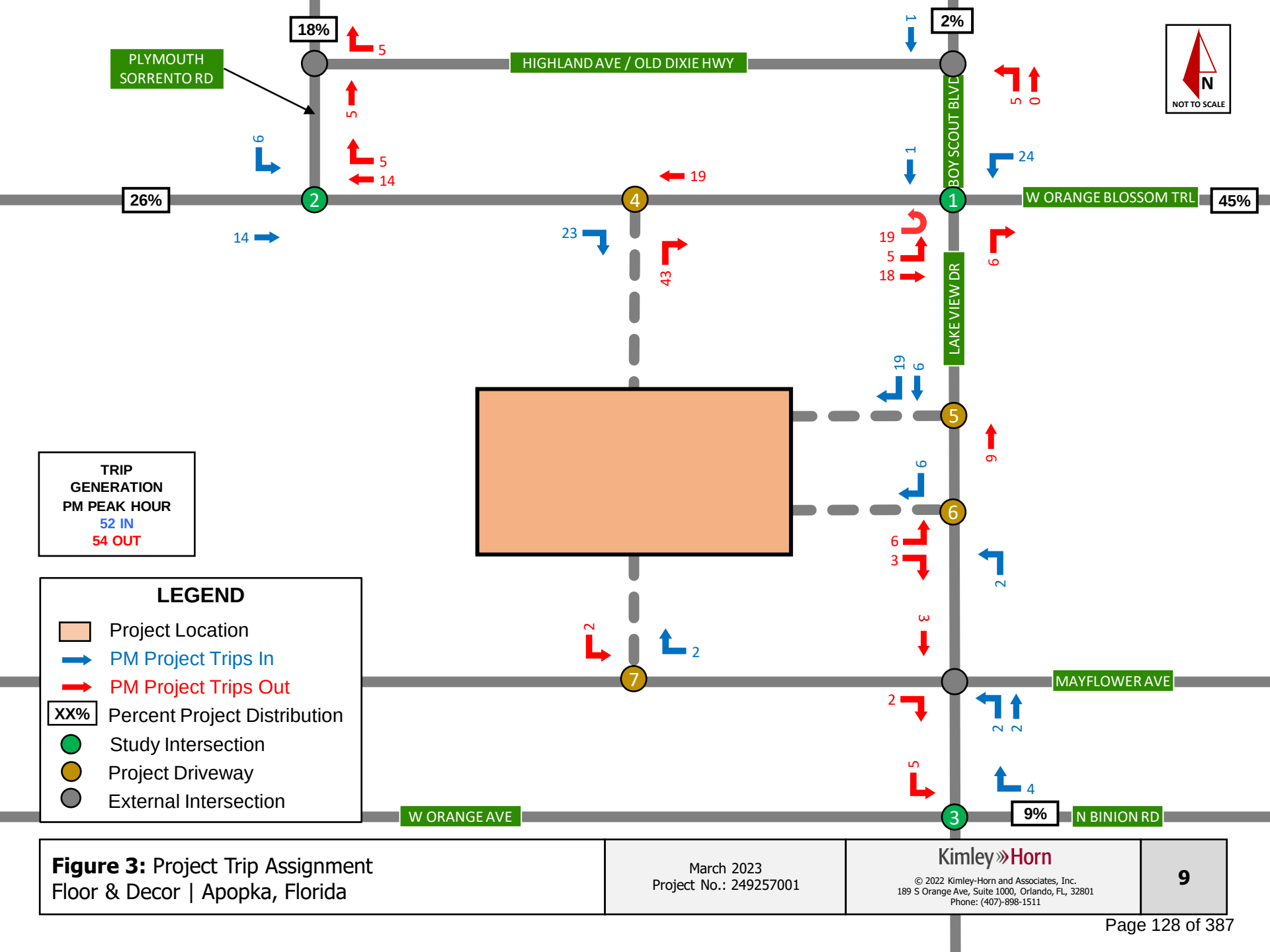
Figure 2: Project Trip Distribution
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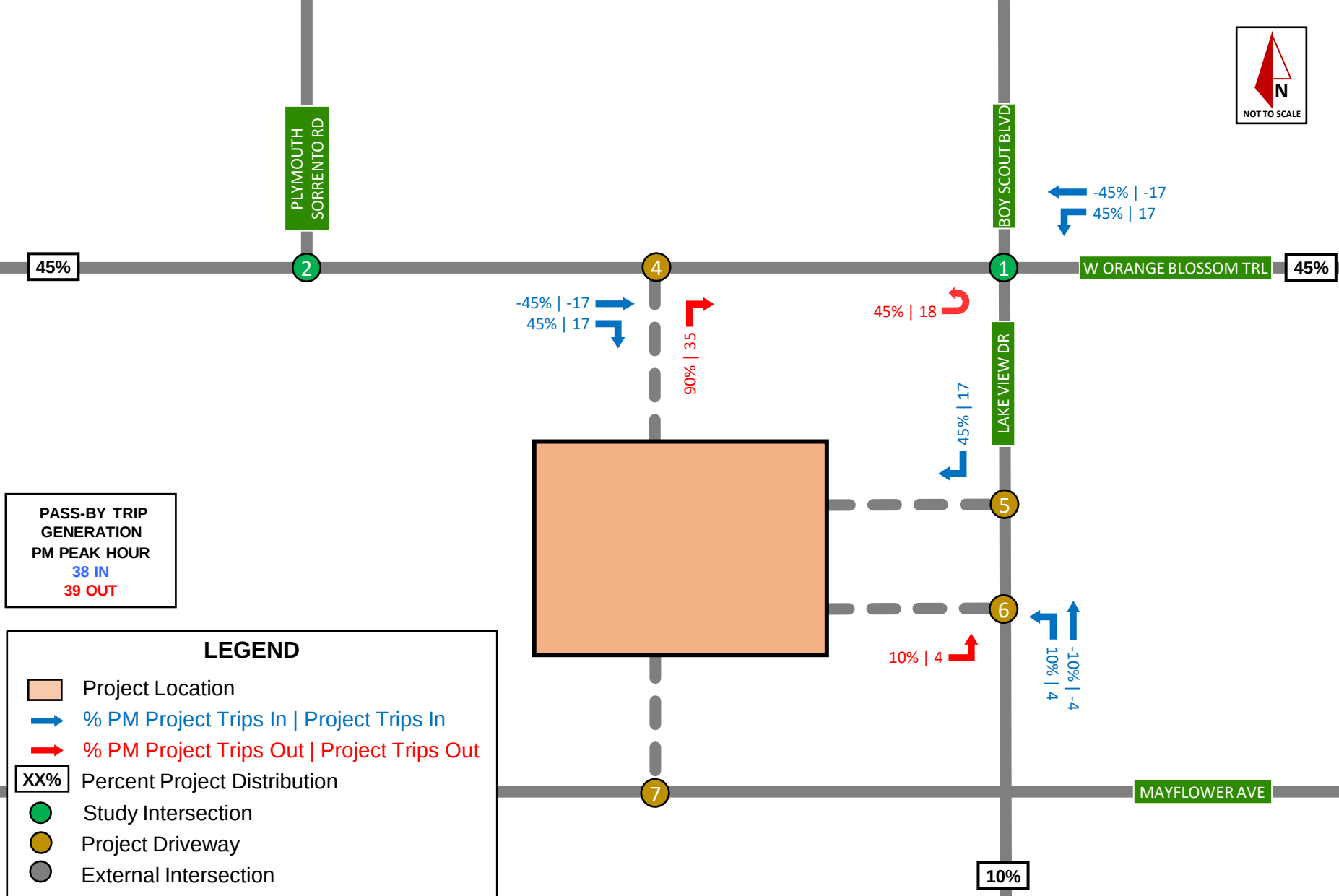


Figure 4: Pass-by Trip Distribution and Assignment
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4.0 BACKGROUND CONDITIONS ANALYSIS – YEAR 2025

4.1 BACKGROUND TRAFFIC

Traffic conditions were evaluated for Year 2025 background conditions, without the inclusion of project trips on the roadway network. Background traffic volume was obtained by applying a conservative growth rate of 2% to existing (2023) traffic volumes. **Appendix D** provides adjusted turning movement volume worksheets for all study intersections.

4.2 BACKGROUND INTERSECTION ANALYSIS

An intersection operational analysis was performed for Year 2025 background conditions during the PM peak hour using procedures outlined in the *Highway Capacity Manual, 6th Edition* with Synchro (v11). Intersection LOS and maximum v/c ratios for PM peak hour background conditions are provided in **Table 3**. Synchro outputs are provided in **Appendix F**.

As shown in **Table 3**, all study area intersections are expected to operate at LOS E or better with v/c ratios of less than one with the exception of the existing deficiencies and the following:

- The northbound shared left/through/right lane at the intersection of US-441 & Lake View Dr / Boy Scout Blvd operates with a v/c of ≥ 1.0 .

4.3 IMPROVED BACKGROUND INTERSECTION ANALYSIS

To mitigate the existing and background deficiencies (northbound approach at US-441 & Lake View Dr / Boy Scout Blvd and southbound approach at US-441 & Plymouth Sorrento Rd), minor signal timing adjustments are recommended. Improvements include timing split modifications. These modifications are to address deficiencies present under existing and background conditions, not to address project impact. **Table 4** provides the improved intersections' LOS and maximum volume to capacity (v/c) ratios for the PM peak hour. With the recommended minor signal timings adjustments, the intersections of US-441 & Lake View Dr / Boy Scout Blvd and US-441 & Plymouth Sorrento Rd are anticipated to operate with acceptable levels of service and v/c ratios less than one (1.0) under background PM peak hour conditions. Synchro outputs for improved background conditions are provided in **Appendix F**.

Table 3: Background Intersection Conditions (PM Peak Hour)

Background Condition - 2025						
Intersection		Control Type	Approach	PM Peak Hour		
				Max Level of Service	Max V/C Ratio	Max V/C Movement
1	US-441 & Lake View Dr / Boy Scout Rd	Signalized	EB	C	0.49	EBT/R
			WB	B	0.50	WBL
			NB	F	1.02	NBL/T/R
			SB	E	0.48	SBL/T/R
			Overall	C (30.7 s)	1.02	NBL/T/R
2	US-441 & Plymouth Sorrento Rd	Signalized	EB	A	0.33	EBT/R
			WB	B	0.46	WBT/R
			NB	-	-	-
			SB	F	0.87	SBL
			Overall	B (13.3 s)	0.87	SBL
3	W Orange Ave / N Binion Rd & Lake View Dr / Pickford Cir	Unsignalized (AWSC)	EB	D	0.67	EBL/T/R
			WB	D	0.58	WBL/T/R
			NB	B	0.02	NBL/T/R
			SB	B	0.44	SBL/T/R
			Overall	-	0.67	EBL/T/R

Table 4: Improved Background Intersection Conditions (PM Peak Hour)

Improved Background Condition -2025							
Intersection		Control Type	Improvement	Approach	PM Peak Hour		
					Max Level of Service	Max V/C Ratio	Max V/C Movement
1	US-441 & Lake View Dr / Boy Scout Rd	Signalized	Modifications to signal timings	EB	C	0.54	EBT/R
				WB	B	0.53	WBL
				NB	E	0.87	NBL/T/R
				SB	D	0.40	SBL/T/R
				Overall	C (27.5 s)	0.87	NBL/T/R
2	US-441 & Plymouth Sorrento Rd	Signalized	Modifications to signal timings	EB	B	0.40	EBT/R
				WB	D	0.57	WBL/T/R
				NB	-	-	-
				SB	D	0.37	SBL
				Overall	C (33.8 s)	0.57	WBL/T/R

5.0 BUILDOUT CONDITIONS ANALYSIS – YEAR 2025

5.1 BUILDOUT TRAFFIC

Future traffic conditions were evaluated for the buildout Year 2025. Buildout volumes were developed by adding anticipated project trips to background volumes. **Appendix D** provides the adjusted turning movement volume worksheets for all intersections. **Figure 5** illustrates turning movement volumes for buildout conditions at the study intersections during the PM peak hour.

5.2 BUILDOUT INTERSECTION ANALYSIS

An intersection operational analysis was performed for Year 2025 buildout conditions during the PM peak hour using procedures outlined in the *Highway Capacity Manual, 6th Edition* with Synchro (v11) software. Improvements to address existing and background deficiencies are assumed for buildout conditions. Intersection LOS and maximum v/c ratios for PM peak hour buildout conditions are provided in **Table 5**. Synchro outputs are provided in **Appendix F**.

As shown in **Table 5**, all study area intersections are expected to operate with LOS E or better with v/c ratios of less than one. No new transportation deficiencies were identified as a result of project traffic.

5.3 BUILDOUT INGRESS TURN LANE ANALYSIS

The need for exclusive ingress left- and right-turn lanes at the proposed site access points was evaluated based on the standards adopted by the jurisdiction responsible for each roadway. Project Driveway 1 is along US-441, and therefore FDOT standards were applied to evaluate the need for an exclusive ingress right-turn lane.

FDOT guidance included in Chapter 6 of the FDOT Access Management Guidebook show that an ingress right-turn lane should be provided if a threshold of 80 to 125 right turns per hour are anticipated when the posted speed limit is 45 MPH or less. As shown in **Figure 5**, the anticipated peak hour eastbound right turn volume is 41 vehicles. Therefore, an exclusive ingress right-turn lane is not warranted along US-441 at Project Driveway 1.

Left-turn movements are not allowed or not anticipated Project Driveway 1, Project Driveway 2, and Project Driveway 4. Therefore, ingress left-turn lanes are not recommended at these driveways. The driveways will have appropriate traffic control devices to prevent unsafe left-turn movements.

Project Driveways 2, 3, and 4 are proposed on County or local roadways. Apopka Land Development Code standards were applied to evaluate the need for exclusive ingress turn lanes. Per Section 5.16.5 of the City's Land Development Code (LDC) a right-turn lane should be provided at each driveway where speed limit equals or exceed 35 MPH, or the right-turning movement exceeds 100 vehicles per hour during the peak hour. As shown in **Figure 5**, no project driveways meet the minimum volume threshold for an exclusive right-turn lane. Additionally, the posted speed limits along Lake View Dr and Mayflower Ave are less than 35 MPH. Therefore, exclusive right-turn lanes are not recommended at Project Driveway 2, Project Driveway 3, or Project Driveway 4.

The need for an exclusive ingress left-turn lane at Project Driveway 3 on Lake View Drive was evaluated the National Cooperative Highway Research Program (NCHRP) Report 457 thresholds. Based on the thresholds in NCHRP Report 457, a left-turn lane is not warranted at Project Driveway 3 and is not

recommended due to the very low left-turn volume anticipated at the driveway. The NCHRP output is provided in **Appendix I**.

PLYMOUTH SORRENTORD



2

W HIGHLAND AVE

W ORANGE BLOSSOM TRL

BOY SCOUT BLVD

OLD DIXIE HWY

MAYFLOWER AVE

W ORANGE AVE

LAKE VIEW DR

N BINION RD

LEGEND

- # Study Intersections
- Project Access Points
- Project Location

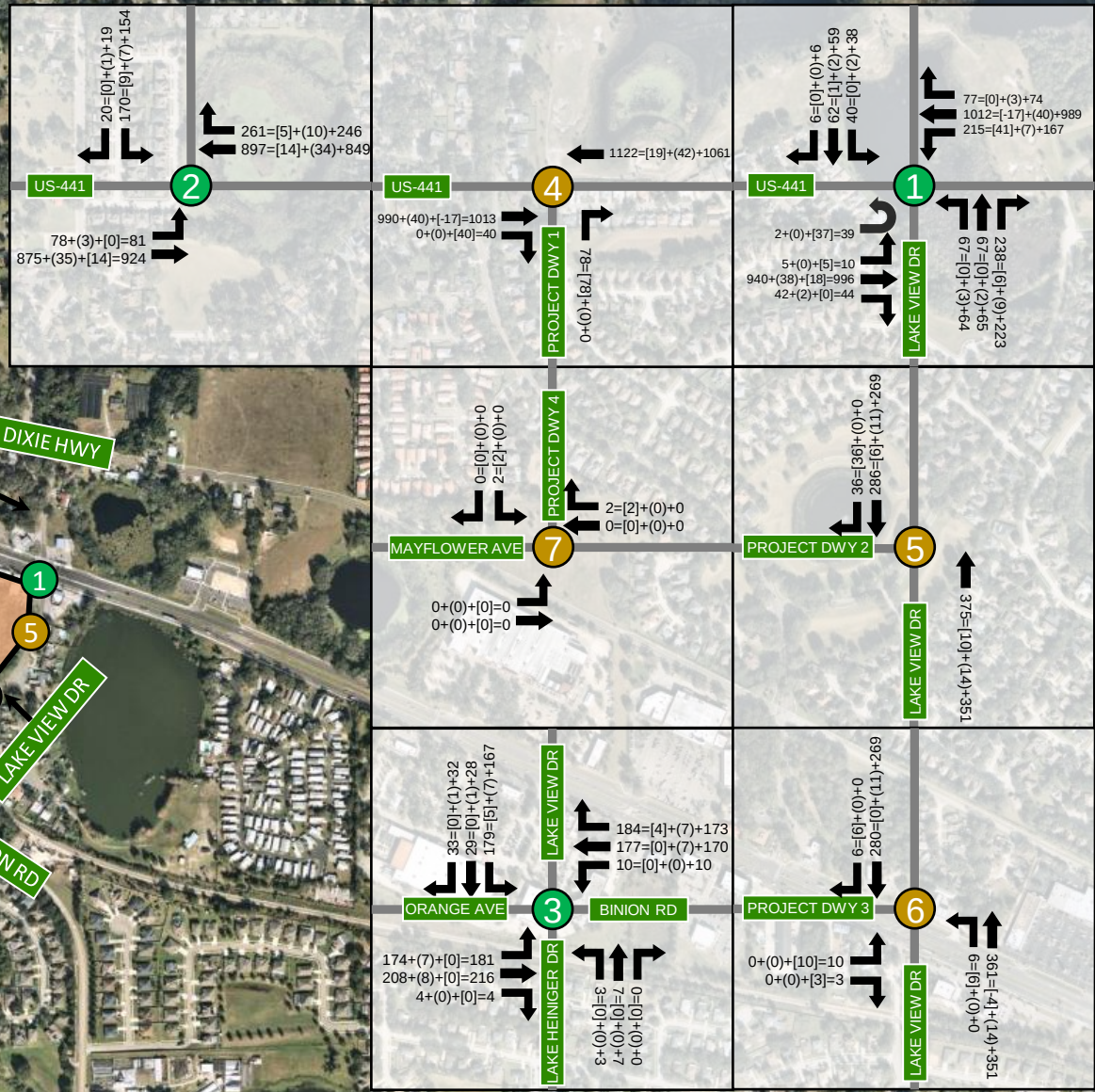


Figure 5: Buildout Volumes - PM Peak Hour
Floor & Decor | Apopka, Florida

March 2023
Project No.: 249257001

KimleyHorn
© 2022 Kimley-Horn and Associates, Inc.
189 S Orange Ave, Suite 1000, Orlando, FL, 32801
Phone: (407)-898-1511

Table 5: Buildout Intersection Conditions (PM Peak Hour)

Buildout Condition - 2025						
Intersection		Control Type	Approach	PM Peak Hour		
				Max Level of Service	Max V/C Ratio	Max V/C Movement
1	US-441 & Lake View Dr / Boy Scout Rd	Signalized	EB WB NB SB Overall	C B E D C (28.9 s)	0.57 0.65 0.87 0.40 0.87	EBT/R WBL NBL/T/R SBL/T/R NBL/T/R
2	US-441 & Plymouth Sorrento Rd	Signalized	EB WB NB SB Overall	B D - D C (27.7 s)	0.40 0.58 - 0.39 0.58	EBL WBT/R - SBL WBT/R
3	W Orange Ave / N Binion Rd & Lake View Dr / Pickford Cir	Unsignalized (AWSC)	EB WB NB SB Overall	C C B B -	0.67 0.60 0.02 0.46 0.67	EBL/T/R WBL/T/R NBL/T/R SBL/T/R EBL/T/R
4	US-441 & Project Driveway 1	Unsignalized (TWSC)	EB(L) WB(L) NB SB Overall	- - B - -	- - 0.18 - 0.18	- - NBR - NBR
5	Lake View Dr & Project Driveway 2	Unsignalized (right-in)	EB WB NB(L) SB(L) Overall	- - - B -	- - - 0.21 0.21	- - - SBR SBR
6	Lake View Dr & Project Driveway 3	Unsignalized (TWSC)	EB WB NB(L) SB(L) Overall	B - A - -	0.03 - 0.01 - 0.03	EBL/R - NBL/T - EBL/R
7	Mayflower & Project Driveway 4	Unsignalized (TWSC)	EB(L) WB(L) NB SB Overall	A - - A -	0.00 - - 0.00 0.00	EBL - - SBL/R SBL/R

6.0 PARKING ANALYSIS

6.1 CODE PARKING REQUIREMENTS

The City of Apopka Land Development Code, Section 5.1.6.A, defines the minimum parking requirements for development within the City of Apopka. Per the LDC, unlisted uses shall be allowed to propose the amount of required parking by conducting a parking demand study to demonstrate the appropriate minimum off-street parking space requirement.

6.2 DATA EVALUATION OF SIMILAR SITES

Kimley-Horn has undertaken a review and evaluation of seven (7) Floor & Décor stores around the country to evaluate the anticipated parking requirements for Floor & Decor developments. The surveyed developments represent the best performing stores in each of their respective markets and were selected for study to collect data at the stores anticipated to have the highest parking and trip generation rates, representing a “worst-case” scenario. Parking counts were performed to determine the maximum number of occupied parking spaces during the typical peak demand period. The parking counts were collected on weekdays between 7:00 AM to 9:30 AM and from 4:00 PM to 7:00 PM and on Saturdays from 11:00 AM to 2:00 PM.

Based upon the parking count data, the average weekday PM peak parking rate was 0.47 spaces per 1,000 square feet, and therefore 38 spaces would be needed to serve the proposed 80 KSF Floor & Decor. However, the maximum parking rate in spaces per 1,000 square feet of gross leasable area occurred during the Saturday data collection for all seven stores studied. The average Saturday peak parking rate was 0.89 spaces per 1,000 square feet, and therefore 71 spaces would be needed to serve the proposed 80 KSF Floor & Decor. The parking study is provided in **Appendix J**.

6.3 PROPOSED PARKING REQUIREMENTS

The maximum parking rate in spaces per 1,000 square feet of gross leasable area occurred during the Saturday data collection period and the observed average peak parking rate was 0.89 spaces per 1,000 square feet. As shown in the site plan (**Appendix A**), 120 spaces are being proposed for the +/-77,860 GFA facility which is a proposed parking supply of 1.54 parking spaces per 1,000 square feet of floor area. Therefore, the proposed parking supply is anticipated to easily meet the peak parking demand of the project.

7.0 CONCLUSION

This traffic impact analysis was performed to assess the transportation impacts of the Floor & Décor development to be located in the southwest quadrant of the intersection of US 441 (W. Orange Blossom Trail) and Lake View Drive in the City of Apopka (Orange County), Florida. The project is anticipated to consist of a 77,860 square-foot building to be built out by Year 2025.

Access to the project site will be provided via four (4) driveways: a right-in/right-out on Orange Blossom Trail, a right-in driveway and a full-access driveway on Lake View Drive, and a full-access driveway on Mayflower Avenue.

Based on trip rates from the latest ITE *Trip Generation Manual* for LUC 862 (Home Improvement Superstore), the project is anticipated to generate a total of 1,426 net new external daily trips and 106 PM peak hour trips (52 inbound and 54 outbound). A total of 77 pass-by trips are estimated during the PM peak hour (38 inbound and 39 outbound).

Operational analyses performed at study area intersections and driveways conclude that under Year 2025 buildout conditions, all study area intersections are expected to operate with acceptable LOS and v/c ratios with the recommended background improvements.

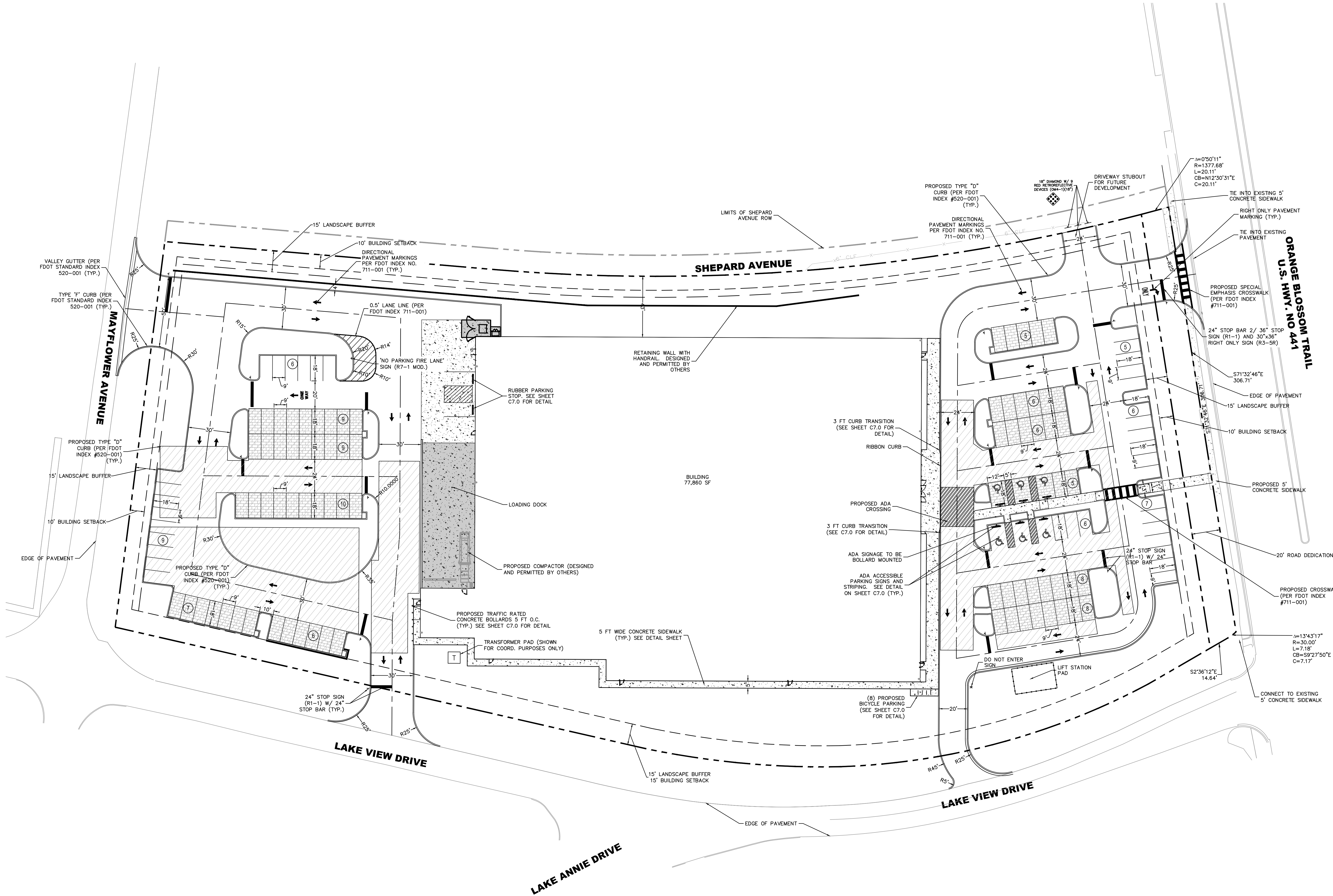
The need for exclusive ingress left- and right-turn lanes at the proposed site access points was evaluated based on the standards adopted by the jurisdiction responsible for each roadway. Upon review of FDOT and City of Apopka guidelines, ingress turn lanes are not warranted or recommended at any of the project driveways.

A parking demand study has been conducted in order to provide a recommended number of parking rate for Floor & Decor facilities. Based on the results of the study, the highest observed average parking demand during a peak period at Floor & Decor facilities was 0.89 spaces per 1,000 square feet of floor area. 120 spaces are being proposed for the +/-77,860 GFA facility which is a proposed parking supply of 1.54 parking spaces per 1,000 square feet of floor area. Therefore, the proposed parking supply is anticipated to easily meet the peak parking demand of the project.

APPENDIX A

Site Plan

Plotted By: Wogner, Blake Sheet: Set-Floor and Decor APOPKA Layout: C4.0 SITE PLAN March 23, 2023 05:10:14pm K:\GRL\GVA\249257\01-Floor & Decor APOPKA\CADD\CONST\PlanSheets\C4.0 SITE PLAN.dwg
This document contains the intellectual property of Floor & Decor APOPKA, LLC. It is intended for use by the client for the specific project and site only. It is not to be used for any other purpose without the written consent of Floor & Decor APOPKA, LLC. All measurements are to the face of the curb unless otherwise noted.



LEGEND

- PROPERTY LINE
- ROAD DEDICATION
- BUILDING SETBACKS
- LANDSCAPE BUFFER
- PROPOSED HEAVY DUTY ASPHALT PAVEMENT
- PROPOSED HEAVY DUTY CONCRETE
- PROPOSED CONCRETE SIDEWALK
- PARKING COUNT

SITE DATA

TOTAL AREA:	5.72 ACRES
EXISTING ZONING:	I/A
EXISTING LAND USE:	INDUSTRIAL
PROPOSED BUILDING AREA:	77,860 SF
F.A.R. CALCULATION:	
MAX FAR:	0.60
PROPOSED FAR:	0.31
BUILDING CRITERIA:	
MAX BUILDING HEIGHT:	45 FT
PROPOSED BUILDING HEIGHT:	32 FT
BUILDING SETBACKS:	REQUIRED
NORTH PROPERTY LINE:	10 FT
EAST PROPERTY LINE:	15 FT
SOUTH PROPERTY LINE:	10 FT
WEST PROPERTY LINE:	10 FT
LANDSCAPE BUFFERS:	REQUIRED
NORTH PROPERTY LINE:	15 FT MIN.
EAST PROPERTY LINE:	15 FT MIN.
SOUTH PROPERTY LINE:	15 FT MIN.
WEST PROPERTY LINE:	15 FT MIN.
REQUIRED PARKING:	70 SPACES (0.89 SPACES/1000 SF)
PROVIDED PARKING:	
STANDARD SPACES (9'X18'):	114 SPACES
ADA SPACES (12'X18'):	6 SPACES
TOTAL SPACES PROVIDED:	120 SPACES
REQUIRED BICYCLE PARKING:	
1 SPACE PER 10000 SF:	8 SPACES
PROVIDED SPACES:	8 SPACES
OVERALL IMPERVIOUS AREA:	
BUILDING AREA:	1.79 AC
PAVEMENT/CONCRETE AREA:	2.30 AC
TOTAL IMPERVIOUS AREA:	4.09 AC (72 %)
OPEN SPACE:	
MINIMUM REQUIRED OPEN SPACE CALCULATION:	
5.72 AC X 5.0% = 0.29 AC	
PROVIDED OPEN SPACE CALCULATION:	
5.72 AC - 4.09 AC = 1.63 AC (28.5%)	
GENERAL NOTES:	
1. ALL RADII ARE TO BE 3' OR 10' UNLESS OTHERWISE NOTED.	
2. ALL MEASUREMENTS TO FACE OF CURB UNLESS OTHERWISE NOTED.	

Always call 811 two full business days before you dig to have underground utilities located and marked.

Sunshine811.com

FLOOR & DECOR

2500 WINDY RIDGE PARKWAY, SE ATLANTA, GA 30339

SBLM

SBLM Architects AA-0003434 33 Walt Whitman Road Suite 300A Huntington Station, NY 11746 Telephone 631 683 5588 Fax 631 683 5591

A.V. SCHWAN & ASSOCIATES CONSULTING STRUCTURAL ENGINEERS 6000 E. Thomas Road, Suite 1 Scottsdale, Arizona 85211 Phone: 480.254.4131 Fax: 480.464.7148 Website: www.AVSchwans.com

dbassociates consulting engineers 3000 Hoover Ave., Suite 100 #1001 Orlando, FL 32801 Telephone: 407.775.1233

CCI CODE CONSULTANTS, INC. 2545 WOODLAND PKWY., SUITE 300 ST. LOUIS, MISSOURI 63144-4220 314-991-2833

Kimley-Horn & Associates, Inc. 189 S. ORANGE AVE., SUITE 1000 ORLANDO, FL 32801 PHONE: 407-898-1511 WWW.KIMLEY-HORN.COM

PROJECT

FLOOR & DECOR APOPKA, FL

SWC ORANGE BLOSSOM TRAIL & LAKE VIEW DRIVE, FL 32712

ISSUE DATE: T.B.D. STORE NUMBER: T.B.D. GROSS BLDG AREA: 74,400 SF JOB NUMBER: 022172 PROTOTYPE: 2023 Q1

ISSUE

SEAL

MARCH 15, 2023

SHEET

SITE PLAN

DRAWN: BJW CHECKED: BSA

C4.0

APPENDIX B

Turning Movement Counts



(303) 216-2439
www.alltrafficdata.net

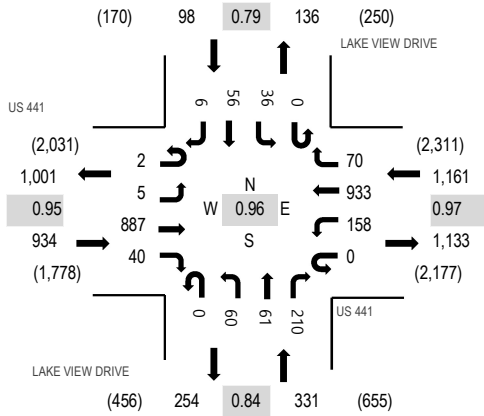
Location: 1 LAKE VIEW DRIVE & US 441 PM

Date: Tuesday, January 31, 2023

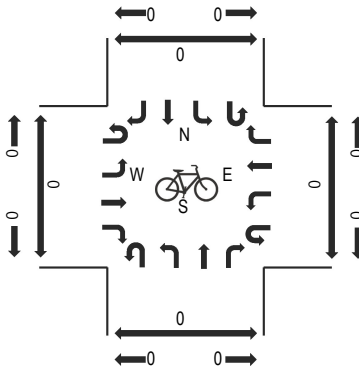
Peak Hour: 05:00 PM - 06:00 PM

Peak 15-Minutes: 05:45 PM - 06:00 PM

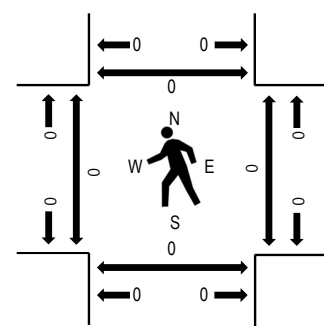
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	US 441 Eastbound				US 441 Westbound				LAKE VIEW DRIVE Northbound				LAKE VIEW DRIVE Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	1	0	215	3	0	31	208	16	0	19	13	43	0	7	4	2	562	2,390	0	0	0	0
4:15 PM	1	1	187	14	0	33	254	10	0	13	12	37	0	7	7	2	578	2,443	0	0	1	0
4:30 PM	1	1	200	12	0	39	238	17	0	14	19	72	0	11	9	2	635	2,490	0	0	0	0
4:45 PM	0	1	201	6	0	32	259	13	0	15	11	56	0	8	12	1	615	2,481	0	0	0	0
5:00 PM	0	1	215	5	0	45	232	12	0	13	24	48	0	5	14	1	615	2,524	0	0	0	0
5:15 PM	2	1	216	8	0	33	237	24	0	14	14	53	0	10	11	2	625		0	0	0	0
5:30 PM	0	0	224	17	0	37	217	15	0	15	12	58	0	12	17	2	626		0	0	0	0
5:45 PM	0	3	232	10	0	43	247	19	0	18	11	51	0	9	14	1	658		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	2	0	0	2	0	0	0	0	3	0	0	0	0	7
Lights	2	5	877	37	0	158	921	70	0	60	60	204	0	36	56	6	2,492
Mediums	0	0	10	1	0	0	10	0	0	0	1	3	0	0	0	0	25
Total	2	5	887	40	0	158	933	70	0	60	61	210	0	36	56	6	2,524

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		1.4%				1.0%				2.1%				0.0%			1.3%
Heavy Vehicle %	0.0%	0.0%	1.1%	7.5%	0.0%	0.0%	1.3%	0.0%	0.0%	0.0%	1.6%	2.9%	0.0%	0.0%	0.0%	0.0%	1.3%
Peak Hour Factor		0.95				0.97				0.84				0.79			0.96
Peak Hour Factor	0.38	0.42	0.96	0.59	0.00	0.88	0.95	0.73	0.00	0.80	0.71	0.80	0.00	0.75	0.82	0.88	0.96



ALL TRAFFIC DATA SERVICES

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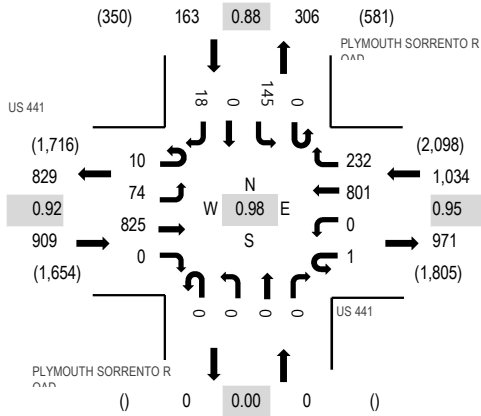
Location: 2 PLYMOUTH SORRENTO ROAD & US 441 PM

Date: Tuesday, January 31, 2023

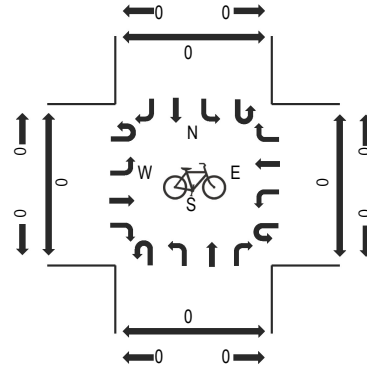
Peak Hour: 05:00 PM - 06:00 PM

Peak 15-Minutes: 05:30 PM - 05:45 PM

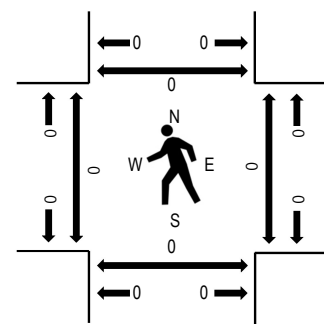
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	US 441 Eastbound				US 441 Westbound				PLYMOUTH SORRENTO Road Northbound				PLYMOUTH SORRENTO Road Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	3	15	170	0	1	0	205	46	0	0	0	0	0	36	0	6	482	1,996	0	0	0	0
4:15 PM	2	15	164	0	0	0	212	59	0	0	0	0	0	42	0	11	505	2,011	0	0	0	0
4:30 PM	1	21	167	0	2	0	205	54	0	0	0	0	0	45	0	7	502	2,040	0	0	0	0
4:45 PM	1	13	173	0	0	0	228	52	0	0	0	0	0	34	0	6	507	2,077	0	0	0	0
5:00 PM	2	20	194	0	1	0	184	62	0	0	0	0	0	31	0	3	497	2,106	0	0	0	0
5:15 PM	3	16	205	0	0	0	216	55	0	0	0	0	0	34	0	5	534		0	0	0	0
5:30 PM	3	17	226	0	0	0	199	52	0	0	0	0	0	36	0	6	539		0	0	0	0
5:45 PM	2	21	200	0	0	0	202	63	0	0	0	0	0	44	0	4	536		0	0	0	0

Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	1	0	0	0	1	2	0	0	0	0	0	0	0	0	4
Lights	10	73	816	0	1	0	790	229	0	0	0	0	0	143	0	18	2,080
Mediums	0	1	8	0	0	0	10	1	0	0	0	0	0	2	0	0	22
Total	10	74	825	0	1	0	801	232	0	0	0	0	0	145	0	18	2,106

Heavy Vehicle Percentage and Peak Hour Factor

	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Heavy Vehicle %		1.1%				1.4%				0.0%				1.2%			1.2%
Heavy Vehicle %	0.0%	1.4%	1.1%	0.0%	0.0%	0.0%	1.4%	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	0.0%	1.2%
Peak Hour Factor		0.92				0.95				0.00				0.88			0.98
Peak Hour Factor	0.83	0.88	0.91	0.00	0.38	0.00	0.93	0.92	0.00	0.00	0.00	0.00	0.00	0.87	0.00	0.68	0.98

APPENDIX C

FDOT's Florida Traffic Online (FTO) Data

2021 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 7500 ORANGE COUNTYWIDE

WEEK	DATES	SF	MOCF: 0.99 PSCF
1	01/01/2021 - 01/02/2021	0.99	1.00
2	01/03/2021 - 01/09/2021	1.04	1.05
3	01/10/2021 - 01/16/2021	1.09	1.10
4	01/17/2021 - 01/23/2021	1.08	1.09
5	01/24/2021 - 01/30/2021	1.07	1.08
6	01/31/2021 - 02/06/2021	1.06	1.07
7	02/07/2021 - 02/13/2021	1.05	1.06
8	02/14/2021 - 02/20/2021	1.04	1.05
9	02/21/2021 - 02/27/2021	1.03	1.04
10	02/28/2021 - 03/06/2021	1.02	1.03
11	03/07/2021 - 03/13/2021	1.01	1.02
12	03/14/2021 - 03/20/2021	1.00	1.01
13	03/21/2021 - 03/27/2021	1.00	1.01
14	03/28/2021 - 04/03/2021	1.00	1.01
15	04/04/2021 - 04/10/2021	1.00	1.01
16	04/11/2021 - 04/17/2021	1.00	1.01
17	04/18/2021 - 04/24/2021	0.99	1.00
18	04/25/2021 - 05/01/2021	0.99	1.00
19	05/02/2021 - 05/08/2021	0.98	0.99
20	05/09/2021 - 05/15/2021	0.98	0.99
21	05/16/2021 - 05/22/2021	0.98	0.99
22	05/23/2021 - 05/29/2021	0.99	1.00
23	05/30/2021 - 06/05/2021	0.99	1.00
24	06/06/2021 - 06/12/2021	0.99	1.00
25	06/13/2021 - 06/19/2021	1.00	1.01
26	06/20/2021 - 06/26/2021	1.00	1.01
27	06/27/2021 - 07/03/2021	1.00	1.01
28	07/04/2021 - 07/10/2021	1.00	1.01
29	07/11/2021 - 07/17/2021	1.00	1.01
30	07/18/2021 - 07/24/2021	1.00	1.01
31	07/25/2021 - 07/31/2021	1.00	1.01
32	08/01/2021 - 08/07/2021	1.00	1.01
33	08/08/2021 - 08/14/2021	0.99	1.00
34	08/15/2021 - 08/21/2021	0.99	1.00
35	08/22/2021 - 08/28/2021	0.99	1.00
36	08/29/2021 - 09/04/2021	0.99	1.00
37	09/05/2021 - 09/11/2021	0.99	1.00
38	09/12/2021 - 09/18/2021	0.99	1.00
*39	09/19/2021 - 09/25/2021	0.99	1.00
*40	09/26/2021 - 10/02/2021	0.98	0.99
*41	10/03/2021 - 10/09/2021	0.98	0.99
*42	10/10/2021 - 10/16/2021	0.97	0.98
*43	10/17/2021 - 10/23/2021	0.98	0.99
*44	10/24/2021 - 10/30/2021	0.98	0.99
*45	10/31/2021 - 11/06/2021	0.99	1.00
*46	11/07/2021 - 11/13/2021	0.99	1.00
*47	11/14/2021 - 11/20/2021	0.99	1.00
*48	11/21/2021 - 11/27/2021	0.99	1.00
*49	11/28/2021 - 12/04/2021	0.99	1.00
*50	12/05/2021 - 12/11/2021	0.99	1.00
*51	12/12/2021 - 12/18/2021	0.99	1.00
52	12/19/2021 - 12/25/2021	1.04	1.05
53	12/26/2021 - 12/31/2021	1.09	1.10

* PEAK SEASON

08-MAR-2022 12:36:27

830UPD

5_7500_PKSEASON.TXT

APPENDIX D

Turning Movement Volume Worksheets

Intersection Development Worksheet



Expect More. Experience Better.

Intersection #: 1
Major Street: US-441 E/W
Minor Street: Lake View Dr / Boy Scout Rd N/S

Existing Year: 2023
Buildout Year: 2025
Seasonal Factor: 1.06

TMC Year: 2023

PHF: 0.96

PM Peak Hour Trips: IN = 52 OUT = 54
PM Peak Hour Pass-By Trips: IN = 38 OUT = 39

Weekday PM Peak Hour 5:00 PM - 6:00 PM	Lake View Dr / Boy Scout Rd								US-441							
	Northbound				Southbound				Eastbound				Westbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2023)	0	60	61	210	0	36	56	6	2	5	887	40	0	158	933	70
Seasonal Factor	1.06				1.06				1.06				1.06			
Heavy Vehicle (%)	0%	0%	2%	3%	0%	0%	0%	0%	0%	0%	1%	8%	0%	0%	1%	0%
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Existing (2023)	0	64	65	223	0	38	59	6	2	5	940	42	0	167	989	74
Growth Rates	2.00%				2.00%				2.00%				2.00%			
Background (2025)	0	67	67	232	0	40	61	6	2	5	978	44	0	174	1,029	77
Project Assignment																
Ingress					2%								45%			
Egress	11%								35%	11%	34%					
Project Trips	0	0	0	6	0	0	1	0	19	5	18	0	0	24	0	0
Pass-By Assignment																
Ingress													45%			
Egress									45%				-45%			
Pass-By Trips	0	0	0	0	0	0	0	0	18	0	0	0	0	17	-17	0
Project Buildout	0	67	67	238	0	40	62	6	39	10	996	44	0	215	1,012	77

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Intersection Development Worksheet



Expect More. Experience Better.

Intersection #: 2
Major Street: US-441 E/W
Minor Street: Plymouth Sorrento N/S

Existing Year: 2023
Buildout Year: 2025
Seasonal Factor: 1.06

TMC Year: 2023

PM Peak Hour Trips: IN = 52 OUT = 54

PHF: 0.88

Weekday PM Peak Hour 5:00 PM - 6:00 PM	Plymouth Sorrento Rd								US-441							
	Northbound				Southbound				Eastbound				Westbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2023)	0	0	0	0	0	145	0	18	0	74	825	0	1	0	801	232
Seasonal Factor	1.06				1.06				1.06				1.06			
Heavy Vehicle (%)	0%	0%	0%	0%	0%	1%	0%	0%	0%	1%	1%	0%	0%	0%	1%	1%
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Existing (2023)	0	0	0	0	0	154	0	19	0	78	875	0	1	0	849	246
Growth Rates	2.00%				2.00%				2.00%				2.00%			
Background (2025)	0	0	0	0	0	161	0	20	0	81	910	0	1	0	883	256
Project Assignment																
Ingress					18%				26%							
Egress													26%		9%	
Project Trips	0	0	0	0	0	9	0	0	0	0	14	0	0	0	14	5
Project Buildout	0	0	0	0	0	170	0	20	0	81	924	0	1	0	897	261

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Intersection Development Worksheet



Expect More. Experience Better.

Intersection #: 3
 Major Street: W Orange Ave / N E/W
 Minor Street: Lake View Dr / Pick N/S

Existing Year: 2023
 Buildout Year: 2025
 Seasonal Factor: 1.06

TMC Year: 2023

PHF: 0.96

PM Peak Hour Trips: IN = 52 OUT = 54

Weekday PM Peak Hour 4:30 PM - 5:30 PM	Lake View Dr / Pickford Cir								W Orange Ave / N Binion Rd							
	Northbound				Southbound				Eastbound				Westbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2023)	0	3	7	0	0	158	26	30	0	164	196	4	0	9	160	163
Seasonal Factor	1.06				1.06				1.06				1.06			
Heavy Vehicle (%)	0%	0%	0%	0%	0%	0%	0%	7%	0%	1%	1%	0%	0%	0%	6%	1%
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Existing (2023)	0	3	7	0	0	167	28	32	0	174	208	4	0	10	170	173
Growth Rates	2.00%				2.00%				2.00%				2.00%			
Background (2025)	0	3	7	0	0	174	29	33	0	181	216	4	0	10	177	180
Project Assignment																
Ingress																
Egress																
Project Trips	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	4
Project Buildout	0	3	7	0	0	179	29	33	0	181	216	4	0	10	177	184

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Intersection Development Worksheet



Expect More. Experience Better.

Intersection #: 4
Major Street: US-441 E/W
Minor Street: Project Driveway 1 N/S

Existing Year: 2023
Buildout Year: 2025
Seasonal Factor: 1.06

TMC Year: 2023

PHF: 0.93

PM Peak Hour Trips: IN = 52 OUT = 54
PM Peak Hour Pass-By Trips: IN = 38 OUT = 39

Weekday PM Peak Hour	Project Driveway 1								US-441							
	Northbound				Southbound				Eastbound				Westbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2023)	0	0	0	0	0	0	0	0	0	0	934	0	0	0	1,001	0
Seasonal Factor	1.06				1.06				1.06				1.06			
Heavy Vehicle (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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	0.92	0.92	0.92	0.92
Existing (2023)	0	0	0	0	0	0	0	0	0	0	990	0	0	0	1,061	0
Growth Rates	2.00%				2.00%				2.00%				2.00%			
Background (2025)	0	0	0	0	0	0	0	0	0	0	1,030	0	0	0	1,103	0
Project Assignment																
Ingress																
Egress																
Project Trips	0	0	0	43	0	0	0	0	0	0	0	23	0	0	19	0
Pass-By Assignment																
Ingress																
Egress																
Pass-By Trips	0	0	0	35	0	0	0	0	0	0	-17	17	0	0	0	0
Project Buildout	0	0	0	78	0	0	0	0	0	0	1,013	40	0	0	1,122	0

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Intersection Development Worksheet



Expect More. Experience Better.

Intersection #: 5
Major Street: Lake View Dr N/S
Minor Street: Project Driveway 2 E/W

Existing Year: 2023
Buildout Year: 2025
Seasonal Factor: 1.06

TMC Year: 2023

PHF: 0.86

PM Peak Hour Trips: IN = 52 OUT = 54
PM Peak Hour Pass-By Trips: IN = 38 OUT = 39

Weekday PM Peak Hour	Lake View Dr								Project Driveway 2							
	Northbound				Southbound				Eastbound				Westbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2023)	0	0	331	0	0	0	254	0	0	0	0	0	0	0	0	0
Seasonal Factor	1.06				1.06				1.06				1.06			
Heavy Vehicle (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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	0.92	0.92	0.92	0.92
Existing (2023)	0	0	351	0	0	0	269	0	0	0	0	0	0	0	0	0
Growth Rates	2.00%				2.00%				2.00%				2.00%			
Background (2025)	0	0	365	0	0	0	280	0	0	0	0	0	0	0	0	0
Project Assignment																
Ingress																
Egress																
Project Trips	0	0	6	0	0	0	6	19	0	0	0	0	0	0	0	0
Pass-By Assignment																
Ingress																
Egress																
Pass-By Trips	0	0	4	0	0	0	0	17	0	0	0	0	0	0	0	0
Project Buildout	0	0	375	0	0	0	286	36	0	0	0	0	0	0	0	0

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Intersection Development Worksheet



Expect More. Experience Better.

Intersection #: 6
Major Street: Lake View Dr N/S
Minor Street: Project Driveway 3 E/W

Existing Year: 2023
Buildout Year: 2025
Seasonal Factor: 1.06

TMC Year: 2023

PHF: 0.92

PM Peak Hour Trips: IN = 52 OUT = 54
PM Peak Hour Pass-By Trips: IN = 38 OUT = 39

Weekday PM Peak Hour 0	Lake View Dr								Project Driveway 3							
	Northbound				Southbound				Eastbound				Westbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2023)	0	0	331	0	0	0	254	0	0	0	0	0	0	0	0	0
Seasonal Factor	1.06				1.06				1.06				1.06			
Heavy Vehicle (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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	0.92	0.92	0.92	0.92
Existing (2023)	0	0	351	0	0	0	269	0	0	0	0	0	0	0	0	0
Growth Rates	2.00%				2.00%				2.00%				2.00%			
Background (2025)	0	0	365	0	0	0	280	0	0	0	0	0	0	0	0	0
Project Assignment																
Ingress	5%				11%											
Egress									11%				5%			
Project Trips	0	2	0	0	0	0	0	6	0	6	0	3	0	0	0	0
Pass-By Assignment																
Ingress	10%															
Egress	-10%								10%							
Pass-By Trips	0	4	-4	0	0	0	0	0	0	4	0	0	0	0	0	0
Project Buildout	0	6	361	0	0	0	280	6	0	10	0	3	0	0	0	0

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Intersection Development Worksheet



Expect More. Experience Better.

Intersection #: 7
 Major Street: Mayflower Ave E/W
 Minor Street: Project Driveway 4 N/S

Existing Year: 2023
 Buildout Year: 2025
 Seasonal Factor: 1.06

TMC Year: 2023

PHF: 0.92

PM Peak Hour Trips: IN = 52 OUT = 54
 PM Peak Hour Pass-By Trips: IN = 38 OUT = 39

Weekday PM Peak Hour	Mayflower Ave								Mayflower Ave							
	Northbound				Southbound				Eastbound				Westbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
TMC (2023)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Seasonal Factor	1.06				1.06				1.06				1.06			
Heavy Vehicle (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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	0.92	0.92	0.92	0.92
Existing (2023)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Growth Rates	2.00%				2.00%				2.00%				2.00%			
Background (2025)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Assignment																
Ingress																
Egress																
Project Trips	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
Project Buildout	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2

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APPENDIX E

Signal Timings

CONSULTANT TIMING

ORANGE COUNTY TRAFFIC SIGNAL TIMING

Intersection: US 441 at Boy Scout Boulevard/Lake View Drive
Equipment: Intelight

CDI: 4-7-2021

CDO:

Address: 37
Date: 03/01/2021

BASIC TIMING

Phase	1	2	3	4	5	6	7	8
Direction	WBL	EB		NB		WB		SB
Min Green (sec)	5	15		5		15		5
Vehicle Gap (sec)	2.0	0.5		3.0		0.5		3.0
Max Green 1 (sec)	15	50		25		50		15
Max Green 2 (sec)	15	50		25		50		25
Yellow (sec)	4.8	5.1		3.8		5.1		3.8
All-Red (sec)	2.3	2.9		3.3		2.9		3.3
Walk (sec)		7		7		7		7
Flash Don't Walk (sec)		15		27		16		28
Recall/Memory	NL	SF/LK		NL		SF/LK		NL
Delay (sec)	5			5				
Detector Switching	1>6							
Dual Entry		Y		Y		Y		Y
Overlap								
Flash		Y		R		Y		R
Speed (mph)	25	45	25	30		45		30
Veh Distance (ft)	93	89		118		119		110
Grade (%)	0.0	-3.0		0.0		0.0		-2.1
Ped Distance (ft)		45		92		49		96
Ped Clearance (sec)		15		27		16		28

COORDINATION PLANS

Coordination Pattern	11	21	31	41			Day	Time	Pattern
Cycle	160	180	180	180			1	0:01	49
Split 1	20	40	35	40			1	10:30	41
Split 2	98	85	90	85			1	17:00	49
Split 3							2	0:01	49
Split 4	42	55	55	55			2	6:00	11
Split 5							2	9:30	21
Split 6	118	125	125	125			2	14:00	31
Split 7							2	19:30	49
Split 8	42	55	55	55			7	0:01	49
Offset	40	128	117	128			7	9:30	41
Lagging Phases	0/0/0/0	0/0/0/0	0/0/0/0	0/0/0/0			7	17:00	49
Source Day	Equate 1	Equate 2	Equate 3	Equate 4	Equate 5				
1									
2	3	4	5	6					
7									

Notes:

- Offset referenced to end of green
- use Plan Force-offs
- Use Max Inhibit during coordination

R1	1	2	4
R2	6		8

CONSULTANT TIMING

ORANGE COUNTY TRAFFIC SIGNAL TIMING

Intersection: US 441 at Plymouth Sorrento Road
Equipment: Intelight

CDI: 4-7-2021

CDO:

Address: 202
Date: 03/01/2021

BASIC TIMING

Phase	1	2	3	4	5	6	7	8
Direction	EBL	WB				EB		SB
Min Green (sec)	5	15				15		5
Vehicle Gap (sec)	1.8	0.5				0.5		4.0
Max Green 1 (sec)	25	50				50		30
Max Green 2 (sec)	25	50				50		30
Yellow (sec)	4.8	4.8				4.8		4.8
All-Red (sec)	2.6	2.3				2.3		3.6
Walk (sec)		7						7
Flash Don't Walk (sec)		22						26
Recall/Memory	NL	SF/LK				SF/LK		NL
Delay (sec)								
Detector Switching	1>6							
Dual Entry		Y				Y		
Overlap								
Flash		Y				Y		R
Speed (mph)	45	45				45		45
Veh Distance (ft)	98	108				119		110
Grade (%)	-0.7	0.0				-0.7		0.0
Ped Distance (ft)		62						88
Ped Clearance (sec)		22						26

COORDINATION PLANS

Coordination Pattern	11	21	31	41			Day	Time	Pattern
Cycle	160	180	180	180			1	0:01	49
Split 1	20	30	30	30			1	10:30	41
Split 2	95	90	100	90			1	17:00	49
Split 3							2	0:01	49
Split 4							2	6:00	11
Split 5							2	9:30	21
Split 6	115	120	130	120			2	14:00	31
Split 7							2	19:30	49
Split 8	45	60	50	60			7	0:01	49
Offset	28	36	11	36			7	9:30	41
Lagging Phases	0/0/0/0	0/0/0/0	0/0/0/0	0/0/0/0			7	17:00	49
Source Day	Equate 1	Equate 2	Equate 3	Equate 4	Equate 5				
1									
2	3	4	5	6					
7									

Notes:

- Offset referenced to end of green
- use Cycle Force-offs
- Use Max Inhibit during coordination

R1	1	2	
R2	6		8

APPENDIX F

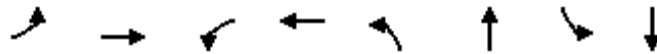
Synchro Outputs

Timings

Existing Conditions

1: Lake View Dr/Boy Scout Rd & Orange Blossom Trl

PM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	5	940	167	989	64	65	38	59
Future Volume (vph)	5	940	167	989	64	65	38	59
Turn Type	Perm	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases		2	1	6		4		8
Permitted Phases	2		6		4		8	
Detector Phase	2	2	1	6	4	4	8	8
Switch Phase								
Minimum Initial (s)	15.0	15.0	5.0	15.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	12.1	23.0	12.1	12.1	12.1	12.1
Total Split (s)	98.0	98.0	20.0	118.0	42.0	42.0	42.0	42.0
Total Split (%)	61.3%	61.3%	12.5%	73.8%	26.3%	26.3%	26.3%	26.3%
Yellow Time (s)	5.1	5.1	4.8	5.1	3.8	3.8	3.8	3.8
All-Red Time (s)	2.9	2.9	2.3	2.9	3.3	3.3	3.3	3.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	8.0	8.0	7.1	8.0		7.1		7.1
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Cycle Length: 160

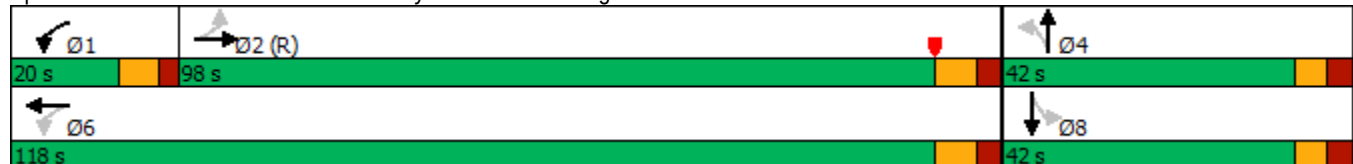
Actuated Cycle Length: 160

Offset: 90 (56%), Referenced to phase 2:EBTL, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated

Splits and Phases: 1: Lake View Dr/Boy Scout Rd & Orange Blossom Trl



HCM 6th Signalized Intersection Summary

1: Lake View Dr/Boy Scout Rd & Orange Blossom Trl

Existing Conditions

PM Peak Hour

												
Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	2	5	940	42	167	989	74	64	65	223	38	59
Future Volume (veh/h)	2	5	940	42	167	989	74	64	65	223	38	59
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		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
Work Zone On Approach		No			No			No				No
Adj Sat Flow, veh/h/ln		1885	1885	1885	1885	1885	1885	1870	1870	1870	1900	1900
Adj Flow Rate, veh/h		5	979	44	174	1030	77	67	68	232	40	61
Peak Hour Factor		0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %		1	1	1	1	1	1	2	2	2	0	0
Cap, veh/h		327	2069	93	377	2322	174	82	73	220	91	129
Arrive On Green		0.59	0.59	0.59	0.05	0.69	0.69	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h		513	3491	157	1795	3378	252	254	334	1010	276	592
Grp Volume(v), veh/h		5	502	521	174	546	561	367	0	0	107	0
Grp Sat Flow(s),veh/h/ln		513	1791	1857	1795	1791	1840	1597	0	0	920	0
Q Serve(g_s), s		0.7	25.4	25.4	5.9	21.9	21.9	21.1	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s		7.5	25.4	25.4	5.9	21.9	21.9	34.9	0.0	0.0	13.8	0.0
Prop In Lane		1.00		0.08	1.00		0.14	0.18		0.63	0.37	
Lane Grp Cap(c), veh/h		327	1061	1100	377	1231	1265	375	0	0	232	0
V/C Ratio(X)		0.02	0.47	0.47	0.46	0.44	0.44	0.98	0.00	0.00	0.46	0.00
Avail Cap(c_a), veh/h		327	1061	1100	431	1231	1265	375	0	0	232	0
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
Upstream Filter(I)		0.93	0.93	0.93	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh		16.3	18.5	18.5	13.9	11.2	11.2	63.3	0.0	0.0	53.2	0.0
Incr Delay (d2), s/veh		0.1	1.4	1.4	0.9	0.3	0.2	40.7	0.0	0.0	1.4	0.0
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
%ile BackOfQ(95%),veh/ln		0.2	15.7	16.2	4.2	12.9	13.2	26.7	0.0	0.0	6.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		16.4	19.9	19.8	14.8	11.5	11.5	104.0	0.0	0.0	54.7	0.0
LnGrp LOS		B	B	B	B	B	B	F	A	A	D	A
Approach Vol, veh/h			1028			1281			367			107
Approach Delay, s/veh			19.8			11.9			104.0			54.7
Approach LOS			B			B			F			D
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	15.2	102.8		42.0		118.0		42.0				
Change Period (Y+Rc), s	* 7.1	8.0		7.1		8.0		7.1				
Max Green Setting (Gmax), s	* 13	90.0		34.9		110.0		34.9				
Max Q Clear Time (g_c+I1), s	7.9	27.4		36.9		23.9		15.8				
Green Ext Time (p_c), s	0.2	7.4		0.0		8.4		0.5				

Intersection Summary

HCM 6th Ctrl Delay 28.6

HCM 6th LOS C

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

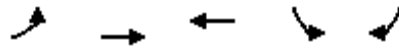
HCM 6th Signalized Intersection Summary
 1: Lake View Dr/Boy Scout Rd & Orange Blossom Trl

Existing Conditions
 PM Peak Hour

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	6
Future Volume (veh/h)	6
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1900
Adj Flow Rate, veh/h	6
Peak Hour Factor	0.96
Percent Heavy Veh, %	0
Cap, veh/h	11
Arrive On Green	0.22
Sat Flow, veh/h	52
Grp Volume(v), veh/h	0
Grp Sat Flow(s),veh/h/ln	0
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	0.06
Lane Grp Cap(c), veh/h	0
V/C Ratio(X)	0.00
Avail Cap(c_a), veh/h	0
HCM Platoon Ratio	1.00
Upstream Filter(l)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(95%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	0.0
LnGrp LOS	A
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Timings 2: Orange Blossom Trl & Plymouth Sorrento Rd

Existing Conditions
PM Peak Hour

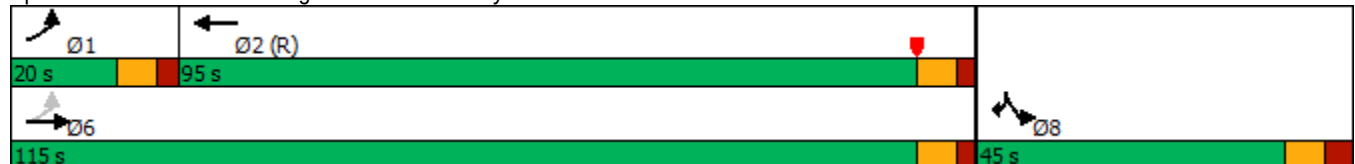


Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	78	875	849	154	19
Future Volume (vph)	78	875	849	154	19
Turn Type	pm+pt	NA	NA	Prot	Prot
Protected Phases	1	6	2	8	8
Permitted Phases	6				
Detector Phase	1	6	2	8	8
Switch Phase					
Minimum Initial (s)	5.0	15.0	15.0	5.0	5.0
Minimum Split (s)	12.4	22.5	22.5	22.5	22.5
Total Split (s)	20.0	115.0	95.0	45.0	45.0
Total Split (%)	12.5%	71.9%	59.4%	28.1%	28.1%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	2.6	2.3	2.3	3.6	3.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.4	7.1	7.1	8.4	8.4
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	Min	C-Min	None	None

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 28 (18%), Referenced to phase 2:WBT, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated

Splits and Phases: 2: Orange Blossom Trl & Plymouth Sorrento Rd

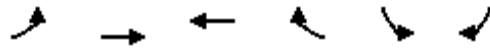


HCM 6th Signalized Intersection Summary

2: Orange Blossom Trl & Plymouth Sorrento Rd

Existing Conditions

PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	78	875	849	246	154	19
Future Volume (veh/h)	78	875	849	246	154	19
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	80	893	866	251	157	19
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	1	1
Cap, veh/h	404	2872	1987	575	182	162
Arrive On Green	0.03	0.80	0.73	0.73	0.10	0.10
Sat Flow, veh/h	1795	3676	2834	793	1795	1598
Grp Volume(v), veh/h	80	893	566	551	157	19
Grp Sat Flow(s),veh/h/ln	1795	1791	1791	1742	1795	1598
Q Serve(g_s), s	1.7	10.5	20.3	20.3	13.8	1.7
Cycle Q Clear(g_c), s	1.7	10.5	20.3	20.3	13.8	1.7
Prop In Lane	1.00			0.46	1.00	1.00
Lane Grp Cap(c), veh/h	404	2872	1299	1264	182	162
V/C Ratio(X)	0.20	0.31	0.44	0.44	0.86	0.12
Avail Cap(c_a), veh/h	490	2872	1299	1264	411	365
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.86	0.86	1.00	1.00
Uniform Delay (d), s/veh	6.4	4.2	8.8	8.8	70.8	65.4
Incr Delay (d2), s/veh	0.2	0.1	0.9	0.9	11.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.1	5.6	11.7	11.4	11.1	1.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	6.6	4.2	9.7	9.8	82.2	65.7
LnGrp LOS	A	A	A	A	F	E
Approach Vol, veh/h		973	1117		176	
Approach Delay, s/veh		4.4	9.8		80.5	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	12.3	123.1			135.4	24.6
Change Period (Y+Rc), s	7.4	* 7.1			* 7.1	8.4
Max Green Setting (Gmax), s	12.6	* 88			* 1.1E2	36.6
Max Q Clear Time (g_c+I1), s	3.7	22.3			12.5	15.8
Green Ext Time (p_c), s	0.1	8.7			6.9	0.4

Intersection Summary

HCM 6th Ctrl Delay	13.0
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th AWSC
3: Pickford Cir/Lake View Dr & Orange Ave/Binion Rd

Existing Conditions
PM Peak Hour

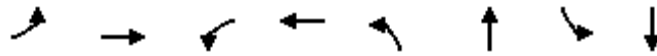
Intersection												
Intersection Delay, s/veh	15.3											
Intersection LOS	C											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	174	208	4	10	170	173	3	7	0	167	28	32
Future Vol, veh/h	174	208	4	10	170	173	3	7	0	167	28	32
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	1	1	1	4	4	4	0	0	0	1	1	1
Mvmt Flow	191	229	4	11	187	190	3	8	0	184	31	35
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB	WB			NB			SB				
Opposing Approach	WB	EB			SB			NB				
Opposing Lanes	1	1			1			1				
Conflicting Approach Left	SB	NB			EB			WB				
Conflicting Lanes Left	1	1			1			1				
Conflicting Approach Right	NB	SB			WB			EB				
Conflicting Lanes Right	1	1			1			1				
HCM Control Delay	17.4	14.4			9.9			13.4				
HCM LOS	C	B			A			B				
Lane	NBLn1	EBLn1	WBLn1	SBLn1								
Vol Left, %	30%	45%	3%	74%								
Vol Thru, %	70%	54%	48%	12%								
Vol Right, %	0%	1%	49%	14%								
Sign Control	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	10	386	353	227								
LT Vol	3	174	10	167								
Through Vol	7	208	170	28								
RT Vol	0	4	173	32								
Lane Flow Rate	11	424	388	249								
Geometry Grp	1	1	1	1								
Degree of Util (X)	0.02	0.635	0.554	0.419								
Departure Headway (Hd)	6.672	5.386	5.142	6.051								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	533	670	698	594								
Service Time	4.757	3.429	3.187	4.103								
HCM Lane V/C Ratio	0.021	0.633	0.556	0.419								
HCM Control Delay	9.9	17.4	14.4	13.4								
HCM Lane LOS	A	C	B	B								
HCM 95th-tile Q	0.1	4.5	3.4	2.1								

Timings

1: Lake View Dr/Boy Scout Rd & Orange Blossom Trl

Background Conditions

PM Peak Hour



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	5	978	174	1029	67	67	40	61
Future Volume (vph)	5	978	174	1029	67	67	40	61
Turn Type	Perm	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases		2	1	6		4		8
Permitted Phases	2		6		4		8	
Detector Phase	2	2	1	6	4	4	8	8
Switch Phase								
Minimum Initial (s)	15.0	15.0	5.0	15.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	12.1	23.0	12.1	12.1	12.1	12.1
Total Split (s)	98.0	98.0	20.0	118.0	42.0	42.0	42.0	42.0
Total Split (%)	61.3%	61.3%	12.5%	73.8%	26.3%	26.3%	26.3%	26.3%
Yellow Time (s)	5.1	5.1	4.8	5.1	3.8	3.8	3.8	3.8
All-Red Time (s)	2.9	2.9	2.3	2.9	3.3	3.3	3.3	3.3
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	8.0	8.0	7.1	8.0		7.1		7.1
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Cycle Length: 160

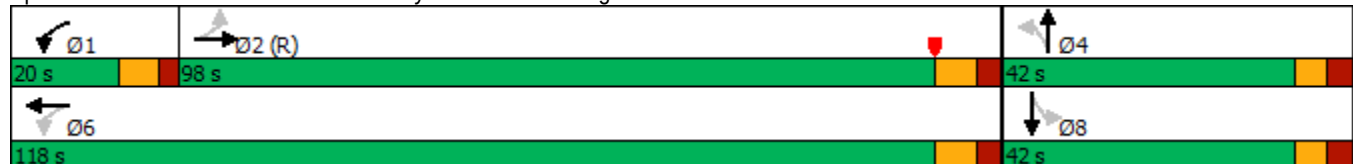
Actuated Cycle Length: 160

Offset: 90 (56%), Referenced to phase 2:EBTL, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated

Splits and Phases: 1: Lake View Dr/Boy Scout Rd & Orange Blossom Trl



HCM 6th Signalized Intersection Summary

Background Conditions

1: Lake View Dr/Boy Scout Rd & Orange Blossom Trl

PM Peak Hour

												
Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	2	5	978	44	174	1029	77	67	67	232	40	61
Future Volume (veh/h)	2	5	978	44	174	1029	77	67	67	232	40	61
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		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
Work Zone On Approach			No			No			No			No
Adj Sat Flow, veh/h/ln		1885	1885	1885	1885	1885	1885	1870	1870	1870	1900	1900
Adj Flow Rate, veh/h		5	1019	46	181	1072	80	70	70	242	42	64
Peak Hour Factor		0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %		1	1	1	1	1	1	2	2	2	0	0
Cap, veh/h		312	2062	93	364	2323	173	82	71	219	91	129
Arrive On Green		0.59	0.59	0.59	0.05	0.69	0.69	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h		492	3490	158	1795	3379	252	255	326	1005	277	593
Grp Volume(v), veh/h		5	523	542	181	568	584	382	0	0	112	0
Grp Sat Flow(s),veh/h/ln		492	1791	1857	1795	1791	1840	1587	0	0	919	0
Q Serve(g_s), s		0.8	27.0	27.0	6.2	23.2	23.3	20.1	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s		8.5	27.0	27.0	6.2	23.2	23.3	34.9	0.0	0.0	14.8	0.0
Prop In Lane		1.00		0.08	1.00		0.14	0.18		0.63	0.37	
Lane Grp Cap(c), veh/h		312	1058	1097	364	1231	1265	373	0	0	231	0
V/C Ratio(X)		0.02	0.49	0.49	0.50	0.46	0.46	1.02	0.00	0.00	0.48	0.00
Avail Cap(c_a), veh/h		312	1058	1097	415	1231	1265	373	0	0	231	0
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
Upstream Filter(I)		0.92	0.92	0.92	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh		16.9	18.9	18.9	14.5	11.4	11.4	63.7	0.0	0.0	53.6	0.0
Incr Delay (d2), s/veh		0.1	1.5	1.5	1.0	0.3	0.3	53.1	0.0	0.0	1.6	0.0
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
%ile BackOfQ(95%),veh/ln		0.2	16.5	17.0	4.4	13.5	13.8	28.9	0.0	0.0	7.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		17.0	20.4	20.4	15.6	11.7	11.7	116.8	0.0	0.0	55.1	0.0
LnGrp LOS		B	C	C	B	B	B	F	A	A	E	A
Approach Vol, veh/h			1070			1333			382			112
Approach Delay, s/veh			20.4			12.2			116.8			55.1
Approach LOS			C			B			F			E
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	15.5	102.5		42.0		118.0		42.0				
Change Period (Y+Rc), s	* 7.1	8.0		7.1		8.0		7.1				
Max Green Setting (Gmax), s	* 13	90.0		34.9		110.0		34.9				
Max Q Clear Time (g_c+I1), s	8.2	29.0		36.9		25.3		16.8				
Green Ext Time (p_c), s	0.2	7.9		0.0		8.9		0.5				

Intersection Summary

HCM 6th Ctrl Delay	30.7
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
 1: Lake View Dr/Boy Scout Rd & Orange Blossom Trl

Background Conditions

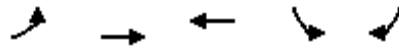
PM Peak Hour

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	6
Future Volume (veh/h)	6
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1900
Adj Flow Rate, veh/h	6
Peak Hour Factor	0.96
Percent Heavy Veh, %	0
Cap, veh/h	11
Arrive On Green	0.22
Sat Flow, veh/h	49
Grp Volume(v), veh/h	0
Grp Sat Flow(s),veh/h/ln	0
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	0.05
Lane Grp Cap(c), veh/h	0
V/C Ratio(X)	0.00
Avail Cap(c_a), veh/h	0
HCM Platoon Ratio	1.00
Upstream Filter(l)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(95%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	0.0
LnGrp LOS	A
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Timings 2: Orange Blossom Trl & Plymouth Sorrento Rd

Background Conditions

PM Peak Hour



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	81	910	883	161	20
Future Volume (vph)	81	910	883	161	20
Turn Type	pm+pt	NA	NA	Prot	Prot
Protected Phases	1	6	2	8	8
Permitted Phases	6				
Detector Phase	1	6	2	8	8
Switch Phase					
Minimum Initial (s)	5.0	15.0	15.0	5.0	5.0
Minimum Split (s)	12.4	22.5	22.5	22.5	22.5
Total Split (s)	20.0	115.0	95.0	45.0	45.0
Total Split (%)	12.5%	71.9%	59.4%	28.1%	28.1%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	2.6	2.3	2.3	3.6	3.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.4	7.1	7.1	8.4	8.4
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	Min	C-Min	None	None

Intersection Summary

Cycle Length: 160

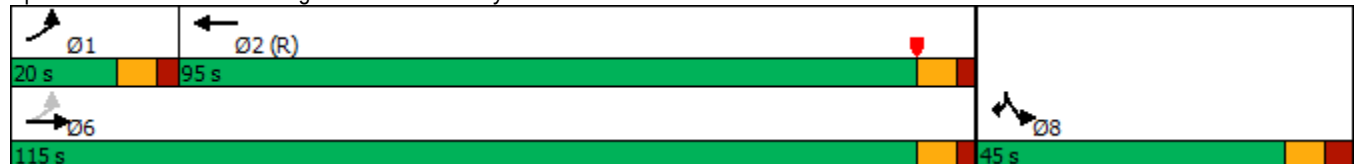
Actuated Cycle Length: 160

Offset: 28 (18%), Referenced to phase 2:WBT, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated

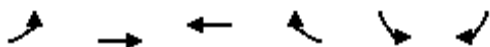
Splits and Phases: 2: Orange Blossom Trl & Plymouth Sorrento Rd



HCM 6th Signalized Intersection Summary

2: Orange Blossom Trl & Plymouth Sorrento Rd

Background Conditions
PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	81	910	883	256	161	20
Future Volume (veh/h)	81	910	883	256	161	20
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	83	929	901	261	164	20
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	1	1
Cap, veh/h	384	2858	1977	572	189	168
Arrive On Green	0.03	0.80	0.72	0.72	0.11	0.11
Sat Flow, veh/h	1795	3676	2835	793	1795	1598
Grp Volume(v), veh/h	83	929	588	574	164	20
Grp Sat Flow(s),veh/h/ln	1795	1791	1791	1743	1795	1598
Q Serve(g_s), s	1.8	11.3	21.8	21.9	14.4	1.8
Cycle Q Clear(g_c), s	1.8	11.3	21.8	21.9	14.4	1.8
Prop In Lane	1.00			0.45	1.00	1.00
Lane Grp Cap(c), veh/h	384	2858	1292	1257	189	168
V/C Ratio(X)	0.22	0.33	0.46	0.46	0.87	0.12
Avail Cap(c_a), veh/h	471	2858	1292	1257	411	365
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.83	0.83	1.00	1.00
Uniform Delay (d), s/veh	6.8	4.4	9.3	9.3	70.5	64.9
Incr Delay (d2), s/veh	0.3	0.1	1.0	1.0	11.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.1	6.2	12.3	12.1	11.5	1.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.1	4.5	10.2	10.3	81.9	65.2
LnGrp LOS	A	A	B	B	F	E
Approach Vol, veh/h		1012	1162		184	
Approach Delay, s/veh		4.7	10.2		80.1	
Approach LOS		A	B		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	12.3	122.5			134.8	25.2
Change Period (Y+Rc), s	7.4	* 7.1			* 7.1	8.4
Max Green Setting (Gmax), s	12.6	* 88			* 1.1E2	36.6
Max Q Clear Time (g_c+l1), s	3.8	23.9			13.3	16.4
Green Ext Time (p_c), s	0.1	9.3			7.3	0.4

Intersection Summary

HCM 6th Ctrl Delay	13.3
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th AWSC
3: Pickford Cir/Lake View Dr & Orange Ave/Binion Rd

Background Conditions

PM Peak Hour

Intersection

Intersection Delay, s/veh16.4

Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	181	216	4	10	177	180	3	7	0	174	29	33
Future Vol, veh/h	181	216	4	10	177	180	3	7	0	174	29	33
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	1	1	1	4	4	4	0	0	0	1	1	1
Mvmt Flow	199	237	4	11	195	198	3	8	0	191	32	36
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	18.9	15.4	10.1	14.1
HCM LOS	C	C	B	B

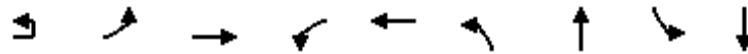
Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	30%	45%	3%	74%
Vol Thru, %	70%	54%	48%	12%
Vol Right, %	0%	1%	49%	14%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	401	367	236
LT Vol	3	181	10	174
Through Vol	7	216	177	29
RT Vol	0	4	180	33
Lane Flow Rate	11	441	403	259
Geometry Grp	1	1	1	1
Degree of Util (X)	0.021	0.669	0.585	0.443
Departure Headway (Hd)	6.827	5.465	5.223	6.146
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	520	661	690	584
Service Time	4.927	3.517	3.277	4.207
HCM Lane V/C Ratio	0.021	0.667	0.584	0.443
HCM Control Delay	10.1	18.9	15.4	14.1
HCM Lane LOS	B	C	C	B
HCM 95th-tile Q	0.1	5.1	3.8	2.3

Timings

Improved Background Conditions

1: Lake View Dr/Boy Scout Rd & Orange Blossom Trl

PM Peak Hour



Lane Group	EBU	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	2	5	978	174	1029	67	67	40	61
Future Volume (vph)	2	5	978	174	1029	67	67	40	61
Turn Type	Perm	Perm	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases			2	1	6		4		8
Permitted Phases	2	2		6		4		8	
Detector Phase	2	2	2	1	6	4	4	8	8
Switch Phase									
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	23.0	12.1	23.0	12.1	12.1	12.1	12.1
Total Split (s)	69.0	69.0	69.0	31.0	100.0	60.0	60.0	60.0	60.0
Total Split (%)	43.1%	43.1%	43.1%	19.4%	62.5%	37.5%	37.5%	37.5%	37.5%
Yellow Time (s)	5.1	5.1	5.1	4.8	5.1	3.8	3.8	3.8	3.8
All-Red Time (s)	2.9	2.9	2.9	2.3	2.9	3.3	3.3	3.3	3.3
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)		8.0	8.0	7.1	8.0		7.1		7.1
Lead/Lag	Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	C-Min	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Cycle Length: 160

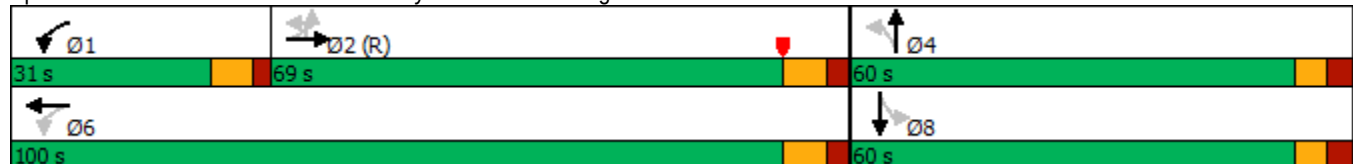
Actuated Cycle Length: 160

Offset: 90 (56%), Referenced to phase 2:EBTL, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated

Splits and Phases: 1: Lake View Dr/Boy Scout Rd & Orange Blossom Trl



HCM 6th Signalized Intersection Summary

Improved Background Conditions

1: Lake View Dr/Boy Scout Rd & Orange Blossom Trl

PM Peak Hour

												
Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	2	5	978	44	174	1029	77	67	67	232	40	61
Future Volume (veh/h)	2	5	978	44	174	1029	77	67	67	232	40	61
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		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
Work Zone On Approach			No			No			No			No
Adj Sat Flow, veh/h/ln		1885	1885	1885	1885	1885	1885	1870	1870	1870	1900	1900
Adj Flow Rate, veh/h		5	1019	46	181	1072	80	70	70	242	42	64
Peak Hour Factor		0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %		1	1	1	1	1	1	2	2	2	0	0
Cap, veh/h		283	1902	86	340	2187	163	92	85	261	109	156
Arrive On Green		0.54	0.54	0.54	0.06	0.65	0.65	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h		492	3490	158	1795	3379	252	254	331	1012	302	603
Grp Volume(v), veh/h		5	523	542	181	568	584	382	0	0	112	0
Grp Sat Flow(s),veh/h/ln		492	1791	1857	1795	1791	1840	1597	0	0	956	0
Q Serve(g_s), s		0.8	30.0	30.0	6.9	26.2	26.2	23.2	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s		10.7	30.0	30.0	6.9	26.2	26.2	37.2	0.0	0.0	14.0	0.0
Prop In Lane		1.00		0.08	1.00		0.14	0.18		0.63	0.37	
Lane Grp Cap(c), veh/h		283	976	1012	340	1159	1191	439	0	0	278	0
V/C Ratio(X)		0.02	0.54	0.54	0.53	0.49	0.49	0.87	0.00	0.00	0.40	0.00
Avail Cap(c_a), veh/h		283	976	1012	504	1159	1191	553	0	0	384	0
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
Upstream Filter(I)		0.89	0.89	0.89	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh		21.6	23.4	23.4	18.0	14.6	14.6	57.6	0.0	0.0	48.1	0.0
Incr Delay (d2), s/veh		0.1	1.9	1.8	1.3	0.3	0.3	11.7	0.0	0.0	0.9	0.0
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
%ile BackOfQ(95%),veh/ln		0.2	18.3	18.9	5.1	15.4	15.8	23.2	0.0	0.0	6.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		21.7	25.3	25.2	19.3	14.9	14.9	69.4	0.0	0.0	49.1	0.0
LnGrp LOS		C	C	C	B	B	B	E	A	A	D	A
Approach Vol, veh/h			1070			1333			382			112
Approach Delay, s/veh			25.2			15.5			69.4			49.1
Approach LOS			C			B			E			D
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	16.4	95.2		48.4		111.6		48.4				
Change Period (Y+Rc), s	* 7.1	8.0		7.1		8.0		7.1				
Max Green Setting (Gmax), s	* 24	61.0		52.9		92.0		52.9				
Max Q Clear Time (g_c+I1), s	8.9	32.0		39.2		28.2		16.0				
Green Ext Time (p_c), s	0.4	7.2		2.1		8.9		0.7				

Intersection Summary

HCM 6th Ctrl Delay	27.5
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
 1: Lake View Dr/Boy Scout Rd & Orange Blossom Trl

Improved Background Conditions

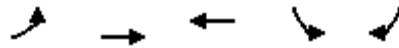
PM Peak Hour

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	6
Future Volume (veh/h)	6
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1900
Adj Flow Rate, veh/h	6
Peak Hour Factor	0.96
Percent Heavy Veh, %	0
Cap, veh/h	13
Arrive On Green	0.26
Sat Flow, veh/h	51
Grp Volume(v), veh/h	0
Grp Sat Flow(s),veh/h/ln	0
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	0.05
Lane Grp Cap(c), veh/h	0
V/C Ratio(X)	0.00
Avail Cap(c_a), veh/h	0
HCM Platoon Ratio	1.00
Upstream Filter(l)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(95%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	0.0
LnGrp LOS	A
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Timings 2: Orange Blossom Trl & Plymouth Sorrento Rd

Improved Background Conditions

PM Peak Hour



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	81	910	883	161	20
Future Volume (vph)	81	910	883	161	20
Turn Type	pm+pt	NA	NA	Prot	Prot
Protected Phases	1	6	2	8	8
Permitted Phases	6		2		
Detector Phase	1	6	2	8	8
Switch Phase					
Minimum Initial (s)	5.0	15.0	15.0	5.0	5.0
Minimum Split (s)	12.4	22.5	22.5	22.5	22.5
Total Split (s)	22.0	112.0	90.0	48.0	48.0
Total Split (%)	13.8%	70.0%	56.3%	30.0%	30.0%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	2.6	2.3	2.3	3.6	3.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.4	7.1	7.1	8.4	8.4
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	Min	C-Min	Max	Max

Intersection Summary

Cycle Length: 160

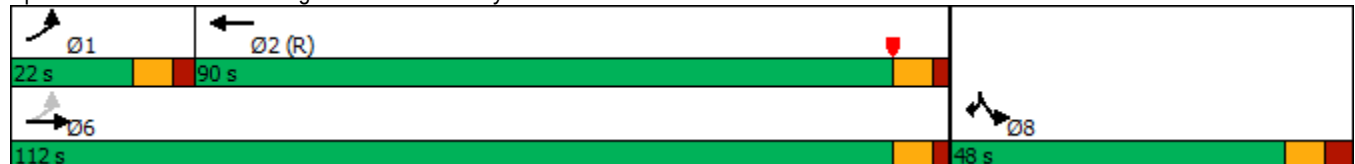
Actuated Cycle Length: 160

Offset: 28 (18%), Referenced to phase 2:WBT, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated

Splits and Phases: 2: Orange Blossom Trl & Plymouth Sorrento Rd

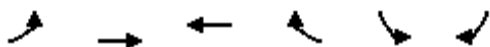


HCM 6th Signalized Intersection Summary

2: Orange Blossom Trl & Plymouth Sorrento Rd

Improved Background Conditions

PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	81	910	883	256	161	20
Future Volume (veh/h)	81	910	883	256	161	20
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	83	929	901	261	164	20
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	1	1
Cap, veh/h	236	2348	1586	459	444	395
Arrive On Green	0.03	0.66	0.19	0.19	0.25	0.25
Sat Flow, veh/h	1795	3676	2835	793	1795	1598
Grp Volume(v), veh/h	83	929	588	574	164	20
Grp Sat Flow(s),veh/h/ln	1795	1791	1791	1743	1795	1598
Q Serve(g_s), s	2.9	19.3	47.7	47.8	12.1	1.5
Cycle Q Clear(g_c), s	2.9	19.3	47.7	47.8	12.1	1.5
Prop In Lane	1.00			0.45	1.00	1.00
Lane Grp Cap(c), veh/h	236	2348	1036	1008	444	395
V/C Ratio(X)	0.35	0.40	0.57	0.57	0.37	0.05
Avail Cap(c_a), veh/h	345	2348	1036	1008	444	395
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.86	0.86	1.00	1.00
Uniform Delay (d), s/veh	21.3	12.8	46.6	46.6	49.9	45.9
Incr Delay (d2), s/veh	0.9	0.1	1.9	2.0	2.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.2	11.9	30.9	30.3	9.6	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.2	12.9	48.5	48.6	52.2	46.1
LnGrp LOS	C	B	D	D	D	D
Approach Vol, veh/h		1012	1162		184	
Approach Delay, s/veh		13.7	48.6		51.5	
Approach LOS		B	D		D	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	12.3	99.7			112.0	48.0
Change Period (Y+Rc), s	7.4	* 7.1			* 7.1	8.4
Max Green Setting (Gmax), s	14.6	* 83			* 1E2	39.6
Max Q Clear Time (g_c+l1), s	4.9	49.8			21.3	14.1
Green Ext Time (p_c), s	0.1	8.6			7.3	0.5

Intersection Summary

HCM 6th Ctrl Delay	33.8
HCM 6th LOS	C

Notes

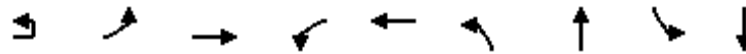
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Timings

Buildout Conditions

1: Lake View Dr/Boy Scout Rd & Orange Blossom Trl

PM Peak Hour



Lane Group	EBU	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	39	10	996	215	1012	67	67	40	62
Future Volume (vph)	39	10	996	215	1012	67	67	40	62
Turn Type	Perm	Perm	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases			2	1	6		4		8
Permitted Phases	2	2		6		4		8	
Detector Phase	2	2	2	1	6	4	4	8	8
Switch Phase									
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.0	23.0	23.0	12.1	23.0	12.1	12.1	12.1	12.1
Total Split (s)	69.0	69.0	69.0	31.0	100.0	60.0	60.0	60.0	60.0
Total Split (%)	43.1%	43.1%	43.1%	19.4%	62.5%	37.5%	37.5%	37.5%	37.5%
Yellow Time (s)	5.1	5.1	5.1	4.8	5.1	3.8	3.8	3.8	3.8
All-Red Time (s)	2.9	2.9	2.9	2.3	2.9	3.3	3.3	3.3	3.3
Lost Time Adjust (s)		0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)		8.0	8.0	7.1	8.0		7.1		7.1
Lead/Lag	Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes	Yes					
Recall Mode	C-Min	C-Min	C-Min	None	None	None	None	None	None

Intersection Summary

Cycle Length: 160

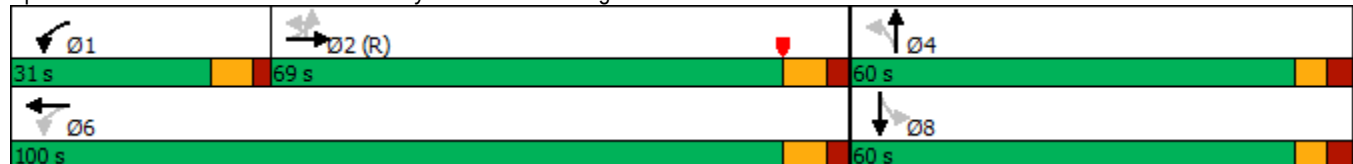
Actuated Cycle Length: 160

Offset: 90 (56%), Referenced to phase 2:EBTL, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated

Splits and Phases: 1: Lake View Dr/Boy Scout Rd & Orange Blossom Trl



HCM 6th Signalized Intersection Summary

Buildout Conditions

1: Lake View Dr/Boy Scout Rd & Orange Blossom Trl

PM Peak Hour

												
Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	39	10	996	44	215	1012	77	67	67	238	40	62
Future Volume (veh/h)	39	10	996	44	215	1012	77	67	67	238	40	62
Initial Q (Qb), veh		0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		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
Work Zone On Approach		No			No			No				No
Adj Sat Flow, veh/h/ln		1885	1885	1885	1885	1885	1885	1870	1870	1870	1900	1900
Adj Flow Rate, veh/h		10	1038	46	224	1054	80	70	70	248	42	65
Peak Hour Factor		0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %		1	1	1	1	1	1	2	2	2	0	0
Cap, veh/h		286	1847	82	345	2172	165	92	85	267	109	158
Arrive On Green		0.53	0.53	0.53	0.07	0.64	0.64	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h		500	3493	155	1795	3374	256	250	326	1021	297	604
Grp Volume(v), veh/h		10	532	552	224	559	575	388	0	0	113	0
Grp Sat Flow(s),veh/h/ln		500	1791	1857	1795	1791	1839	1598	0	0	951	0
Q Serve(g_s), s		1.7	31.9	31.9	8.9	25.9	25.9	23.7	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s		9.2	31.9	31.9	8.9	25.9	25.9	37.8	0.0	0.0	14.1	0.0
Prop In Lane		1.00		0.08	1.00		0.14	0.18		0.64	0.37	
Lane Grp Cap(c), veh/h		286	947	982	345	1153	1184	445	0	0	280	0
V/C Ratio(X)		0.03	0.56	0.56	0.65	0.49	0.49	0.87	0.00	0.00	0.40	0.00
Avail Cap(c_a), veh/h		286	947	982	486	1153	1184	553	0	0	381	0
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
Upstream Filter(I)		1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh		21.9	25.3	25.3	20.0	14.8	14.8	57.3	0.0	0.0	47.7	0.0
Incr Delay (d2), s/veh		0.2	2.4	2.3	2.1	0.3	0.3	12.1	0.0	0.0	0.9	0.0
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
%ile BackOfQ(95%),veh/ln		0.4	19.9	20.5	6.7	15.3	15.6	23.6	0.0	0.0	6.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh		22.1	27.7	27.6	22.1	15.1	15.1	69.4	0.0	0.0	48.7	0.0
LnGrp LOS		C	C	C	C	B	B	E	A	A	D	A
Approach Vol, veh/h			1094			1358			388			113
Approach Delay, s/veh			27.6			16.2			69.4			48.7
Approach LOS			C			B			E			D
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	18.4	92.6		49.0		111.0		49.0				
Change Period (Y+Rc), s	* 7.1	8.0		7.1		8.0		7.1				
Max Green Setting (Gmax), s	* 24	61.0		52.9		92.0		52.9				
Max Q Clear Time (g_c+I1), s	10.9	33.9		39.8		27.9		16.1				
Green Ext Time (p_c), s	0.5	7.3		2.1		8.7		0.7				

Intersection Summary

HCM 6th Ctrl Delay	28.7
HCM 6th LOS	C

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
1: Lake View Dr/Boy Scout Rd & Orange Blossom Trl

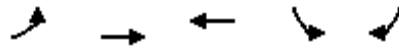
Buildout Conditions
PM Peak Hour

Movement	SBR
Lane Configurations	
Traffic Volume (veh/h)	6
Future Volume (veh/h)	6
Initial Q (Qb), veh	0
Ped-Bike Adj(A_pbT)	1.00
Parking Bus, Adj	1.00
Work Zone On Approach	
Adj Sat Flow, veh/h/ln	1900
Adj Flow Rate, veh/h	6
Peak Hour Factor	0.96
Percent Heavy Veh, %	0
Cap, veh/h	13
Arrive On Green	0.26
Sat Flow, veh/h	51
Grp Volume(v), veh/h	0
Grp Sat Flow(s),veh/h/ln	0
Q Serve(g_s), s	0.0
Cycle Q Clear(g_c), s	0.0
Prop In Lane	0.05
Lane Grp Cap(c), veh/h	0
V/C Ratio(X)	0.00
Avail Cap(c_a), veh/h	0
HCM Platoon Ratio	1.00
Upstream Filter(l)	0.00
Uniform Delay (d), s/veh	0.0
Incr Delay (d2), s/veh	0.0
Initial Q Delay(d3),s/veh	0.0
%ile BackOfQ(95%),veh/ln	0.0
Unsig. Movement Delay, s/veh	
LnGrp Delay(d),s/veh	0.0
LnGrp LOS	A
Approach Vol, veh/h	
Approach Delay, s/veh	
Approach LOS	
Timer - Assigned Phs	

Timings 2: Orange Blossom Trl & Plymouth Sorrento Rd

Buildout Conditions

PM Peak Hour



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	81	924	897	170	20
Future Volume (vph)	81	924	897	170	20
Turn Type	pm+pt	NA	NA	Prot	Prot
Protected Phases	1	6	2	8	8
Permitted Phases	6		2		
Detector Phase	1	6	2	8	8
Switch Phase					
Minimum Initial (s)	5.0	15.0	15.0	5.0	5.0
Minimum Split (s)	12.4	22.5	22.5	22.5	22.5
Total Split (s)	22.0	112.0	90.0	48.0	48.0
Total Split (%)	13.8%	70.0%	56.3%	30.0%	30.0%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8
All-Red Time (s)	2.6	2.3	2.3	3.6	3.6
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.4	7.1	7.1	8.4	8.4
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	Min	C-Min	Max	Max

Intersection Summary

Cycle Length: 160

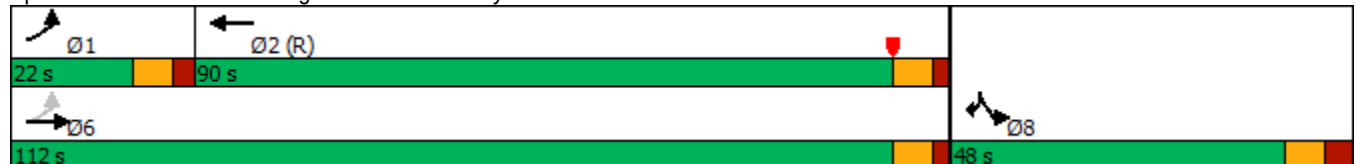
Actuated Cycle Length: 160

Offset: 28 (18%), Referenced to phase 2:WBT, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated

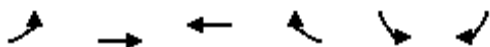
Splits and Phases: 2: Orange Blossom Trl & Plymouth Sorrento Rd



HCM 6th Signalized Intersection Summary

2: Orange Blossom Trl & Plymouth Sorrento Rd

Buildout Conditions
PM Peak Hour



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	81	924	897	261	170	20
Future Volume (veh/h)	81	924	897	261	170	20
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	83	943	915	266	173	20
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	1	1
Cap, veh/h	250	2348	1585	460	444	395
Arrive On Green	0.03	0.66	0.39	0.39	0.25	0.25
Sat Flow, veh/h	1795	3676	2833	794	1795	1598
Grp Volume(v), veh/h	83	943	598	583	173	20
Grp Sat Flow(s),veh/h/ln	1795	1791	1791	1742	1795	1598
Q Serve(g_s), s	2.9	19.7	42.1	42.3	12.8	1.5
Cycle Q Clear(g_c), s	2.9	19.7	42.1	42.3	12.8	1.5
Prop In Lane	1.00			0.46	1.00	1.00
Lane Grp Cap(c), veh/h	250	2348	1036	1008	444	395
V/C Ratio(X)	0.33	0.40	0.58	0.58	0.39	0.05
Avail Cap(c_a), veh/h	359	2348	1036	1008	444	395
HCM Platoon Ratio	1.00	1.00	0.67	0.67	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.4	12.9	33.5	33.6	50.1	45.9
Incr Delay (d2), s/veh	0.8	0.1	2.3	2.4	2.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.2	12.0	27.1	26.6	10.1	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	20.2	13.0	35.9	36.0	52.7	46.1
LnGrp LOS	C	B	D	D	D	D
Approach Vol, veh/h		1026	1181		193	
Approach Delay, s/veh		13.6	35.9		52.0	
Approach LOS		B	D		D	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	12.3	99.7			112.0	48.0
Change Period (Y+Rc), s	7.4	* 7.1			* 7.1	8.4
Max Green Setting (Gmax), s	14.6	* 83			* 1E2	39.6
Max Q Clear Time (g_c+I1), s	4.9	44.3			21.7	14.8
Green Ext Time (p_c), s	0.1	9.1			7.5	0.5

Intersection Summary

HCM 6th Ctrl Delay	27.7
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th AWSC
3: Pickford Cir/Lake View Dr & Orange Ave/Binion Rd

Buildout Conditions
PM Peak Hour

Intersection												
Intersection Delay, s/veh	16.7											
Intersection LOS	C											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	181	216	4	10	177	184	3	7	0	179	29	33
Future Vol, veh/h	181	216	4	10	177	184	3	7	0	179	29	33
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	1	1	1	4	4	4	0	0	0	1	1	1
Mvmt Flow	199	237	4	11	195	202	3	8	0	197	32	36
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB	WB			NB			SB				
Opposing Approach	WB	EB			SB			NB				
Opposing Lanes	1	1			1			1				
Conflicting Approach Left	SB	NB			EB			WB				
Conflicting Lanes Left	1	1			1			1				
Conflicting Approach Right	NB	SB			WB			EB				
Conflicting Lanes Right	1	1			1			1				
HCM Control Delay	19.2	15.8			10.1			14.3				
HCM LOS	C	C			B			B				
Lane	NBLn1	EBLn1	WBLn1	SBLn1								
Vol Left, %	30%	45%	3%	74%								
Vol Thru, %	70%	54%	48%	12%								
Vol Right, %	0%	1%	50%	14%								
Sign Control	Stop	Stop	Stop	Stop								
Traffic Vol by Lane	10	401	371	241								
LT Vol	3	181	10	179								
Through Vol	7	216	177	29								
RT Vol	0	4	184	33								
Lane Flow Rate	11	441	408	265								
Geometry Grp	1	1	1	1								
Degree of Util (X)	0.021	0.673	0.594	0.454								
Departure Headway (Hd)	6.972	5.495	5.245	6.166								
Convergence, Y/N	Yes	Yes	Yes	Yes								
Cap	516	657	685	583								
Service Time	4.972	3.551	3.303	4.23								
HCM Lane V/C Ratio	0.021	0.671	0.596	0.455								
HCM Control Delay	10.1	19.2	15.8	14.3								
HCM Lane LOS	B	C	C	B								
HCM 95th-tile Q	0.1	5.2	3.9	2.4								

HCM 6th TWSC
4: Project Driveway 1 & Orange Blossom Trl

Buildout Conditions
PM Peak Hour

Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↱			↑↑		↱
Traffic Vol, veh/h	1013	40	0	1122	0	78
Future Vol, veh/h	1013	40	0	1122	0	78
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	1101	43	0	1220	0	85
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	572
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	463
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	463
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		14.5	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1		EBT	EBR	WBT	
Capacity (veh/h)	463		-	-	-	
HCM Lane V/C Ratio	0.183		-	-	-	
HCM Control Delay (s)	14.5		-	-	-	
HCM Lane LOS	B		-	-	-	
HCM 95th %tile Q(veh)	0.7		-	-	-	

HCM Unsignalized Intersection Capacity Analysis 5: Lake View Dr & Project Driveway 2

Buildout Conditions
PM Peak Hour

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	375	286	36
Future Volume (Veh/h)	0	0	0	375	286	36
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	408	311	39
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)					346	
pX, platoon unblocked	0.95	0.95	0.95			
vC, conflicting volume	738	330	350			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	700	272	292			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	386	730	1209			
Direction, Lane #	NB 1	SB 1				
Volume Total	408	350				
Volume Left	0	0				
Volume Right	0	39				
cSH	1209	1700				
Volume to Capacity	0.00	0.21				
Queue Length 95th (ft)	0	0				
Control Delay (s)	0.0	0.0				
Lane LOS						
Approach Delay (s)	0.0	0.0				
Approach LOS						
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			23.1%	ICU Level of Service		A
Analysis Period (min)			15			

HCM 6th TWSC
6: Lake View Dr & Project Driveway 3

Buildout Conditions
PM Peak Hour

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	3	6	361	280	6
Future Vol, veh/h	10	3	6	361	280	6
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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	11	3	7	392	304	7
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	714	308	311	0	-	0
Stage 1	308	-	-	-	-	-
Stage 2	406	-	-	-	-	-
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	398	732	1249	-	-	-
Stage 1	745	-	-	-	-	-
Stage 2	673	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	395	732	1249	-	-	-
Mov Cap-2 Maneuver	395	-	-	-	-	-
Stage 1	740	-	-	-	-	-
Stage 2	673	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	13.4	0.1		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1249	-	442	-	-	
HCM Lane V/C Ratio	0.005	-	0.032	-	-	
HCM Control Delay (s)	7.9	0	13.4	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Intersection						
Int Delay, s/veh	4.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	2	2	0
Future Vol, veh/h	0	0	0	2	2	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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	2	2	0
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	2	0	-	0	1	1
Stage 1	-	-	-	-	1	-
Stage 2	-	-	-	-	0	-
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	1620	-	-	-	1022	1084
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1620	-	-	-	1022	1084
Mov Cap-2 Maneuver	-	-	-	-	1022	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		8.5		
HCM LOS	A					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1620	-	-	-	1022	
HCM Lane V/C Ratio	-	-	-	-	0.002	
HCM Control Delay (s)	0	-	-	-	8.5	
HCM Lane LOS	A	-	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0	

APPENDIX G

ITE Excerpts

Land Use: 862

Home Improvement Superstore

Description

A home improvement superstore is a free-standing facility that specializes in the sale of home improvement merchandise. The store generally offers a variety of customer services and centralized cashiering. A home improvement superstore typically maintains long store hours 7 days a week. Examples of items sold in the store include lumber, tools, paint, lighting, wallpaper and paneling, kitchen and bathroom fixtures, lawn equipment, and plant and garden accessories. The stores included in this land use are often the only ones on the site, but they can also be found in mutual operation with a related or unrelated garden center. A home improvement superstore is sometimes placed as a separate parcel within a retail complex, with or without its own dedicated parking. The buildings contained in this land use usually range in size between 50,000 and 200,000 square feet gross floor area. This land use does not include interior design stores. Building materials and lumber store (Land Use 812) and hardware/paint store (Land Use 816) are related uses.

Additional Data

Outside storage areas are not included in the overall gross floor area measurements. However, if a storage area is located within the principal outside faces of the exterior walls, it is included in the overall gross floor area of the building.

A garden center that is contained within the principal outside faces of the exterior building walls is included in the reported gross floor area. An outdoor or fenced-in area outside the principal faces of the exterior building walls is excluded.

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 Arizona, California, Connecticut, Delaware, Florida, Maryland, Massachusetts, New Hampshire, New York, Ontario (CAN), Pennsylvania, Rhode Island, Vermont, and Wisconsin.

To assist in the future analysis of this land use, it is important to collect and include information on the presence and size of garden centers, outdoor fenced-in space, and service stations in trip generation data submissions.

Source Numbers

126, 376, 434, 437, 507, 616, 617, 728, 731, 863, 927, 936, 961, 1077

Home Improvement Superstore (862)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 19

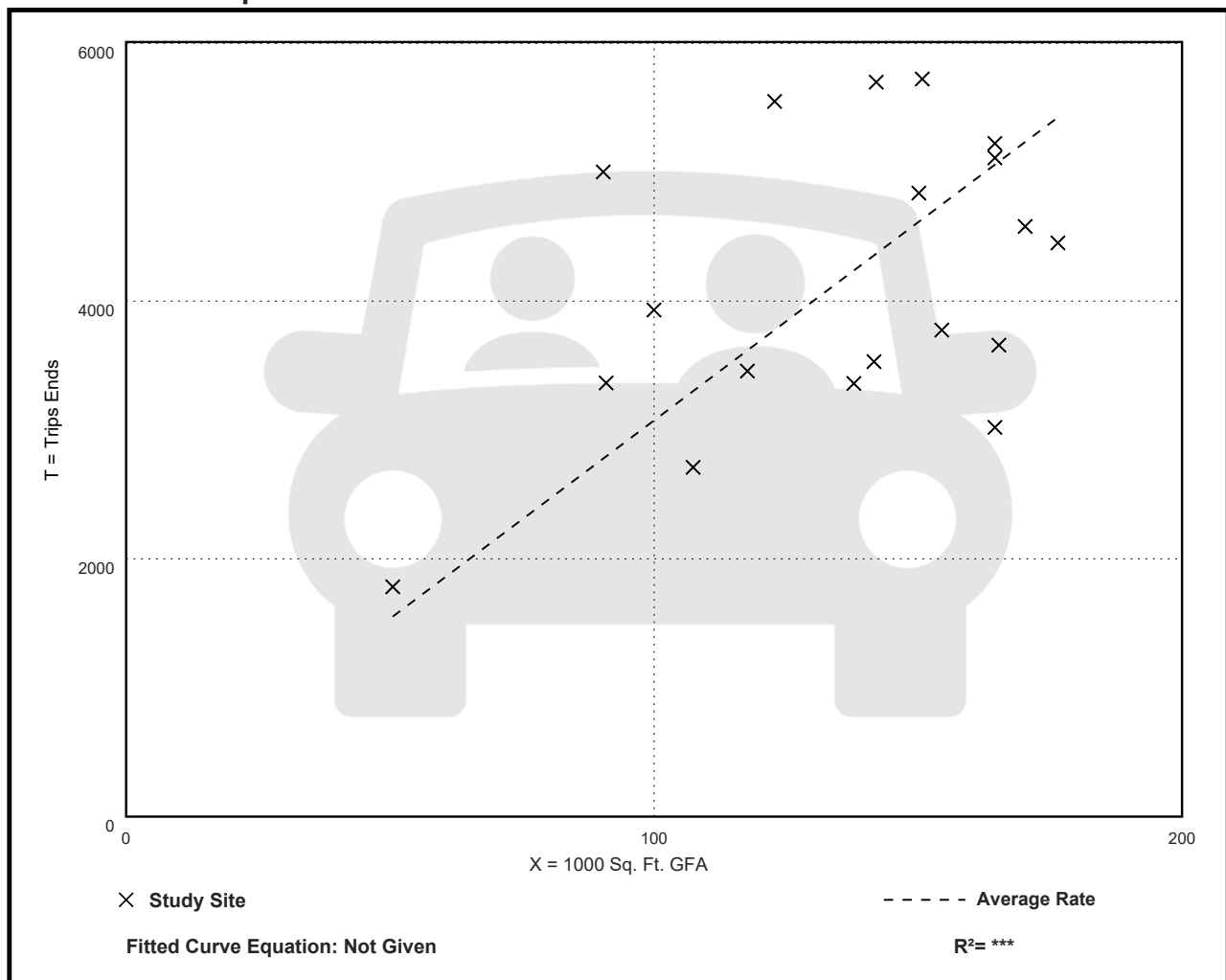
Avg. 1000 Sq. Ft. GFA: 135

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
30.74	18.35 - 55.35	8.58

Data Plot and Equation



Home Improvement Superstore (862)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 51

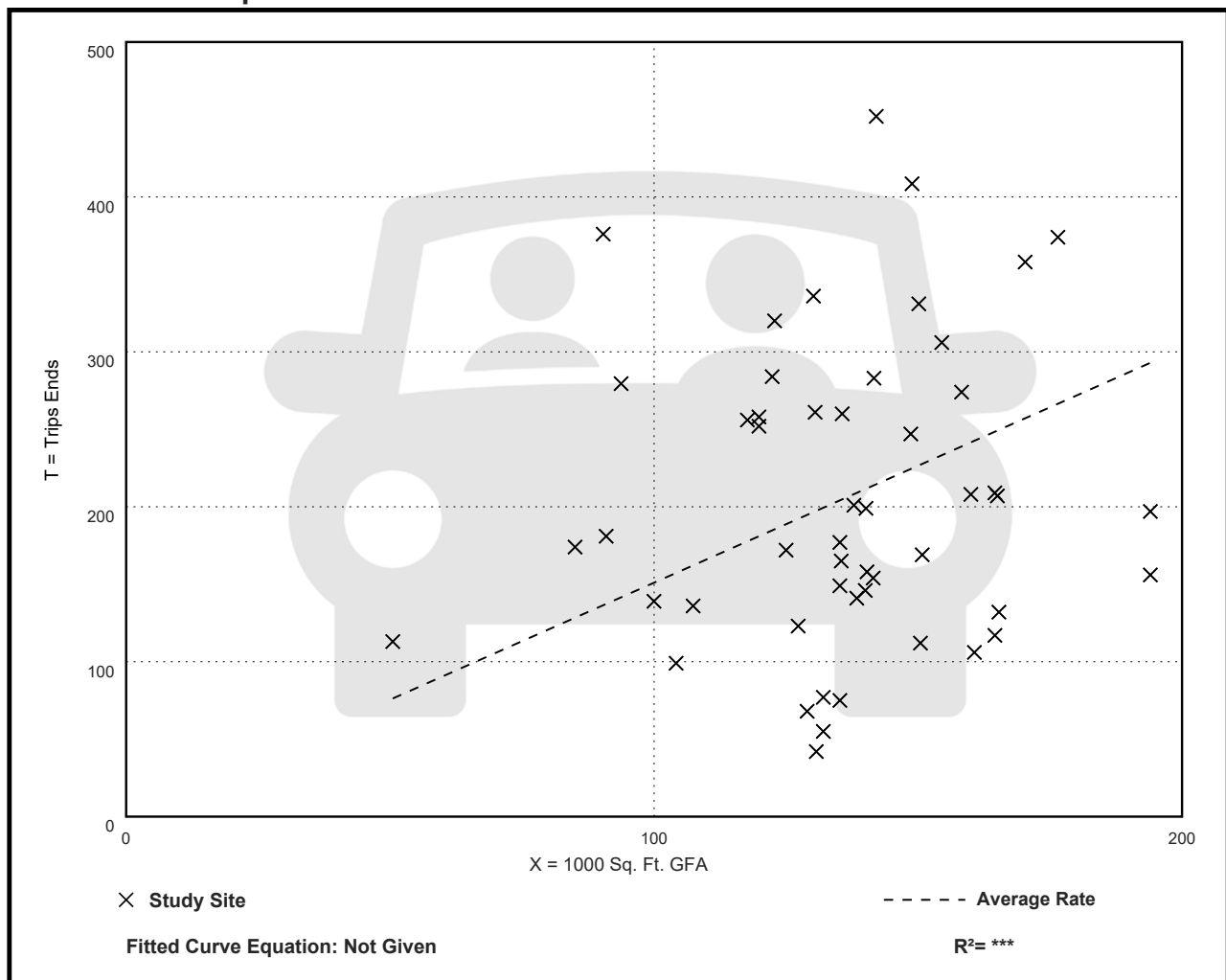
Avg. 1000 Sq. Ft. GFA: 136

Directional Distribution: 57% entering, 43% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.51	0.32 - 4.16	0.76

Data Plot and Equation



Home Improvement Superstore (862)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

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: 62

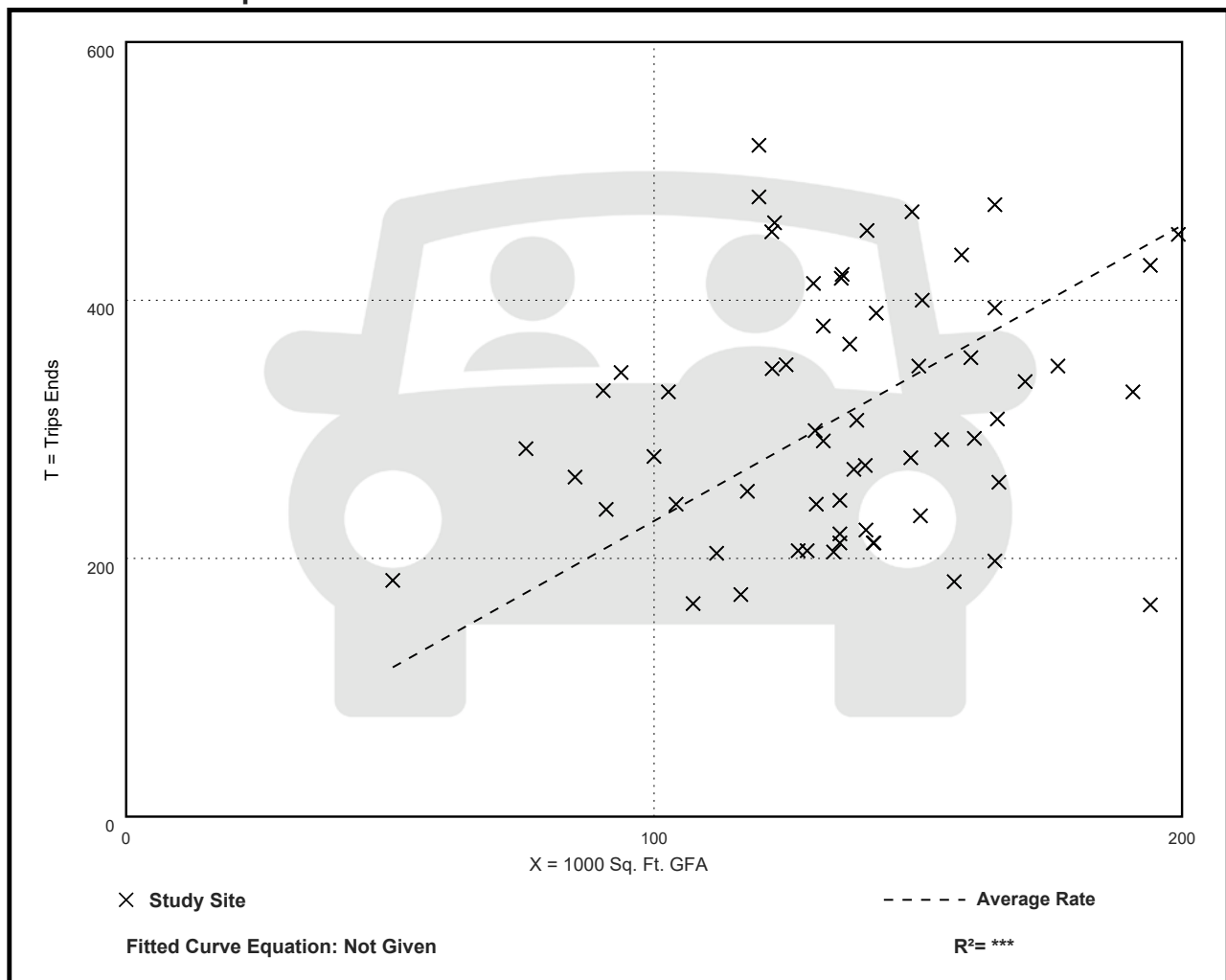
Avg. 1000 Sq. Ft. GFA: 136

Directional Distribution: 49% entering, 51% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.29	0.85 - 4.34	0.77

Data Plot and Equation



Home Improvement Superstore (862)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

AM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 26

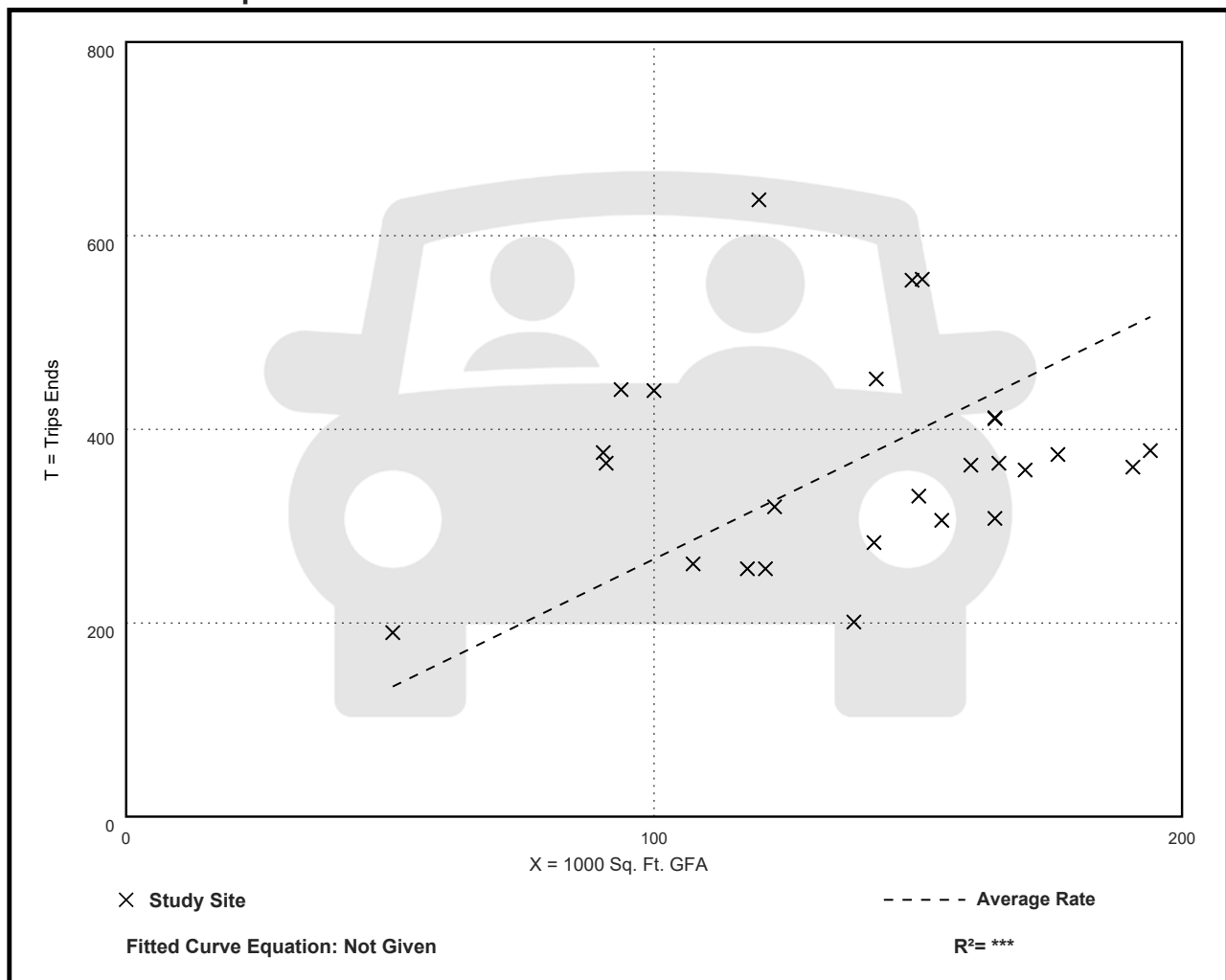
Avg. 1000 Sq. Ft. GFA: 138

Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.66	1.46 - 5.31	0.97

Data Plot and Equation



Home Improvement Superstore (862)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

PM Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 23

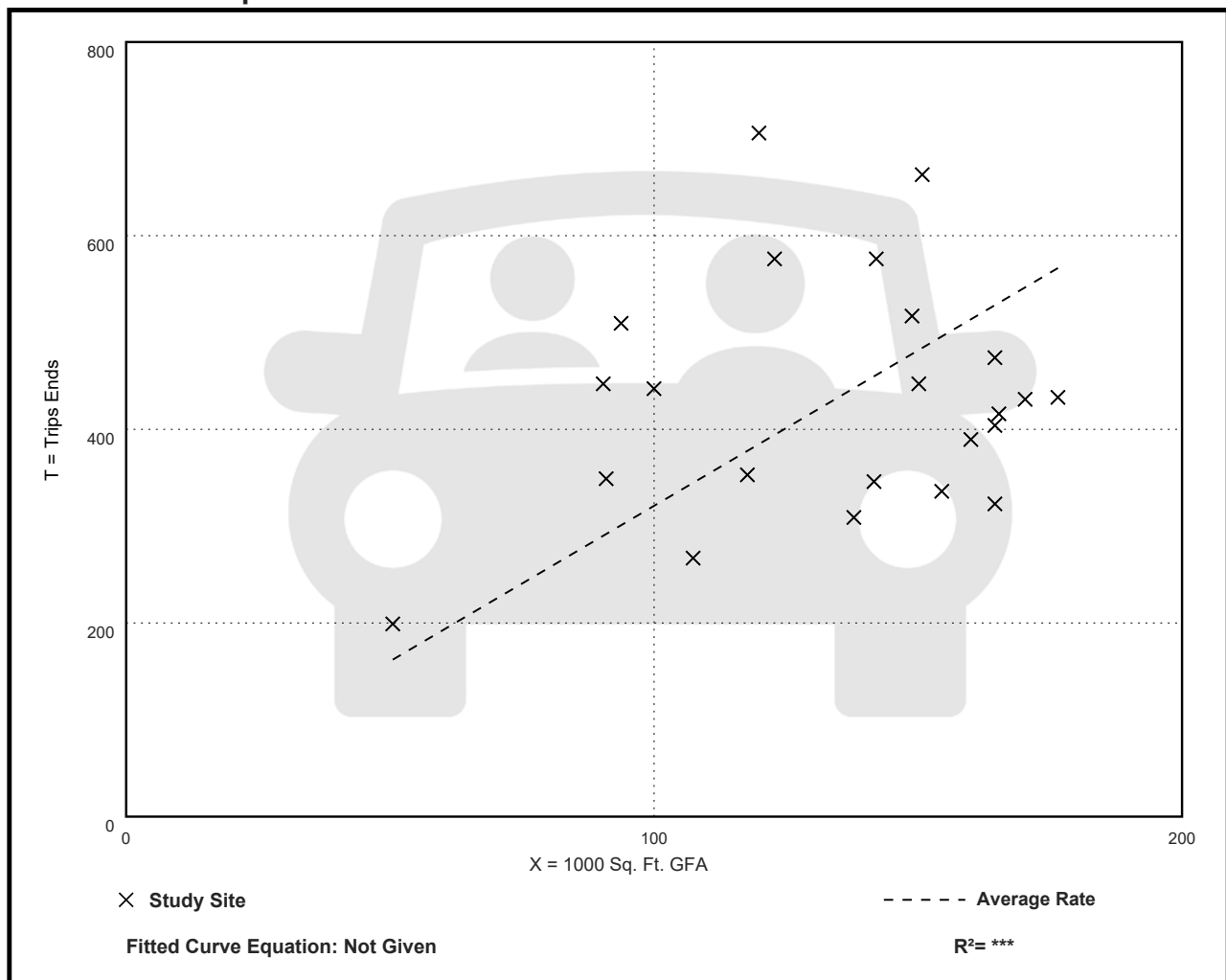
Avg. 1000 Sq. Ft. GFA: 134

Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.21	1.96 - 5.89	1.10

Data Plot and Equation



Home Improvement Superstore (862)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Saturday

Setting/Location: General Urban/Suburban

Number of Studies: 3

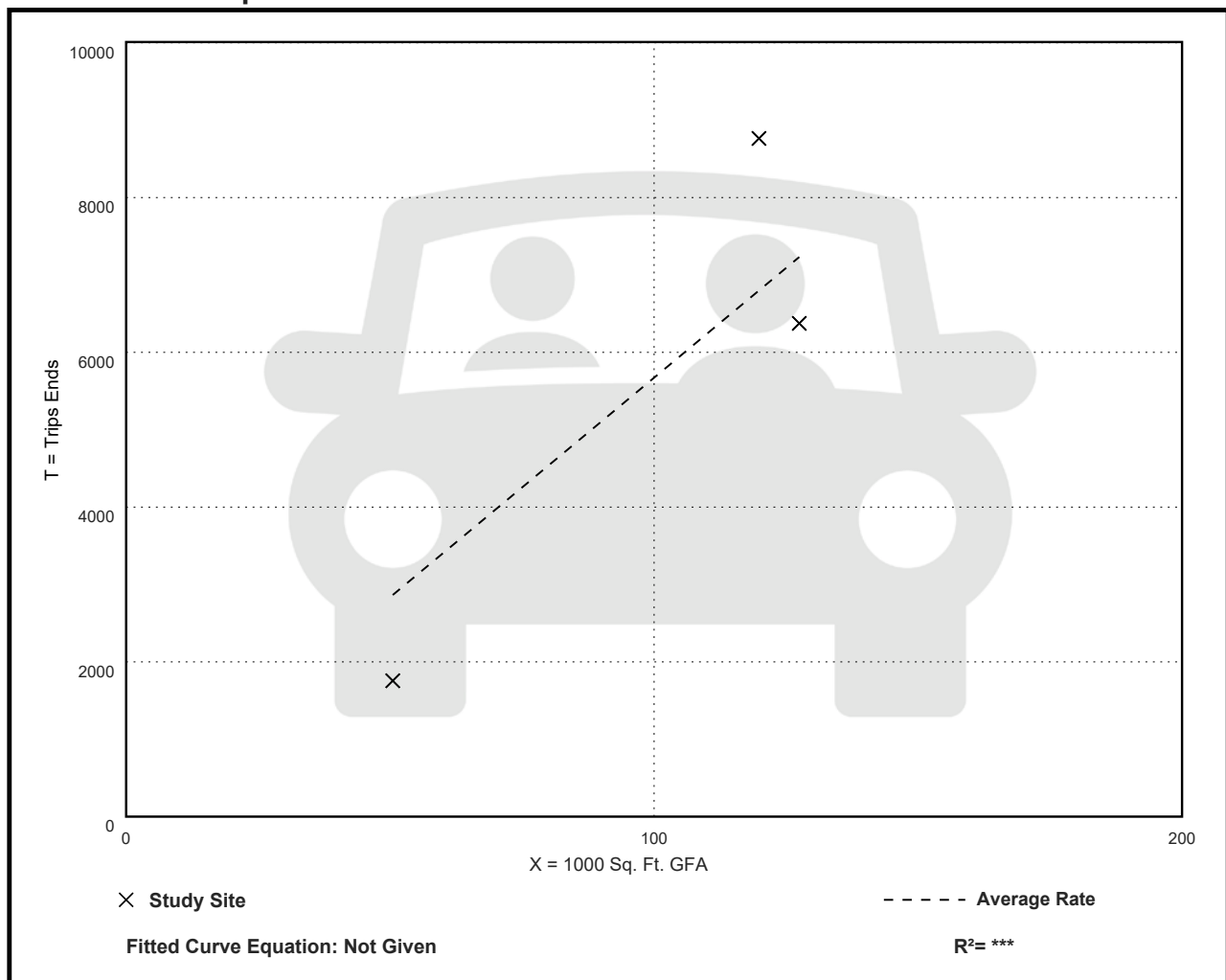
Avg. 1000 Sq. Ft. GFA: 99

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
56.72	34.77 - 73.12	17.72

Data Plot and Equation



Home Improvement Superstore (862)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 40

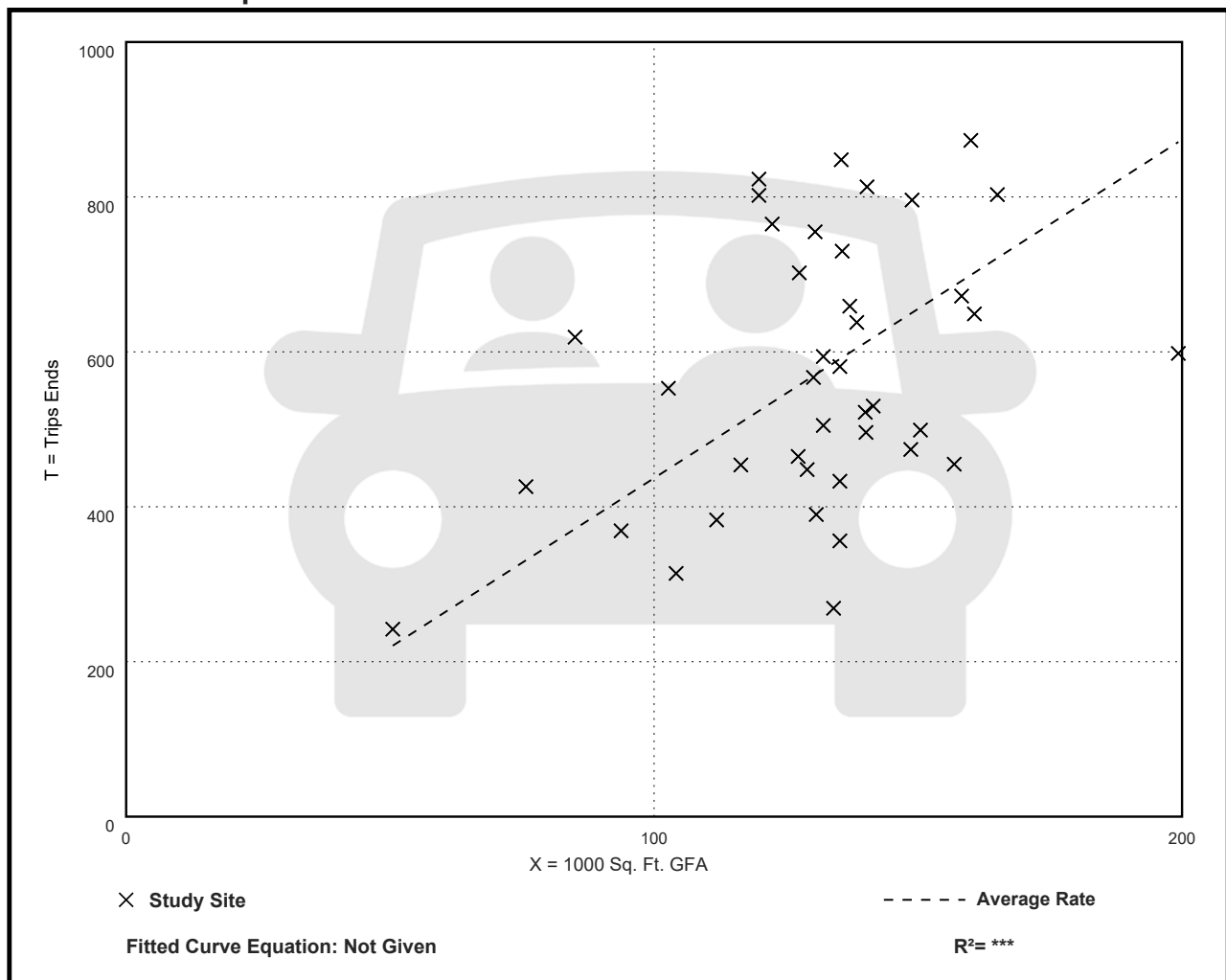
Avg. 1000 Sq. Ft. GFA: 131

Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
4.37	2.01 - 7.28	1.25

Data Plot and Equation



Home Improvement Superstore (862)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Sunday

Setting/Location: General Urban/Suburban

Number of Studies: 2

Avg. 1000 Sq. Ft. GFA: 85

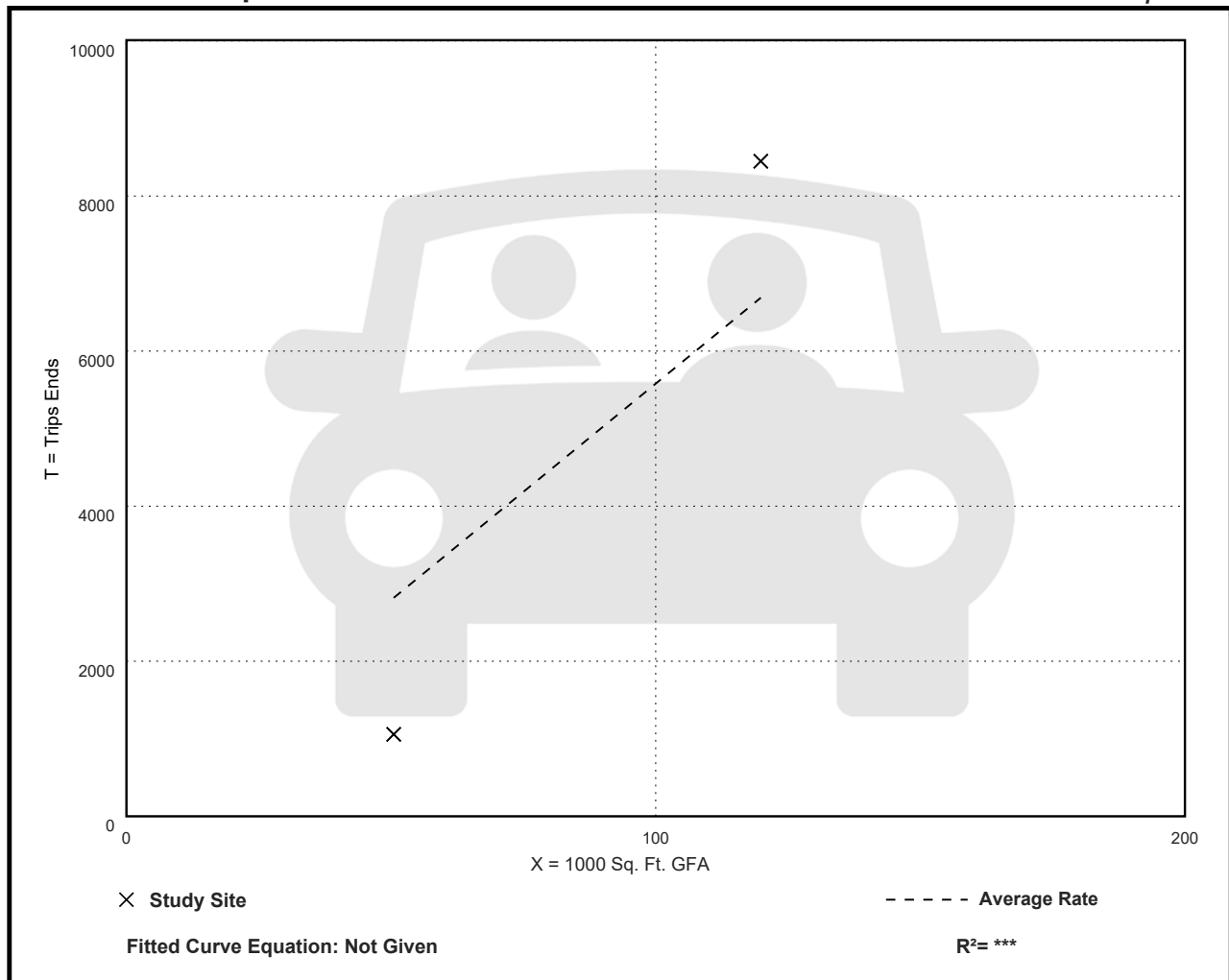
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
55.80	20.93 - 70.49	***

Data Plot and Equation

Caution – Small Sample Size



Home Improvement Superstore (862)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Sunday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 4

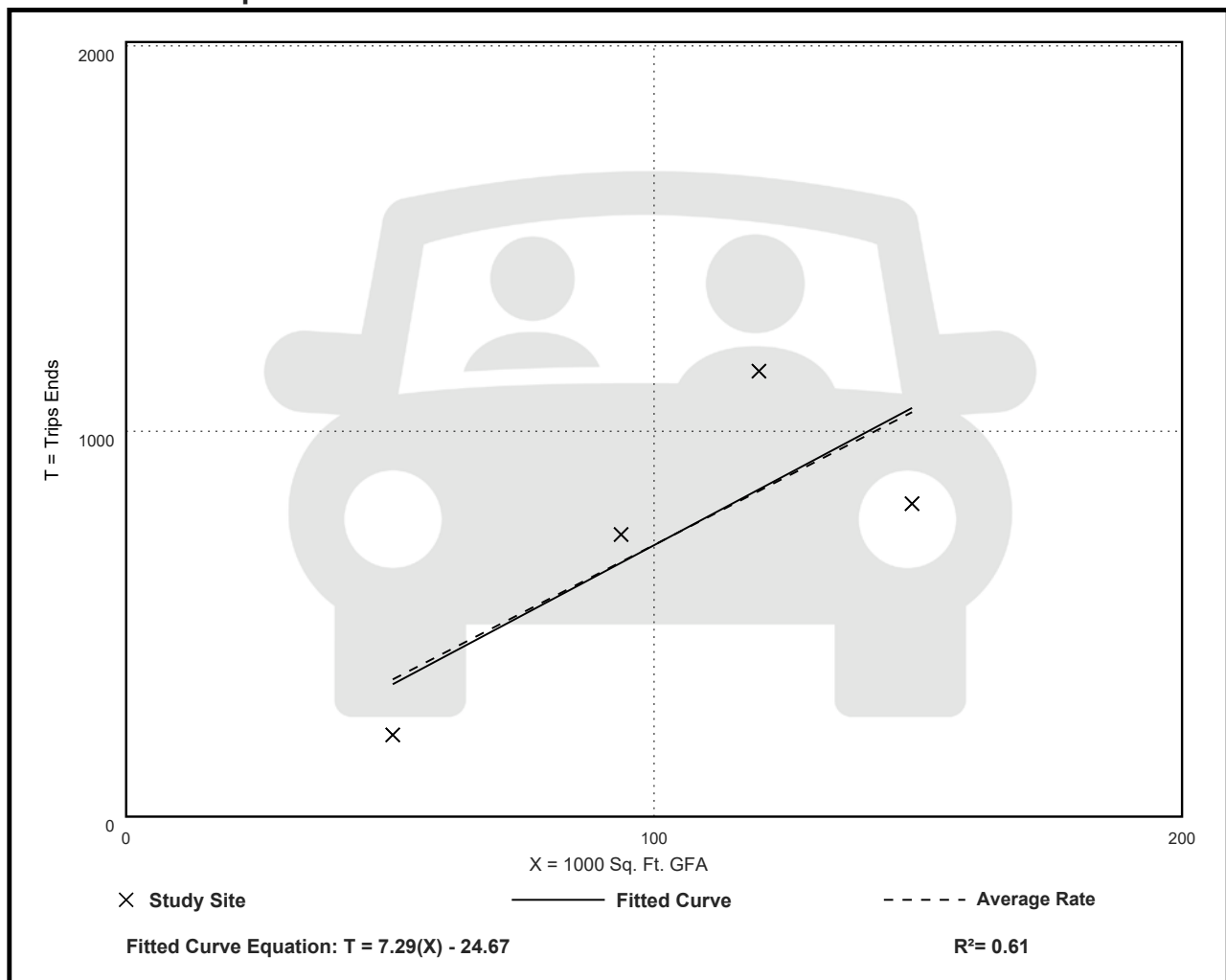
Avg. 1000 Sq. Ft. GFA: 103

Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
7.05	4.20 - 9.64	2.31

Data Plot and Equation



Home Improvement Superstore (862)

Walk+Bike+Transit Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 3

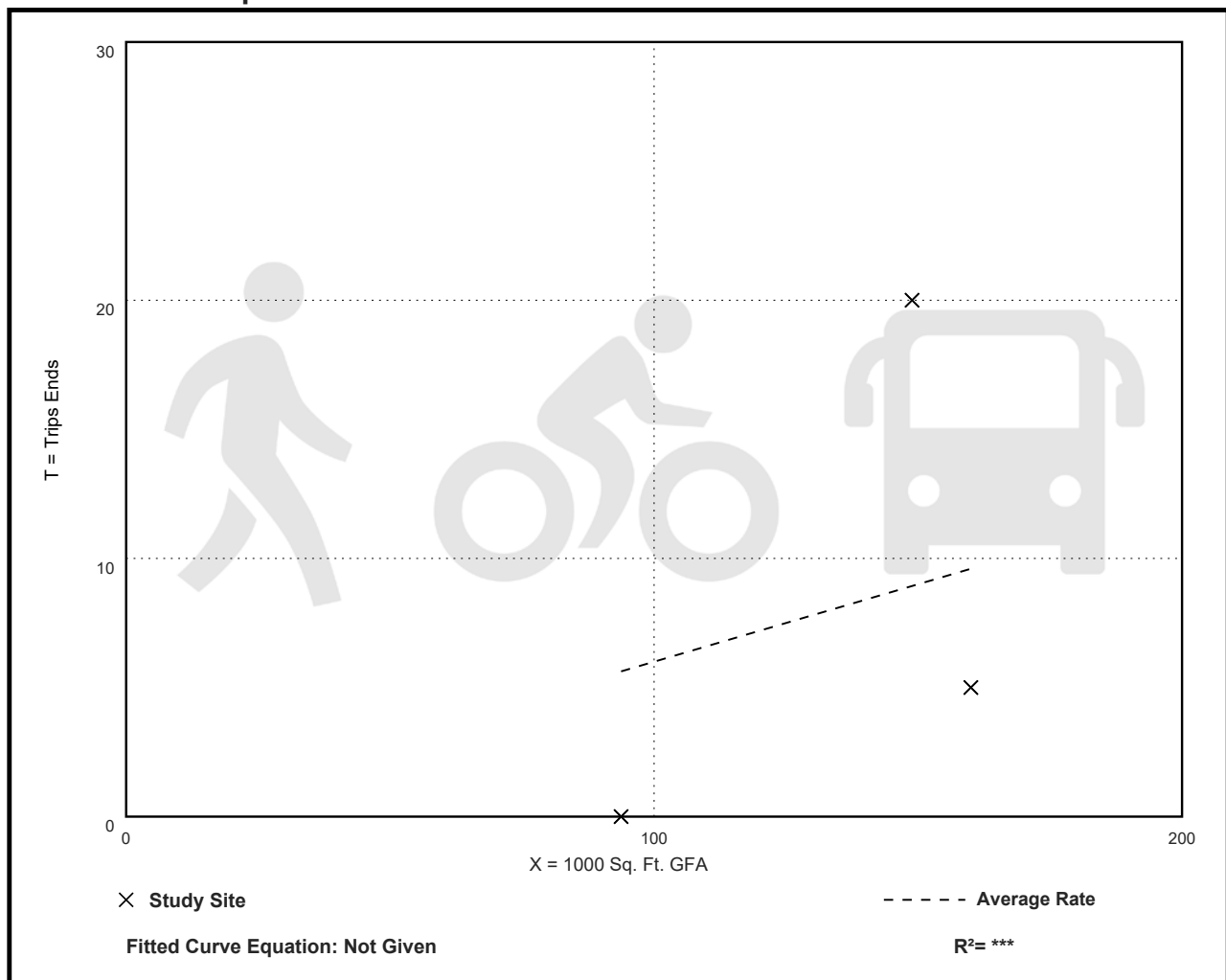
Avg. 1000 Sq. Ft. GFA: 134

Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.06	0.00 - 0.13	0.07

Data Plot and Equation



Home Improvement Superstore (862)

Walk+Bike+Transit Trip Ends vs: 1000 Sq. Ft. GFA

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: 3

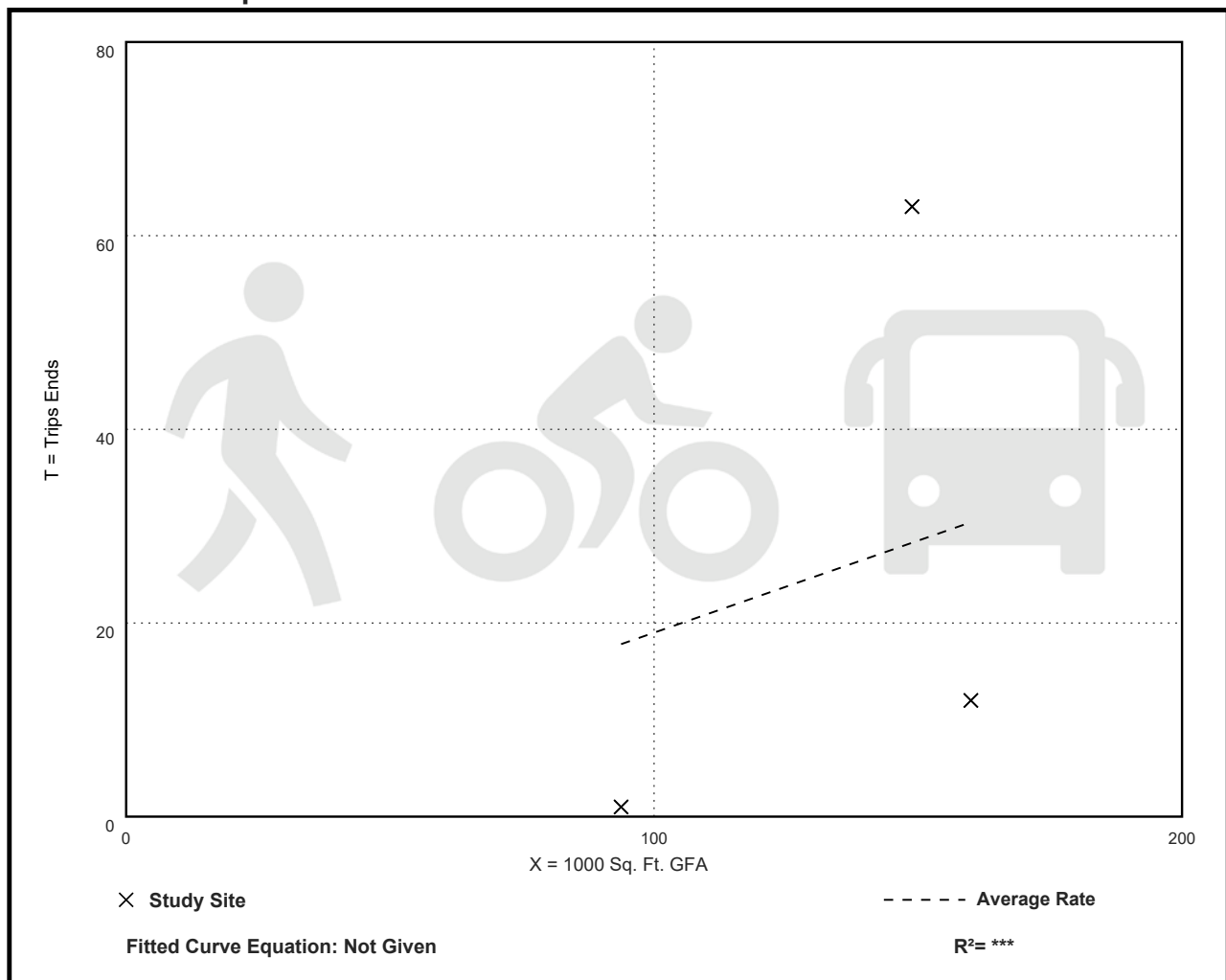
Avg. 1000 Sq. Ft. GFA: 134

Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.19	0.01 - 0.42	0.22

Data Plot and Equation



Home Improvement Superstore (862)

Walk+Bike+Transit Trip Ends vs: 1000 Sq. Ft. GFA

On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 3

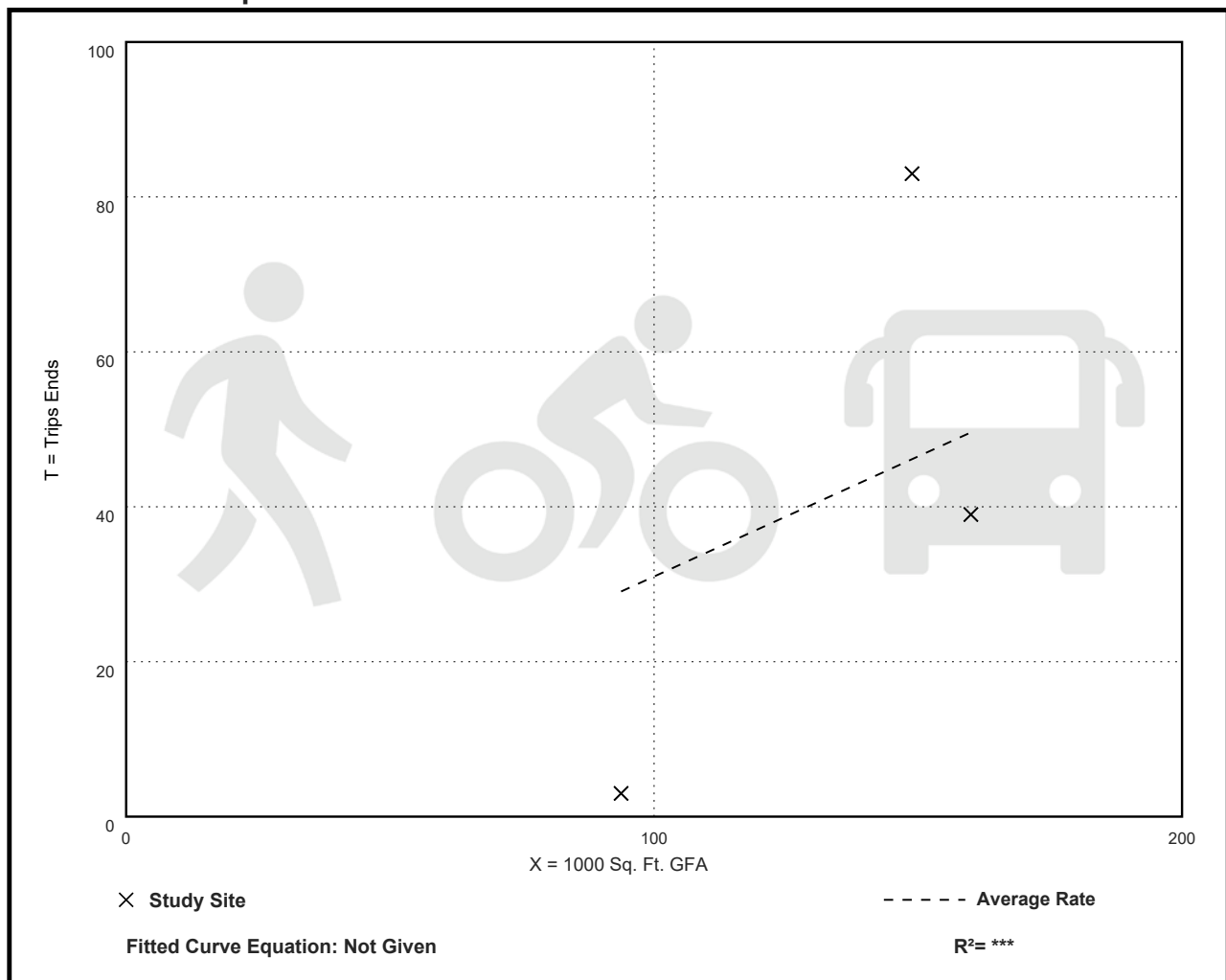
Avg. 1000 Sq. Ft. GFA: 134

Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.31	0.03 - 0.56	0.25

Data Plot and Equation



Home Improvement Superstore (862)

Walk+Bike+Transit Trip Ends vs: 1000 Sq. Ft. GFA

On a: Sunday, Peak Hour of Generator

Setting/Location: General Urban/Suburban

Number of Studies: 1

Avg. 1000 Sq. Ft. GFA: 94

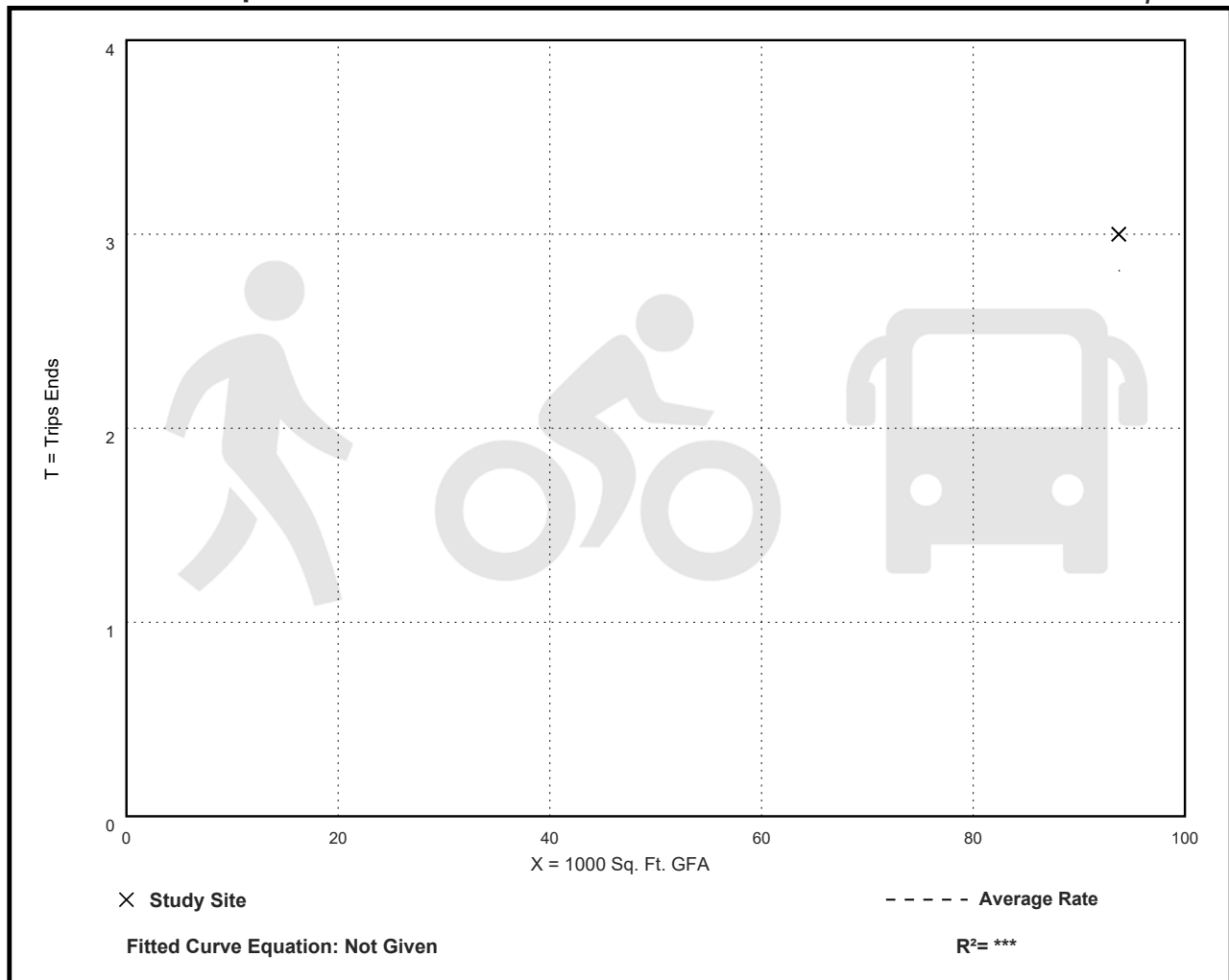
Directional Distribution: Not Available

Walk+Bike+Transit Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.03	0.03 - 0.03	***

Data Plot and Equation

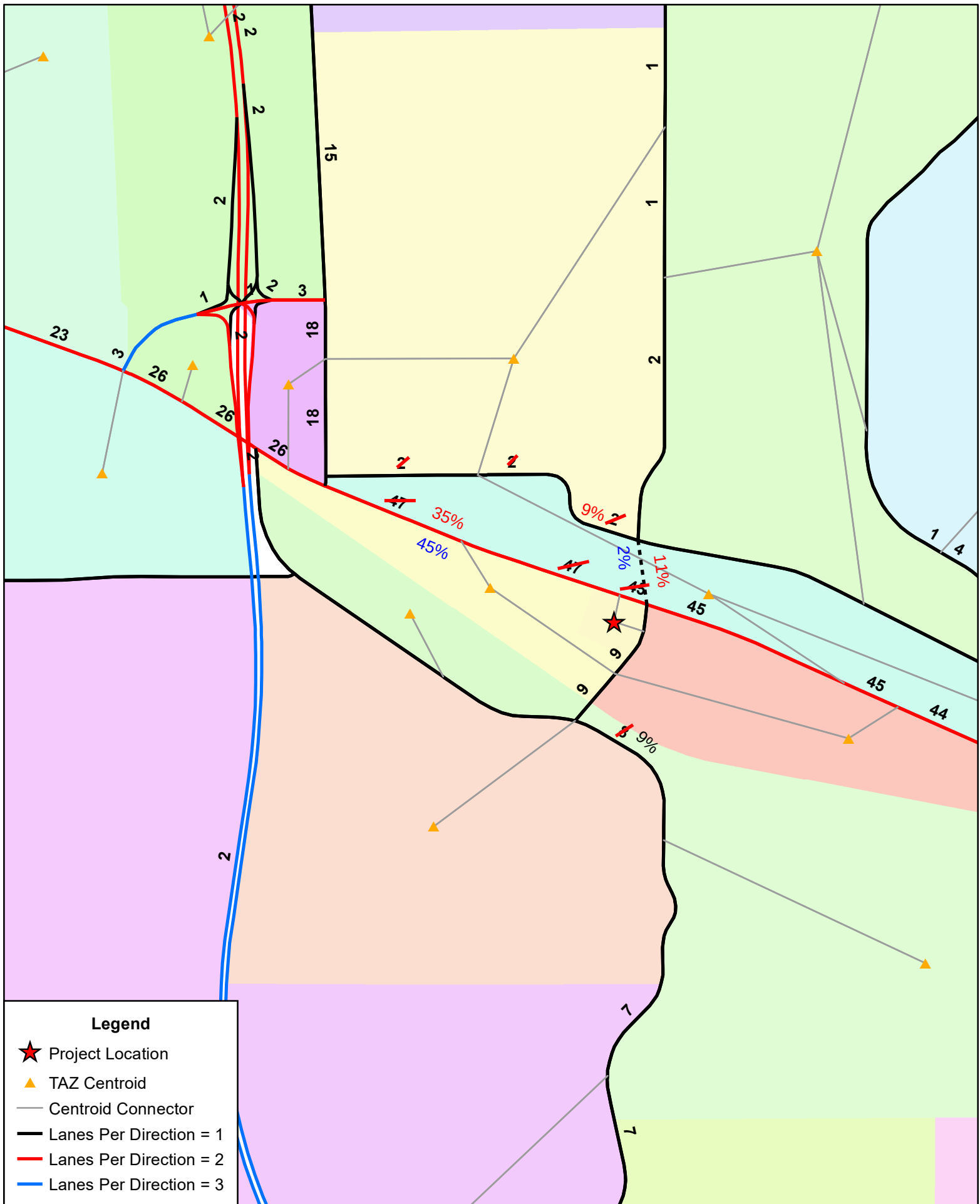
Caution – Small Sample Size



Vehicle Pass-By Rates by Land Use									
Source: ITE Trip Generation Manual , 11th Edition									
Land Use Code	862								
Land Use	Home Improvement Superstore								
Setting	General Urban/Suburban								
Time Period	Weekday PM Peak Period								
# Data Sites	4								
Average Pass-By Rate	42%								
	Pass-By Characteristics for Individual Sites								
	State or Province	Survey Year	# Interviews	Pass-By Trip (%)	Non-Pass-By Trips			Adj Street Peak Hour Volume	Source
GFA (000)					Primary (%)	Diverted (%)	Total (%)		
91	Florida	1993	111	46	—	—	54	—	30
100	Florida	1993	147	54	—	—	46	—	30
107	Florida	1992	488	44	32	24	56	—	30
142	Florida	2010	153	25	—	—	75	3888	9

APPENDIX H

CFRPMv7 Model Output



Trip Distribution - Floor & Decor Apopka
CFRPMv7 - 2025 - 1/5/2023



APPENDIX I

NCHRP Report 457 Output

NBL on Lake View Dr at Project Driveway 3 Analysis

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

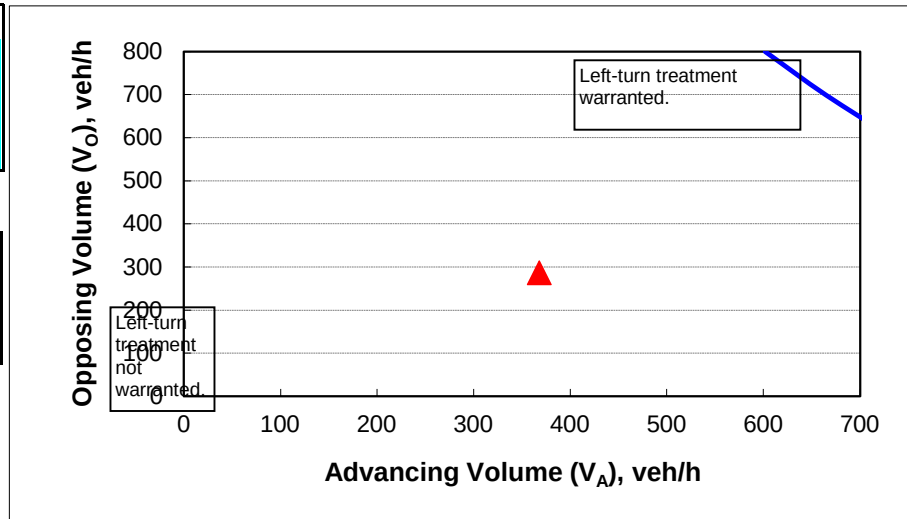
Variable	Value
85 th percentile speed, mph:	30
Percent of left-turns in advancing volume (V _A), %:	2%
Advancing volume (V _A), veh/h:	368
Opposing volume (V _O), veh/h:	286

OUTPUT

Variable	Value
Limiting advancing volume (V _A), veh/h:	1021
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



APPENDIX J

Parking Study

Parking and Trip Generation Study

Floor & Decor

Prepared for:

Floor & Decor Outlets of America, Inc.

Prepared by:

Kimley-Horn and Associates, Inc.
12740 Gran Bay Parkway West, Suite 2350
Jacksonville, Florida 32258
FBPE No. CA 00000696

William J. Schilling Jr., P.E.
Florida License Number: 53947
Date: _____

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Introduction

Floor & Decor has retained Kimley-Horn and Associates, Inc. (Kimley-Horn) to determine actual parking and trip generation rates at several of their existing stores around the country. Due to the characteristics of Floor & Decor's products, the sizes of the stores are very large in comparison to other retail stores, typically ranging between 60,000 and 100,000 square feet. The stores are sized to accommodate the large amount of flooring inventory that is typically stored and displayed for sale within the store. Historically, in order to determine the trip generation and required parking for a proposed Floor & Decor store, municipalities have used parking and trip generation rates that are based on studies for more traditional commercial retail stores. These traditional retail rates tend to overestimate the parking spaces needed and the weekday peak hour trips generated by a Floor & Decor store. This can result in Floor & Decor incurring unnecessary costs associated with constructing under-utilized parking lots for its stores or over-assessment for off-site transportation mitigation or mobility fees.

Kimley-Horn has recently conducted parking and trip generation data collection for several existing Floor & Decor stores around the country. From the data collection, actual parking and trip generation rates were determined for the existing stores, based on the gross leasable area of the stores. This report summarizes the data collection and resulting parking and trip generation rates.

Data Collection

Parking and trip generation data was collected for seven Floor & Decor stores around the country. These seven sites represent the best performing stores in each of their respective markets and were selected for study to collect data at the stores anticipated to have the highest parking and trip generation rates, representing a "worst-case" scenario. The store locations are as follows:

1. 1974 High Ridge Road; Boynton Beach, FL, 33426
2. 77 Willowbrook Boulevard; Wayne, NJ 07470
3. 14041 Worth Avenue; Woodbridge, VA 22192
4. 1801 East Dyer Road; Santa Ana, CA 92705
5. 17211 North Freeway; Houston, TX 77090
6. 600 East Rand Road; Arlington Heights, IL 60004
7. 2918 Buford Drive; Buford, GA 30519

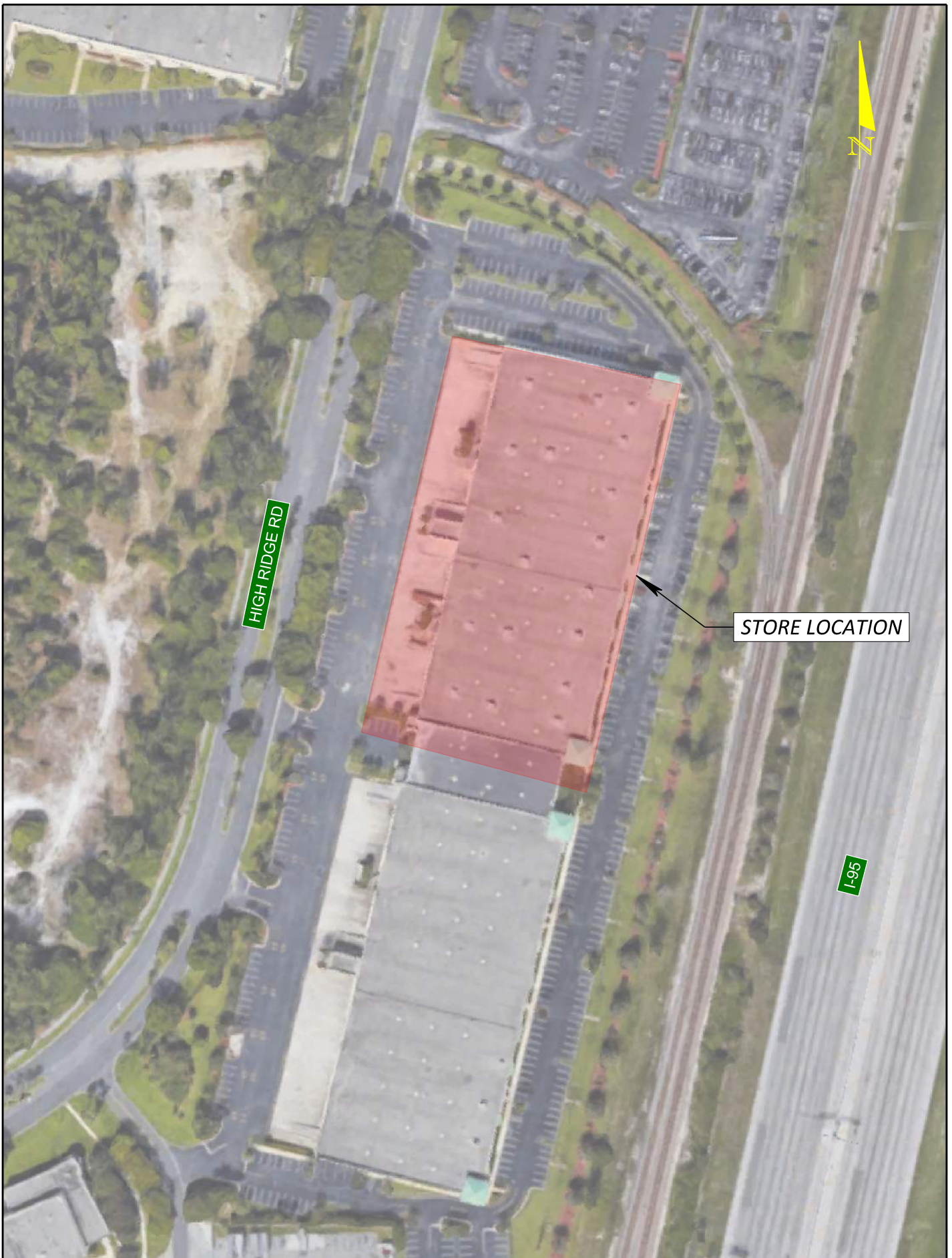
Figures 1 through 7 provide aerial location exhibits for each of the seven studied Floor & Decor stores. The store in Woodbridge, Virginia was recently studied by Kimley-Horn in August 2016. The parking and trip generation data obtained for that study was used in this analysis. For the other six stores, Kimley-Horn staff collected weekday parking and trip generation data between Tuesday, January 24, 2017 and Thursday, January 26, 2017. The weekday parking and trip generation data was collected from 7:00 AM to 9:30 AM and from 4:00 PM to 7:00 PM. Also, parking data collection was collected at the six stores on either Saturday, January 21, 2017 or Saturday, January 28, 2017 from 11:00 AM to 2:00 PM. According to Floor & Decor, the stores do not typically experience seasonal variations in patronage levels and sales. Therefore, the data collection is anticipated to represent typical store conditions.

In order to conduct the trip generation data collection, a Kimley-Horn staff member stood near the entrance to the Floor & Decor store and observed the parking lot. When a vehicle entered the parking lot and a person or a group of people got out of the vehicle and entered the Floor and Decor store, this was counted as one inbound vehicle trip. When a person or group of people exiting the Floor & Decor store got into a vehicle and exited the parking lot, this was counted as one outbound vehicle trip. This trip generation data collection method was used recognizing that several of the studied Floor & Decor stores are within shopping centers having multiple tenants, and this was the easiest way to isolate those trips to the shopping centers specifically destined to/from the studied Floor & Decor store.

Appendix A contains samples of the data collection worksheets used at the six stores in which new data was collected. The parking data collected at each of the seven sites is included in Appendix B, and the trip generation data is included in Appendix C.

Results of Parking Data Collection

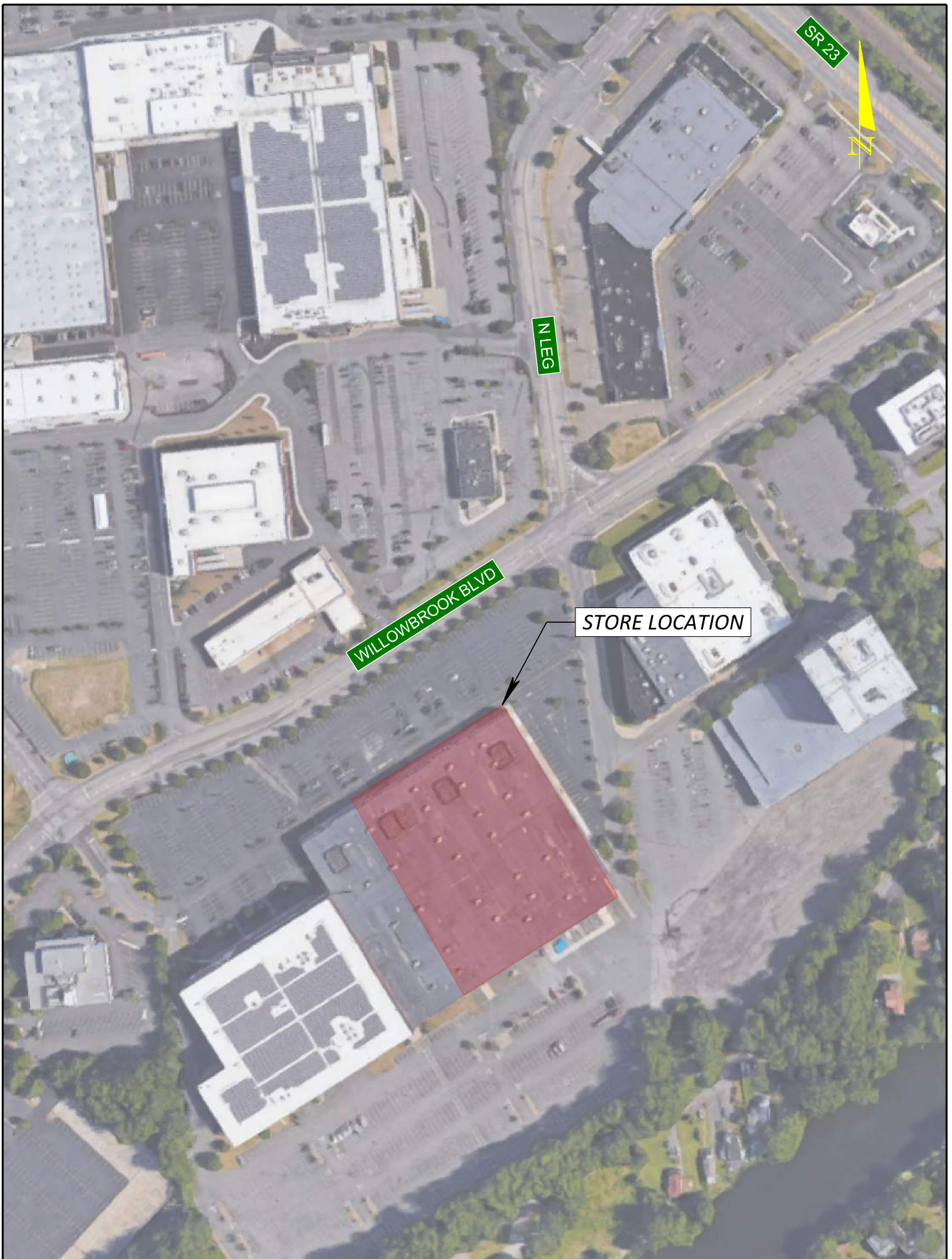
Table 1 presents the results of the parking data collection. As shown in **Table 1**, the maximum parking rate in spaces per 1,000 square feet of gross leasable area occurred during the Saturday data collection for all seven stores. The Saturday peak parking rates varied from 0.60 spaces per 1,000 square feet in Woodbridge, Virginia, (the lowest Saturday rate) to 1.07 spaces per 1,000 square feet in Houston, Texas (the highest Saturday rate). The average weekday AM peak parking rate for the seven stores was 0.35 spaces per 1,000 square feet. The average weekday PM peak parking rate was 0.47 spaces per 1,000 square feet. The average Saturday peak parking rate was 0.89 spaces per 1,000 square feet.



FLOOR & DECOR PARKING
AND TRIP GENERATION STUDY

BOYNTON BEACH STORE:
1974 HIGH RIDGE ROAD
BOYNTON BEACH, FL 33426

FIGURE 1



FLOOR & DECOR PARKING AND TRIP GENERATION STUDY	WAYNE STORE: 77 WILLOWBROOK BOULEVARD WAYNE, NJ 07470	FIGURE 2
--	--	-----------------



FLOOR & DECOR PARKING
AND TRIP GENERATION STUDY

POTOMAC MILLS STORE:
14041 WORTH AVENUE
WOODBIDGE, VA 22192

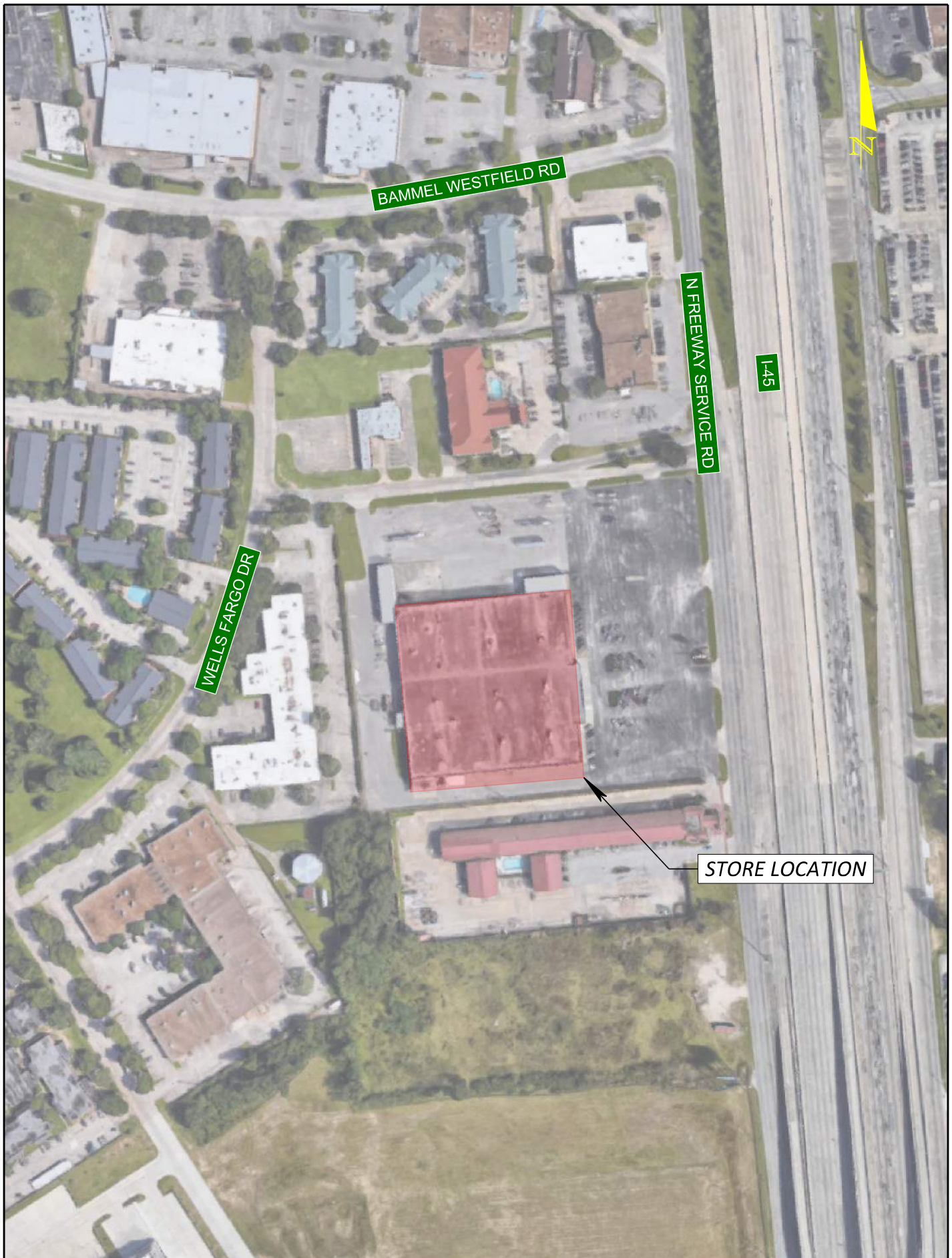
FIGURE 3



FLOOR & DECOR PARKING
AND TRIP GENERATION STUDY

SANTA ANA STORE:
1801 EAST DYER ROAD
SANTA ANA, CA 92705

FIGURE 4



FLOOR & DECOR PARKING
AND TRIP GENERATION STUDY

NORTH HOUSTON STORE:
17211 NORTH FREEWAY
HOUSTON, TX 77090

FIGURE 5



FLOOR & DECOR PARKING
AND TRIP GENERATION STUDY

ARLINGTON HEIGHTS STORE:
600 EAST RAND ROAD
ARLINGTON HEIGHTS, IL 60004

FIGURE 6



FLOOR & DECOR PARKING
AND TRIP GENERATION STUDY

MALL OF GEORGIA STORE:
2918 BUFORD DRIVE
BUFORD, GA 30519

FIGURE 7

Table 1: Peak Parking Counts and Rates

Store Location and Size	Date	Peak Time	Number of Occupied Spaces	Parking Rate (spaces per 1,000 SF GLA)
Floor & Decor - Boynton Beach 1974 High Ridge Road Boynton Beach, FL 33426 91,916 GLA	Wed, Jan 25	9:15 AM, 9:30 AM	43	0.47
	Wed, Jan 25	4:00 PM	51	0.55
	Sat, Jan 28	1:00 PM, 1:15 PM	65	0.71
Floor & Decor - Wayne 77 Willowbrook Boulevard Wayne, NJ 07470 88,500 SF GLA	Thur, Jan 26	9:30 AM	12	0.14
	Wed, Jan 25	6:15 PM	28	0.32
	Sat, Jan 21	1:30 PM	79	0.89
Floor & Decor - Potomac Mills 14041 Worth Avenue Woodbridge, VA 22192 76,384 SF GLA	Thur, July 14, 2016	8:00 AM, 9:30 AM	15	0.20
	Wed, July 13, 2016	4:00 PM	30	0.39
	Sat, July 9, 2016	1:00 PM, 1:15 PM	46	0.60
Floor & Decor - Santa Ana 1801 East Dyer Road Santa Ana, CA 92705 72,914 SF GLA	Tue, Jan 24	9:15 AM	26	0.36
	Tue, Jan 24	4:00 PM	29	0.40
	Sat, Jan 21	1:00 PM	75	1.03
Floor & Decor - North Houston 17211 North Freeway Houston, TX 77090 109,000 SF GLA	Wed, Jan 25	9:30 AM	58	0.53
	Tue, Jan 24	4:15 PM	56	0.51
	Sat, Jan 21	2:00 PM	117	1.07
Floor & Decor - Arlington Heights 600 East Rand Road Arlington Heights, IL 60004 74,900 SF GLA	Wed, Jan 25	9:30 AM	23	0.31
	Wed, Jan 25	4:00 PM, 4:15 PM	36	0.48
	Sat, Jan 28	1:00 PM	66	0.88
Floor & Decor - Mall of Georgia 2918 Buford Drive Buford, GA 30519 87,825 SF GLA	Tue, Jan 24	9:15 AM	37	0.42
	Tue, Jan 24	4:15 PM	56	0.64
	Sat, Jan 21	1:30 PM	89	1.01
Average weekday AM peak parking rate of all seven stores:				0.35
Average weekday PM peak parking rate of all seven stores:				0.47
Average Saturday midday peak parking rate of all seven stores:				0.89

Results of Trip Generation Data Collection

Table 2 presents the results of the trip generation data collection. As shown in **Table 2**, the peak hour trip generation rates in trips per 1,000 square feet of gross leasable area were higher in the PM peak hour than they were in the AM peak hour for five of the seven stores. The Wayne, New Jersey store experienced the lowest AM peak hour trip generation rate, and the Santa Ana store experienced the lowest PM peak hour trip generation rate. The Boynton Beach store experienced the highest AM peak hour and the highest PM peak hour trip generation rates. The average AM peak hour trip generation rate for the seven stores was 0.45 trips per 1,000 square feet (57 percent inbound, 43 percent outbound). The average PM peak hour trip generation rate was 0.62 trips per 1,000 square feet (50 percent inbound, 50 percent outbound).

Table 2: Peak Hour Trip Generation Summary

Store Location and Size	Date	Peak Hour	Inbound Trips	Outbound Trips	Total Trips	Trip Generation Rate (Trips per 1,000 SF GLA)	Inbound Trip Percentage	Outbound Trip Percentage
Floor & Decor - Boynton Beach 1974 High Ridge Road Boynton Beach, FL 33426 91,916 SF GLA	Wed, Jan 25, 2017	8:30 AM - 9:30 AM	43	38	81	0.88	53%	47%
	Wed, Jan 25, 2017	4:00 PM - 5:00 PM	40	37	77	0.84	52%	48%
Floor & Decor - Wayne 77 Willowbrook Boulevard Wayne, NJ 07470 88,500 SF GLA	Thur, Jan 26, 2017	8:30 AM - 9:30 AM	10	5	15	0.17	67%	33%
	Wed, Jan 25, 2017	5:15 PM - 6:15 PM	27	22	49	0.55	55%	45%
Floor & Decor - Potomac Mills 14041 Worth Avenue Woodbridge, VA 22192 76,384 SF GLA	Thur, July 14, 2016	7:30 AM - 8:30 AM	13	15	28	0.37	46%	54%
	Wed, July 13, 2016	5:00 PM - 6:00 PM	18	20	38	0.50	47%	53%
Floor & Decor - Santa Ana 1801 East Dyer Road Santa Ana, CA 92705 72,914 SF GLA	Tue, Jan 24, 2017	8:15 AM - 9:15 AM	18	17	35	0.48	51%	49%
	Tue, Jan 24, 2017	4:00 PM - 5:00 PM	15	16	31	0.43	48%	52%
Floor & Decor - North Houston 17211 North Freeway Houston, TX 77090 109,000 SF GLA	Wed, Jan 25, 2017	8:15 AM - 9:15 AM	28	26	54	0.50	52%	48%
	Tue, Jan 24, 2017	5:30 PM - 6:30 PM	31	33	64	0.59	48%	52%
Floor & Decor - Arlington Heights 600 East Rand Road Arlington Heights, IL 60004 74,900 SF GLA	Wed, Jan 25, 2017	8:30 AM - 9:30 AM	17	11	28	0.37	61%	39%
	Wed, Jan 25, 2017	5:30 PM - 6:30 PM	24	22	46	0.61	52%	48%
Floor & Decor - Mall of Georgia 2918 Buford Drive Buford, GA 30519 87,825 SF GLA	Tue, Jan 24, 2017	8:30 AM - 9:30 AM	23	11	34	0.39	68%	32%
	Tue, Jan 24, 2017	5:45 PM - 6:45 PM	33	40	73	0.83	45%	55%
Average AM Peak Hour Trip Generation Rate and Inbound/Outbound Percentage						0.45	(57% in, 43% out)	
Average PM Peak Hour Trip Generation Rate and Inbound/Outbound Percentage						0.62	(50% in, 50% out)	

Summary

Table 3 presents the average weekday AM and PM peak parking and trip generation rates as well as the average Saturday peak parking rate for the seven stores. **Table 4** presents the highest weekday AM and PM parking and trip generation rates observed as well as the highest Saturday parking rate observed for the seven stores.

Table 3: Average Parking and Trip Generation Rates

Time Period	Average Peak Parking Rate (Occupied Spaces per 1,000 SF GLA)	Average Peak Hour Trip Generation Rate (Trips Per Hour Per 1,000 SF GLA)	Average Peak Hour Inbound Trip Percentage	Average Peak Hour Outbound Trip Percentage
AM Peak	0.35	0.45	57%	43%
PM Peak	0.47	0.62	50%	50%
Saturday Peak	0.89	-		

Table 4: Highest Parking and Trip Generation Rates

Time Period	Highest Parking Rate (Occupied Spaces per 1,000 SF GLA)	Location of Store with Highest Parking Rate	Highest Trip Generation Rate (Trips Per Hour Per 1,000 SF GLA)	Location of Store with Highest Trip Generation Rate	Inbound Trip Percentage at Store with Highest Trip Generation	Outbound Trip Percentage at Store with Highest Trip Generation
AM Peak	0.53	North Houston	0.88	Boynton Beach	53%	47%
PM Peak	0.64	Mall of Georgia	0.84	Boynton Beach	52%	48%
Saturday Peak	1.07	North Houston	-			

Appendix A:

Sample Parking and Trip Generation Data Collection Sheets

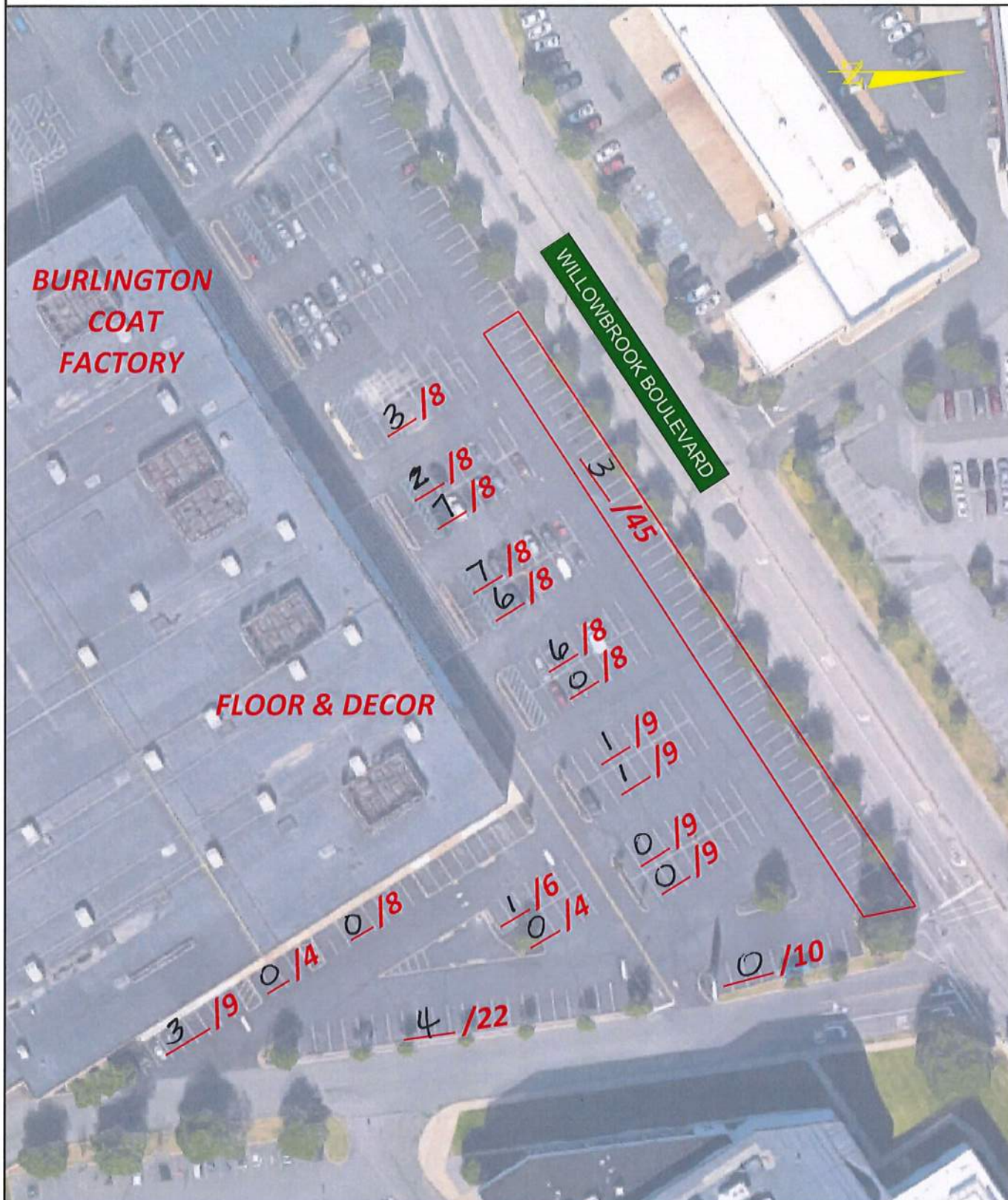
DATE: 1/25/16
 TIME PERIOD: 7:30 AM
 DATA COLLECTOR: Dombrowski

(15)



FLOOR & DECOR	1974 HIGH RIDGE ROAD BOYNTON BEACH, FL 33426	PARKING DATA COLLECTION
---------------	---	----------------------------

DATE: 1/21/17
 TIME PERIOD: 11:15 - 11:30
 DATA COLLECTOR: Logan Grant



FLOOR & DECOR	77 WILLOWBROOK BOULEVARD WAYNE, NJ 07470	PARKING DATA COLLECTION
---------------	---	----------------------------

DATE: 1/24/17
TIME PERIOD: 7:00 AM
DATA COLLECTOR: Alex Vlosky



FLOOR & DECOR

1801 EAST DYER ROAD
SANTA ANA, CA 92705

PARKING DATA
COLLECTION

DATE: 1/21/2018
 TIME PERIOD: 11:30AM - 11:45AM
 DATA COLLECTOR: EMMA JENSEN

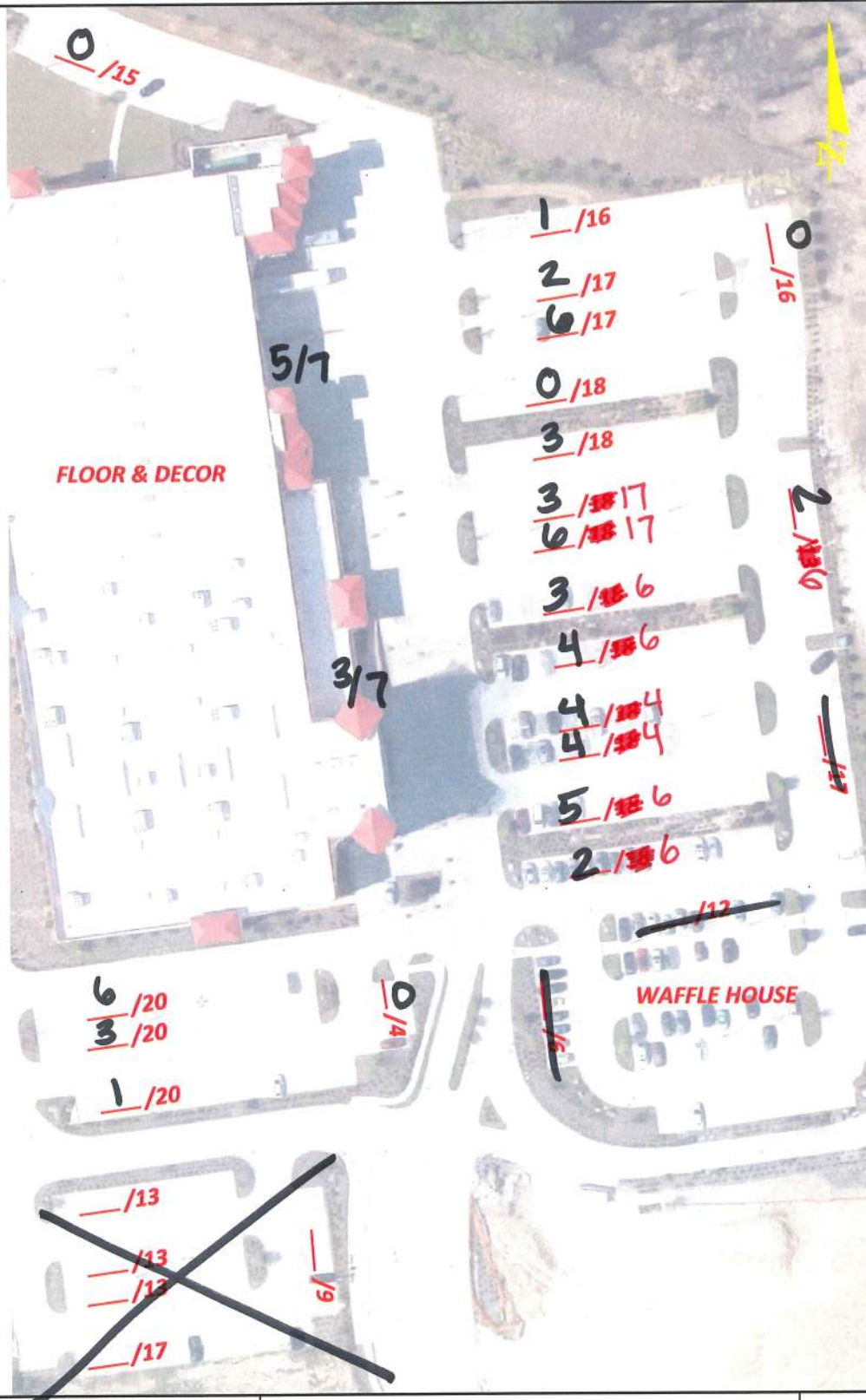


FLOOR & DECOR

17211 NORTH FREEWAY
 HOUSTON, TX 77090

PARKING DATA
 COLLECTION

DATE: 1/21/17
 TIME PERIOD: 11:00 AM - 11:15 AM
 DATA COLLECTOR: Jourdyn Fuga



FLOOR & DECOR

2918 BUFORD DRIVE
 BUFORD, GA 30519

PARKING DATA
 COLLECTION

DATE: 1/24/17

TIME PERIOD: AM

DATA COLLECTOR: MATT FLYNN

	IN	OUT
7:00 AM - 7:15 AM		
7:15 AM - 7:30 AM		
7:30 AM - 7:45 AM		
7:45 AM - 8:00 AM		
8:00 AM - 8:15 AM		
8:15 AM - 8:30 AM		
8:30 AM - 8:45 AM		
8:45 AM - 9:00 AM		
9:00 AM - 9:15 AM		
9:15 AM - 9:30 AM		

Appendix B:

Parking Data Collection

Floor & Decor Parking Data Collection

Boynton Beach

Boynton Beach, Florida		
Store Size (square feet)		91,916
Time	Parking Count	Parking Ratio (spaces/1000 sf)
AM Peak		
Collected on Wednesday, January 25, 2017		
7:00 AM	14	0.15
7:15 AM	13	0.14
7:30 AM	15	0.16
7:45 AM	20	0.22
8:00 AM	26	0.28
8:15 AM	25	0.27
8:30 AM	29	0.32
8:45 AM	35	0.38
9:00 AM	41	0.45
9:15 AM	43	0.47
9:30 AM	43	0.47
PM Peak		
Collected on Wednesday, January 25, 2017		
4:00 PM	51	0.55
4:15 PM	42	0.46
4:30 PM	39	0.42
4:45 PM	46	0.50
5:00 PM	46	0.50
5:15 PM	39	0.42
5:30 PM	37	0.40
5:45 PM	39	0.42
6:00 PM	30	0.33
6:15 PM	26	0.28
6:30 PM	26	0.28
6:45 PM	30	0.33
7:00 PM	29	0.32
Saturday Peak		
Collected on Saturday, January 28, 2017		
11:00 AM	47	0.51
11:15 AM	55	0.60
11:30 AM	64	0.70
11:45 AM	56	0.61
12:00 PM	52	0.57
12:15 PM	51	0.55
12:30 PM	56	0.61
12:45 PM	62	0.67
1:00 PM	65	0.71
1:15 PM	65	0.71
1:30 PM	61	0.66
1:45 PM	62	0.67
2:00 PM	64	0.70

Wayne

Wayne, New Jersey		
Store Size (square feet)		88,500
Time	Parking Count	Parking Ratio (spaces/1000 sf)
AM Peak		
Collected on Tuesday, January 24, 2017		
7:00 AM	2	0.02
7:15 AM	3	0.03
7:30 AM	2	0.02
7:45 AM	3	0.03
8:00 AM	4	0.05
8:15 AM	4	0.05
8:30 AM	4	0.05
8:45 AM	4	0.05
9:00 AM	6	0.07
9:15 AM	9	0.10
9:30 AM	12	0.14
PM Peak		
Collected on Tuesday, January 24, 2017		
4:00 PM	19	0.21
4:15 PM	15	0.17
4:30 PM	21	0.24
4:45 PM	16	0.18
5:00 PM	18	0.20
5:15 PM	19	0.21
5:30 PM	24	0.27
5:45 PM	24	0.27
6:00 PM	26	0.29
6:15 PM	28	0.32
6:30 PM	26	0.29
6:45 PM	26	0.29
7:00 PM	23	0.26
Saturday Peak		
Collected on Saturday, January 21, 2017		
11:00 AM	35	0.40
11:15 AM	44	0.50
11:30 AM	54	0.61
11:45 AM	49	0.55
12:00 PM	57	0.64
12:15 PM	58	0.66
12:30 PM	55	0.62
12:45 PM	67	0.76
1:00 PM	70	0.79
1:15 PM	71	0.80
1:30 PM	79	0.89
1:45 PM	73	0.82
2:00 PM	75	0.85

Floor & Decor Parking Data Collection

Potamac Mills

Woodbridge, Virginia		
Store Size (square feet)		76,384
Time	Parking Count	Parking Ratio (spaces/1000 sf)
AM Peak Collected on Thursday, July 14, 2016		
7:00 AM	5	0.07
7:15 AM	9	0.12
7:30 AM	11	0.14
7:45 AM	12	0.16
8:00 AM	15	0.20
8:15 AM	13	0.17
8:30 AM	9	0.12
8:45 AM	10	0.13
9:00 AM	12	0.16
9:15 AM	13	0.17
9:30 AM	15	0.20
PM Peak Collected on Wednesday, July 13, 2016		
4:00 PM	30	0.39
4:15 PM	28	0.37
4:30 PM	21	0.27
4:45 PM	21	0.27
5:00 PM	21	0.27
5:15 PM	18	0.24
5:30 PM	19	0.25
5:45 PM	20	0.26
6:00 PM	19	0.25
6:15 PM	16	0.21
6:30 PM	17	0.22
6:45 PM	19	0.25
7:00 PM	23	0.30
Saturday Peak Collected on Saturday, July 9, 2016		
11:00 AM	38	0.50
11:15 AM	33	0.43
11:30 AM	34	0.45
11:45 AM	39	0.51
12:00 PM	32	0.42
12:15 PM	37	0.48
12:30 PM	44	0.58
12:45 PM	45	0.59
1:00 PM	46	0.60
1:15 PM	46	0.60
1:30 PM	40	0.52
1:45 PM	32	0.42
2:00 PM	37	0.48

Santa Ana

Santa Ana, California		
Store Size (square feet)		72,914
Time	Parking Count	Parking Ratio (spaces/1000 sf)
AM Peak Collected on Tuesday, January 24, 2017		
7:00 AM	9	0.12
7:15 AM	12	0.16
7:30 AM	12	0.16
7:45 AM	12	0.16
8:00 AM	14	0.19
8:15 AM	16	0.22
8:30 AM	22	0.30
8:45 AM	19	0.26
9:00 AM	23	0.32
9:15 AM	26	0.36
9:30 AM	25	0.34
PM Peak Collected on Tuesday, January 24, 2017		
4:00 PM	29	0.40
4:15 PM	22	0.30
4:30 PM	26	0.36
4:45 PM	23	0.32
5:00 PM	18	0.25
5:15 PM	23	0.32
5:30 PM	14	0.19
5:45 PM	14	0.19
6:00 PM	16	0.22
6:15 PM	15	0.21
6:30 PM	22	0.30
6:45 PM	21	0.29
7:00 PM	20	0.27
Saturday Peak Collected on Saturday, January 21, 2017		
11:00 AM	59	0.81
11:15 AM	66	0.91
11:30 AM	67	0.92
11:45 AM	60	0.82
12:00 PM	62	0.85
12:15 PM	68	0.93
12:30 PM	67	0.92
12:45 PM	68	0.93
1:00 PM	75	1.03
1:15 PM	70	0.96
1:30 PM	74	1.01
1:45 PM	70	0.96
2:00 PM	60	0.82

Floor & Decor Parking Data Collection

North Houston

Houston, Texas		
Store Size (square feet)		109,000
Time	Parking Count	Parking Ratio (spaces/1000 sf)
AM Peak		
<i>Collected on Wednesday, January 25, 2017</i>		
7:00 AM	22	0.20
7:15 AM	41	0.38
7:30 AM	37	0.34
7:45 AM	35	0.32
8:00 AM	39	0.36
8:15 AM	44	0.40
8:30 AM	49	0.45
8:45 AM	49	0.45
9:00 AM	56	0.51
9:15 AM	54	0.50
9:30 AM	58	0.53
PM Peak		
<i>Collected on Tuesday, January 24, 2017</i>		
4:00 PM	54	0.50
4:15 PM	56	0.51
4:30 PM	54	0.50
4:45 PM	50	0.46
5:00 PM	48	0.44
5:15 PM	43	0.39
5:30 PM	52	0.48
5:45 PM	44	0.40
6:00 PM	52	0.48
6:15 PM	46	0.42
6:30 PM	47	0.43
6:45 PM	41	0.38
7:00 PM	37	0.34
Saturday Peak		
<i>Collected on Saturday, January 21, 2017</i>		
11:00 AM	81	0.74
11:15 AM	79	0.72
11:30 AM	83	0.76
11:45 AM	91	0.83
12:00 PM	91	0.83
12:15 PM	90	0.83
12:30 PM	89	0.82
12:45 PM	88	0.81
1:00 PM	101	0.93
1:15 PM	105	0.96
1:30 PM	90	0.83
1:45 PM	100	0.92
2:00 PM	117	1.07

Arlington Heights

Arlington Heights, Illinois		
Store Size (square feet)		74,900
Time	Parking Count	Parking Ratio (spaces/1000 sf)
AM Peak		
<i>Collected on Thursday, January 19, 2017</i>		
7:00 AM	8	0.11
7:15 AM	11	0.15
7:30 AM	10	0.13
7:45 AM	10	0.13
8:00 AM	12	0.16
8:15 AM	13	0.17
8:30 AM	14	0.19
8:45 AM	18	0.24
9:00 AM	17	0.23
9:15 AM	21	0.28
9:30 AM	23	0.31
PM Peak		
<i>Collected on Thursday, January 19, 2017</i>		
4:00 PM	36	0.48
4:15 PM	36	0.48
4:30 PM	35	0.47
4:45 PM	29	0.39
5:00 PM	33	0.44
5:15 PM	34	0.45
5:30 PM	28	0.37
5:45 PM	29	0.39
6:00 PM	30	0.40
6:15 PM	29	0.39
6:30 PM	29	0.39
6:45 PM	25	0.33
7:00 PM	21	0.28
Saturday Peak		
<i>Collected on Saturday, January 28, 2017</i>		
11:00 AM	41	0.55
11:15 AM	36	0.48
11:30 AM	45	0.60
11:45 AM	46	0.61
12:00 PM	43	0.57
12:15 PM	47	0.63
12:30 PM	48	0.64
12:45 PM	52	0.69
1:00 PM	66	0.88
1:15 PM	65	0.87
1:30 PM	55	0.73
1:45 PM	50	0.67
2:00 PM	49	0.65

Floor & Decor Parking Data Collection

Mall of Georgia		
Buford, Georgia		
Store Size (square feet)		87,825
Time	Parking Count	Parking Ratio (spaces/1000 sf)
AM Peak		
<i>Collected on Tuesday, January 24, 2017</i>		
7:00 AM	13	0.15
7:15 AM	17	0.19
7:30 AM	20	0.23
7:45 AM	16	0.18
8:00 AM	18	0.20
8:15 AM	21	0.24
8:30 AM	23	0.26
8:45 AM	24	0.27
9:00 AM	29	0.33
9:15 AM	37	0.42
9:30 AM	33	0.38
PM Peak		
<i>Collected on Tuesday, January 24, 2017</i>		
4:00 PM	53	0.60
4:15 PM	56	0.64
4:30 PM	52	0.59
4:45 PM	48	0.55
5:00 PM	46	0.52
5:15 PM	43	0.49
5:30 PM	36	0.41
5:45 PM	32	0.36
6:00 PM	29	0.33
6:15 PM	28	0.32
6:30 PM	37	0.42
6:45 PM	34	0.39
7:00 PM	36	0.41
Saturday Peak		
<i>Collected on Saturday, January 21, 2017</i>		
11:00 AM	63	0.72
11:15 AM	65	0.74
11:30 AM	71	0.81
11:45 AM	62	0.71
12:00 PM	64	0.73
12:15 PM	75	0.85
12:30 PM	79	0.90
12:45 PM	76	0.87
1:00 PM	84	0.96
1:15 PM	88	1.00
1:30 PM	89	1.01
1:45 PM	74	0.84
2:00 PM	73	0.83

Appendix C:

Trip Generation Data Collection

Floor & Decor Trip Generation Data Collection

Boynton Beach

Boynton Beach, Florida				
Store Size (square feet)				91,916
Time Period	Inbound trips	Outbound trips	Total trips	Peak Hour Trip Generation (trips/1000 sf)
AM Peak				
Collected on Wednesday, January 25, 2017				
7:00 - 7:15	7	4	11	
7:15 - 7:30	2	2	4	
7:30 - 7:45	5	1	6	
7:45 - 8:00	6	6	12	
8:00 - 8:15	9	5	14	
8:15 - 8:30	6	2	8	
8:30 - 8:45	6	6	12	0.88
8:45 - 9:00	12	13	25	
9:00 - 9:15	16	12	28	
9:15 - 9:30	9	7	16	
PM Peak				
Collected on Wednesday, January 25, 2017				
4:00 - 4:15	9	12	21	0.84
4:15 - 4:30	9	10	19	
4:30 - 4:45	11	10	21	
4:45 - 5:00	11	5	16	
5:00 - 5:15	5	14	19	
5:15 - 5:30	7	5	12	
5:30 - 5:45	7	9	16	
5:45 - 6:00	3	11	14	
6:00 - 6:15	4	6	10	
6:15 - 6:30	5	8	13	
6:30 - 6:45	9	7	16	
6:45 - 7:00	4	0	4	

Wayne

Wayne, New Jersey				
Store Size (square feet)				88,500
Time Period	Inbound trips	Outbound trips	Total trips	Peak Hour Trip Generation (trips/1000 sf)
AM Peak Collected on Tuesday, January 24, 2017				
7:00 - 7:15	0	0	0	
7:15 - 7:30	0	0	0	
7:30 - 7:45	1	0	1	
7:45 - 8:00	1	0	1	
8:00 - 8:15	2	2	4	
8:15 - 8:30	1	1	2	
8:30 - 8:45	2	2	4	0.17
8:45 - 9:00	2	1	3	
9:00 - 9:15	3	1	4	
9:15 - 9:30	3	1	4	
PM Peak Collected on Tuesday, January 24, 2017				
4:00 - 4:15	3	6	9	
4:15 - 4:30	4	4	8	
4:30 - 4:45	3	3	6	
4:45 - 5:00	5	2	7	
5:00 - 5:15	4	3	7	0.55
5:15 - 5:30	8	3	11	
5:30 - 5:45	5	6	11	
5:45 - 6:00	8	5	13	
6:00 - 6:15	6	8	14	
6:15 - 6:30	7	3	10	
6:30 - 6:45	5	7	12	
6:45 - 7:00	4	8	12	

Potomac Mills

Woodbridge, Virginia				
Store Size (square feet)				76,384
Time Period	Inbound trips	Outbound trips	Total trips	Peak Hour Trip Generation (trips/1000 sf)
AM Peak Collected on Thursday, July 14, 2016				
7:00 - 7:15	5	1	6	0.37
7:15 - 7:30	3	1	4	
7:30 - 7:45	4	3	7	
7:45 - 8:00	7	4	11	
8:00 - 8:15	1	3	4	
8:15 - 8:30	1	5	6	
8:30 - 8:45	3	2	5	
8:45 - 9:00	2	0	2	
9:00 - 9:15	3	2	5	
9:15 - 9:30	5	3	8	
PM Peak Collected on Wednesday, July 13, 2016				
4:00 - 4:15	5	7	12	0.50
4:15 - 4:30	2	9	11	
4:30 - 4:45	4	4	8	
4:45 - 5:00	3	3	6	
5:00 - 5:15	4	7	11	
5:15 - 5:30	4	3	7	
5:30 - 5:45	6	5	11	
5:45 - 6:00	4	5	9	
6:00 - 6:15	2	5	7	
6:15 - 6:30	5	4	9	
6:30 - 6:45	7	5	12	
6:45 - 7:00	7	3	10	

Santa Ana

Santa Ana, California				
Store Size (square feet)				72,914
Time Period	Inbound trips	Outbound trips	Total trips	Peak Hour Trip Generation (trips/1000 sf)
AM Peak Collected on Tuesday, January 24, 2017				
7:00 - 7:15	0	0	0	0.48
7:15 - 7:30	2	1	3	
7:30 - 7:45	2	1	3	
7:45 - 8:00	1	1	2	
8:00 - 8:15	6	1	7	
8:15 - 8:30	7	4	11	
8:30 - 8:45	5	5	10	
8:45 - 9:00	1	5	6	
9:00 - 9:15	5	3	8	0.43
9:15 - 9:30	3	4	7	
PM Peak Collected on Tuesday, January 24, 2017				
4:00 - 4:15	2	4	6	0.43
4:15 - 4:30	6	1	7	
4:30 - 4:45	5	6	11	
4:45 - 5:00	2	5	7	
5:00 - 5:15	1	4	5	
5:15 - 5:30	4	3	7	
5:30 - 5:45	2	4	6	
5:45 - 6:00	2	0	2	
6:00 - 6:15	2	1	3	
6:15 - 6:30	5	1	6	
6:30 - 6:45	2	3	5	
6:45 - 7:00	5	5	10	

Floor & Decor Trip Generation Data Collection

North Houston

North Houston Houston, Texas				
Store Size (square feet)				109,000
Time Period	Inbound trips	Outbound trips	Total trips	Peak Hour Trip Generation (trips/1000 sf)
AM Peak Collected on Wednesday, January 25, 2017				
7:00 - 7:15	6	1	7	0.50
7:15 - 7:30	5	4	9	
7:30 - 7:45	4	4	8	
7:45 - 8:00	7	3	10	
8:00 - 8:15	9	3	12	
8:15 - 8:30	9	8	17	
8:30 - 8:45	6	7	13	
8:45 - 9:00	6	5	11	
9:00 - 9:15	7	6	13	0.59
9:15 - 9:30	7	2	9	
PM Peak Collected on Tuesday, January 24, 2017				
4:00 - 4:15	6	6	12	0.59
4:15 - 4:30	6	8	14	
4:30 - 4:45	8	14	22	
4:45 - 5:00	7	5	12	
5:00 - 5:15	3	7	10	
5:15 - 5:30	8	3	11	0.59
5:30 - 5:45	5	10	15	
5:45 - 6:00	10	5	15	
6:00 - 6:15	6	7	13	
6:15 - 6:30	10	11	21	
6:30 - 6:45	7	7	14	0.59
6:45 - 7:00	6	7	13	

Arlington Heights

Arlington Heights, Illinois				
Store Size (square feet)				74,900
Time Period	Inbound trips	Outbound trips	Total trips	Peak Hour Trip Generation (trips/1000 sf)
AM Peak Collected on Thursday, January 19, 2017				
7:00 - 7:15	6	2	8	0.37
7:15 - 7:30	3	2	5	
7:30 - 7:45	1	2	3	
7:45 - 8:00	4	1	5	
8:00 - 8:15	3	2	5	
8:15 - 8:30	3	2	5	
8:30 - 8:45	2	1	3	
8:45 - 9:00	3	3	6	
9:00 - 9:15	6	2	8	0.37
9:15 - 9:30	6	5	11	
PM Peak Collected on Thursday, January 19, 2017				
4:00 - 4:15	3	6	9	0.61
4:15 - 4:30	8	4	12	
4:30 - 4:45	2	3	5	
4:45 - 5:00	10	2	12	
5:00 - 5:15	4	3	7	
5:15 - 5:30	4	3	7	
5:30 - 5:45	5	6	11	
5:45 - 6:00	8	5	13	
6:00 - 6:15	3	8	11	0.61
6:15 - 6:30	8	3	11	
6:30 - 6:45	4	7	11	0.61
6:45 - 7:00	3	8	11	

Mall of Georgia

Buford, Georgia				
Store Size (square feet)				87,825
Time Period	Inbound trips	Outbound trips	Total trips	Peak Hour Trip Generation (trips/1000 sf)
AM Peak Collected on Tuesday, January 24, 2017				
7:00 - 7:15	6	2	8	0.39
7:15 - 7:30	4	2	6	
7:30 - 7:45	1	4	5	
7:45 - 8:00	4	2	6	
8:00 - 8:15	3	1	4	
8:15 - 8:30	6	3	9	
8:30 - 8:45	3	2	5	
8:45 - 9:00	5	3	8	
9:00 - 9:15	9	2	11	0.39
9:15 - 9:30	6	4	10	
PM Peak Collected on Tuesday, January 24, 2017				
4:00 - 4:15	7	9	16	0.83
4:15 - 4:30	7	8	15	
4:30 - 4:45	5	13	18	
4:45 - 5:00	5	10	15	
5:00 - 5:15	5	6	11	
5:15 - 5:30	3	10	13	
5:30 - 5:45	3	9	12	
5:45 - 6:00	3	10	13	
6:00 - 6:15	6	8	14	0.83
6:15 - 6:30	15	8	23	
6:30 - 6:45	9	14	23	
6:45 - 7:00	6	4	10	



City of Apopka PLANNING COMMISSION STAFF REPORT

Section: SITE PLANS

Item #: 2.

Meeting Date: August 8, 2023

Department: Community Development

SUBJECT:

Shoppes at East Shore Multifamily – Major Development Plan

REQUEST:

Recommend approval of the Shoppes at East Shore Multifamily – Major Development Plan

SUMMARY:

Owner(s): Shoppes At East Shore, LLC

Applicant: Kimley-Horn and Associates, Inc. c/o L. Jordan Draper, P.E.

Parcel Number(s): 20-21-28-0000-00-025, 20-21-28-0000-00-024, 20-21-28-0000-00-021 and 20-21-28-0000-00-028

Location: Northeast corner of Ocoee Apopka Road and Keene Road

Future Land Use (FLU): Mixed-Use (15 dwelling units per acre and 1.0 floor area ratio maximum)

Zoning: PD (Planned Development)

Existing Use: Vacant

Proposed Use(s): 208 multifamily units

Tract Size: 27.48 +/- acres

Proposed Density/Intensity: 7.6 dwelling units per acre

ZONING REPORT:

Direction	Future Land Use	Zoning	Present Use
North	Mixed-Use and Residential Low	Mixed-Use – East Shore – Gateway (MU-ES-GT) and County Rural	Horse Farm and Single-Family Residence
East	County Rural	County A-1 (Citrus Rural)	Horse Farm and Single-Family Residences
South	Office and County Industrial	O (Office) and County A-1	County Waste Management Facility
West	High Density Residential – 25	PD (Planned Development)	Ocoee Apopka Road Multi-Family (Jefferson Apartments)

PROJECT SUMMARY:

The Shoppes at East Shore Multifamily – Major Development Plan (MDP) proposes to construct an age-restricted apartment complex with a proposed height of almost 55 feet on the northern portion of the Shoppes at East Shore Planned Development (PD). The PD establishes the maximum permitted height of 65 feet. This portion of the PD requires 262 parking spaces while 271 parking spaces are provided by the applicant with ten accessible parking spaces.

The landscape plan proposes Oak trees within landscaped parking islands and Southern Magnolia and Sabal Palm trees embellish the frontage on Ocoee Apopka Road. Crape Myrtles decorate the foundation planting around the apartment buildings.

ACCESS/TRANSPORTATION:

The Major Development Plan shows two access points located on Ocoee Apopka Road, as well as, access along the drive aisle shared with the adjacent proposed grocer to the south. Therefore, the site may be accessed via Keene Road through the grocery portion of the PD. Pedestrian connection is provided between the multi-family project and the approved grocery store.

ORANGE COUNTY NOTIFICATION:

Orange County was notified at the time of the site plan submittal for this property through the DRC agenda distribution.

PUBLIC HEARING SCHEDULE:

August 8, 2023 – Planning Commission (5:30 P.M.)

September 6, 2023 – City Council (1:30 P.M.)

Attachments:

- Maps
- Shoppes at East Shore Multifamily – MDP
- Shoppes at East Shore Multifamily – Building Elevations
- Shoppes at East Shore Multifamily – TIA

FUNDING SOURCE:

Not applicable.

RECOMMENDED MOTION:

Development Review Committee:

Recommends approval of the Shoppes at East Shore Multifamily – Major Development Plan, subject to the findings in the staff report.

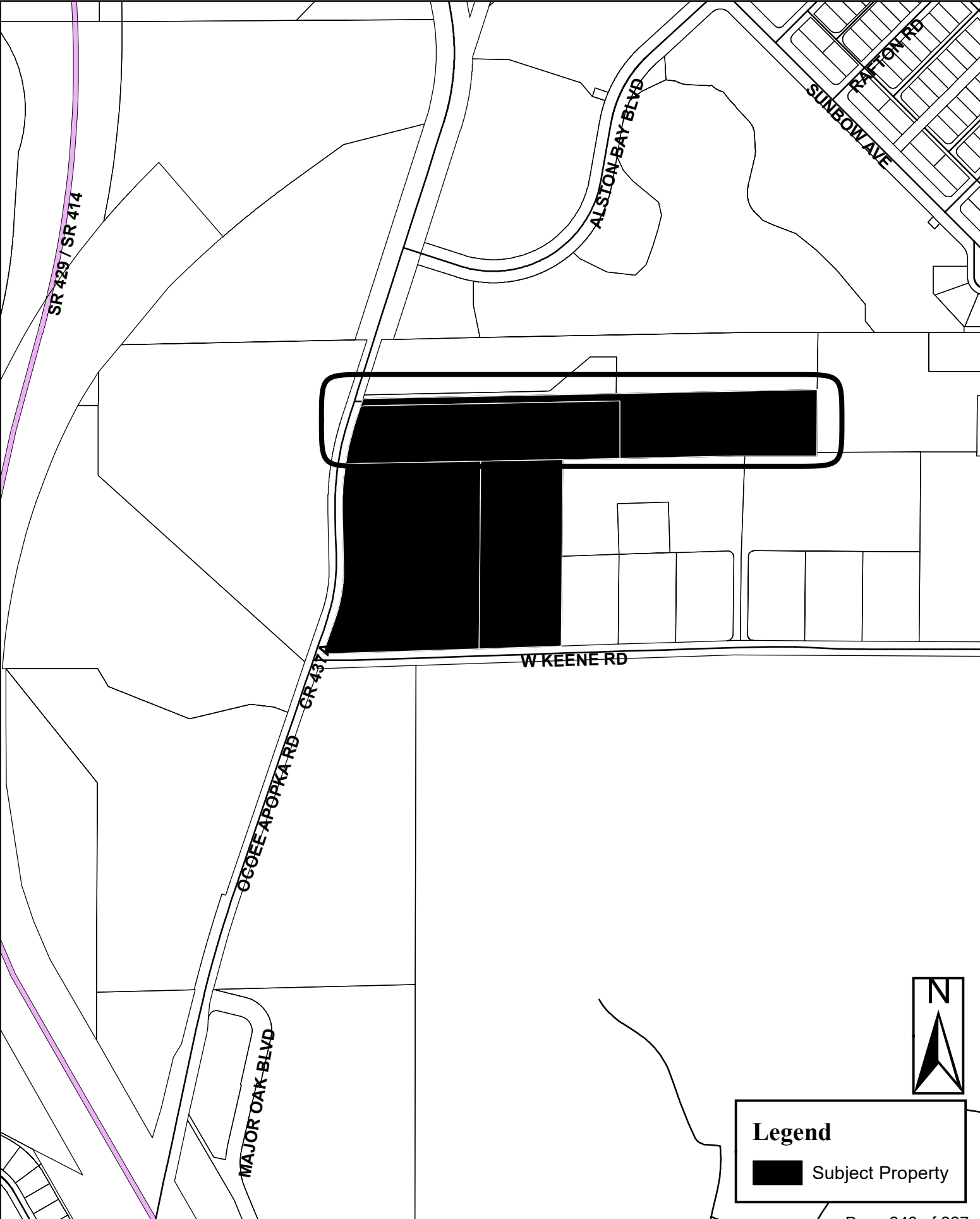
Recommended Motion – Planning Commission:

Recommend approval of the Shoppes at East Shore Multifamily – Major Development Plan, subject to the findings in the staff report.

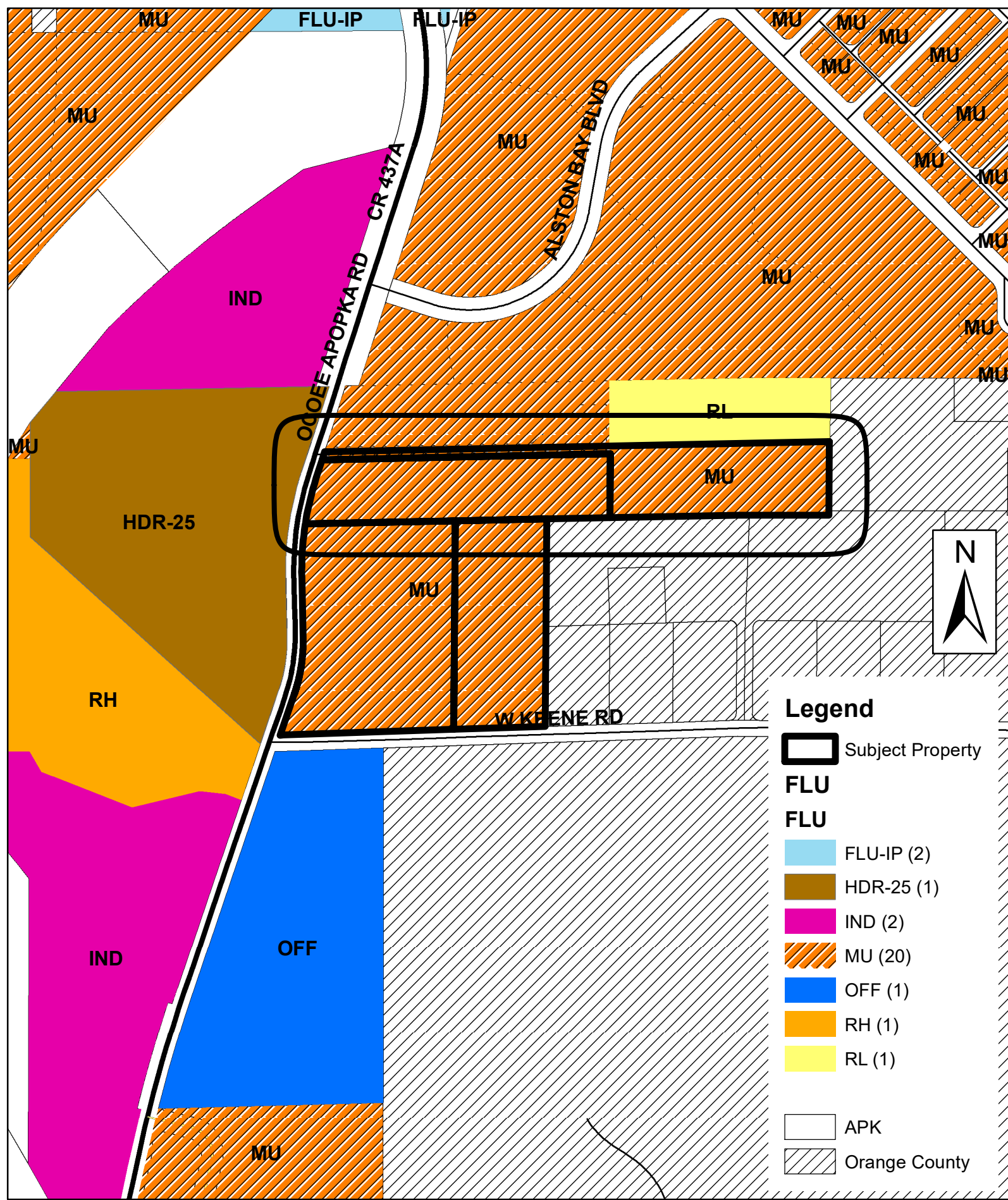
ATTACHMENTS:

1. Maps
2. Shoppes at East Shore Multifamily – MDP
3. Shoppes at East Shore Multifamily - Building Elevations
4. Shoppes at East Shore Multifamily - TIA

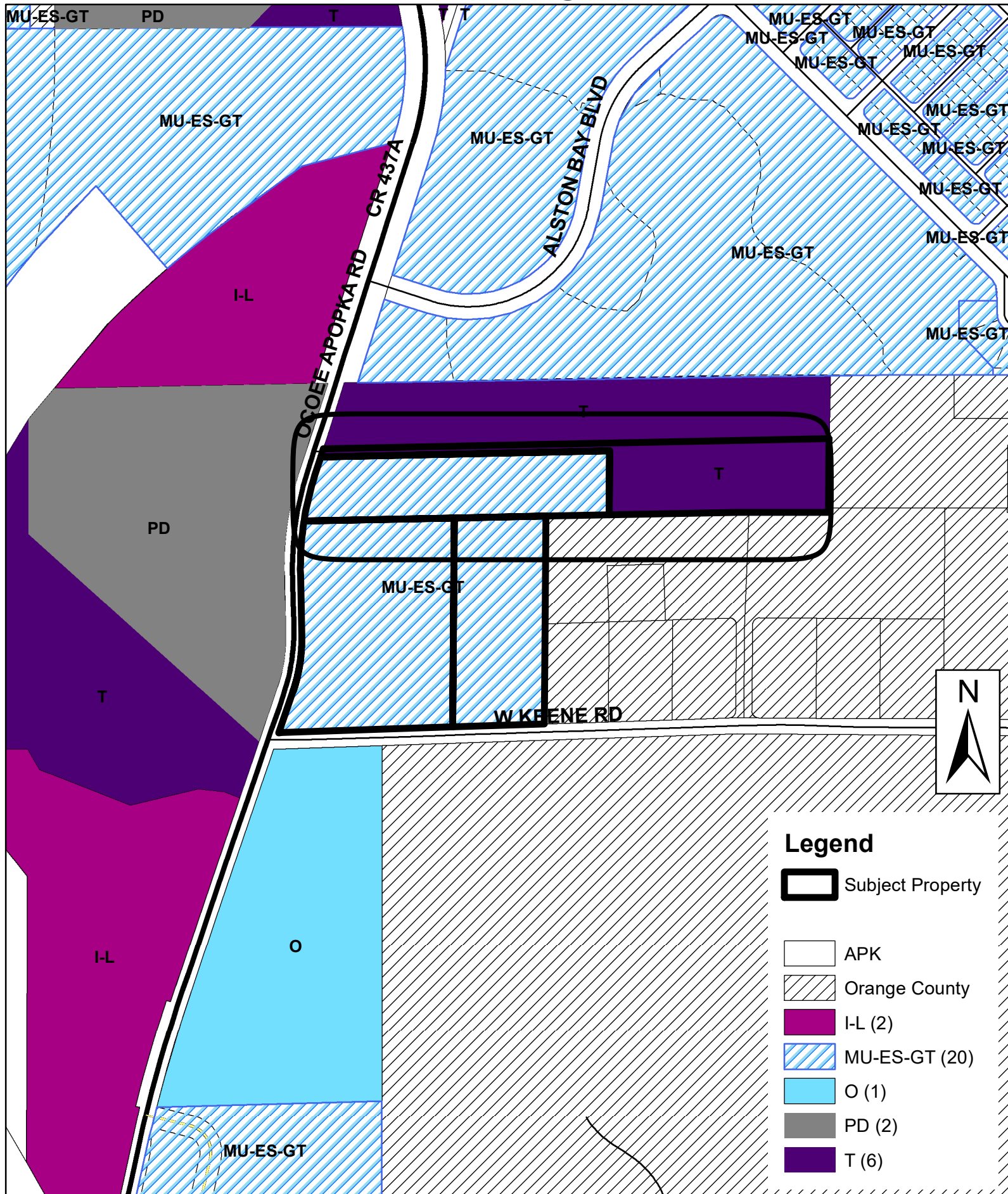
Vicinity



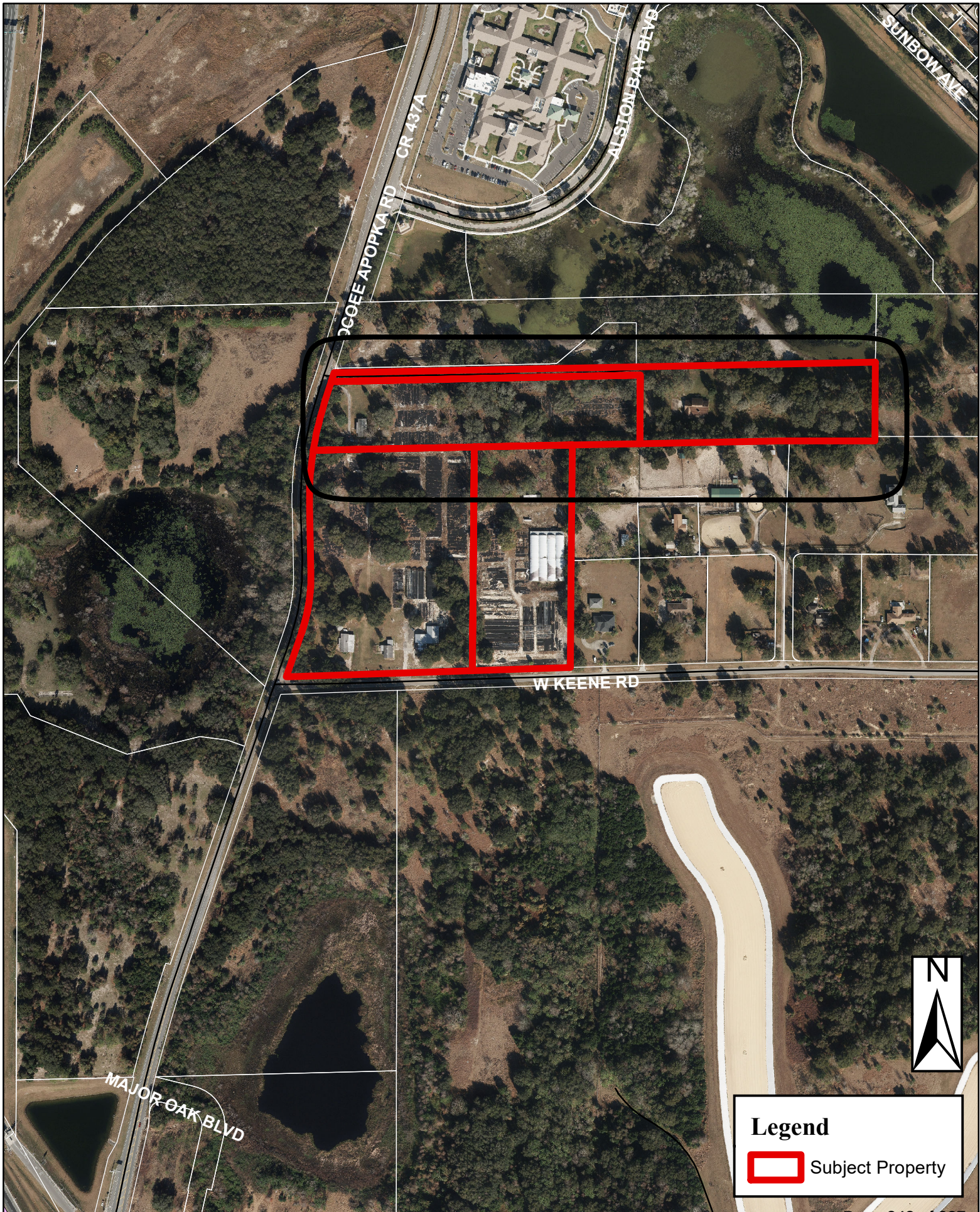
Future Land Use



Zoning



Aerial

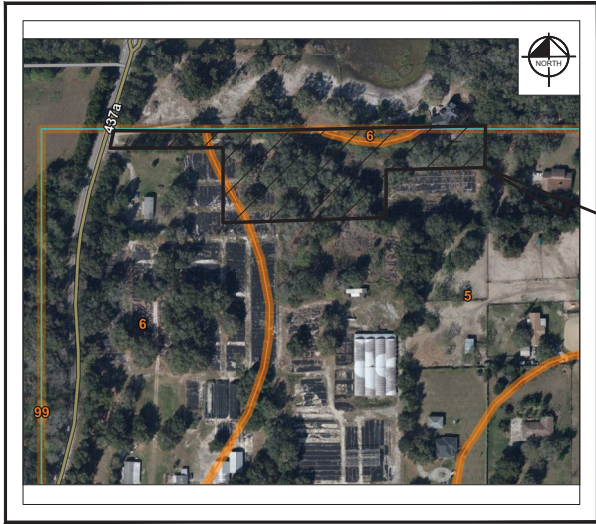


Drawing name: K:\ORL_Civil\249218001-Shoppes at East Shore ALF\CADD\CONST\Master Plan\PlanSheets\MDP0.0 - COVER.dwg MDP0.0 - COVER SHEET Mar 17, 2023 11:29am by: Matthew Wansor
This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adoption by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

MAJOR DEVELOPMENT PLAN FOR SHOPPES AT EAST SHORE MULTI-FAMILY

ORANGE COUNTY PARCEL ID NO.
20-21-28-0000-00-021
20-21-28-0000-00-028

CITY OF APOPKA, FLORIDA
JANUARY 26, 2023



SOILS MAP

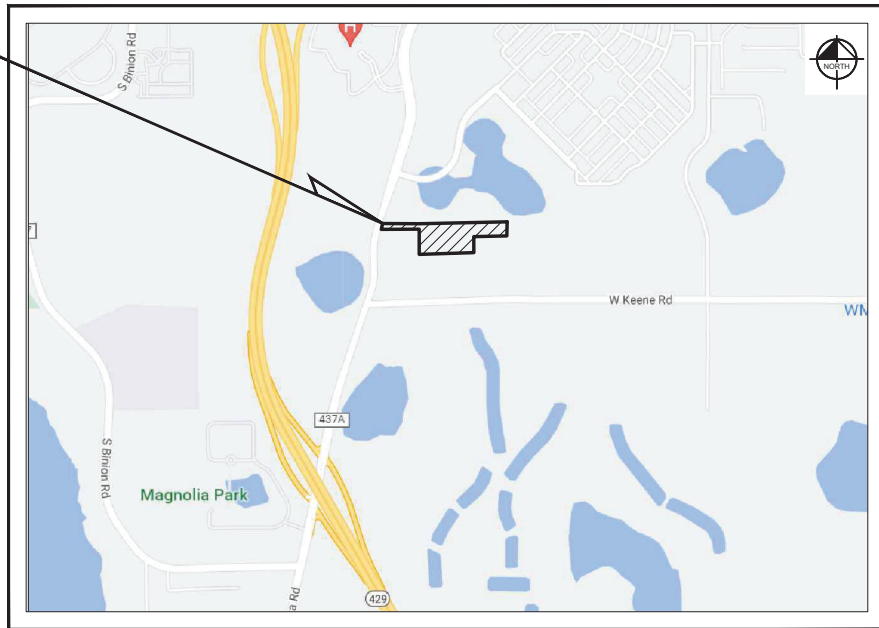
N.T.S.
5 CANDLER FINE SAND 5-12% SLOPES
6 CANDLER-APOPKA FINE SANDS

LEGAL DESCRIPTION:

A PORTION OF :
PID 20-21-28-0000-00-021
BEG 786.7 FT N & 479.15 FT W OF S1/4 COR OF SEC RUN W 1106.75 FT TO ST RD R/W NLY ALONG
R/W TO A PT 246.47 FT S OR N LINE OF S1/2 OF SW1/4 RUN E 1046.71 FT S 237.23 FT TO POB IN
SEC 20-21-28
PID 20-21-28-0000-00-028
BEG 786.7 FT N OF S1/4 COR OF SEC RUN E 331.67 FT N 272.54 FT W 1849.36 FT S 17 DEG W 31.7
FT E 1046.71 FT S 237.23 FT E 479.15 FT TO POB IN SEC 20-21-28
CONTAINING 7.47 ACRES

SITE

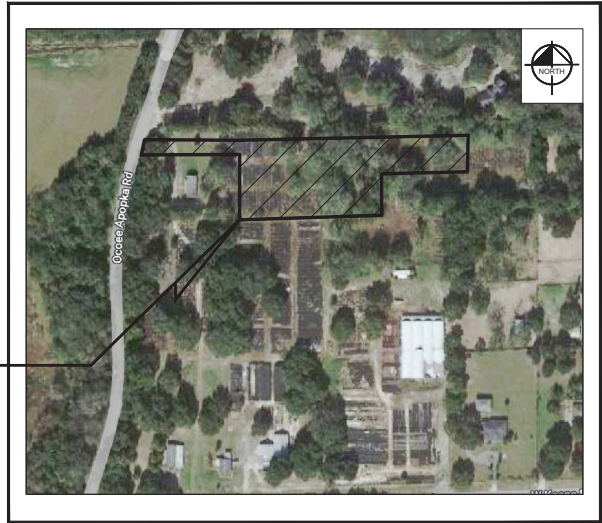
SITE



SECTION 20, TOWNSHIP 21, RANGE 28

LOCATION MAP

N.T.S.



AERIAL PHOTOGRAPH

INDEX OF SHEETS

MDP0.0	COVER SHEET
MDP1.0	SURVEY
MDP2.0	EXISTING CONDITIONS PLAN
MDP3.0	OVERALL SITE PLAN
MDP3.1 - MDP3.2	SITE PLAN
MDP4.0 - MDP4.1	PAVING GRADING AND DRAINAGE PLAN
MDP5.0 - MDP5.1	UTILITY PLAN
MDP6.0	FIRE TRUCK ROUTING PLAN
MDP6.1	GARBAGE TRUCK ROUTING PLAN
MDP6.2	FIRE ACCESS ROAD
L1.00	OVERALL LANDSCAPE PLAN
L1.01 - L1.02	LANDSCAPE PLAN
L1.03	LANDSCAPE PLANT SCHEDULE & NOTES
L1.50	LANDSCAPE DETAILS
L1.51	LANDSCAPE SPECIFICAITONS
L2.00	OVERALL IRRIGATION PLAN
L2.01 - L2.02	IRRIGATION PLAN
L2.50	IRRIGATION DETAILS
L2.51	IRRIGATION SPECIFICATIONS & NOTES
E1.03	SITE PLAN PHOTOMETRICS

UTILITY PROVIDERS

WATER/SEWER:

CITY OF APOPKA
748 EAST CLEVELAND STREET
APOPKA, FL 32703
CONTACT: VLADIMIR SIMONOVSKI
PHONE: (407) 703-1731

CABLE:

CHARTER COMMUNICATIONS
3767 ALL AMERICAN BLVD.
ORLANDO, FL 32810
CONTACT: RAMON NUNEZ
PHONE: (407) 215-5870

ELECTRIC :

DUKE ENERGY
452 EAST CROWN POINT ROAD
WINTER GARDEN, FL 34787
CONTACT: STEPHANIE OLMO
PHONE: (407) 905-3376

TELEPHONE:

CENTURYLINK
1325 BLAIRSTONE ROAD, ROOM 113
TALLAHASSEE, FL 32301
CONTACT: BILL MCCLOUD
PHONE: (850) 599-1444

GAS:

LAKE APOPKA NATURAL GAS DISTRICT
1320 WINTER GARDEN VINELAND ROAD
WINTER PARK, FL 34787
CONTACT: PATRICK NGUYEN
PHONE: (407) 656-2734

PROJECT TEAM

OWNER:

SHOPPES AT EAST SHORE LLC
1200 NETWORK CENTRE DR
EFFINGHAM, IL 62401-4602

DEVELOPER:

SPARROW PARTNERS
2500 BEE CAVES RD, SUITE 380
AUSTIN, TX 78746
CONTACT: MILT BARBER
EMAIL: MILT.BARBER@SPARROW-PARTNERS.COM

CIVIL ENGINEER:

KIMLEY-HORN AND ASSOCIATES, INC.
189 SOUTH ORANGE AVENUE, SUITE 1000
ORLANDO, FL 32801
CONTACT: JORDAN DRAPER, P.E.
PHONE: (407) 412-7741
EMAIL: JORDAN.DRAPER@KIMLEY-HORN.COM

APPLICANT:

SPARROW PARTNERS
2500 BEE CAVES RD, SUITE 380
AUSTIN, TX 78746
CONTACT: MILT BARBER
EMAIL: MILT.BARBER@SPARROW-PARTNERS.COM

SURVEYOR:

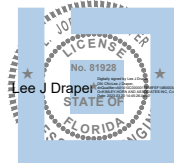
ALLEN & COMPANY
16 EAST PLANT STREET
WINTER GARDEN, FL 34787
CONTACT: JAMES RICKMAN
PHONE: (407) 654-5355

LANDSCAPE ARCHITECT:

KIMLEY-HORN AND ASSOCIATES, INC.
189 SOUTH ORANGE AVENUE, SUITE 1000
ORLANDO, FL 32801
CONTACT: MATT FRANKO
PHONE: 407-427-1629
EMAIL: MATT.FRANKO@KIMLEY-HORN.COM

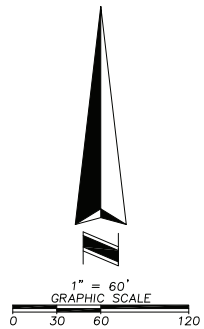
PREPARED BY
Kimley»Horn

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189 S. ORANGE AVE., SUITE 1000, ORLANDO, FL 32801
PHONE: 407-898-1511
WWW.KIMLEY-HORN.COM REGISTRY No. 35106



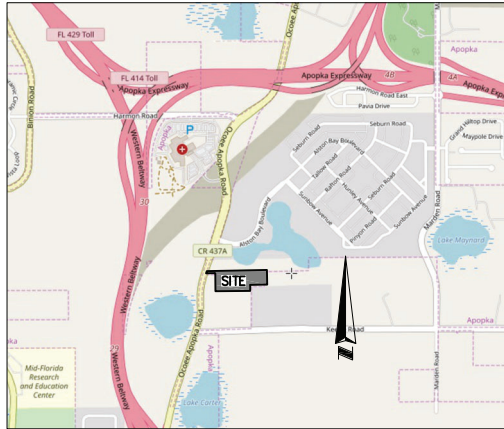
L. JORDAN DRAPER, P.E.
FLORIDA LICENSE NUMBER
81928
1/26/2023

REVISIONS:	DATE
NO. DESCRIPTION	



LEGEND

- | | | | |
|------|-----------------------------------|------|-----------------------|
| □ | FOUND CONCRETE MONUMENT AS NOTED | ⊕ | WOOD UTILITY POLE |
| ● | SET 1/2" IRON ROD AND CAP LB#6723 | ⌚ | UTILITY VAULT |
| △ | FIBER OPTIC MARKER | ⊙ | WELL |
| ○ | FOUND IRON ROD OR PIPE AS NOTED | ⊕ | WOOD GUY POLE |
| (D) | DESCRIBED | —OU— | OVERHEAD UTILITY LINE |
| (M) | MEASURED | —X— | WIRE FENCE |
| R/W | RIGHT-OF-WAY | —○— | CHAIN LINK FENCE |
| P.T. | POINT OF TANGENCY | O.R. | OFFICIAL RECORDS |
| P.C. | POINT OF CURVATURE | R | RADIUS |
| ⊕ | ELECTRICAL VAULT | CH | CHORD |
| ⊕ | FIBER OPTIC RISER | DIR | DIRECTION |
| ⊕ | IRRIGATION VALVE | Δ | DELTA |
| ⊕ | GUY WIRE | L | LENGTH |
| ⊕ | CONCRETE LIGHT POLE | L.B. | LICENSED BUSINESS |



VICINITY MAP NOT TO SCALE

LEGAL DESCRIPTION

A PARCEL OF LAND LYING IN SECTION 20, TOWNSHIP 21 SOUTH, RANGE 28 EAST, ORANGE COUNTY, FLORIDA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTH QUARTER CORNER OF SECTION 20, TOWNSHIP 21 SOUTH, RANGE 28 EAST; THENCE RUN NORTH 00°31'40" EAST ALONG THE NORTH-SOUTH QUARTER SECTION LINE OF SAID SECTION 20 FOR A DISTANCE OF 789.65 FEET TO A POINT ON THE NORTH LINE OF LOT 7 HILLTOP STABLE, ACCORDING TO THE PLAT THEREOF AS RECORDED IN PLAT BOOK 17, PAGE 129, OF THE PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA; THENCE DEPARTING SAID NORTH-SOUTH LINE, RUN SOUTH 88°52'45" WEST ALONG THE NORTH LINE OF SAID LOT 7 FOR A DISTANCE OF 403.54 FEET, TO THE POINT OF BEGINNING; THENCE RUN SOUTH 88°52'45" WEST ALONG THE NORTH LINE OF AFORESAID LOT 7, FOR A DISTANCE OF 309.73 FEET TO THE NORTHWEST CORNER OF SAID LOT 7; THENCE RUN SOUTH 00°30'03" WEST ALONG THE WEST LINE OF SAID LOT 7, FOR A DISTANCE OF 109.98 FEET; THENCE DEPARTING SAID WEST LINE, RUN SOUTH 89°37'07" WEST, FOR A DISTANCE OF 632.05 FEET; THENCE RUN NORTH 00°22'53" WEST, FOR A DISTANCE OF 317.74 FEET TO THE POINT OF CURVATURE OF A CURVE, CONCAVE SOUTHWESTERLY HAVING A RADIUS OF 10.00 FEET, A CHORD BEARING OF NORTH 45°45'04" WEST AND A CHORD LENGTH OF 14.23 FEET; THENCE RUN NORTHWESTERLY ALONG THE ARC OF SAID CURVE, THROUGH A CENTRAL ANGLE OF 90°44'22", FOR A DISTANCE OF 15.84 FEET TO A POINT OF TANGENCY; THENCE RUN SOUTH 88°52'45" WEST, FOR A DISTANCE OF 159.80 FEET TO A POINT ON THE PROPOSED EAST RIGHT OF WAY LINE OF OCOEE-APOPKA ROAD; THENCE RUN NORTH 17°47'49" EAST ALONG SAID PROPOSED EAST RIGHT OF WAY LINE, FOR A DISTANCE OF 43.43 FEET; THENCE DEPARTING SAID PROPOSED EASTERLY RIGHT OF WAY LINE, RUN NORTH 88°52'45" EAST, FOR A DISTANCE OF 1096.42 FEET; THENCE RUN SOUTH 01°07'38" EAST, FOR A DISTANCE OF 267.15 FEET, TO THE POINT OF BEGINNING.

THE ABOVE DESCRIBED PARCEL OF LAND CONTAINS 325,325 SQUARE FEET, OR 7.47 ACRES, MORE OR LESS.

SURVEYOR'S NOTES:

Bearings shown hereon are based on the South line of the SW 1/4 of Section 20-21-28 as being S88°07'11"W. (an assumed bearing for angular designation only)

The legal description hereon is in accord with the description provided by the client and describes the same property as the vesting deeds.

There may be easements and restrictions of record and/or private agreements not furnished to this surveyor or shown on this boundary survey that may affect property rights and/or land use rights of the subject property.

This survey was performed with the benefit of an insurance title commitment, prepared by Old Republic National Title Insurance Company, Commitment number 1191496, effective date December 13, 2021 at 11:00 PM.

There may be environmental issues and/or other matters regulated by various departments of federal, state or local governments affecting the subject property not shown on this survey.

This survey was performed for the sole and exclusive benefit of the entities listed hereon and shall not be relied upon by any other entity or individual whomsoever.

Adjoining parcel owner and recording information delineated hereon was obtained from the Orange County Property Appraiser's public access system.

This survey is not valid without the signature and original raised seal of a Florida Licensed Surveyor and Mapper.

Underground utilities and improvements were not located, unless shown hereon.

Unless otherwise noted or shown hereon, apparent and/or visible, unobstructed, above ground improvements were located. Underground improvements, such as foundations and utilities, were not located, unless noted otherwise.

Unless otherwise noted or shown hereon, there are no apparent and/or unobstructed, above ground encroachments. The disposition of any potential encroaching improvements shown is beyond professional purview and subject to legal interpretation.

Subject property shown hereon is in Zone X, area of minimal flood hazard, according to Flood Insurance Rate Map panel number 12095C0120H, map revised 9/24/2021. The above statement is for information only and this surveyor assumes no liability for the correctness of the cited map(s). In addition, the above statement does not represent this surveyor's opinion of the probability of flooding.

We hereby certify that the lands shown hereon and the adjacent parcels of land, where they share a common boundary line, are contiguous with no gaps, gores, hiatus, or overlaps.

There are no platted setback or building restriction lines which have been recorded in subdivision plats and no record documents have been delivered to surveyor for said lines.

There is no observed evidence of cemeteries and burial grounds on the property.

There is no observable evidence of earth moving works, building construction, or additions within recent months.

There is no observed evidence of changes in street right-of-way lines either completed or proposed and recent street or sidewalk construction or repairs.

There is no observable evidence of the site being used as a solid waste dump, sump or sanitary landfill.

CERTIFIED TO:

Sparrow Partners

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2021 minimum standard detail requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes items 1, 2, 3, 4, 8, 11, 13, 16 & 17 of Table A thereof.

The fieldwork was completed on 9/8/2022.

SIGNATURE _____

JAMES L. RICKMAN, FLORIDA LICENSED SURVEYOR AND MAPPER #5633
FOR THE LICENSED FIRM OF ALLEN & COMPANY, LICENSED BUSINESS #6723



SURVEYING • MAPPING
GEOSPATIAL SERVICES
www.allen-company.com

16 EAST PLANT STREET
WINTER GARDEN, FLORIDA 34787
(407) 654-5355 LB #6723

ALTANS/PS LAND TITLE BOUNDARY SURVEY

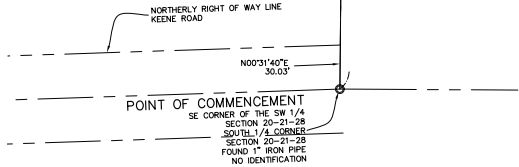
OF

KEENE ROAD SITE

SECTION 20, TOWNSHIP 21 SOUTH, RANGE 28 EAST

ORANGE COUNTY, FLORIDA

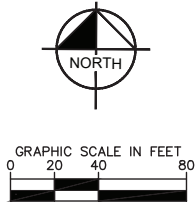
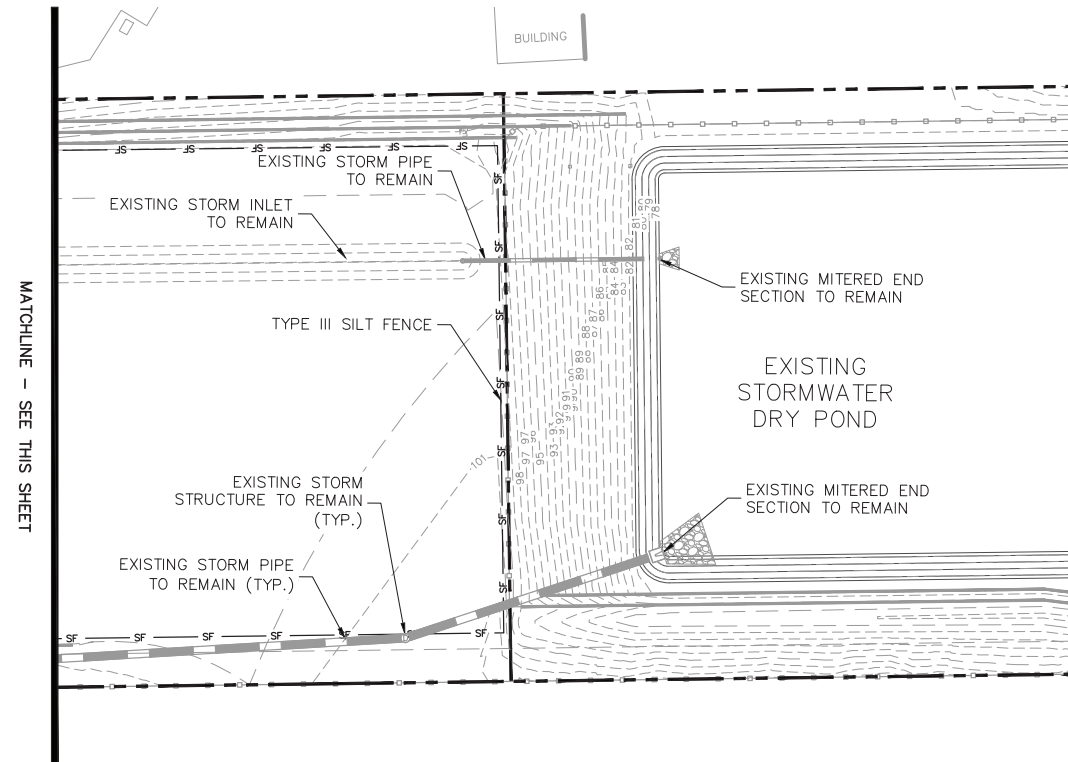
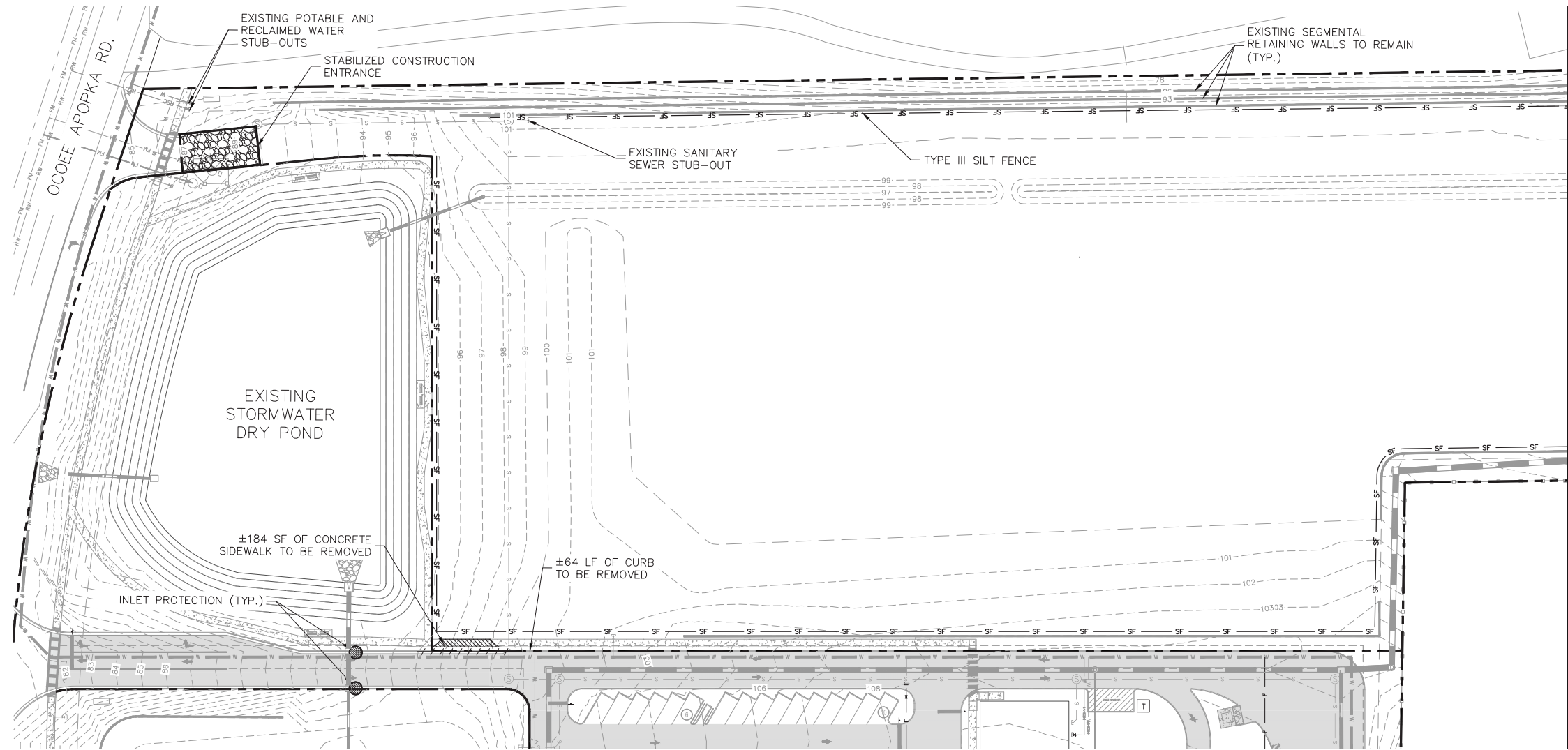
FOR:



DATE REVISIONS

JOB #:	20220555
DATE:	9/19/2022
SCALE:	1" = 60'
CALC BY:	DY
FIELD BY:	AH/MC
DRAWN BY:	DY/BRH
CHECKED BY:	MR

SHEET 1 OF 1



THIS PLAN AND THE EXISTING CONDITIONS SHOWN ON THIS
PLAN DO NOT SUPERSEDE OR SUBSTITUTE ANY SURVEYED
INFORMATION. PLEASE REFERENCE SURVEY FOR OFFICIAL
LOCATIONS AND INFORMATION OF THE EXISTING CONDITIONS.

- | <u>LEGEND</u> | |
|---|--|
|  | PROPERTY LINE (TYP.) |
|  | EXISTING CURB TO BE REMOVED |
|  | TYPE III SILT FENCE |
|  | STABILIZED CONSTRUCTION ENTRANCE |
|  | EXISTING CONCRETE SIDEWALK TO BE REMOVED |
|  | INLET PROTECTION |

MATCHLINE - SEE THIS SHEET



EXISTING CONDITIONS PLAN

SHOPPES AT EAST SHORE MULTI-FAMILY

Kimley»»Horn
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189 S. ORANGE AVENUE, SUITE 1000, ORLANDO, FL 32801
PHONE: 407-898-1511
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

[illegible]

SHEET NUMBER
MDP2.0

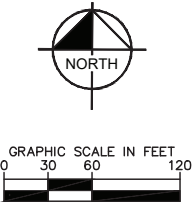
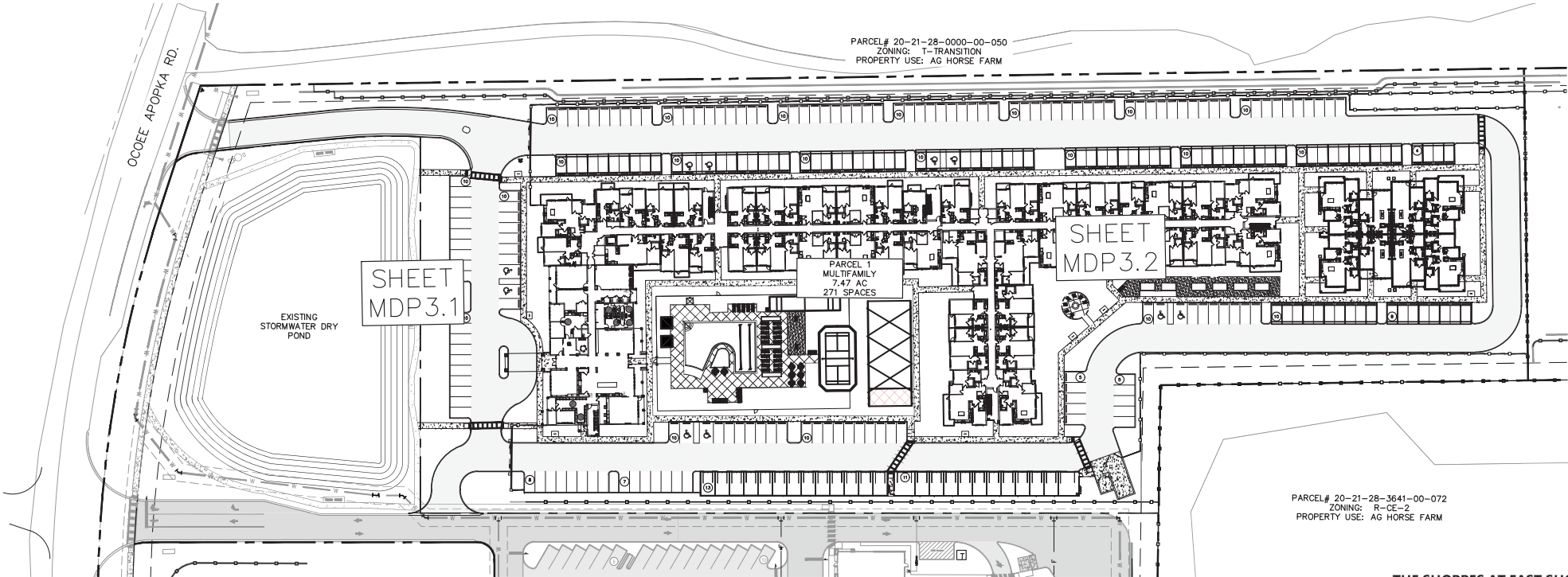
PUBLIC OPEN SPACE CALCULATIONS (OVERALL PD):

PARCEL	LAND USE	GROSS AREA (AC)	WETLAND/ WATER (AC)	DEVELOPABLE AREA (AC)	OPEN SPACE REQ'D		OPEN SPACE PROVIDED		
					%	AC	PARK/REC/ OPEN/VA	AMENITIZED STORM	TOTAL
1	RESIDENTIAL	7.47	0.00	7.47	30%	2.24	2.35	0.00	2.35
2	COMMERCIAL	1.26	0.00	1.26	20%	0.25	(1)	0.00	(1)
3	COMMERCIAL	1.35	0.00	1.35	20%	0.27	(1)	0.00	(1)
4	COMMERCIAL	2.07	0.00	2.07	20%	0.41	(1)	0.00	(1)
5	COMMERCIAL	15.87	0.00	15.87	20%	3.17	2.69	1.14	3.83
TOTAL		28.02	0.00	28.02		6.35	(1)	1.14	6.18

NOTES:

- (1) TBD - TO BE DETERMINED WITH FUTURE MDP'S AND CSP'S
(3) OPEN SPACE REQUIRED IS CALCULATED PARCEL BY PARCEL AND OPEN SPACE PROVIDED IS APPLIED OVER THE OVERALL PD.

Green Building Standards		
Minimum Points Required	4	4.0 points required for Residential Developments 30 units or more.
Item	Points	Notes
Development in the MU-ES: Mixed-Use East Shore District	1	
Additional 5% bicycle parking	4	0.5 per additional 5% 40% additional
Elevate new and/or existing structures more than 3 feet above base flood elevation (BFE)	15	0.50 per foot above BFE 30-.64 FEET ABOVE BFE
Total Recommended Potential Points	4	



LEGEND

- PROPERTY LINE (TYP.)
- LANDSCAPE BUFFER
- PROPOSED FENCE
- PROPOSED HEAVY DUTY ASPHALT PAVEMENT
- PROPOSED STANDARD DUTY ASPHALT PAVEMENT
- PROPOSED CONCRETE SIDEWALK
- PROPOSED CONCRETE PAVEMENT
- PROPOSED PARKING COUNT
- EXISTING RETAINING WALL

THE SHOPPES AT EAST SHORE PD DATA:

ZONING	PD
PROPOSED UNITS:	
PARCEL 1 (future)	RESIDENTIAL 224 DU
PARCEL 2 (future)	COMMERCIAL 3,000 SF
PARCEL 3 (future)	COMMERCIAL 3,000 SF
PARCEL 4 (future)	COMMERCIAL 5,000 SF
PARCEL 5 (phase 1)	COMMERCIAL 63,000 SF
	MEDICAL OFFICE 4,200 SF
TOTAL	78,200 224 DU
TOTAL MDP GROSS ACRES	28.02 Ac
TOTAL MDP WETLAND ACRES	0.00 Ac
TOTAL MDP FLOODPLAIN/TREE PRESERVATION	0.54 Ac
TOTAL MDP DEVELOPABLE ACRES	27.48 Ac

DEVELOPMENT PLAN CHART		
PARCEL ID NUMBERS	20-21-28-0000-00-021, 20-21-28-0000-00-024, 20-21-28-0000-00-025, 20-21-28-0000-00-028,	
FUTURE LAND USE	MIXED USE	
ZONING	PD	
ADJACENT FUTURE LAND USE	NORTH (CITY): MIXED USE EAST (COUNTY): RURAL SOUTH (CITY & COUNTY): OFFICE/INSTITUTIONAL WEST (CITY): MIXED USE	
ADJACENT ZONING	NORTH (CITY): MU-ES-GT (MIXED USE EAST SHORE GATEWAY) EAST (COUNTY): R-CE-2 (RURAL RESIDENTIAL) SOUTH (CITY & COUNTY): O (OFFICE) AND A-1 (AGRICULTURAL) WEST (CITY): T (TRANSITION)	
ACREAGE/SQUARE FOOTAGE	28.02	
BUILDING HEIGHT (commercial)	PROPOSED: 35 FEET	MAX: 45'
BUILDING HEIGHT (multi-family)	PROPOSED: 55 FEET	MAX: 4 STORIES/55'
BUILDING SETBACKS (commercial)	PROPOSED: FRONT: 20' SIDE: 15' REAR: 10'	
BUILDING SETBACKS (multi-family)	PROPOSED: FRONT: 15' SIDE: 10' REAR: 25'	
PARKING SPACES (parcel 5)	PROVIDED: 353	
	REQUIRED: 333	
NUMBER OF EMPLOYEES	N/A	
WAIVER REQUEST	YES:	NO: X
VARIANCE REQUEST	YES:	NO: X
MIN. LOT WIDTH (commercial)	75'	
MIN. LOT WIDTH (multi-family)	100'	

NOTES:

- (1) MINIMUM OF 15 FT BETWEEN STRUCTURES, ONLY APPLIES TO EXTERIOR UNITS.

PARCEL 1: SITE DATA:

PARCEL ACREAGE:	7.47 ACRES
PERVIOUS AREA:	2.35 ACRES
IMPERVIOUS AREA:	5.12 ACRES
MAX. BUILDING HEIGHT:	4 STORIES - 55'
PROPOSED BUILDING HEIGHT:	4 STORIES - 54'-11-1/2"
PARKING PROVIDED:	271 SPACES
REQUIRED:	
1 SPACE/1 BEDROOM:	124
1.35 SPACES/2 BEDROOM:	114
0.1 VISITOR SPACES/RESIDENT SPACE:	24
TOTAL PARKING REQUIRED:	262 SPACES
PARKING PROVIDED:	
STANDARD PARKING (9'x18'):	237 SPACES (1)
GARAGE PARKING:	24
ADA PARKING (12'x18'):	10 SPACES
TOTAL PARKING PROVIDED:	271 SPACES
BIKE PARKING PROVIDED:	16 SPACES

- (1) PARKING STUDY WILL BE PROVIDED AT TIME OF FINAL DEVELOPMENT PLAN

FENCES AND WALLS:
SHALL BE IN ACCORDANCE WITH THE CITY OF APOPKA LDC SECTION 5.5.

EXTERIOR LIGHTING:
SHALL BE IN ACCORDANCE WITH THE CITY OF APOPKA LDC SECTION 5.6.

SIGNS:
SHALL BE IN ACCORDANCE WITH MASTER SIGN PLAN AND/OR THE CITY OF APOPKA LDC SECTION 5.10.

NOTES:

1. ALL CURB DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
2. ALL PROPOSED ON-SITE STRIPING SHALL BE PAINTED UNLESS OTHERWISE NOTED.

UTILITY SERVICE:

CITY OF APOPKA IS THE PROVIDER FOR POTABLE WATER AND SEWER SERVICES.

PRIOR TO CONSTRUCTION PLAN APPROVAL, HYDRAULIC CALCULATIONS WILL BE SUBMITTED SHOWING THAT THE PROPOSED WATER, WASTEWATER AND, RECLAIMED WATER SYSTEMS HAVE BEEN SIZED TO SUPPORT THE ENTIRE PROJECT.

STORMWATER MANAGEMENT:

STORMWATER MANAGEMENT SYSTEM WILL BE DESIGNED TO MEET CITY OF APOPKA AND THE REQUIREMENTS OF THE LOCAL WATER MANAGEMENT DISTRICT.

SITE LIGHTING:

ALL EXTERIOR SITE LIGHTING SHALL COMPLY WITH SECTION 5.6 OF THE CITY OF APOPKA LAND DEVELOPMENT CODE AND ALL CURRENT APPLICABLE CITY OF APOPKA STANDARDS.

LANDSCAPING:

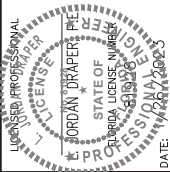
ALL LANDSCAPING SHALL MEET OR EXCEED THE REQUIREMENTS OF SECTION 5.2 OF THE CITY OF APOPKA LAND DEVELOPMENT CODE. SEE LANDSCAPE PLANS FOR ADDITIONAL INFORMATION.

FIRE PROTECTION:

FIRE HYDRANTS SHALL BE INSTALLED SO THE DESIGN AND CALCULATIONS MEET THE REQUIREMENTS OF FFPC 6TH EDITION (NFPA 1 AND 101 2015 EDITION).

Kimley»Horn

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180 S. ORANGE AVENUE, SUITE 1000, ORLANDO, FL 32801
PHONE: 407-898-1511
WWW.KIMLEY-HORN.COM REGISTRY No. 35106



KHA PROJECT	DATE	SCALE	DESIGNED BY	DRAWN BY	CHECKED BY
249218001	1/26/2023	AS SHOWN	JDB	JDB	LJD

OVERALL SITE PLAN

SHOPPES AT EAST SHORE
MULTI-FAMILY

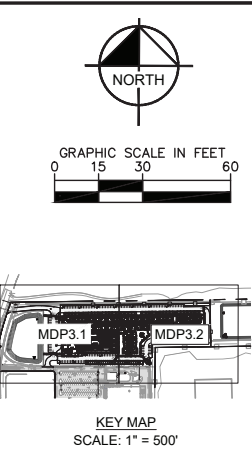
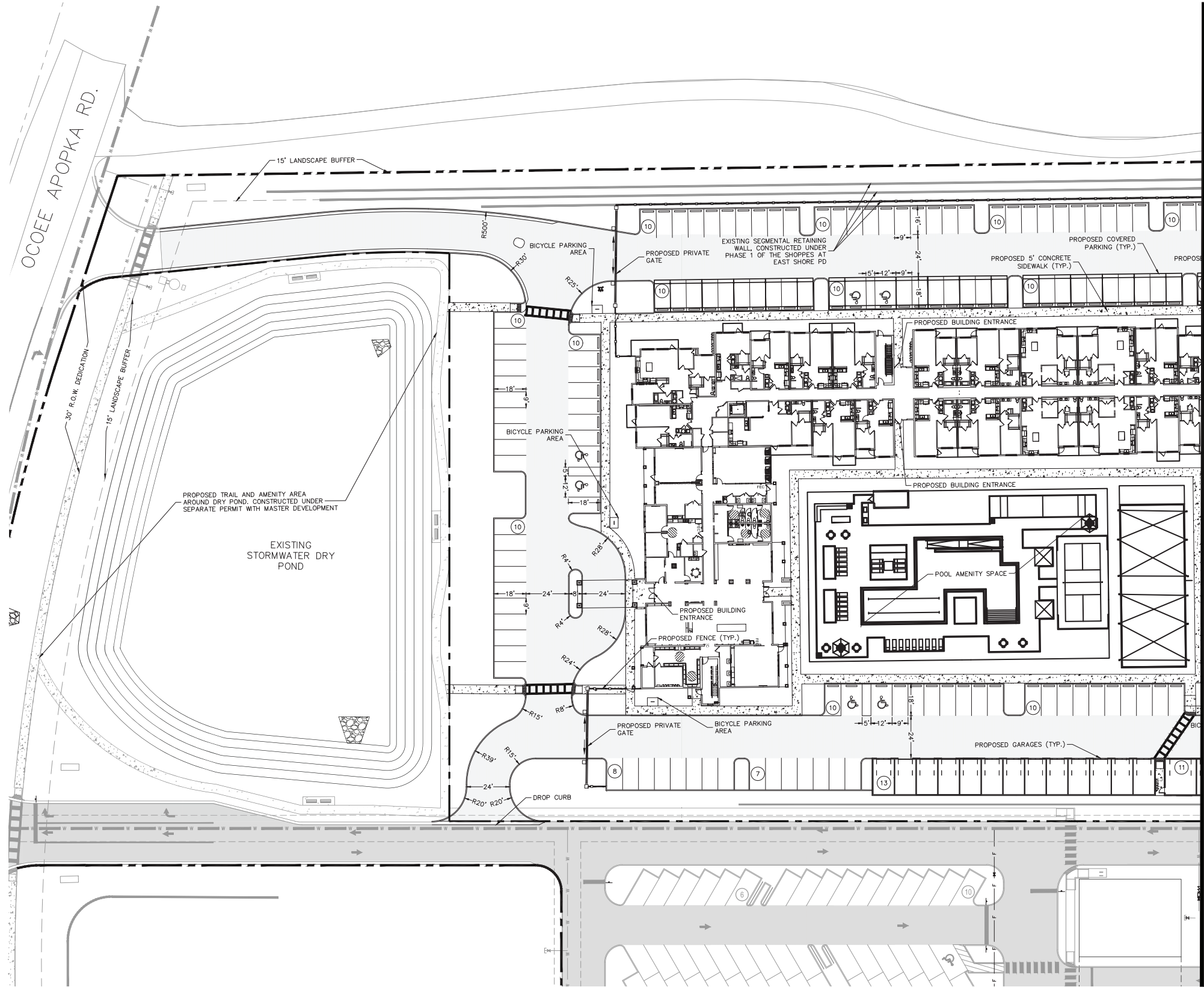
FLORIDA

CITY OF APOPKA

SHEET NUMBER
MDP3.0

Drawing name: K:\ORL_Civil\249218001-Shoppes at East Shore ALF\CADD\CONST\Master Plan\PlanSheets\MP3.1 - SITE PLAN.dwg MDP3.1 - SITE PLAN Mar 17, 2023 11:31am by: Matthew.wansor

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LEGEND

	PROPERTY LINE (TYP.)
	LANDSCAPE BUFFER
	PROPOSED FENCE
	PROPOSED ASPHALT PAVEMENT
	PROPOSED CONCRETE SIDEWALK
	PROPOSED CONCRETE PAVEMENT
	PROPOSED PARKING COUNT
	EXISTING RETAINING WALL

Always call 811 two full business days before you dig to have underground utilities located and marked.

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No.	REVISIONS	DATE	BY

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PHONE: 407-898-1511
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

Professional Engineer Seal for Jordan Draper, State of Florida, License No. 13030, dated 12/26/2023.

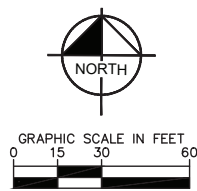
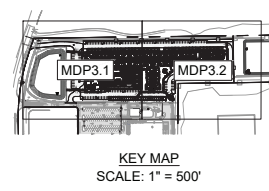
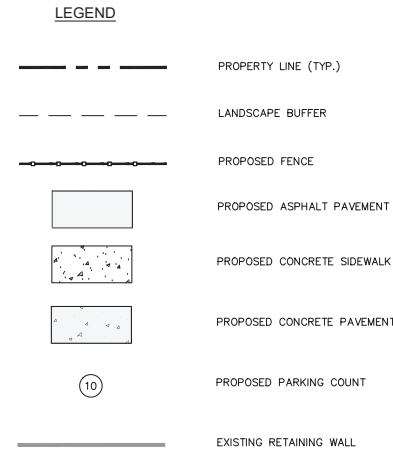
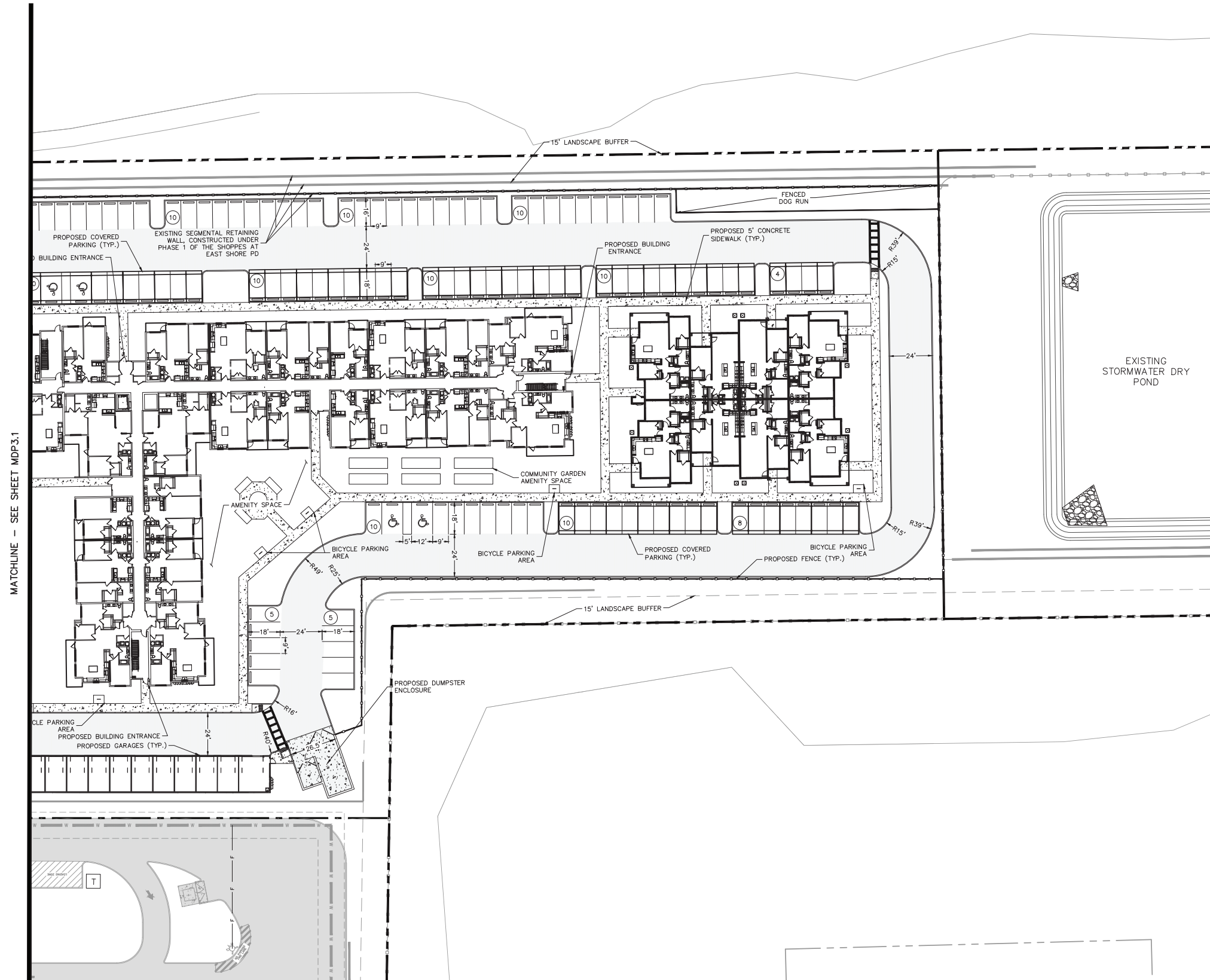
KHA PROJECT	DATE
249218001	1/26/2023
SCALE AS SHOWN	DESIGNED BY JDB
DRAWN BY JDB	CHECKED BY LJD
LUD DATE:	

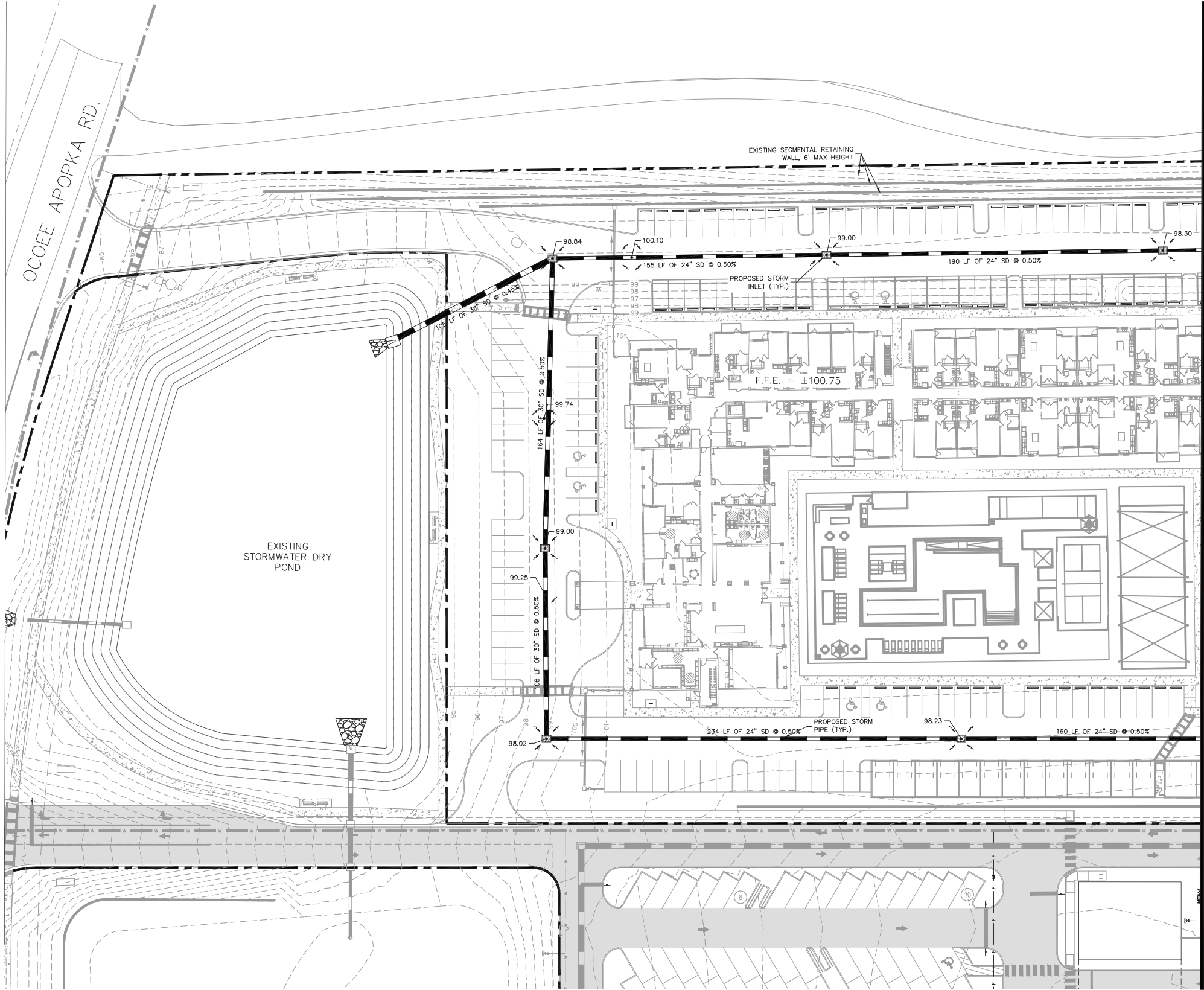
SITE PLAN

**SHOPPES AT EAST SHORE
MULTI-FAMILY**

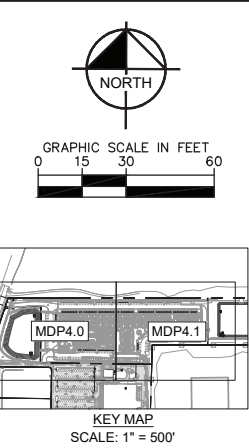
CITY OF APOPKA FLORIDA

SHEET NUMBER
MDP3.1

[illegible]



MATCHLINE - SEE SHEET MDP4.1



- LEGEND**
- PROPERTY LINE (TYP.)
 - PROPOSED STORM PIPE
 - ±99.00 PROPOSED SPOT ELEVATION
 - PROPOSED STORM INLET
 - PROPOSED UNDERGROUND EXFILTRATION SYSTEM
 - EXISTING STORM PIPE
 - EXISTING RETAINING WALL (HEIGHT VARIES)
 - 100 --- EXISTING CONTOUR
 - EXISTING STORM INLET

- NOTES:**
- STORM PIPE MATERIALS SHALL BE A-2000 PVC, N-12 HP STORM, RIGID WALL WATER TIGHT HDPE, OR RCP, AND CONFORM WITH THE LATEST EDITION OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AS WELL AS CITY OF APOPKA REQUIREMENTS.
 - CURB RAMPS ALONG PUBLIC STREETS AND IN THE PUBLIC RIGHT-OF-WAY SHALL BE CONSTRUCTED BASED ON THE CITY STANDARD CONSTRUCTION DETAILS AND SPECIFICATIONS.
 - PRIVATE CURB RAMPS ON THE SITE (I.E. OUTSIDE PUBLIC STREET RIGHT-OF-WAY) SHALL CONFORM TO ADA STANDARDS AND SHALL HAVE A DETECTABLE WARNING SURFACE THAT IS FULL WIDTH AND FULL DEPTH OF THE CURB RAMP, NOT INCLUDING FLARES.
 - ALL ACCESSIBLE ROUTES, GENERAL SITE AND BUILDING ELEMENTS, RAMPS, CURB RAMPS, STRIPING, AND PAVEMENT MARKINGS SHALL CONFORM TO ADA STANDARDS FOR ACCESSIBLE DESIGN, LATEST EDITION.
 - BEFORE PLACING PAVEMENT, CONTRACTOR SHALL VERIFY THAT SUITABLE ACCESSIBLE PEDESTRIAN ROUTES (PER ADA AND FHA) EXIST TO AND FROM EVERY DOOR AND ALONG SIDEWALKS, ACCESSIBLE PARKING SPACES, ACCESS AISLES, AND ACCESSIBLE ROUTES. IN NO CASE SHALL AN ACCESSIBLE RAMP SLOPE EXCEED 1 VERTICAL TO 12 HORIZONTAL. IN NO CASE SHALL SIDEWALK CROSS SLOPE EXCEED 2.0 PERCENT. IN NO CASE SHALL LONGITUDINAL SIDEWALK SLOPE EXCEED 5.0 PERCENT. ACCESSIBLE PARKING SPACES AND ACCESS AISLES SHALL NOT EXCEED 2.0 PERCENT SLOPE IN ANY DIRECTION.
 - CONTRACTOR SHALL TAKE FIELD SLOPE MEASUREMENTS ON FINISHED SUBGRADE AND FORM BOARDS PRIOR TO PLACING PAVEMENT TO VERIFY THAT ADA SLOPE REQUIREMENTS ARE PROVIDED. CONTRACTOR SHALL CONTACT ENGINEER PRIOR TO PAVING IF ANY EXCESSIVE SLOPES ARE ENCOUNTERED. NO CONTRACTOR CHANGE ORDERS WILL BE ACCEPTED FOR ADA SLOPE COMPLIANCE ISSUES.
 - ALL PEDESTRIAN SIDEWALKS, PATHWAYS, AND CROSSWALKS SHALL BE CONSTRUCTED NOT TO EXCEED MAX. 2.0% CROSS SLOPE, MAX. 5.0% RUNNING SLOPE.
 - ALL HANDICAP ACCESSIBLE PARKING SPACES SHALL BE CONSTRUCTED NOT TO EXCEED MAX. 2.0% CROSS SLOPE IN ALL DIRECTIONS.
 - PROPOSED GRADES TO MATCH EXISTING ELEVATIONS AT PROPERTY LINE.
 - CONTRACTOR TO FIELD VERIFY ELEVATIONS AT ALL EXISTING SIDEWALK AND ROAD CONNECTION POINTS WITH ENGINEER OF RECORD BEFORE CONSTRUCTION OF ANY IMPROVEMENTS.
 - FOR EROSION CONTROL NOTES REFER TO SHEET C2.0.
 - CONTRACTOR TO ENSURE ADEQUATE COVER REMAINS OVER ALL EXISTING UTILITIES.

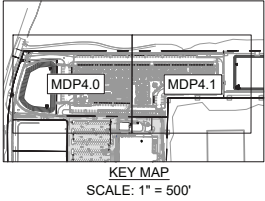
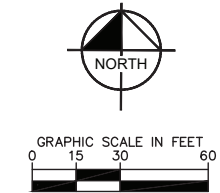
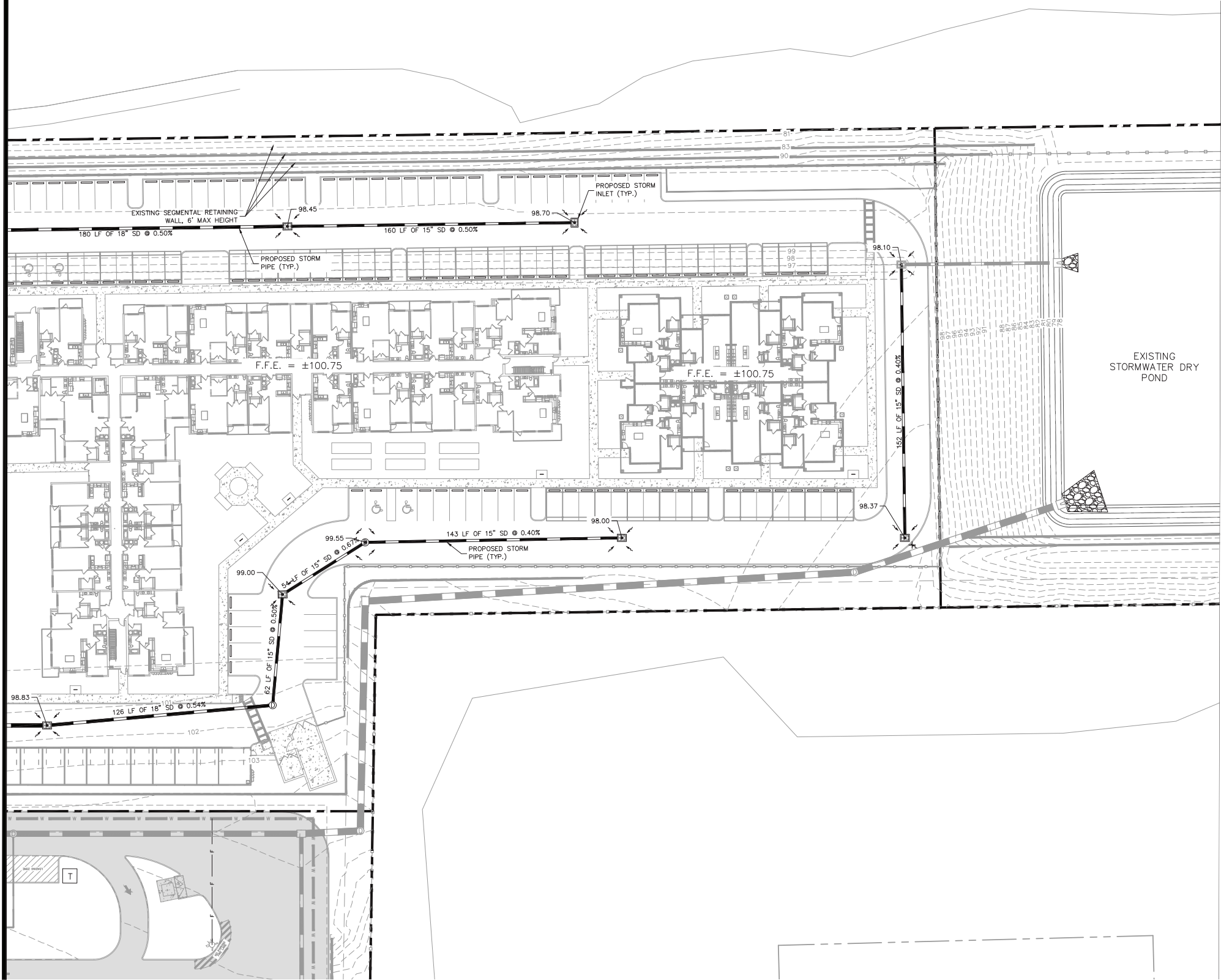
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KHA PROJECT 249218001		DATE 1/26/2023		SCALE AS SHOWN		DESIGNED BY JDB		DRAWN BY JDB		CHECKED BY LJD		DATE:					
KIMLEY-HORN		JORDAN DRAPER		STATE OF FLORIDA		PROFESSIONAL ENGINEER		LICENSE NO. 12510		EXPIRATION DATE 12/31/2025							
PAVING GRADING AND DRAINAGE PLAN												SHOPPES AT EAST SHORE MULTI-FAMILY		FLORIDA			
SHEET NUMBER MDP4.0												CITY OF APOPKA		REVISIONS		DATE BY	

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MATCHLINE - SEE SHEET MDP4.0



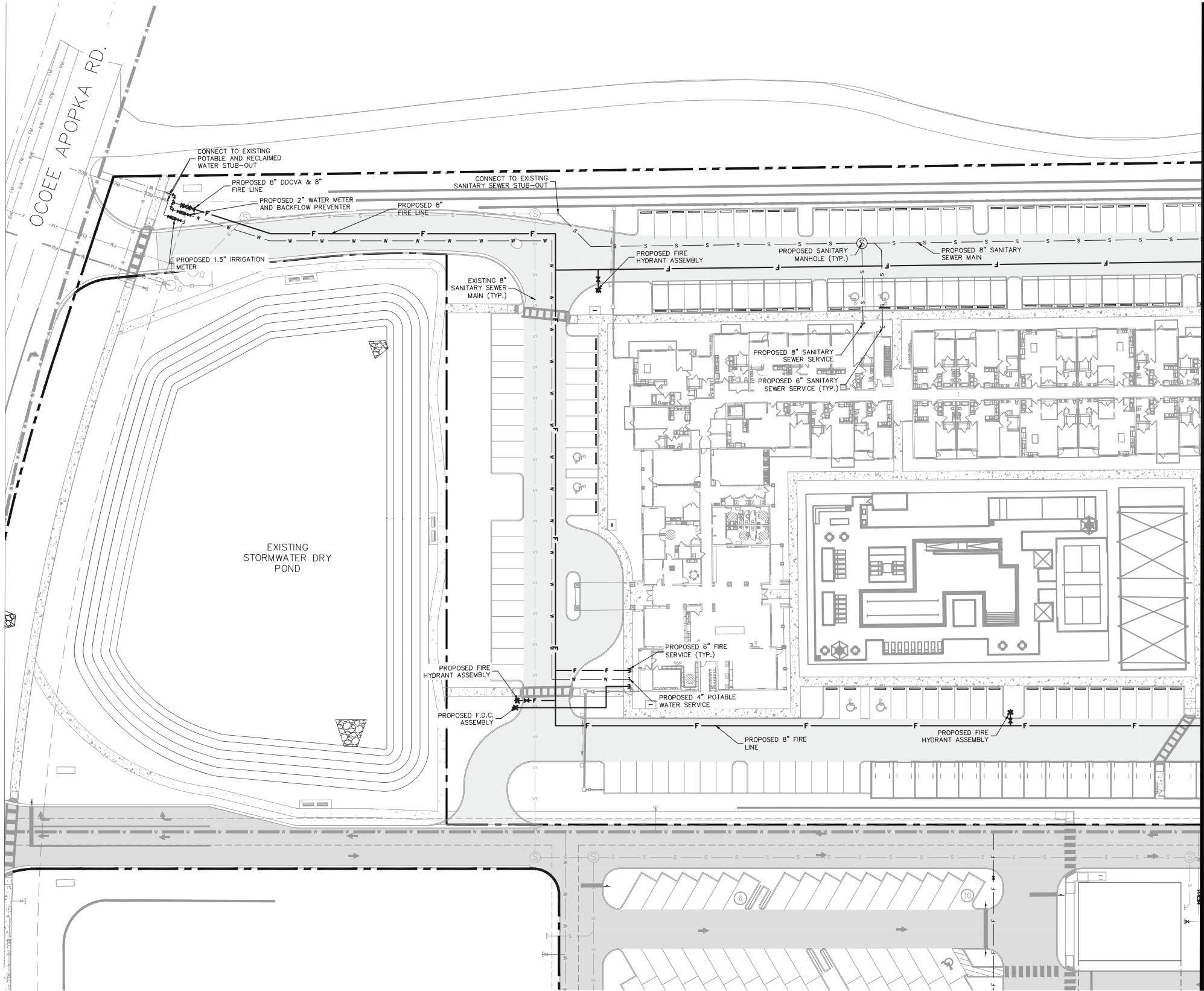
- LEGEND**
- PROPERTY LINE (TYP.)
 - PROPOSED STORM PIPE
 - PROPOSED SPOT ELEVATION
 - PROPOSED STORM INLET
 - PROPOSED UNDERGROUND EXFILTRATION SYSTEM
 - EXISTING STORM PIPE
 - EXISTING RETAINING WALL (HEIGHT VARIES)
 - EXISTING CONTOUR
 - EXISTING STORM INLET

- NOTES:**
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 - FOR EROSION CONTROL NOTES REFER TO SHEET C2.0.
 - CONTRACTOR TO ENSURE ADEQUATE COVER REMAINS OVER ALL EXISTING UTILITIES.

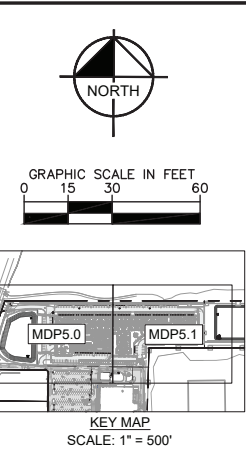
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KHA PROJECT 249218001		DATE 1/26/2023		SCALE AS SHOWN		DESIGNED BY JDB		DRAWN BY JDB		CHECKED BY LJD		DATE 1/26/2023	
KIMLEY-HORN		KIMLEY-HORN AND ASSOCIATES, INC.		180 S. ORANGE AVENUE, SUITE 1000, ORLANDO, FL 32801		PHONE: 407-898-1511		WWW.KIMLEY-HORN.COM		REGISTRY NO. 35106		BY	
PAVING GRADING AND DRAINAGE PLAN		AND DRAINAGE PLAN		CITY OF APOPKA		FLORIDA		SHEET NUMBER		MDP4.1		REVISIONS	
SHOPPES AT EAST SHORE MULTIFAMILY		SHEET NUMBER		MDP4.1		DATE		BY		REVISIONS		BY	



MATCHLINE - SEE SHEET MDP5.1



LEGEND

- PROPERTY LINE (TYP.)
- W --- EXISTING POTABLE WATER MAIN
- REC --- EXISTING RECLAIMED WATER MAIN
- S --- EXISTING SANITARY SEWER MAIN
- ⊙ EXISTING SANITARY SEWER MANHOLE
- W --- PROPOSED POTABLE WATER MAIN
- REC --- PROPOSED RECLAIMED WATER MAIN
- F --- PROPOSED FIRE MAIN MAIN
- S --- PROPOSED SANITARY SEWER MAIN
- ⊙ PROPOSED FIRE HYDRANT ASSEMBLY
- ⊙ PROPOSED F.D.C.
- ⊙ PROPOSED SANITARY SEWER MANHOLE

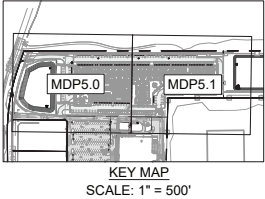
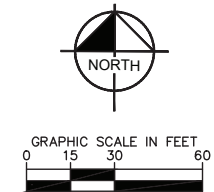
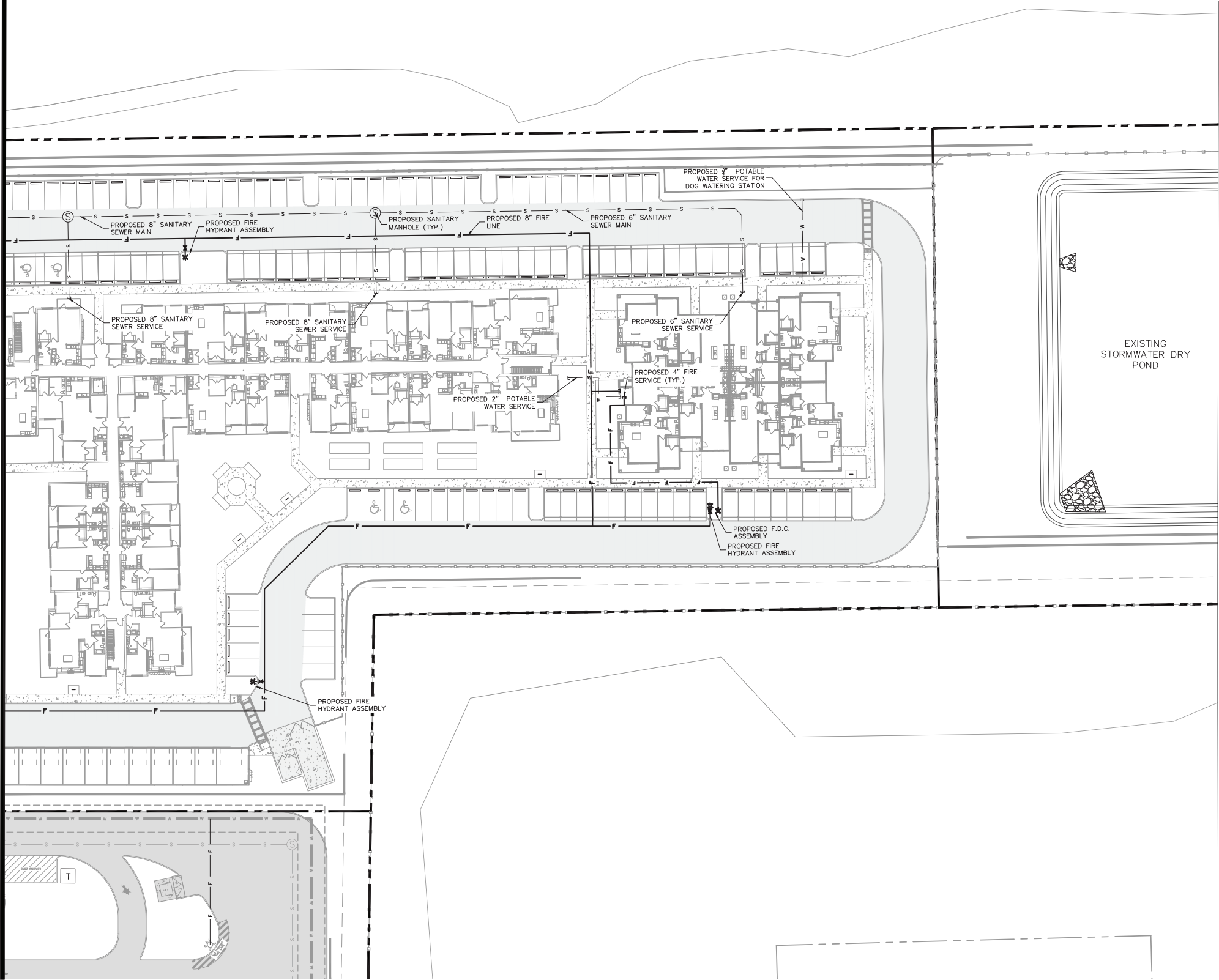
- NOTES:
1. ALL CONSTRUCTION DETAILS ARE CONCEPTUAL AND SUBJECT TO REVIEW AND MODIFICATION DURING THE APPROVAL OF CONSTRUCTION SITE PLANS (CSP).
 2. THE SIZE, LOCATION AND POINTS OF CONNECTION FOR WATER, WASTEWATER AND RECLAIMED WATER MAINS SHALL BE FINALIZED AT TIME OF CONSTRUCTION SITE PLANS (CSP) REVIEW.
 3. ALL FIRE HYDRANTS MUST MAINTAIN 36" CLEAR AROUND.

Always call 811 two full business days before you dig to have underground utilities located and marked.

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KHA PROJECT 249218001		DATE 1/26/2023		SCALE AS SHOWN		DESIGNED BY JDB		DRAWN BY JDB		CHECKED BY LJD		DATE:			
KIMLEY-HORN AND ASSOCIATES, INC.		JORDAN DRAPER, P.E.		STATE OF FLORIDA		PROFESSIONAL ENGINEER		LICENSE NO. 13520		EXPIRATION DATE 12/31/2025					
SHOPPES AT EAST SHORE MULTIFAMILY												CITY OF APOPKA		FLORIDA	
UTILITY PLAN															
SHEET NUMBER MDP5.0															
Kimley»Horn															
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WWW.KIMLEY-HORN.COM PHONE: 407-898-1511 REGISTRY NO. 35106															
REVISIONS												DATE		BY	

MATCHLINE - SEE SHEET MDP5.0



LEGEND

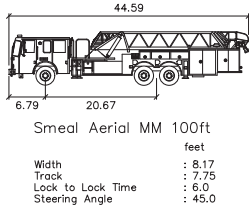
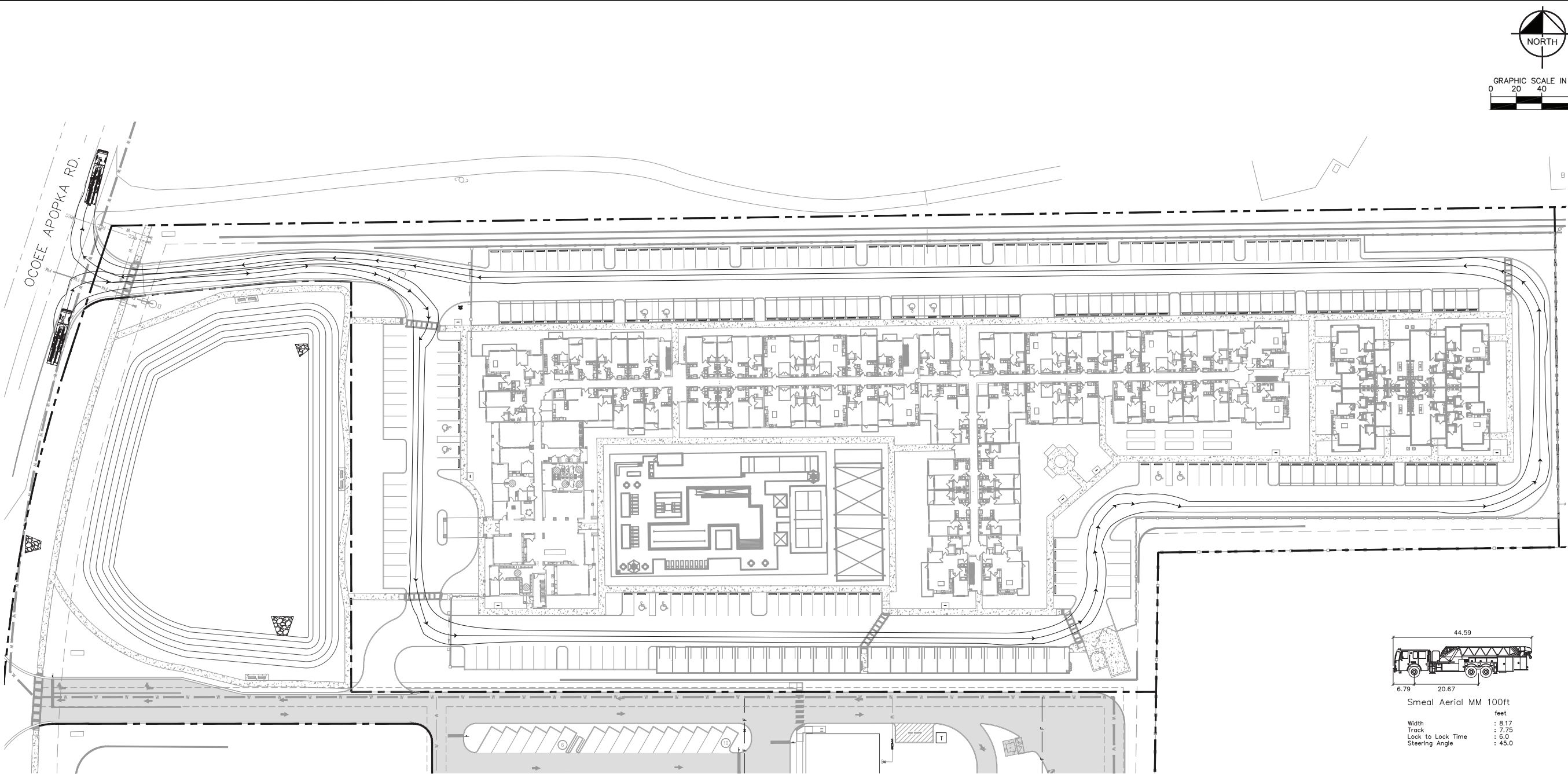
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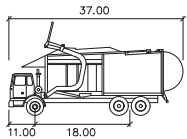
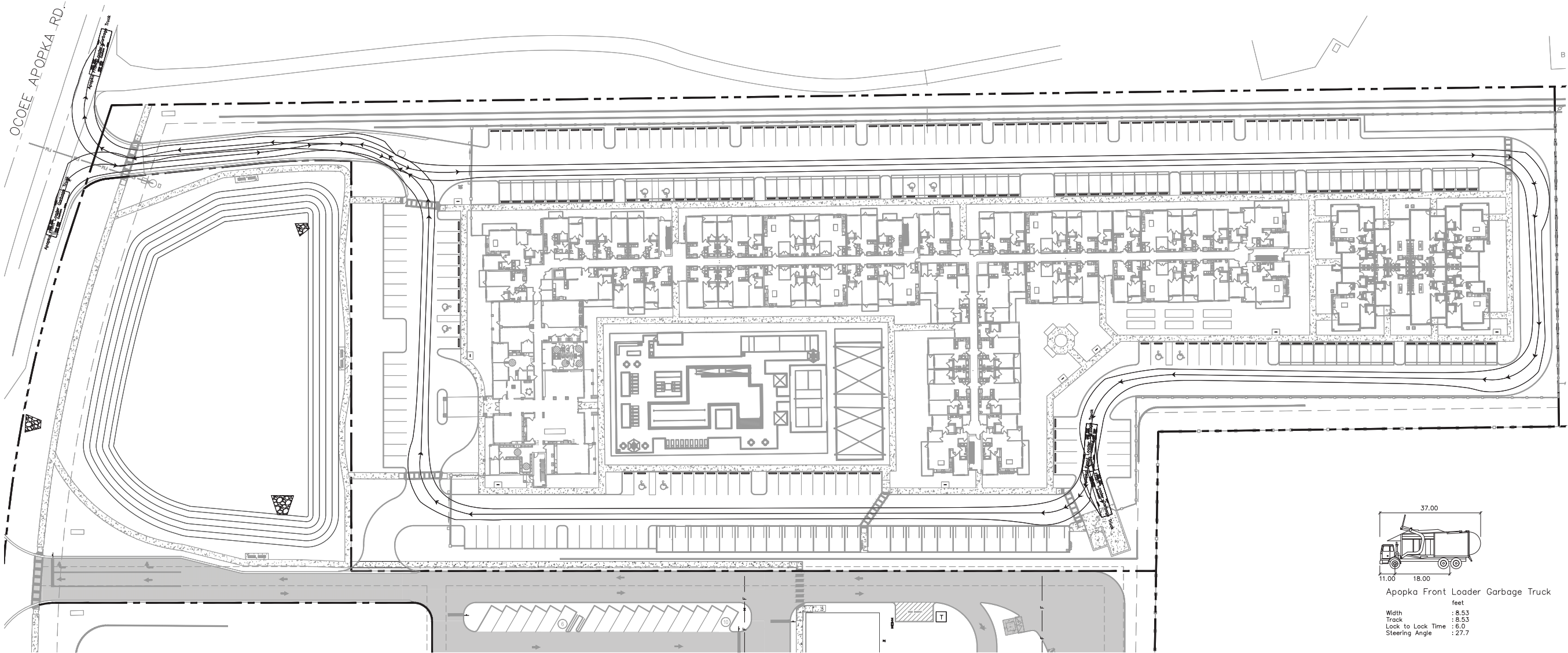
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SHOPPES AT EAST SHORE MULTIFAMILY												CITY OF APOPKA		FLORIDA	
UTILITY PLAN															
SHEET NUMBER MDP5.1															
KIMLEY-HORN															
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REVISIONS												No.		BY	
DATE															



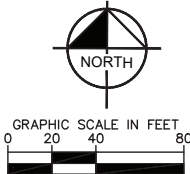
SHOPPES AT EAST SHORE MULTI-FAMILY	CITY OF APOKA	FLORIDA	FIRE TRUCK ROUTING PLAN		KHA PROJECT 249218001	DATE 1/26/2023	SCALE AS SHOWN	DESIGNED BY JDB	DRAWN BY JDB	CHECKED BY LJD	DATE 1/26/2023	LICENSED PROFESSIONAL ENGINEER JORDAN DRAPER STATE OF FLORIDA LICENSE NUMBER 13130	 © 2023 KIMLEY-HORN AND ASSOCIATES, INC. 189 S. ORANGE AVENUE, SUITE 1000, ORLANDO, FL 32801 PHONE: 407-898-1511 WWW.KIMLEY-HORN.COM REGISTRY No. 35106	REVISIONS		BY
			No.	DATE												
SHEET NUMBER MDP6.0																

Drawing name: K:\ORL_Civil\249218001-Shoppes at East Shore ALF\CADD\CONST\Master Plan\PlanSheets\MP6.1 - GARBAGE TRUCK ROUTING PLAN.dwg MDP6.1 - GARBAGE TRUCK ROUTING PLAN Mar 17, 2023 11:34am by: Matthew.wansor

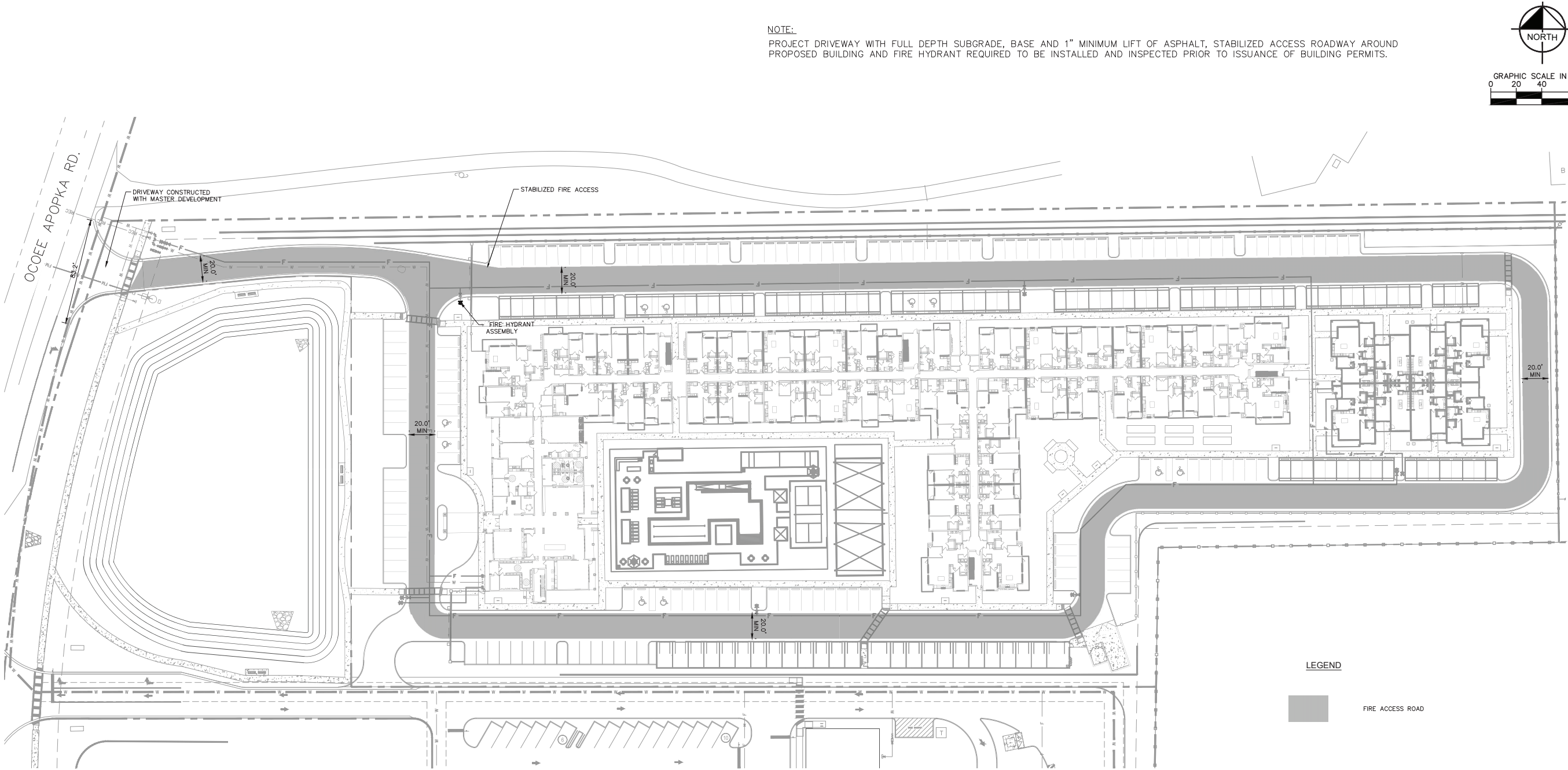
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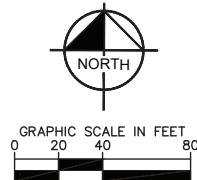
Apopka Front Loader Garbage Truck
feet
Width : 8.53
Track : 8.53
Lock to Lock Time : 6.0
Steering Angle : 27.7



SHOPPES AT EAST SHORE MULTI-FAMILY	CITY OF APOPKA	FLORIDA	GARBAGE TRUCK ROUTING PLAN	KHA PROJECT 249218001	DATE 1/26/2023	SCALE AS SHOWN	DESIGNED BY JDB	DRAWN BY JDB	CHECKED BY LJD	DATE 1/26/2023		Kimley»Horn © 2023 KIMLEY-HORN AND ASSOCIATES, INC. 189 S. ORANGE AVENUE, SUITE 1000, ORLANDO, FL 32801 PHONE: 407-898-1511 WWW.KIMLEY-HORN.COM REGISTRY No. 35106	REVISIONS		BY
				No.	DATE										
SHEET NUMBER MDP6.1															

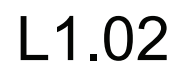


NOTE:
PROJECT DRIVEWAY WITH FULL DEPTH SUBGRADE, BASE AND 1" MINIMUM LIFT OF ASPHALT, STABILIZED ACCESS ROADWAY AROUND PROPOSED BUILDING AND FIRE HYDRANT REQUIRED TO BE INSTALLED AND INSPECTED PRIOR TO ISSUANCE OF BUILDING PERMITS.



LEGEND
[Symbol] FIRE ACCESS ROAD

SHOPPES AT EAST SHORE MULTI-FAMILY	CITY OF APOPKA	FLORIDA	SHEET NUMBER MDP6.2		Kimley»Horn © 2023 KIMLEY-HORN AND ASSOCIATES, INC. 189 S. ORANGE AVENUE, SUITE 1000, ORLANDO, FL 32801 PHONE: 407-898-1511 WWW.KIMLEY-HORN.COM REGISTRY No. 35106	No.	REVISIONS	DATE	BY



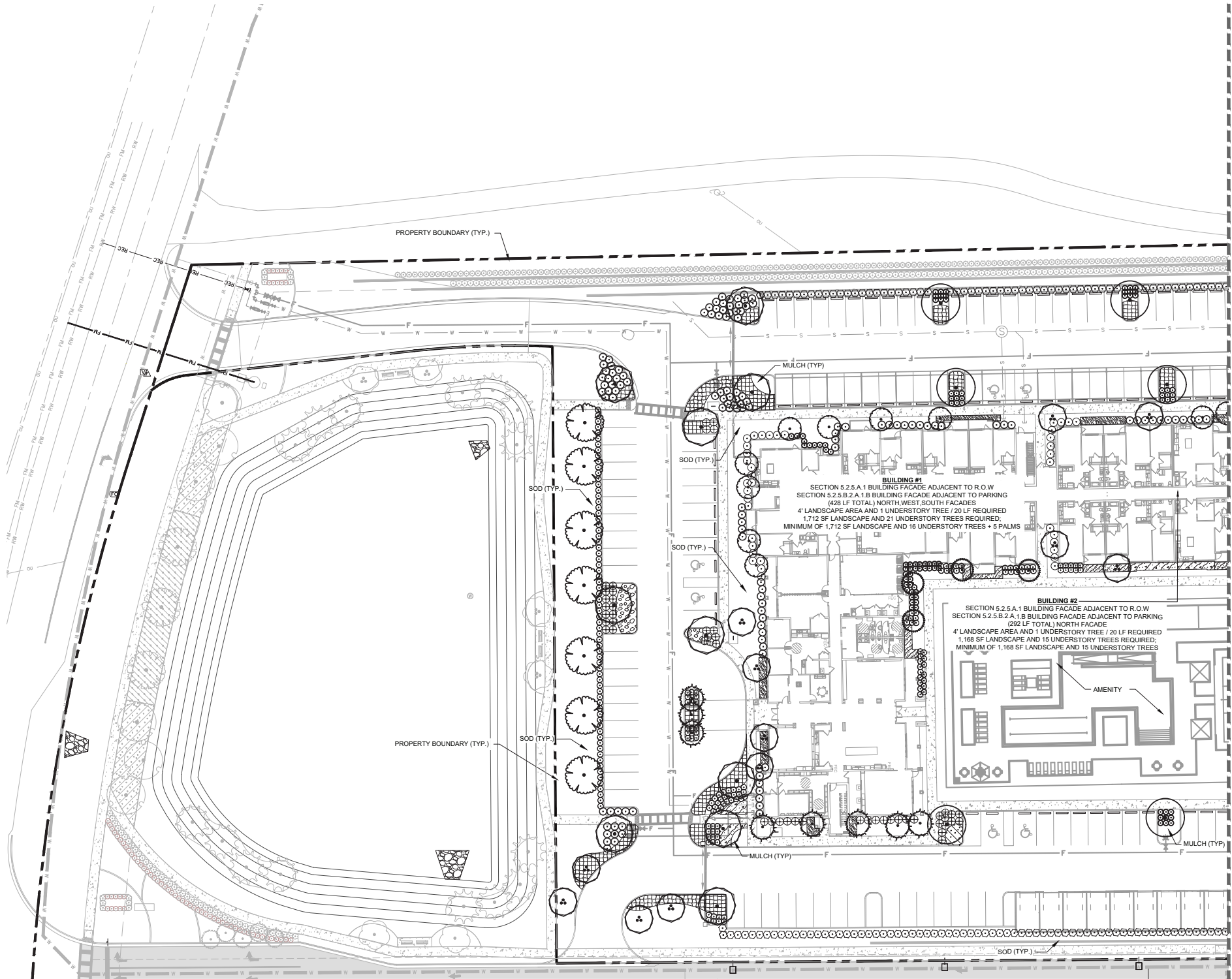
3. ALL LANDSCAPE MATERIAL TO BE FLORIDA GRADE #1 OR BETTER QUALITY.
2. ALL LANDSCAPED AREAS ARE TO RECEIVE A MINIMUM OF 4" OF TOPSOIL.
3. ALL PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS, AND FREE OF PESTS AND DISEASE.
4. ALL MATERIALS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT BEFORE, DURING, AND AFTER INSTALLATION.
5. ALL TREES MUST BE GUYED OR STAKED AS SHOWN IN THE DETAILS.
6. ALL PLANTING AREAS SHALL BE COMPLETELY MULCHED AS SPECIFIED.
7. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL AVOID DAMAGE TO ALL UTILITIES DURING THE COURSE OF THE WORK. LOCATIONS OF EXISTING BURIED UTILITY LINES SHOWN ON THE PLANS ARE BASED UPON BEST AVAILABLE INFORMATION AND ARE TO BE CONSIDERED APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR 1) TO VERIFY THE LOCATIONS OF UTILITY LINES ADJACENT TO THE WORK AREA 2) TO PROTECT ALL UTILITY LINES DURING THE CONSTRUCTION PERIOD 3) TO REPAIR ANY AND ALL DAMAGE TO UTILITIES, STRUCTURES, SITE APPURTENANCES, ETC. WHICH OCCURS AS A RESULT OF THE CONSTRUCTION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON THESE PLANS BEFORE PRICING THE WORK.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR DELIVERY SCHEDULE AND PROTECTION BETWEEN DELIVERY AND PLANTING TO MAINTAIN HEALTHY PLANT CONDITIONS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULLY MAINTAINING (INCLUDING BUT NOT LIMITED TO: WATERING, SPRAYING, MULCHING, FERTILIZING, ETC.) ALL OF THE PLANT MATERIALS AND LAWN FOR THE WARRANTY PERIOD.
11. ANY PLANT MATERIAL WHICH IS DISEASED, DISTRESSED, DEAD, OR REJECTED (PRIOR TO SUBSTANTIAL COMPLETION) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AND SIZE AND MEETING ALL PLANT LIST SPECIFICATIONS.
12. THE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANT MATERIAL FOR WARRANTY PERIOD. THE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS DURING THE NORMAL PLANTING SEASON.
13. STANDARDS SET FORTH IN "AMERICAN STANDARD FOR NURSERY STOCK" REPRESENT GUIDELINE SPECIFICATIONS ONLY AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIAL.
14. ALL LANDSCAPING SHALL BE INSTALLED ACCORDING TO SOUND NURSERY PRACTICES, AND SHALL BE FLORIDA NO. 1 OR BETTER AS GIVEN IN "GRADES AND STANDARDS FOR NURSERY PLANTS, PARTS I AND II," STATE OF FLORIDA, DEPARTMENT OF AGRICULTURE.
15. ALL INVASIVE / EXOTIC SPECIES AND PROHIBITED TREE SPECIES SHALL BE REMOVED FROM SITE, INCLUDING ROOT BALLS TO THE EXTENT POSSIBLE WITH NO DAMAGE TO ADJACENT EXISTING TREES.
16. ALL LANDSCAPE AREAS WILL BE PROVIDED WITH PERMANENT AUTOMATIC IRRIGATION SYSTEM.
17. TREE SUPPORT MATERIALS ARE TO BE REMOVED FROM EACH TREE ONCE IT IS "ESTABLISHED" (AS APPROVED BY THE LANDSCAPE ARCHITECT).
18. ALL PLANT SPECIFICATIONS IN THE PLANT SCHEDULE SHALL BE CONSIDERED THE MINIMUM ALLOWABLE SPECIFICATIONS. CONTRACTOR SHALL PROCURE PLANT MATERIALS AND UPSIZE AS NECESSARY TO MEET THE MOST STRINGENT SPECIFICATION.

PER "CITY OF APOPKA" LAND DEVELOPMENT CODE

SHRUB AREAS

SOD

Plotted By: Wanser, Matthew Sheet: Sat-SHOPPES AT EAST SHORE MULTI-FAMILY Layout: L1.01 March 17, 2023 11:36:15pm K:\ORL_Civil\249218001-Shoppes at East Shore (AECAD)\CONST\Master Plan\PlanSheets\L1.00 - LANDSCAPE PLAN.dwg
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PLANT SCHEDULE

CANOPY TREE	CODE	BOTANICAL NAME	COMMON NAME
	AR	ACER RUBRUM 'FLORIDA FLAME' STRAIGHT, SINGLE LEADER, FULL, FL #1	FLORIDA FLAME RED MAPLE
	MB	MAGNOLIA GRANDIFLORA 'D.D. BLANCHARD' TM STRAIGHT, SINGLE LEADER, 6' CT, FL #1	SOUTHERN MAGNOLIA
	QV	QUERCUS VIRGINIANA STRAIGHT, SINGLE LEADER, FULL, FL #1	SOUTHERN LIVE OAK
PALM TREES	CODE	BOTANICAL NAME	COMMON NAME
	SP	SABAL PALMETTO STRAIGHT, BOOTED, HURRICANE CUT, FULL, FL #1	SABAL PALM
UNDERSTORY TREE	CODE	BOTANICAL NAME	COMMON NAME
	IC	ILEX CASSINE STRAIGHT, FULL, FL #1, SINGLE LEADER	DAHOO HOLLY
	LI	LAGERSTROEMIA INDICA X FAURIEI 'MUSKOGEE' MULTI-TRUNK, 5 TRUNK MIN, FL #1	MUSKOGEE CRAPE MYRTLE MULTI-TRUNK
	ML	MAGNOLIA GRANDIFLORA 'LITTLE GEM' STRAIGHT, SINGLE LEADER, FULL, FL #1	LITTLE GEM DWARF SOUTHERN MAGNOLIA
SHRUBS	CODE	BOTANICAL NAME	COMMON NAME
	AV	ALPINIA ZERUMBET 'VARIEGATA' FULL	VARIEGATED SHELL GINGER
	HP	HAMELIA PATENS 'COMPACTA' FULL	DWARF FIREBUSH
	IV	ILEX VOMITORIA 'SCHILLINGS DWARF' FULL	DWARF YAUPON HOLLY
	PM	PODOCARPUS MACROPHYLLUS FULL	PODOCARPUS
	RA	RHAPHIOLEPS INDICA 'ALBA' FULL	WHITE INDIAN HAWTHORN
	VO	VIBURNUM ODORATISSIMUM FULL	SWEET VIBURNUM
	ZF	ZAMIA FLORIDANA FULL	COONTIE PALM
SHRUB AREAS	CODE	BOTANICAL NAME	COMMON NAME
	DR	DURANTA REPENS 'VARIEGATA' FULL	VARIEGATED GOLD MOUND
	MC	MUHLENBERGIA CAPILLARIS FULL	PINK MUHLY GRASS
GROUND COVERS	CODE	BOTANICAL NAME	COMMON NAME
	AA	AGAPANTHUS AFRICANUS FULL	LILY OF THE NILE
	AG	ARACHIS GLABRATA FULL	PERENNIAL PEANUT
	BF	BULBINE FRUTESCENS FULL	STALKED BULBINE
	DT	DIANELLA TASMANICA FULL	FLAX LILY
	EB	EVOLVULUS GLOMERATUS 'BLUE DAZE' FULL	BRAZILIAN DWARF MORNING GLORY
	LG	LIRIOPE MUSCARI 'EVERGREEN GIANT' FULL	EVERGREEN GIANT LILYTURF
	TJ	TRACHELOSPERMUM JASMINOIDES 'CONFEDERATE' FULL	CONFEDERATE JASMINE
	TV	TULBAGHIA VIOLACEA FULL	SOCIETY GARLIC
MISC. MULCH	QTY	BOTANICAL/COMMON NAME	
	TBD	DESIGNER BROWN HARDWOOD MULCH	
SOD	TBD	PASPALUM NOTATUM 'ARGENTINE'/BAHIA GRASS	

NORTH

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SHOPPES AT EAST SHORE
MULTI-FAMILY

FLORIDA

CITY OF APOPKA

LANDSCAPE PLAN

L1.01

LICENSED PROFESSIONAL

KHA PROJECT
249218001

DATE
1/26/2023

SCALE AS SHOWN

DESIGNED BY ASIL

DRAWN BY ASIL

CHECKED BY MTF

DATE: 1/26/2023

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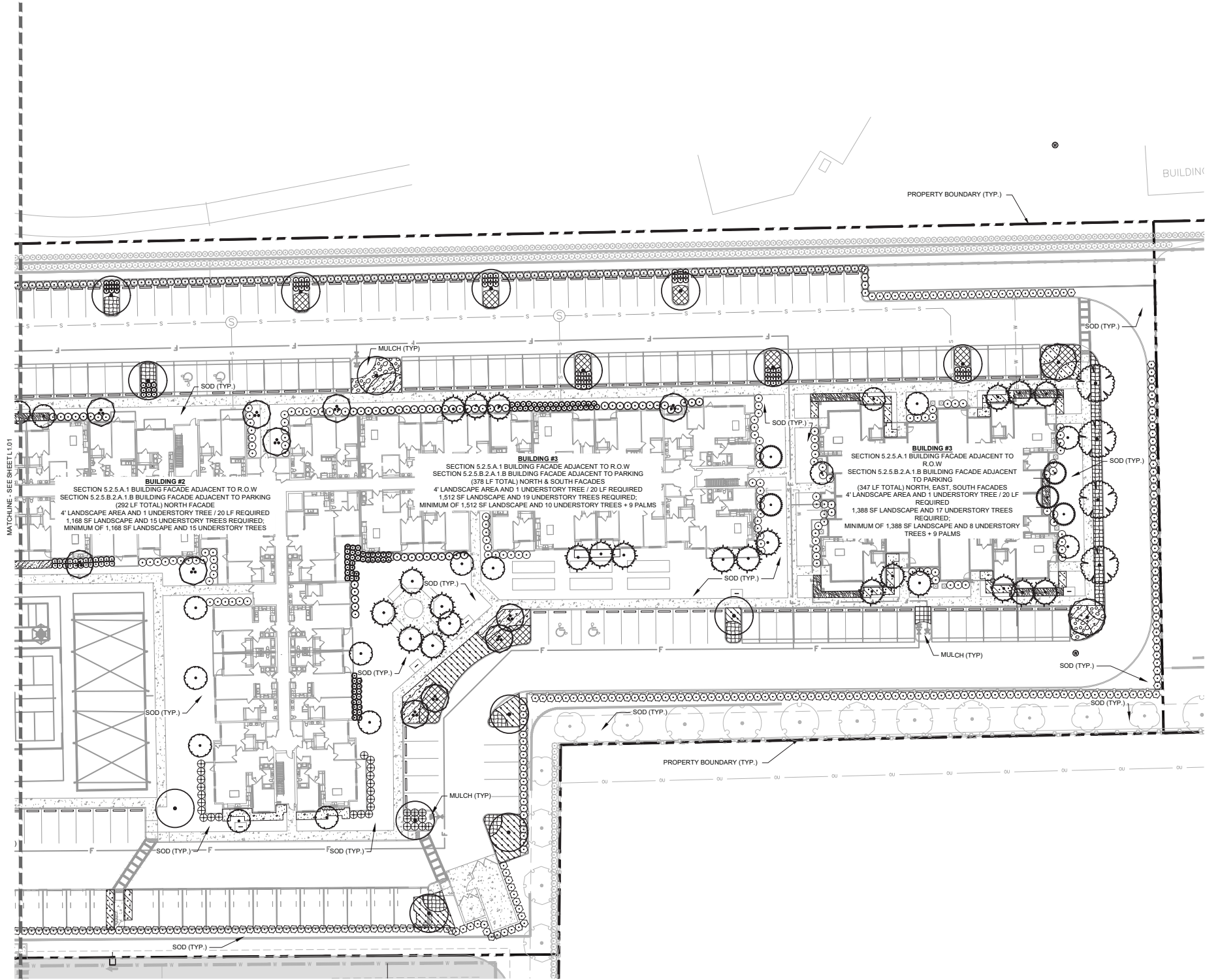
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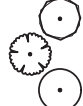
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PLANT SCHEDULE

CANOPY TREE	CODE	BOTANICAL NAME	COMMON NAME
	AR	ACER RUBRUM 'FLORIDA FLAME' STRAIGHT, SINGLE LEADER, FULL, FL #1	FLORIDA FLAME RED MAPLE
	MB	MAGNOLIA GRANDIFLORA 'D.D. BLANCHARD' TM STRAIGHT, SINGLE LEADER, 6' CT, FL #1	SOUTHERN MAGNOLIA
	QV	QUERCUS VIRGINIANA STRAIGHT, SINGLE LEADER, FULL, FL #1	SOUTHERN LIVE OAK
PALM TREES	CODE	BOTANICAL NAME	COMMON NAME
	SP	SABAL PALMETTO STRAIGHT, BOOTED, HURRICANE CUT, FULL, FL #1	SABAL PALM
UNDERSTORY TREE	CODE	BOTANICAL NAME	COMMON NAME
	IC	ILEX CASSINE STRAIGHT, FULL, FL #1, SINGLE LEADER	DAHOO HOLLY
	LI	LAGERSTROEMIA INDICA X FAURIEI 'MUSKOGEE' MULTI-TRUNK, 5 TRUNK MIN, FL #1	MUSKOGEE CRAPE MYRTLE MULTI-TRUNK
	ML	MAGNOLIA GRANDIFLORA 'LITTLE GEM' STRAIGHT, SINGLE LEADER, FULL, FL #1	LITTLE GEM DWARF SOUTHERN MAGNOLIA
SHRUBS	CODE	BOTANICAL NAME	COMMON NAME
	AV	ALPINIA ZERUMBET 'VARIEGATA' FULL	VARIEGATED SHELL GINGER
	HP	HAMELIA PATENS 'COMPACTA' FULL	DWARF FIREBUSH
	IV	ILEX VOMITORIA 'SCHILLINGS DWARF' FULL	DWARF YAUPON HOLLY
	PM	PODOCARPUS MACROPHYLLUS FULL	PODOCARPUS
	RA	RHAPHIOLEPIS INDICA 'ALBA' FULL	WHITE INDIAN HAWTHORN
	VO	VIBURNUM ODORATISSIMUM FULL	SWEET VIBURNUM
	ZF	ZAMIA FLORIDANA FULL	COONTIE PALM
SHRUB AREAS	CODE	BOTANICAL NAME	COMMON NAME
	DR	DURANTA REPENS 'VARIEGATA' FULL	VARIEGATED GOLD MOUND
	MC	MUHLENBERGIA CAPILLARIS FULL	PINK MUHLY GRASS
GROUND COVERS	CODE	BOTANICAL NAME	COMMON NAME
	AA	AGAPANTHUS AFRICANUS FULL	LILY OF THE NILE
	AG	ARACHIS GLABRATA FULL	PERENNIAL PEANUT
	BF	BULBINE FRUTESCENS FULL	STALKED BULBINE
	DT	DIANELLA TASMANICA FULL	FLAX LILY
	EB	EVOLVULUS GLOMERATUS 'BLUE DAZE' FULL	BRAZILIAN DWARF MORNING GLORY
	LG	LIRIOPE MUSCARI 'EVERGREEN GIANT' FULL	EVERGREEN GIANT LILYTURF
	TJ	TRACHELOSPERMUM JASMINOIDES 'CONFEDERATE' FULL	CONFEDERATE JASMINE
	TV	TULBAGHIA VIOLACEA FULL	SOCIETY GARLIC
MISC. MULCH	QTY	BOTANICAL/COMMON NAME	
	TBD	DESIGNER BROWN HARDWOOD MULCH	
SOD	TBD	PASPALUM NOTATUM 'ARGENTINE'/BAHIA GRASS	

NORTH

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PLANT SCHEDULE

CANOPY TREE	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE
	AR	12	ACER RUBRUM 'FLORIDA FLAME' STRAIGHT, SINGLE LEADER, FULL, FL #1	FLORIDA FLAME RED MAPLE	FG	3" CAL MIN	12' HT MIN
	MB	11	MAGNOLIA GRANDIFLORA 'D.D. BLANCHARD' TM STRAIGHT, SINGLE LEADER, 6" CT, FL #1	SOUTHERN MAGNOLIA	FG	3" CAL MIN	12' HT MIN
	QV	21	QUERCUS VIRGINIANA STRAIGHT, SINGLE LEADER, FULL, FL #1	SOUTHERN LIVE OAK	FG	3" CAL MIN	14' HT MIN
PALM TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE
	SP	32	SABAL PALMETTO STRAIGHT, BOOTED, HURRICANE CUT, FULL, FL #1	SABAL PALM	FG	-	12' - 18' CT
UNDERSTORY TREE	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	CAL	SIZE
	IC	25	ILEX CASSINE STRAIGHT, FULL, FL #1, SINGLE LEADER	DAHOON HOLLY	FG	3" CAL MIN	10' HT, 4" SPR
	LI	23	LAGERSTROEMIA INDICA X FAURIEI 'MUSKOGEE' MULTI-TRUNK, 5 TRUNK MIN, FL #1	MUSKOGEE CRAPE MYRTLE MULTI-TRUNK	FG	5" CAL. TOT.	10'-12' H X 5'-6" W
	ML	9	MAGNOLIA GRANDIFLORA 'LITTLE GEM' STRAIGHT, SINGLE LEADER, FULL, FL #1	LITTLE GEM DWARF SOUTHERN MAGNOLIA	FG	3" CAL MIN	10' HT, 4" SPR
SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	SPACING	SIZE
	AV	184	ALPINIA ZERUMBET 'VARIEGATA' FULL	VARIEGATED SHELL GINGER	3 GAL	30" OC	24" OC
	HP	187	HAMELIA PATENS 'COMPACTA' FULL	DWARF FIREBUSH	3 GAL	24" HT MIN	30" OC
	IV	83	ILEX VOMITORIA 'SCHILLINGS DWARF' FULL	DWARF YAUPON HOLLY	3 GAL	24" OC	12" FULL
	PM	497	PODOCARPUS MACROPHYLLUS FULL	PODOCARPUS	7 GAL	36" OC	36" HT MIN
	RA	176	RHAPHIOLEPS INDICA 'ALBA' FULL	WHITE INDIAN HAWTHORN	3 GAL	30" OC	14" FULL
	VO	163	VIBURNUM ODORATISSIMUM FULL	SWEET VIBURNUM	3 GAL	36" OC	24" FULL
	ZF	98	ZAMIA FLORIDANA FULL	COONTIE PALM	3 GAL	30" OC	24" OC
SHRUB AREAS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	SPACING
	DR	290	DURANTA REPENS 'VARIEGATA' FULL	VARIEGATED GOLD MOUND	3 GAL	18" HT MIN	24" OC
	MC	127	MUHLENBERGIA CAPILLARIS FULL	PINK MUHLY GRASS	3 GAL	24" HT MIN	36" OC
GROUND COVERS	CODE	QTY	BOTANICAL NAME	COMMON NAME	CONT	SIZE	SPACING
	AA	40	AGAPANTHUS AFRICANUS FULL	LILY OF THE NILE	3 GAL	12" FULL	24" OC
	AG	1,237	ARACHIS GLABRATA FULL	PERENNIAL PEANUT	1 GAL	10" SPRD	18" OC
	BF	169	BULBINE FRUTESCENS FULL	STALKED BULBINE	1 GAL	12" FULL	18" OC
	DT	315	DIANELLA TASMANICA FULL	FLAX LILY	1 GAL	14" FULL	18" OC
	EB	199	EVOLVULUS GLOMERATUS 'BLUE DAZE' FULL	BRAZILIAN DWARF MORNING GLORY	3 GAL	12" FULL	18" OC
	LG	486	LIRIOPE MUSCARI 'EVERGREEN GIANT' FULL	EVERGREEN GIANT LILYTURF	3 GAL	12" HT. MIN.	18" OC
	TJ	240	TRACHELOSPERMUM JASMINOIDES 'CONFEDERATE' FULL	CONFEDERATE JASMINE	1 GAL	12" FULL	24" OC
	TV	466	TULBAGHIA VIOLACEA FULL	SOCIETY GARLIC	1 GAL	12" FULL	18" OC
MISC. MULCH	QTY TBD		BOTANICAL/COMMON NAME DESIGNER BROWN HARDWOOD MULCH	SPECIFICATIONS 3" DEPTH MINIMUM, SHREDDED, FREE OF WEEDS/INVASIVE PLANT MATERIAL			
SOD	TBD		PASPALUM NOTATUM 'ARGENTINE/BAHIA GRASS	ROLLED TIGHT, 100% WEED/INSECT/DISEASE FREE			

CODE MINIMUM LANDSCAPE CALCULATIONS

PER "CITY OF APOPKA" LAND DEVELOPMENT CODE

	REQUIRED	PROVIDED
BUILDING FOUNDATION LANDSCAPE <i>SECTION 5.2.5.A.1</i> BUILDING FACADE FACING R.O.W. (AND) <i>SECTION 5.2.5.B.2.A.1.B</i> BUILDING FACADE ADJACENT TO PARKING	BUILDING 1 - 428 LF (NORTH, WEST, SOUTH FACADES) 1,712 SF OF LANDSCAPE REQ. (4" WIDTH LANDSCAPE AREA) 21 UNDERSTORY TREES REQ. (1 UNDERSTORY TREE / 20 LF) BUILDING 2 - 292 LF (NORTH FACADES) 1,168 SF OF LANDSCAPE REQ. (4" WIDTH LANDSCAPE AREA) 15 UNDERSTORY TREES REQ. (1 UNDERSTORY TREE / 20 LF) BUILDING 3 - 378 LF (NORTH & SOUTH FACADES) 1,512 SF OF LANDSCAPE REQ. (4" WIDTH LANDSCAPE AREA) 19 UNDERSTORY TREES REQ. (1 UNDERSTORY TREE / 20 LF) BUILDING 4 - 347 LF (NORTH, SOUTH, EAST FACADES) 1,388 SF OF LANDSCAPE REQ. (4" WIDTH LANDSCAPE AREA) 17 UNDERSTORY TREES REQ. (1 UNDERSTORY TREE / 20 LF)	BUILDING 1 1,914 SF OF LANDSCAPE 16 UNDERSTORY TREES + 5 PALMS BUILDING 2 1,428 SF OF LANDSCAPE 15 UNDERSTORY TREES BUILDING 3 1,598 SF OF LANDSCAPE 10 UNDERSTORY TREES + 9 PALMS BUILDING 4 1,539 SF OF LANDSCAPE 8 UNDERSTORY TREES + 9 PALMS
INTERIOR VUA LANDSCAPE <i>SECTION 5.2.5.B.2</i>	10% OF VUA AREA TO BE LANDSCAPED (9,861 SF) 1 TREE + 1 TREE PER 10 PARKING SPACES (267 PARKING SPACES) 98,610 SF VUA X 0.1 = 9,861 SF LANDSCAPE REQUIRED 267 SPACES / 10 +1 = 27.7 ~ 28 SHADE TREES REQUIRED 9,861 SF VUA x .3 = 2,958 SF OF MATURE TREE CANOPY COVERAGE	10,402 SF LANDSCAPE AREA PROVIDED 43 SHADE TREES PROVIDED 3,088 SF PROVIDED
PERIMETER LANDSCAPING <i>SECTION 5.2.5.B.3</i> <i>SECTION 5.2.5.B.b.2</i>	1 CANOPY TREE AND 10 SHRUBS (36" HT. MIN. PER 35 LF (OR FRACTION THEREOF) OF PROPERTY PERIMETER	ALL PERIMETER LANDSCAPE PROVIDED IN OVERALL MASTER PLAN DEVELOPMENT "THE SHOPPES AT EAST SHORE"

LANDSCAPE NOTES:

- ALL LANDSCAPE MATERIAL TO BE FLORIDA GRADE #1 OR BETTER QUALITY
- ALL LANDSCAPED AREAS ARE TO RECEIVE A MINIMUM OF 4" OF TOPSOIL.
- ALL PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS, AND FREE OF PESTS AND DISEASE.
- ALL MATERIALS ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT BEFORE, DURING, AND AFTER INSTALLATION.
- ALL TREES MUST BE GUYED OR STAKED AS SHOWN IN THE DETAILS.
- ALL PLANTING AREAS SHALL BE COMPLETELY MULCHED AS SPECIFIED.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL AVOID DAMAGE TO ALL UTILITIES DURING THE COURSE OF THE WORK. LOCATIONS OF EXISTING BURIED UTILITY LINES SHOWN ON THE PLANS ARE BASED UPON BEST AVAILABLE INFORMATION AND ARE TO BE CONSIDERED APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR 1) TO VERIFY THE LOCATIONS OF UTILITY LINES ADJACENT TO THE WORK AREA 2) TO PROTECT ALL UTILITY LINES DURING THE CONSTRUCTION PERIOD 3) TO REPAIR ANY AND ALL DAMAGE TO UTILITIES, STRUCTURES, SITE APPURTENANCES, ETC. WHICH OCCURS AS A RESULT OF THE CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON THESE PLANS BEFORE PRICING THE WORK.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DELIVERY SCHEDULE AND PROTECTION BETWEEN DELIVERY AND PLANTING TO MAINTAIN HEALTHY PLANT CONDITIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULLY MAINTAINING (INCLUDING BUT NOT LIMITED TO: WATERING, SPRAYING, MULCHING, FERTILIZING, ETC.) ALL OF THE PLANT MATERIALS AND LAWN FOR THE WARRANTY PERIOD.
- ANY PLANT MATERIAL WHICH IS DISEASED, DISTRESSED, DEAD, OR REJECTED (PRIOR TO SUBSTANTIAL COMPLETION) SHALL BE PROMPTLY REMOVED FROM THE SITE AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AND SIZE AND MEETING ALL PLANT LIST SPECIFICATIONS.
- THE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANT MATERIAL FOR WARRANTY PERIOD. THE CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS DURING THE NORMAL PLANTING SEASON.
- STANDARDS SET FORTH IN "AMERICAN STANDARD FOR NURSERY STOCK" REPRESENT GUIDELINE SPECIFICATIONS ONLY AND SHALL CONSTITUTE MINIMUM QUALITY REQUIREMENTS FOR PLANT MATERIAL.
- ALL LANDSCAPING SHALL BE INSTALLED ACCORDING TO SOUND NURSERY PRACTICES, AND SHALL BE FLORIDA NO. 1 OR BETTER AS GIVEN IN "GRADES AND STANDARDS FOR NURSERY PLANTS, PARTS I AND II," STATE OF FLORIDA, DEPARTMENT OF AGRICULTURE.
- ALL INVASIVE / EXOTIC SPECIES AND PROHIBITED TREE SPECIES SHALL BE REMOVED FROM SITE, INCLUDING ROOT BALLS TO THE EXTENT POSSIBLE WITH NO DAMAGE TO ADJACENT EXISTING TREES.
- ALL LANDSCAPE AREAS WILL BE PROVIDED WITH PERMANENT AUTOMATIC IRRIGATION SYSTEM.
- TREE SUPPORT MATERIALS ARE TO BE REMOVED FROM EACH TREE ONCE IT IS "ESTABLISHED" (AS APPROVED BY THE LANDSCAPE ARCHITECT).
- ALL PLANT SPECIFICATIONS IN THE PLANT SCHEDULE SHALL BE CONSIDERED THE MINIMUM ALLOWABLE SPECIFICATIONS. CONTRACTOR SHALL PROCURE PLANT MATERIALS AND UPSIZE AS NECESSARY TO MEET THE MOST STRINGENT SPECIFICATION.

SHOPPES AT EAST SHORE
MULTI-FAMILY

CITY OF APOPKA

SHEET NUMBER
L1.03

LANDSCAPE PLANT
SCHEDULE & NOTES

Licensed Professional

KHA PROJECT
249218001

DATE
1/26/2023

SCALE AS SHOWN
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CHECKED BY MTF

DATE: 1/26/2023

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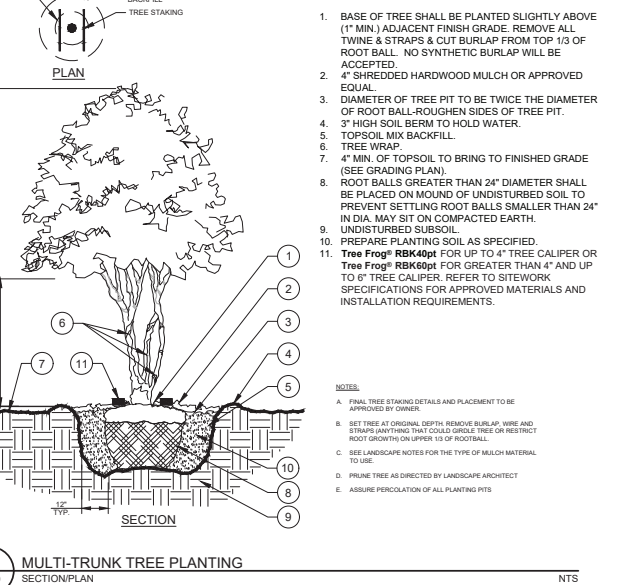
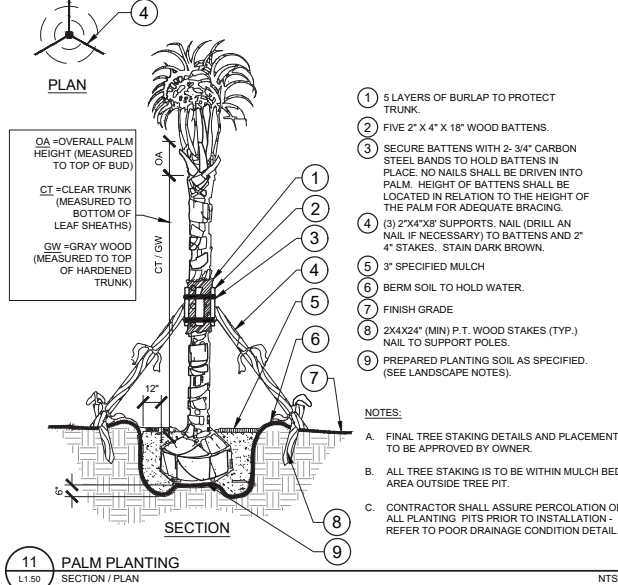
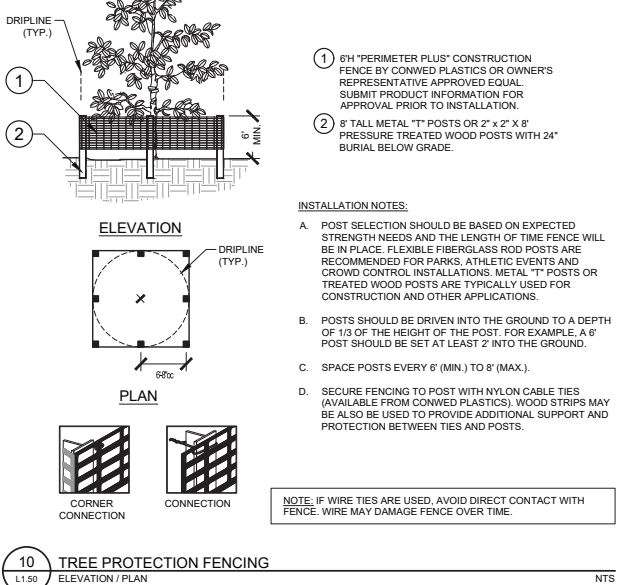
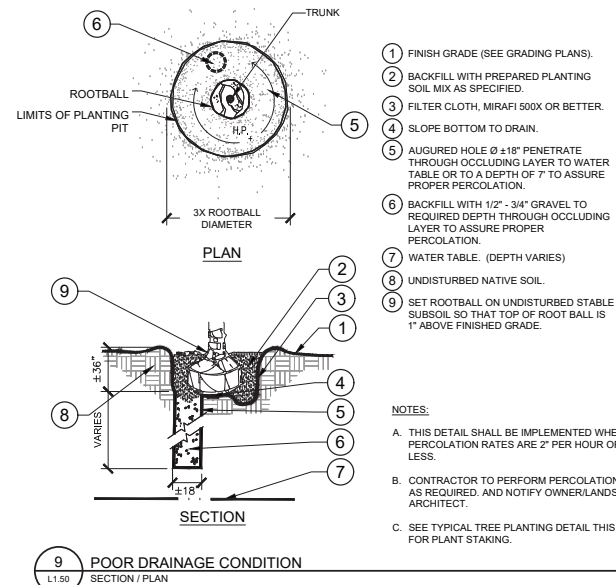
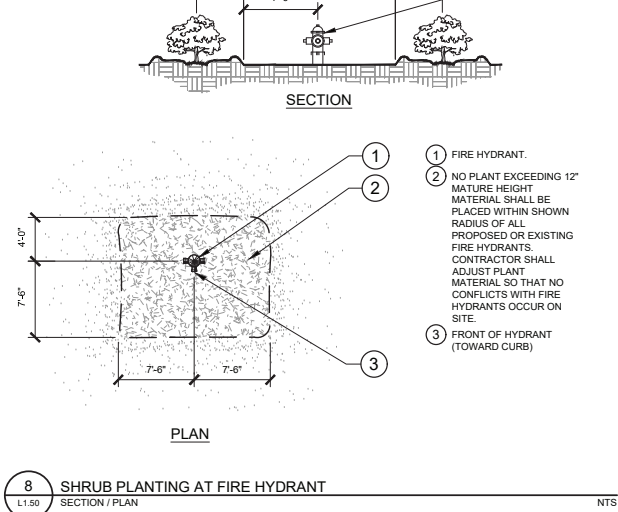
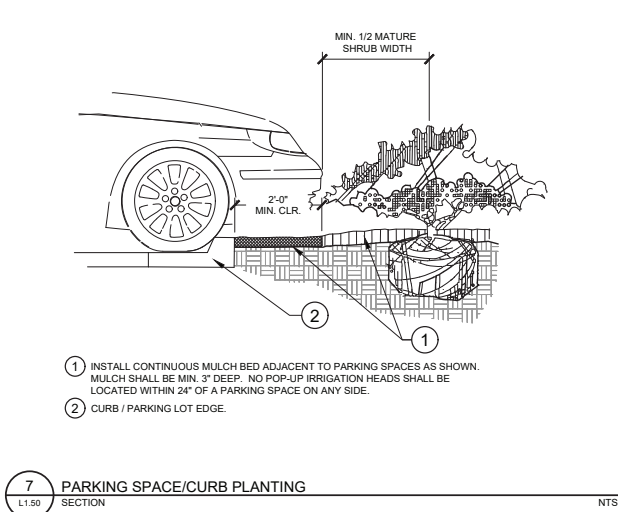
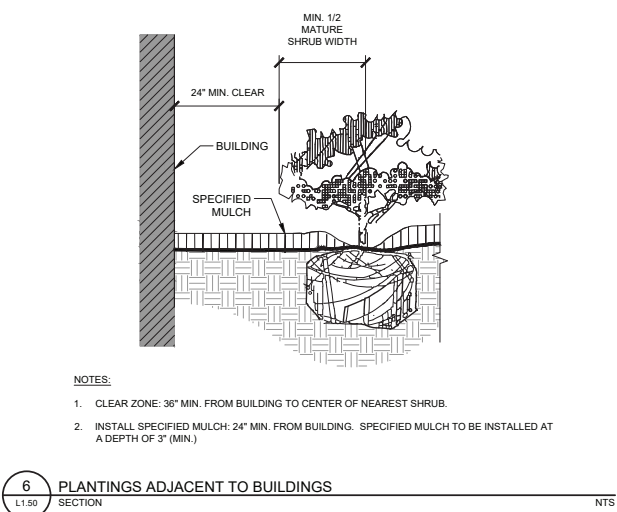
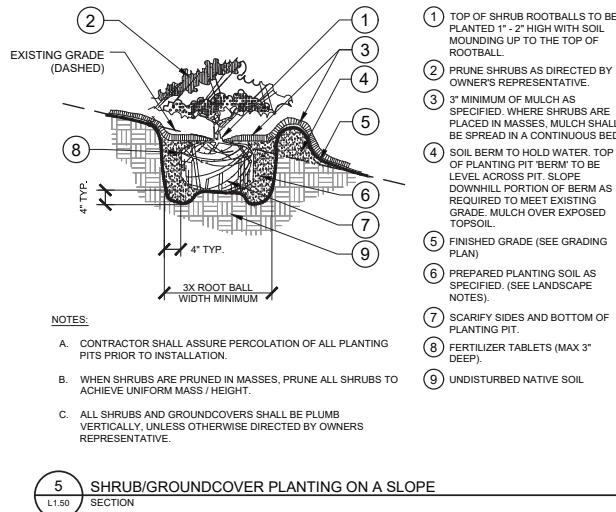
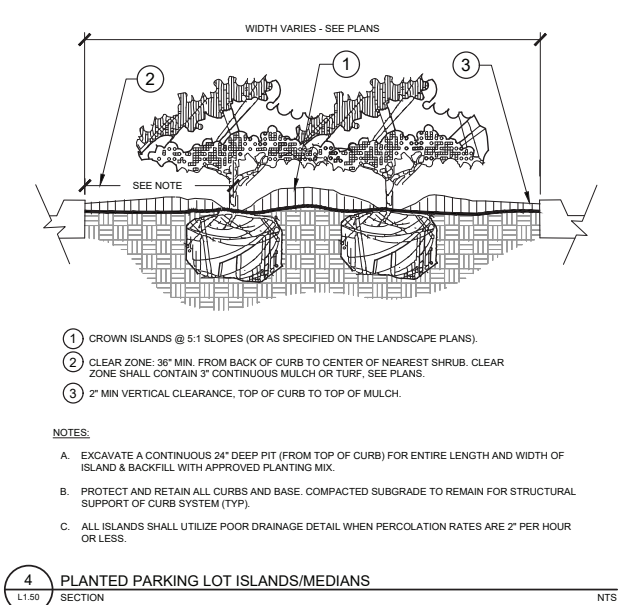
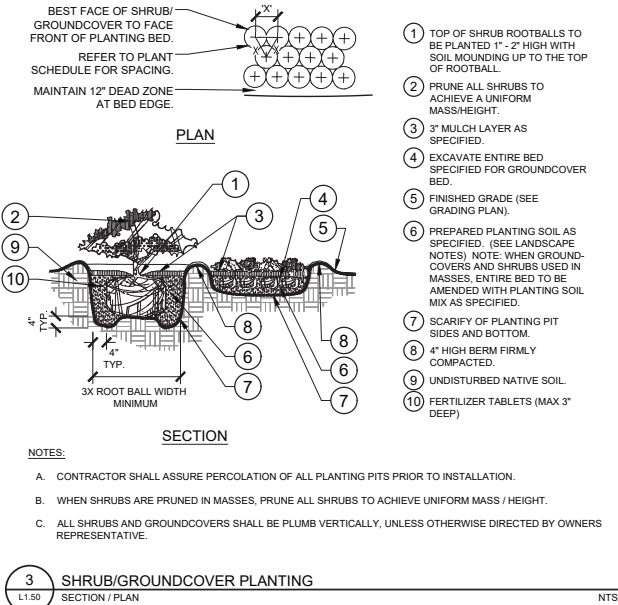
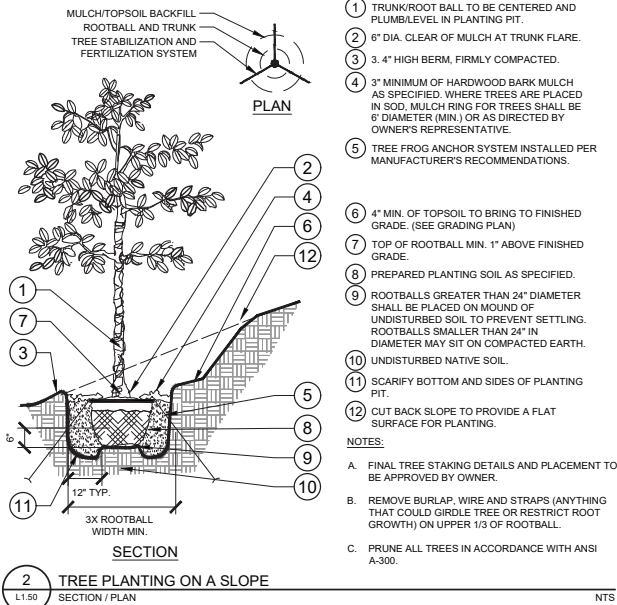
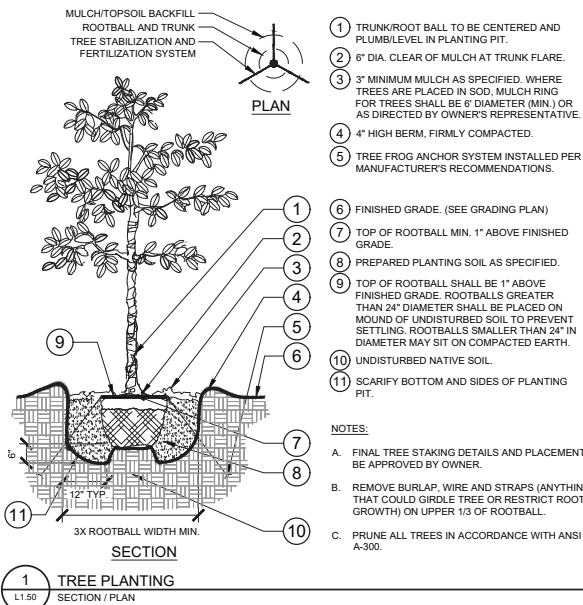
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LANDSCAPE DETAILS												SHEET NUMBER L1.50	
SHOPPES AT EAST SHORE MULTI-FAMILY												CITY OF APOPKA	
FLORIDA												DATE	

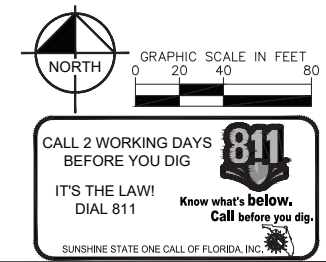
GENERAL LANDSCAPE SPECIFICATIONS AND NOTES

- SCOPE OF WORK
1. THE WORK CONSISTS OF: FURNISHING ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, TRANSPORTATION, AND ANY OTHER APPURTENANCES NECESSARY FOR THE COMPLETION OF THIS PROJECT AS SHOWN ON THE DRAWINGS, AS INCLUDED IN THE PLANT LIST, AND AS SPECIFIED HEREIN.
2. WORK SHALL INCLUDE MAINTENANCE AND WATERING OF ALL CONTRACT PLANTING AREAS UNTIL CERTIFICATION OF ACCEPTANCE BY THE OWNER.
- B. PROTECTION OF EXISTING STRUCTURES
- ALL EXISTING BUILDINGS, WALKS, WALLS, PAVING, PIPING, OTHER SITE CONSTRUCTION ITEMS, AND PLANTING ALREADY COMPLETED OR ESTABLISHED AND DESIGNATED TO REMAIN SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. ALL DAMAGE RESULTING FROM NEGLIGENCE SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER, AT NO COST TO THE OWNER.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL NECESSARY BMP DEVICES ACCORDING TO ALL REGULATORY AGENCY'S STANDARDS THROUGH THE DURATION OF ALL CONSTRUCTION ACTIVITIES.
3. THE CONTRACTOR SHALL SUBMIT A DETAILED PROJECT SPECIFIC WORK ZONE TRAFFIC CONTROL PLAN UNLESS THE WORK REQUIRES NOTHING MORE THAN A DIRECT APPLICATION OF FDOT DESIGN STANDARDS, INDEX 600. IF A DIRECT APPLICATION OF INDEX 600 IS PROPOSED, THE CONTRACTOR SHALL SUBMIT IN WRITING A STATEMENT INDICATING THE STANDARD INDEX AND PAGE NUMBER NO LESS THAN 10 BUSINESS DAYS PRIOR TO START OF CONSTRUCTION. WHEN A DIRECT APPLICATION OF FDOT STANDARD INDEX 600 IS NOT ACCEPTABLE A PROJECT SPECIFIC WORK ZONE TRAFFIC CONTROL PLAN SHALL BE PREPARED BY A FLORIDA PROFESSIONAL ENGINEER WHO HAS SUCCESSFULLY COMPLETED ADVANCED TRAINING IN MAINTENANCE OF TRAFFIC, AS DEFINED BY FDOT FOR APPROVAL BY THE COUNTY ENGINEER'S REPRESENTATIVE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UTILITIES, WHETHER PUBLIC OR PRIVATE, PRIOR TO EXCAVATION. THE INFORMATION AND DATA SHOWN WITH DESIGN TO EXISTING UNDERGROUND FACILITIES AT OR CONTIGUOUS TO THE SITE IS APPROXIMATE AND BASED ON INFORMATION FURNISHED BY THE OWNER OF SUCH UNDERGROUND FACILITIES OR ON PHYSICAL APPURTENANCES OBSERVED IN THE FIELD. THE OWNER AND DESIGN PROFESSIONAL SHALL NOT BE RESPONSIBLE FOR THE ACCURACY AND COMPLETENESS OF ANY SUCH INFORMATION OR DATA. THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR, REVIEWING AND CHECKING ALL SUCH INFORMATION AND DATA LOCATING ALL UNDERGROUND FACILITIES DURING CONSTRUCTION. THE SAFETY AND PROTECTION THEREOF, REPAIRING ANY DAMAGE THERETO RESULTING FROM THE WORK, THE COST OF ALL WILL BE CONSIDERED AS HAVING BEEN INCLUDED IN THE CONTRACT PRICE. THE CONTRACTOR SHALL NOTIFY ANY AFFECTED UTILITY COMPANIES OR AGENCIES IN WRITING AT LEAST 48 HOURS PRIOR TO BEGINNING CONSTRUCTION.
- C. PROTECTION OF EXISTING PLANT MATERIALS
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UNAUTHORIZED CUTTING OR DAMAGE TO TREES AND SHRUBS EXISTING OR OTHERWISE, CAUSED BY CARELESS EQUIPMENT OPERATION, MATERIAL STOCKPILING, ETC... THIS SHALL INCLUDE COMPACTION BY DRIVING OR PARKING INSIDE THE DRIP-LINE AND SPILLING OIL, GASOLINE, OR OTHER DELETERIOUS MATERIALS WITHIN THE DRIP-LINE. NO MATERIALS SHALL BE BURNED ON SITE. EXISTING TREES KILLED OR DAMAGED SO THAT THEY ARE MISSHAPEN AND/OR UNSIGHTLY SHALL BE REPLACED AT THE COST TO THE CONTRACTOR OF THREE HUNDRED DOLLARS (\$300) PER CALIPER INCH ON AN ESCALATING SCALE WHICH ADDS AN ADDITIONAL TWENTY (20) PERCENT PER INCH OVER FOUR (4) INCHES CALIPER AS FIXED AND AGREED LIQUIDATED DAMAGES. CALIPER SHALL BE MEASURED SIX (6) INCHES ABOVE GROUND LEVEL FOR TREES UP TO AND INCLUDING FOUR (4) INCHES IN CALIPER AND TWELVE (12) INCHES ABOVE GROUND LEVEL FOR TREES OVER FOUR (4) INCHES IN CALIPER.
2. SEE TREE MITIGATION PLAN AND NOTES, IF APPLICABLE.
- D. MATERIALS
1. GENERAL
- MATERIAL SAMPLES LISTED BELOW SHALL BE SUBMITTED FOR APPROVAL, ON SITE OR AS DETERMINED BY THE OWNER. UPON APPROVAL, DELIVERY OF MATERIALS MAY COMMENCE.
- | MATERIAL | SAMPLE SIZE |
|-------------|--|
| MULCH | ONE (1) CUBIC FOOT |
| TOPSOIL MIX | ONE (1) CUBIC YD |
| PLANTS | ONE (1) OF EACH VARIETY (OR TAGGED IN NURSERY) |
2. PLANT MATERIALS
- a. PLANT SPECIES AND SIZE SHALL CONFORM TO THOSE INDICATED ON THE DRAWINGS. ALL NURSERY STOCK SHALL BE IN ACCORDANCE WITH GRADES AND STANDARDS FOR NURSERY PLANTS, LATEST EDITION, PUBLISHED BY THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES. ALL PLANTS SHALL BE FLORIDA GRADE NO. 1 OR BETTER AS DETERMINED BY THE FLORIDA DIVISION OF PLANT INDUSTRY. ALL PLANTS SHALL BE HEALTHY, VIGOROUS, SOUND, WELL-BRANCHED, AND FREE OF DISEASE AND INSECTS, INSECT EGGS AND LARVAE AND SHALL HAVE ADEQUATE ROOT SYSTEMS. TREES FOR PLANTING IN ROWS SHALL BE UNIFORM IN SIZE AND SHAPE. ALL MATERIALS SHALL BE SUBJECT TO APPROVAL BY THE OWNER. WHEN ANY REQUIREMENTS ARE OMITTED FROM THE PLANT LIST, THE PLANTS FURNISHED SHALL BE NORMAL FOR THE VARIETY. PLANTS SHALL BE PRUNED PRIOR TO DELIVERY ONLY WITH APPROVAL FROM OWNER OR OWNER'S REPRESENTATIVE. NO SUBSTITUTIONS SHALL BE MADE WITHOUT WRITTEN PERMISSION FROM THE OWNER'S REPRESENTATIVE.
- b. MEASUREMENTS: THE HEIGHT AND/OR WIDTH OF TREES SHALL BE MEASURED FROM THE GROUND OR ACROSS THE NORMAL SPREAD OF BRANCHES WITH THE PLANTS IN THEIR NORMAL POSITION. THIS MEASUREMENT SHALL NOT INCLUDE THE IMMEDIATE TERMINAL GROWTH. PLANTS LARGER IN SIZE THAN THOSE SPECIFIED IN THE PLANT LIST MAY BE USED IF APPROVED BY THE OWNER. IF THE USE OF LARGER PLANTS IS APPROVED, THE BALL OF EARTH OR SPREAD OF ROOTS SHALL BE INCREASED IN PROPORTION TO THE SIZE OF THE PLANT.
- c. INSPECTION: PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL AT THE PLACE OF GROWTH, OR UPON DELIVERY TO THE SITE, AS DETERMINED BY THE OWNER, FOR QUALITY, SIZE, AND VARIETY. SUCH APPROVAL SHALL NOT IMPAIR THE RIGHT OF INSPECTION AND REJECTION AT THE SITE DURING PROGRESS OF THE WORK OR AFTER COMPLETION FOR SIZE AND CONDITION OF ROOT BALLS OR ROOTS, LATENT DEFECTS OR INJURIES. REJECTED PLANTS SHALL BE REMOVED IMMEDIATELY FROM THE SITE. NOTICE REQUESTING INSPECTION SHALL BE SUBMITTED IN WRITING BY THE CONTRACTOR AT LEAST ONE (1) WEEK PRIOR TO ANTICIPATED DATE.
- E. SOIL MIXTURE (PLANTING MEDIUM, PLANTING MIX, TOPSOIL MIX)
1. CONTRACTOR SHALL TEST EXISTING SOIL AND AMEND AS NECESSARY IN ACCORDANCE WITH THE GUIDELINES BELOW:
2. SOIL MIXTURE (PLANTING MEDIUM FOR PLANT PITS) SHALL CONSIST OF TWO PARTS OF TOPSOIL AND ONE PART SAND, AS DESCRIBED BELOW. CONTRACTOR TO SUBMIT SAMPLES AND PH TESTING RESULTS OF SOIL MIXTURE FOR OWNER'S REPRESENTATIVE APPROVAL PRIOR TO PLANT INSTALLATION OPERATIONS COMMENCE.
- a. TOPSOIL, FOR USE IN PREPARING SOIL MIXTURE FOR BACKFILLING PLANT PITS SHALL BE FERTILE, FRABLE, AND OF A LOAMY CHARACTER, REASONABLY FREE OF SUBSOIL, CLAY LUMPS, BRUSH WEEDS AND OTHER LITTER, FREE OF ROOTS, STUMPS, STONES LARGER THAN 2" IN ANY DIRECTION, AND OTHER EXTRANEOUS OR TOXIC MATTER HARMFUL TO PLANT GROWTH. IT SHALL CONTAIN THREE (3) TO FIVE (5) PERCENT DECOMPOSED ORGANIC MATTER AND HAVE A PH BETWEEN 5.5 AND 7.0.
- b. SAND SHALL BE COARSE, CLEAN, WELL-DRAINING, NATIVE SAND.
2. TREES SHALL BE PLANTED IN THE EXISTING NATIVE SOIL ON SITE, UNLESS DETERMINED TO BE UNSUITABLE - AT WHICH POINT THE CONTRACTOR SHALL CONTACT OWNER'S REPRESENTATIVE TO DISCUSS ALTERNATE RECOMMENDATION PRIOR TO PLANTING.
- F. WATER
1. WATER NECESSARY FOR PLANTING AND MAINTENANCE SHALL BE OF SATISFACTORY QUALITY TO SUSTAIN ADEQUATE PLANT GROWTH AND SHALL NOT CONTAIN HARMFUL, NATURAL OR MAN-MADE ELEMENTS DETRIMENTAL TO PLANTS. WATER MEETING THE ABOVE STANDARD SHALL BE OBTAINED ON THE SITE FROM THE OWNER, IF AVAILABLE, AND THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE ARRANGEMENTS FOR ITS USE BY HIS TASKS, HOSES, SPRINKLERS, ETC... IF SUCH WATER IS NOT AVAILABLE AT THE SITE, THE CONTRACTOR SHALL PROVIDE SATISFACTORY WATER FROM SOURCES OFF THE SITE AT NO ADDITIONAL COST TO THE OWNER.
- * WATERING/IRRIGATION RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.
- G. FERTILIZER
- CONTRACTOR SHALL PROVIDE FERTILIZER APPLICATION SCHEDULE TO OWNER, AS APPLICABLE TO SOIL TYPE, PLANT INSTALLATION TYPE, AND SITE'S PROPOSED USE. SUGGESTED FERTILIZER TYPE SHALL BE ORGANIC OR OTHERWISE NATURALLY-DERIVED.
- * FERTILIZER RESTRICTIONS MAY APPLY - REFER TO PROPERTY'S JURISDICTIONAL AUTHORITY.
- H. MULCH
1. MULCH MATERIAL SHALL BE MOISTENED AT THE TIME OF APPLICATION TO PREVENT WIND DISPLACEMENT, AND APPLIED AT A DEPTH OF THREE (3) INCHES. CLEAR MULCH FROM EACH PLANTS CROWN (BASE). MULCH SHALL BE "FLORIMULCH", EUCALYPTUS MULCH, OR SIMILAR SUSTAINABLY HARVESTED MULCH UNLESS SPECIFIED OTHERWISE.
2. PROVIDE A THREE (3) INCH MINIMUM LAYER OF SPECIFIED MULCH OVER THE ENTIRE AREA OF EACH SHRUB BED, GROUND COVER, VINE BED, AND TREE PIT (6" MINIMUM) PLANTED UNDER THIS CONTRACT.
- I. DIGGING AND HANDLING
1. PROTECT ROOTS OR ROOT BALLS OF PLANTS AT ALL TIMES FROM SUN, DRYING WINDS, WATER AND FREEZING, AS NECESSARY UNTIL PLANTING. PLANT MATERIALS SHALL BE ADEQUATELY PACKED TO PREVENT DAMAGE DURING TRANSIT. TREES TRANSPORTED MORE THAN TEN (10) MILES OR WHICH ARE NOT PLANTED WITHIN THREE (3) DAYS OF DELIVERY TO THE SITE SHALL BE SPRAYED WITH AN ANTIRANSPIRANT PRODUCT ("WILTPROF" OR EQUIVALENT) TO MINIMIZE TRANSPIRATIONAL WATER LOSS.
2. BALLED AND BURLAPPED (B&B), AND FIELD GROWN (FG) PLANTS SHALL BE DUG WITH FIRM, NATURAL BALLS OF SOIL OF SUFFICIENT SIZE TO ENCOMPASS THE FIBROUS AND FEEDING ROOTS OF THE PLANTS. NO PLANTS MOVED WITH A ROOT BALL SHALL BE PLANTED IF THE BALL IS CRACKED OR BROKEN. PLANTS SHALL NOT BE HANDLED BY STEMS.

- PLANTS MARKED "BP" IN THE PLANT LIST SHALL BE DUG WITH BARE ROOTS. CARE SHALL BE EXERCISED THAT THE ROOTS DO NOT DRY OUT DURING TRANSPORTATION AND PRIOR TO PLANTING.
4. PROTECTION OF PALMS: ONLY A MINIMUM OF FRONDS SHALL BE REMOVED FROM THE CROWN OF THE PALM TREES TO FACILITATE MOVING AND HANDLING. CLEAR TRUNK (CT) SHALL BE AS SPECIFIED AFTER THE MINIMUM OF FRONDS HAVE BEEN REMOVED. ALL PALMS SHALL BE BRACED PER PALM PLANTING DETAIL.
5. EXCAVATION OF TREE PITS SHALL BE PERFORMED USING EXTREME CARE TO AVOID DAMAGE TO SURFACE AND SUBSURFACE ELEMENTS SUCH AS UTILITIES OR HARDCAPE ELEMENTS, FOOTERS AND PREPARED SUB-BASES.
- CONTAINER GROWN STOCK
1. ALL CONTAINER GROWN MATERIAL SHALL BE HEALTHY, VIGOROUS, WELL-ROOTED PLANTS ESTABLISHED IN THE CONTAINER IN WHICH THEY ARE SOLD. THE PLANTS SHALL HAVE TOPS WHICH ARE OF GOOD QUALITY AND ARE IN A HEALTHY GROWING CONDITION.
2. AN ESTABLISHED CONTAINER GROWN PLANT SHALL BE TRANSLANTED INTO A CONTAINER AND GROWN IN THAT CONTAINER SUFFICIENTLY LONG ENOUGH FOR THE NEW FIBROUS ROOTS TO HAVE DEVELOPED SO THAT THE ROOT MASS WILL RETAIN ITS SHAPE AND HOLD TOGETHER WHEN REMOVED FROM THE CONTAINER. CONTAINER GROWN STOCK SHALL NOT BE HANDLED BY THEIR STEMS.
3. ROOT BOUND PLANTS ARE NOT ACCEPTABLE AND WILL BE REJECTED.
4. RPG- "ROOTS PLUS GROWER" CONTAINER PRODUCTS SHALL BE USED WHERE SPECIFIED.
- COLLECTED STOCK
- WHEN THE USE OF COLLECTED STOCK IS PERMITTED AS INDICATED BY THE OWNER OR OWNER'S REPRESENTATIVE, THE MINIMUM SIZES OF ROOTBALLS SHALL BE EQUAL TO THAT SPECIFIED FOR THE NEXT LARGER SIZE OF NURSERY GROWN STOCK OF THE SAME VARIETY.
- NATIVE STOCK
- PLANTS COLLECTED FROM WILD OR NATIVE STANDS SHALL BE CONSIDERED NURSERY GROWN WHEN THEY HAVE BEEN SUCCESSFULLY RE-ESTABLISHED IN A NURSERY ROW AND GROWN UNDER REGULAR NURSERY CULTURAL PRACTICES FOR A MINIMUM OF TWO (2) GROWING SEASONS AND HAVE ATTAINED ADEQUATE ROOT AND TOP GROWTH TO INDICATE FULL RECOVERY FROM TRANSLANTING INTO THE GROWING ROWS.
- MATERIALS LIST
- QUANTITIES NECESSARY TO COMPLETE THE WORK ON THE DRAWINGS SHALL BE FURNISHED BY THE CONTRACTOR. QUANTITY ESTIMATES HAVE BEEN MADE CAREFULLY, BUT THE LANDSCAPE ARCHITECT OR OWNER ASSUMES NO LIABILITY FOR OMISSIONS OR ERRORS. SHOULD A DISCREPANCY OCCUR BETWEEN THE PLANS AND THE PLANT LIST QUANTITY, THE OWNERS REPRESENTATIVE SHALL BE NOTIFIED FOR CLARIFICATION PRIOR TO BIDDING OR INSTALLATION. ALL DIMENSIONS AND/OR SIZES SPECIFIED SHALL BE THE MINIMUM ACCEPTABLE SIZE.
- FINE GRADING
1. FINE GRADING UNDER THIS CONTRACT SHALL CONSIST OF FINAL FINISHED GRADING OF LAWN AND PLANTING AREAS THAT HAVE BEEN ROUGH GRADED BY OTHERS. BERMING AS SHOWN ON THE DRAWINGS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, UNLESS OTHERWISE NOTED.
2. THE CONTRACTOR SHALL FINE GRADE THE LAWN AND PLANTING AREAS TO BRING THE ROUGH GRADE UP TO FINAL FINISHED GRADE ALLOWING FOR THICKNESS OF SOO AND/OR MULCH DEPTH. CONTRACTOR SHALL FINE GRADE BY HAND AND WITH ALL EQUIPMENT NECESSARY INCLUDING A GRADING TRACTOR WITH FRONT-END LOADER FOR TRANSPORTING SOIL WITHIN THE SITE.
3. ALL PLANTING AREAS SHALL BE GRADED AND MAINTAINED FOR POSITIVE DRAINAGE TO SURFACE/SUBSURFACE STORM DRAIN SYSTEMS, AREAS ADJACENT TO BUILDINGS SHALL SLOPE AWAY FROM THE BUILDINGS. REFER TO CIVIL ENGINEERS PLANS FOR FINAL GRADES, IF APPLICABLE.
- PLANTING PROCEDURES
1. CLEANING UP BEFORE COMMENCING WORK: THE CONTRACTOR SHALL CLEAN WORK AND SURROUNDING AREAS OF ALL RUBBISH OR OBJECTABLE MATTER DAILY. ALL MORTAR, CEMENT, AND TOXIC MATERIAL SHALL BE REMOVED FROM THE SURFACE OF ALL PLANT BEDS. THESE MATERIALS SHALL NOT BE MIXED WITH THE SOIL, AND SHOULD THE CONTRACTOR FIND SUCH SOIL CONDITIONS BENEATH THE SOIL, WHICH WOULD IN ANY WAY AFFECT THE PLANTING, HE SHALL IMMEDIATELY REPORT IT TO THE ATTENTION OF THE OWNERS REPRESENTATIVE. FAILURE TO DO SO BEFORE PLANTING SHALL MAKE THE CORRECTIVE MEASURES THE RESPONSIBILITY OF THE CONTRACTOR.
2. VERIFY LOCATIONS OF ALL UTILITIES, CONDUITS, SUPPLY LINES AND CABLES, INCLUDING BUT NOT LIMITED TO: ELECTRIC, GAS (LINES AND TANKS), WATER, SANITARY SEWER, STORMWATER SYSTEMS, CABLE, AND TELEPHONE. PROPERLY MAINTAIN AND PROTECT EXISTING UTILITIES. CALL SUNSHINE STATE ONE CALL OF FLORIDA, INC. (811) TO LOCATE UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
3. SUBGRADE EXCAVATION: CONTRACTOR IS RESPONSIBLE TO REMOVE ALL EXISTING AND IMPORTED LIMEROCK AND LIMEROCK SUB-BASE FROM ALL LANDSCAPE PLANTING AREAS TO A MINIMUM DEPTH OF 36" OR TO NATIVE SOIL. CONTRACTOR IS RESPONSIBLE TO BACKFILL THESE PLANTING AREAS TO ROUGH FINISHED GRADE WITH CLEAN TOPSOIL FROM AN ON-SITE SOURCE OR AN IMPORTED SOURCE; IF LIMEROCK OR OTHER ADVERSE CONDITIONS OCCUR IN PLANTED AREAS AFTER 36" DEEP EXCAVATION BY THE CONTRACTOR, AND POSITIVE DRAINAGE CAN NOT BE ACHIEVED, CONTRACTOR SHALL UTILIZE POOR DRAINAGE CONDITION PLANTING DETAIL.
4. FURNISH NURSERY'S CERTIFICATE OF COMPLIANCE WITH ALL REQUIREMENTS AS SPECIFIED HEREIN. INSPECT AND SELECT PLANT MATERIALS BEFORE PLANTS ARE DUG AT NURSERY OR GROWING SITE.
5. COMPLY WITH APPLICABLE FEDERAL, STATE, COUNTY, AND LOCAL REGULATIONS GOVERNING LANDSCAPE MATERIALS AND WORK. CONFORM TO ACCEPTED HORTICULTURAL PRACTICES AS USED IN THE TRADE. UPON ARRIVAL AT THE SITE, PLANTS SHALL BE THOROUGHLY WATERED AND PROPERLY MAINTAINED UNTIL PLANTED. PLANTS STORED ON-SITE SHALL NOT REMAIN UNPLANTED OR APPROPRIATELY HEATED IN FOR A PERIOD EXCEEDING TWENTY-FOUR (24) HOURS. AT ALL TIMES WORKMANLIKE METHODS CUSTOMARY IN GOOD HORTICULTURAL PRACTICES SHALL BE EXERCISED.
6. THE WORK SHALL BE COORDINATED WITH OTHER TRADES TO PREVENT CONFLICTS. COORDINATE PLANTING WITH IRRIGATION WORK TO ASSURE AVAILABILITY OF WATER AND PROPER LOCATION OF IRRIGATION APPURTENANCES AND PLANTS.
7. ALL PLANTING PITS SHALL BE EXCAVATED TO SIZE AND DEPTH IN ACCORDANCE WITH THE USA STANDARD FOR NURSERY STOCK 280.1, UNLESS SHOWN OTHERWISE ON THE DRAWINGS, AND BACK FILLED WITH THE PREPARED PLANTING SOIL MIXTURE AS SPECIFIED IN SECTION E. TEST ALL PLANTING PITS WITH WATER BEFORE PLANTING TO ASSURE PROPER DRAINAGE. PERCOLATION IS AVAILABLE. NO ALLOWANCE WILL BE MADE FOR LOST PLANTS DUE TO IMPROPER DRAINAGE. IF POOR DRAINAGE EXISTS, UTILIZE "POOR DRAINAGE CONDITION" PLANTING DETAIL. TREES SHALL BE SET PLUMS AND HELD IN POSITION UNTIL THE PLANTING MIXTURE HAS BEEN FLUSHED INTO PLACE WITH A SLOW, FINE JET HOSE STREAM. ALL PLANTING SHALL BE PERFORMED BY PERSONNEL FAMILIAR WITH PLANTING PROCEDURES AND UNDER THE SUPERVISION OF A QUALIFIED LANDSCAPE FOREMAN. PERSONNEL "JETTIN' IN" SHALL BE ASSURED TO ELIMINATE AIR POCKETS AROUND THE ROOTS. "JET STICK" OR EQUAL IS RECOMMENDED.
8. TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO BUILDINGS AND BUILDING STRUCTURES WHILE INSTALLING TREES.
9. SOIL MIXTURE SHALL BE AS SPECIFIED IN SECTION E OF THESE SPECIFICATIONS.
10. TREES AND SHRUBS SHALL BE SET STRAIGHT AT AN ELEVATION THAT, AFTER SETTLEMENT, THE PLANT CROWN WILL STAND ONE (1) TO TWO (2) INCHES ABOVE GRADE. EACH PLANT SHALL BE SET IN THE CENTER OF THE PIT. PLANTING SOIL MIXTURE SHALL BE BACK FILLED, THOROUGHLY TAMPED AROUND THE BALL, AND SETTLED BY WATER (AFTER TAMPING).
11. AMEND PINE AND OAK PLANT PITS WITH ECTOMYCORRHIZAL SOIL APPLICATION PER MANUFACTURER'S RECOMMENDATION. ALL OTHER PLANT PITS SHALL BE AMENDED WITH ENDOMYCORRHIZAL SOIL APPLICATION PER MANUFACTURER'S RECOMMENDATION. PROVIDE PRODUCT INFORMATION SUBMITTAL PRIOR TO INSTALLATION.
12. FILL HOLE WITH SOIL MIXTURE, MAKING CERTAIN PLANT SOIL IS SATURATED. TO DO THIS, FILL HOLE WITH WATER AND ALLOW TO SOAK MINIMUM TWENTY (20) MINUTES. STIRRING IF NECESSARY TO GET SOIL THOROUGHLY WET. PACK LIGHTLY WITH FEET, ADD MORE WET SOIL MIXTURE. DO NOT COVER TOP OF BALL WITH SOIL MIXTURE. ALL BURLAP, POLE, WEBS, BASKETS, ETC., SHALL BE REMOVED FROM THE SIDES AND TOPS OF BALLS, BUT NO BURLAP SHALL BE PULLED FROM UNDERNEATH.
13. TREES SHALL BE PRUNED, AT THE DIRECTION OF THE OWNER OR OWNER'S REPRESENTATIVE, TO PRESERVE THE NATURAL CHARACTER OF THE PLANT. ALL SOFT WOOD OR SUCKER GROWTH AND ALL BROKEN OR BADLY DAMAGED BRANCHES SHALL BE REMOVED WITH A CLEAN CUT. ALL PRUNING TO BE PERFORMED BY CERTIFIED ARBORIST, IN ACCORDANCE WITH ANSI A-300.
14. SHRUBS AND GROUND COVER PLANTS SHALL BE EVENLY SPACED IN ACCORDANCE WITH THE DRAWINGS AND AS INDICATED ON THE PLANT LIST. MATERIALS INSTALLED SHALL MEET MINIMUM SPECIMEN REQUIREMENTS OR QUANTITIES SHOWN ON PLANS, WHICHEVER IS GREATER. CULTIVATE PLANTING AREAS TO A MINIMUM DEPTH OF 6". REMOVE AND DISPOSE ALL DEBRIS. MIX TOP 4" OF THE PLANTING SOIL MIXTURE AS SPECIFIED IN SECTION E. THOROUGHLY WATER ALL PLANTS AFTER INSTALLATION.
15. TREE GUYING AND BRACING SHALL BE INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH THE PLANS TO INSURE STABILITY AND MAINTAIN TREES IN AN UPRIGHT POSITION. IF THE CONTRACTOR AND OWNER DECIDE TO WAIVE THE TREE GUYING AND BRACING, THE OWNER SHALL NOTIFY THE PROJECT LANDSCAPE ARCHITECT IN WRITING AND AGREE TO INDEMNIFY AND HOLD HARMLESS THE PROJECT LANDSCAPE ARCHITECT IN THE EVENT UNSUPPORTED TREES PLANTED UNDER THIS CONTRACT FALL AND DAMAGE PERSON OR PROPERTY.
16. ALL PLANT BEDS SHALL BE KEPT FREE OF NOXIOUS WEEDS UNTIL FINAL ACCEPTANCE OF WORK. IF DIRECTED BY THE OWNER, "ROUND-UP" SHALL BE APPLIED FOR WEED CONTROL BY QUALIFIED PERSONNEL TO ALL PLANTING AREAS IN SPOT APPLICATIONS PER MANUFACTURER'S PRECAUTIONS AND SPECIFICATIONS. PRIOR TO FINAL INSPECTION, TREAT ALL PLANTING BEDS WITH AN APPROVED PRE-EMERGENT HERBICIDE AT AN APPLICATION RATE RECOMMENDED BY THE MANUFACTURER. (AS ALLOWED BY JURISDICTIONAL AUTHORITY)
- LAWN SODDING
1. THE WORK CONSISTS OF LAWN BED PREPARATION, SOIL PREPARATION, AND SODDING COMPLETE, IN STRICT ACCORDANCE WITH THE SPECIFICATIONS AND THE APPLICABLE DRAWINGS TO PRODUCE A TURF GRASS LAWN ACCEPTABLE TO THE OWNER.
2. ALL AREAS THAT ARE TO BE SODDED SHALL BE CLEARED OF ANY ROUGH GRASS, WEEDS, AND DEBRIS BY MEANS OF A SOD CUTTER TO A DEPTH OF THREE (3) INCHES, AND THE GROUND BROUGHT TO AN EVEN GRADE. THE ENTIRE SURFACE SHALL BE ROLLED WITH A ROLLER WEIGHING NO MORE THAN ONE-HUNDRED (100) POUNDS PER FOOT OF WIDTH. DURING THE ROLLING, ALL DEPRESSIONS CAUSED BY SETTLEMENT SHALL BE FILLED WITH ADDITIONAL SOIL, AND THE SURFACE SHALL BE REGRADED AND ROLLED UNTIL PRESENTING A SMOOTH AND EVEN FINISH TO THE SURFACE.

- PREPARE LOOSE BED FOUR (4) INCHES DEEP. HAND RAKE UNTIL ALL BUMPS AND DEPRESSIONS ARE REMOVED. SOD PREPARED AREA THOROUGHLY.
4. SODDING
- a. THE CONTRACTOR SHALL SOD ALL AREAS THAT ARE NOT PAVED OR PLANTED AS DESIGNATED ON THE DRAWINGS WITHIN THE CONTRACT LIMITS, UNLESS SPECIFICALLY NOTED OTHERWISE.
- b. THE SOD SHALL BE CERTIFIED TO MEET FLORIDA STATE PLANT BOARD SPECIFICATIONS, ABSOLUTELY TRUE TO VARIETAL TYPE, AND FREE FROM WEEDS, FUNGUS, INSECTS AND DISEASE OF ANY KIND.
- c. SOD PANELS SHALL BE LAID TIGHTLY TOGETHER SO AS TO MAKE A SOLID SODDED LAWN AREA. SOD SHALL BE LAID UNIFORMLY AGAINST THE EDGES OF ALL CURBS AND OTHER LANDSCAPE ELEMENTS. PAVED AND PLANTED AREAS, ADJACENT TO BUILDINGS, A 24 INCH STONE MULCH STRIP SHALL BE PROVIDED. IMMEDIATELY FOLLOWING SOD LAYING, THE LAWN AREAS SHALL BE ROLLED WITH A LAWN ROLLER CUSTOMARILY USED FOR SUCH PURPOSES, AND THEN THOROUGHLY IRRIGATED. IF, IN THE OPINION OF THE OWNER, TOP-DRESSING IS NECESSARY AFTER ROLLING TO FILL THE VOIDS BETWEEN THE SOD PANELS AND TO EVEN OUT INCONSISTENCIES IN THE SOD, CLEAN SAND, AS APPROVED BY THE OWNER'S REPRESENTATIVE, SHALL BE UNIFORMLY SPREAD OVER THE ENTIRE SURFACE OF THE SOD AND THOROUGHLY WATERED IN. FERTILIZER INSTALLED SOD AS ALLOWED BY PROPERTY'S JURISDICTIONAL AUTHORITY.
5. DURING DELIVERY, PRIOR TO, AND DURING THE PLANTING OF THE LAWN AREAS, THE SOD PANELS SHALL AT ALL TIMES BE PROTECTED FROM EXCESSIVE DRYING AND UNNECESSARY EXPOSURE OF THE ROOTS TO THE SUN. ALL SOD SHALL BE STACKED SO AS NOT TO BE DAMAGED BY SWEATING OR EXCESSIVE HEAT AND MOISTURE.
6. LAWN MAINTENANCE
- a. WITHIN THE CONTRACT LIMITS, THE CONTRACTOR SHALL PRODUCE A DENSE, WELL ESTABLISHED LAWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR AND RE-SODDING OF ALL ERODED, SUNKEN OR BARE SPOTS (LARGER THAN 12"X12") UNTIL CERTIFICATION OF ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. REPAIRED SODDING SHALL BE ACCOMPLISHED AS IN THE ORIGINAL WORK (INCLUDING REGRADING IF NECESSARY).
- b. CONTRACTOR RESPONSIBLE FOR ESTABLISHING AND MAINTAINING SOD/LAWN UNTIL ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. PRIOR TO AND UPON ACCEPTANCE, CONTRACTOR TO PROVIDE WATERING/IRRIGATION SCHEDULE TO OWNER. OBSERVE ALL APPLICABLE WATERING RESTRICTIONS AS SET FORTH BY THE PROPERTY'S JURISDICTIONAL AUTHORITY.
- CLEANUP
- UPON COMPLETION OF ALL PLANTING WORK AND BEFORE FINAL ACCEPTANCE, THE CONTRACTOR SHALL REMOVE ALL MATERIAL, EQUIPMENT, AND DEBRIS RESULTING FROM HIS WORK. ALL PAVED AREAS SHALL BE CLEANED AND THE SITE LEFT IN A NEAT AND ACCEPTABLE CONDITION AS APPROVED BY THE OWNER'S REPRESENTATIVE.
- PLANT MATERIAL MAINTENANCE
- ALL PLANTS AND PLANTING INCLUDED UNDER THIS CONTRACT SHALL BE MAINTAINED BY WATERING, CULTIVATING, SPRAYING, AND ALL OTHER OPERATIONS (SUCH AS RE-STAKING OR REPAIRING GUY SUPPORTS) NECESSARY TO INSURE A HEALTHY PLANT CONDITION BY THE CONTRACTOR UNTIL CERTIFICATION OF ACCEPTANCE BY THE OWNER'S REPRESENTATIVE.
- FINAL INSPECTION AND ACCEPTANCE OF WORK
- FINAL INSPECTION AT THE END OF THE WARRANTY PERIOD SHALL BE ON PLANTING, CONSTRUCTION AND ALL OTHER INCIDENTAL WORK PERTAINING TO THIS CONTRACT. ANY REPLACEMENT AT THIS TIME SHALL BE SUBJECT TO THE SAME ONE (1) YEAR WARRANTY (OR AS SPECIFIED BY THE LANDSCAPE ARCHITECT OR OWNER IN WRITING) BEGINNING WITH THE TIME OF REPLACEMENT AND ENDING WITH THE SAME INSPECTION AND ACCEPTANCE HEREIN DESCRIBED.
- WARRANTY
1. THE LIFE AND SATISFACTORY CONDITION OF ALL PLANT MATERIAL INSTALLED (INCLUDING SOD) BY THE LANDSCAPE CONTRACTOR SHALL BE WARRANTED BY THE CONTRACTOR FOR A MINIMUM OF ONE (1) CALENDAR YEAR COMMENCING AT THE TIME OF CERTIFICATION OF ACCEPTANCE BY THE OWNER'S REPRESENTATIVE.
2. ANY PLANT NOT FOUND IN A HEALTHY GROWING CONDITION AT THE END OF THE WARRANTY PERIOD SHALL BE REMOVED FROM THE SITE AND REPLACED AS SOON AS WEATHER CONDITIONS PERMIT. ALL REPLACEMENTS SHALL BE PLANTS OF THE SAME KIND AND SIZE AS SPECIFIED IN THE PLANT LIST. THEY SHALL BE FURNISHED PLANTED AND MULCHED AS SPECIFIED AT NO ADDITIONAL COST TO THE OWNER.
3. IN THE EVENT THE OWNER DOES NOT CONTRACT WITH THE CONTRACTOR FOR LANDSCAPE AND IRRIGATION MAINTENANCE, THE CONTRACTOR SHOULD VISIT THE PROJECT SITE PERIODICALLY DURING THE ONE (1) YEAR WARRANTY PERIOD TO EVALUATE MAINTENANCE PROCEDURES BEING PERFORMED BY THE OWNER. CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING OF MAINTENANCE PROCEDURES OR CONDITIONS WHICH THREATEN VIGOROUS AND HEALTHY PLANT GROWTH. SITE VISITS SHALL BE CONDUCTED A MINIMUM OF ONCE PER MONTH FOR A PERIOD OF TWELVE (12) MONTHS FROM THE DATE OF ACCEPTANCE.

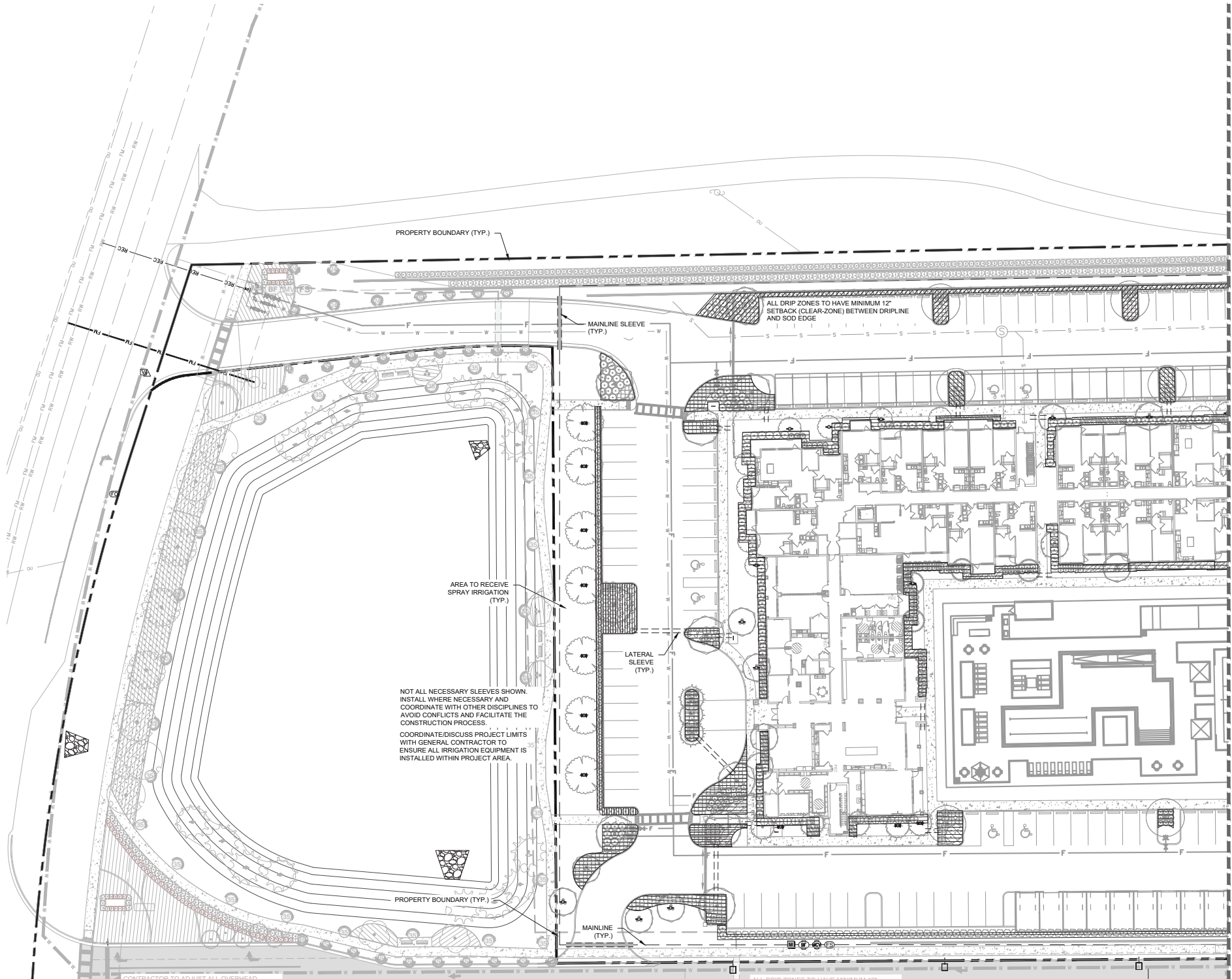
SHEET NUMBER L151		SHOPPES AT EAST SHORE MULTI-FAMILY		LANDSCAPE SPECIFICATIONS		KHA PROJECT 249218001 DATE 1/26/2023 SCALE AS SHOWN DESIGNED BY ASIL DRAWN BY ASIL CHECKED BY MIT		LICENSED PROFESSIONAL FLORIDA LICENSE NUMBER DATE: 1/26/2023		 © 2023 KIMLEY-HORN AND ASSOCIATES, INC. 189 S. ORANGE AVENUE, SUITE 1000, ORLANDO, FL 32801 PHONE: 407-898-1511 WWW.KIMLEY-HORN.COM REGISTRY No. 35106		No.		REVISIONS		DATE		BY	



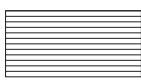
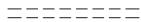
FLOW TOTALS
Area for Dripline: 430.7
Bubbler: 19.3
Total: 450.0 GPM

IRRIGATION CONTRACTOR IS RESPONSIBLE FOR PERFORMING ALL NECESSARY MODIFICATIONS REQUIRED TO MEET THE SCHEMATIC INTENT OF THESE PLANS PRIOR TO SUBMITTING PROPOSAL. THESE PLANS OUTLINE THE OVERALL LAYOUT THE SYSTEM AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ZONE THE SYSTEM ACCORDINGLY BASED ON FLOW AND PRESSURE AVAILABLE. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE FOLLOWING BUT NOT LIMITED TO AVAILABLE FLOW, AVAILABLE PRESSURE, CONNECTION ASSEMBLY, CAPACITY OF THE SYSTEM.

Plotted By: Wincep, Matthew Sheet: Sat-SHOPPES AT EAST SHORE MULTI-FAMILY Layout: 12.01 March 17, 2023 11:38:16am K:\06L_Civil\249218001-Shoppes at East Shore_Alt\CAD\CONST\Master_Plan\PlanSheets\12.01-IRRIGATION PLAN.dwg
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IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
 	RAIN BIRD RWS-M-B-C W/ RWS-SOCK 1400 SERIES MINI ROOT WATERING SYSTEM WITH 4IN. DIAMETER X 18IN. LONG WITH LOCKING GRATE, SEMI-RIGID MESH TUBE AND RAIN BIRD 1401 0.25 GPM OR 1402 0.5 GPM BUBBLER AS INDICATED. WITH CHECK VALVE, AND SAND SOCK FOR SANDY SOIL.	53	30
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	
	AREA TO RECEIVE DRIPLINE RAIN BIRD XFD-09-12 XFD ON-SURFACE PRESSURE COMPENSATING LANDSCAPE DRIPLINE, 0.9 GPM EMITTERS AT 12" O.C. DRIPLINE LATERALS SPACED AT 12" APART, WITH EMITTERS OFFSET FOR TRIANGULAR PATTERN, UV RESISTANT. SPECIFY XF INSERT FITTINGS.	28,714 L.F.	
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	
	RAIN BIRD PEB 1-1/2" 1IN., 1-1/2IN., 2IN. PLASTIC INDUSTRIAL MASTER VALVES. LOW FLOW OPERATING CAPABILITY, GLOBE CONFIGURATION.	1	
	WATTS LF909M1 1-1/2" LEAD FREE REDUCED PRESSURE BACKFLOW PREVENTER.	1	
	RAIN BIRD WR2-RFS WIRELESS RAIN/FREEZE SENSOR.	1	
	RAIN BIRD FS-150-B 1-1/2IN. FLOW SENSOR, BRASS MODEL. SUGGESTED OPERATING RANGE 4.0 GPM TO 80.0 GPM. SIZE FOR FLOW NOT ACCORDING TO PIPE SIZE. RAIN BIRD COMPATIBLE CONTROLLERS: ESP-LXV(M/P) LX-D LX-M2(P) MES, OR CONTROLLERS ACCEPTING CUSTOM K-FACTOR AND OFFSET. INSTALL IN RAIN BIRD VALVE BOX.	1	
	WATER METER 1-1/2"	1	
	IRRIGATION MAINLINE: PVC SCHEDULE 40	2,523 L.F.	
	PIPE SLEEVE: PVC SCHEDULE 40 - LATERALS	510.0 L.F.	
	PIPE SLEEVE: PVC SCHEDULE 40 - MAINLINE	133.3 L.F.	



NORTH



GRAPHIC SCALE IN FEET

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SUNSHINE STATE ONE CALL OF FLORIDA, INC.

SHOPPES AT EAST SHORE MULTI-FAMILY

CITY OF APOPKA

FLORIDA

IRRIGATION PLAN

KHA PROJECT 249218001

DATE 1/26/2023

SCALE AS SHOWN

DESIGNED BY ASIL

DRAWN BY ASIL

CHECKED BY MTF

LICENSED PROFESSIONAL

FLORIDA LICENSE NUMBER

DATE: 1/26/2023

REVISIONS

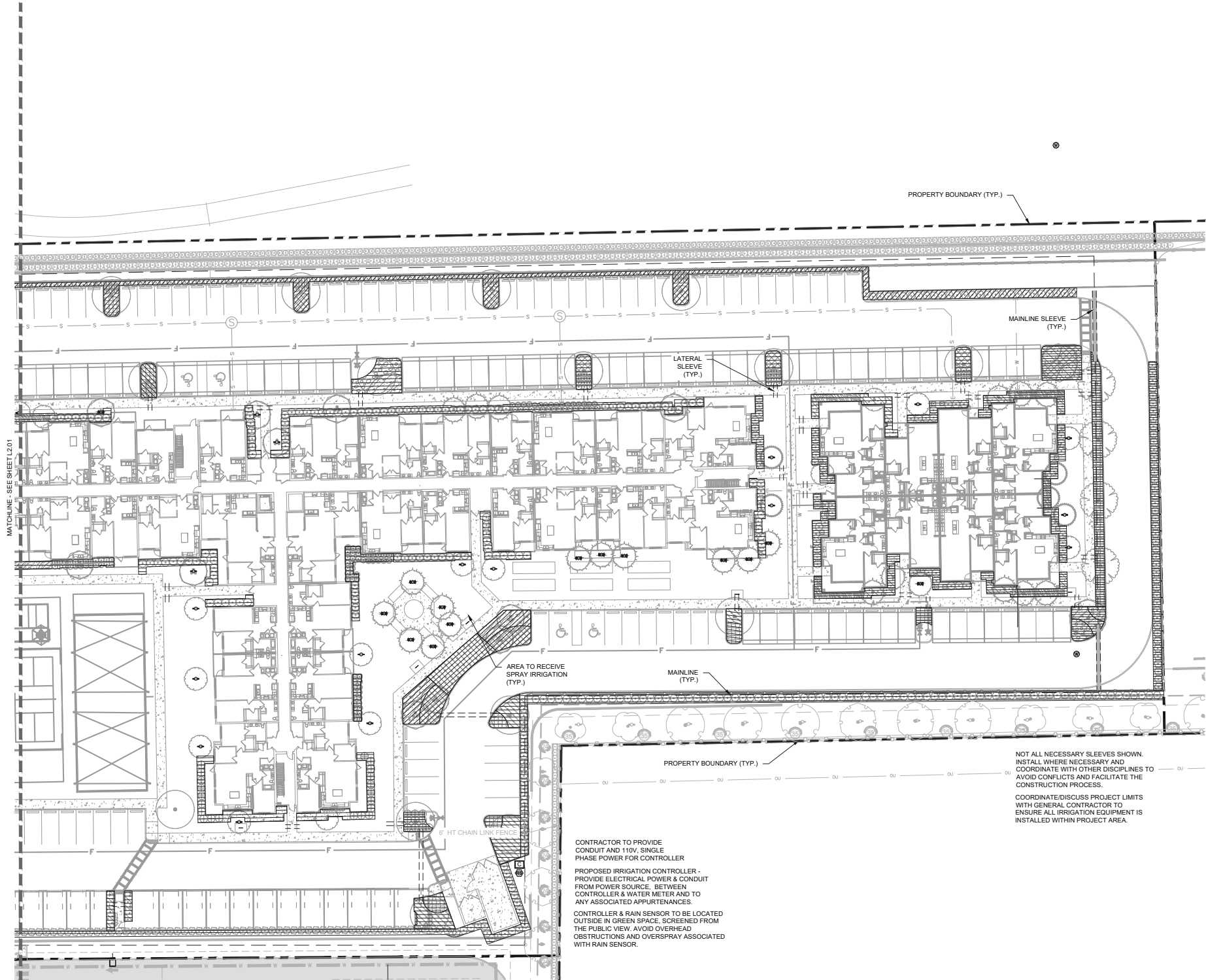
No.	DATE	BY

SHEET NUMBER

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Page 264 of 387

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IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
	RAIN BIRD RWS-M-B-C W/ RWS-SOCK 1400 SERIES MINI ROOT WATERING SYSTEM WITH 4IN. DIAMETER X 18IN. LONG WITH LOOKING GRATE, SEMI-RIGID MESH TUBE AND RAIN BIRD 1401 0.25 GPM OR 1402 0.5 GPM BUBBLER AS INDICATED. WITH CHECK VALVE, AND SAND SOCK FOR SANDY SOIL.	53	30
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	
	AREA TO RECEIVE DRIPLINE RAIN BIRD XFD-09-12 XFD ON-SURFACE PRESSURE COMPENSATING LANDSCAPE DRIPLINE, 0.9 GPM EMITTERS AT 12" O.C. DRIPLINE LATERALS SPACED AT 12" APART, WITH EMITTERS OFFSET FOR TRIANGULAR PATTERN, UV RESISTANT. SPECIFY XF INSERT FITTINGS.	28,714 L.F.	
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	
	RAIN BIRD PEB 1-1/2" 1IN., 1-1/2IN., 2IN. PLASTIC INDUSTRIAL MASTER VALVES. LOW FLOW OPERATING CAPABILITY, GLOBE CONFIGURATION.	1	
	WATTS LF908M1 1-1/2" LEAD FREE REDUCED PRESSURE BACKFLOW PREVENTER.	1	
	RAIN BIRD WR2-RFS WIRELESS RAIN/FREEZE SENSOR.	1	
	RAIN BIRD FS-150-B 1-1/2IN. FLOW SENSOR, BRASS MODEL. SUGGESTED OPERATING RANGE 4.0 GPM TO 80.0 GPM. SIZE FOR FLOW NOT ACCORDING TO PIPE SIZE. RAIN BIRD COMPATIBLE CONTROLLERS: ESP-LXV(M/P) LXI LXME2(P) MES, OR CONTROLLERS ACCEPTING CUSTOM K-FACTOR AND OFFSET. INSTALL IN RAIN BIRD VALVE BOX.	1	
	WATER METER 1-1/2"	1	
	IRRIGATION MAINLINE: PVC SCHEDULE 40	2,523 L.F.	
	PIPE SLEEVE: PVC SCHEDULE 40 - LATERALS	510.0 L.F.	
	PIPE SLEEVE: PVC SCHEDULE 40 - MAINLINE	133.3 L.F.	



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SHoppes at East Shore
MULTI-FAMILY

FLORIDA

CITY OF APOPKA

IRRIGATION PLAN

KHA PROJECT
249218001

DATE
1/26/2023

SCALE AS SHOWN

DESIGNED BY ASIL

DRAWN BY ASIL

CHECKED BY MTF

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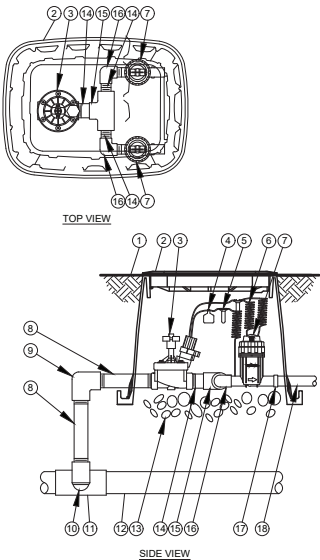
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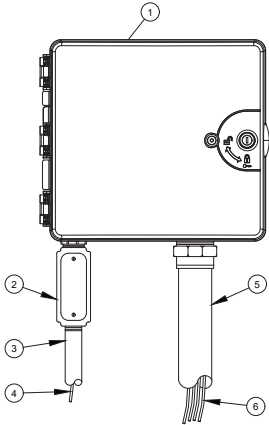
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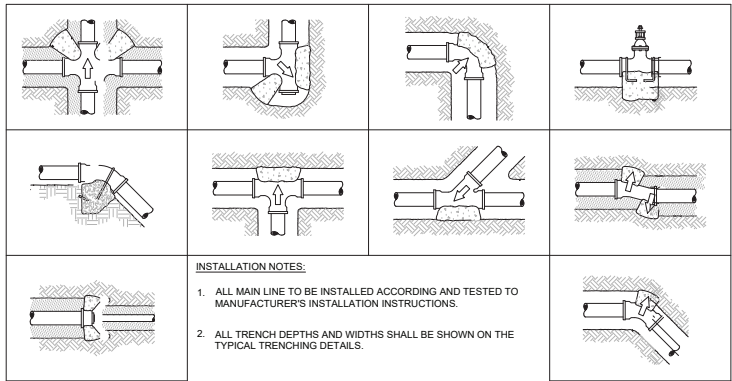


1 COMMERCIAL CONTROL DRIP ZONE VALVE KIT
L2.50 SECTION / PLAN NTS

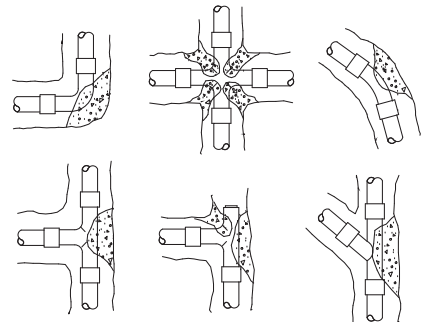


2 TYPICAL CONTROLLER
L2.50 ELEVATION NTS

- 1 IRRIGATION CONTROLLER:
CONTROLLER (OWNER TO SPECIFY WALL MOUNT
OR STAINLESS STEEL PEDESTAL MOUNT). INSTALL
PER MANUFACTURER'S RECOMMENDATIONS.
- 2 JUNCTION BOX
- 3 1-INCH CONDUIT AND FITTINGS TO POWER
SUPPLY
- 4 POWER SUPPLY WIRE
- 5 2-INCH CONDUIT AND FITTINGS FOR STATION
WIRES
- 6 WIRES TO REMOTE CONTROL VALVES
- NOTES:
1. FOR EASE OF INSTALLATION INTO A CONTROLLER WITH MORE
THAN 24 STATIONS, INSTALL A JUNCTION BOX AT THE BASE OF
CONTROLLER AND TRANSITION LARGER VALVE AND COMMON
WIRES FROM FIELD TO 18 AWG MULTI CONDUCTOR WIRE TO BE
USED IN CONTROLLER.
2. USE STEEL CONDUIT FOR ABOVE GRADE AND SCH 40 PVC
CONDUIT FOR BELOW GRADE CONDITIONS.
3. PROVIDE PROPER GROUNDING COMPONENTS TO ACHIEVE
GROUND RESISTANCE OF 10 OHMS OR LESS.

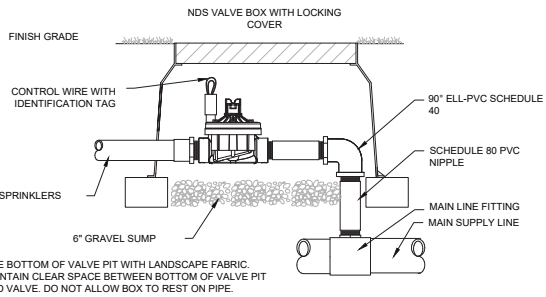


3 TYPICAL THRUST BLOCK
L2.50 SECTION NTS

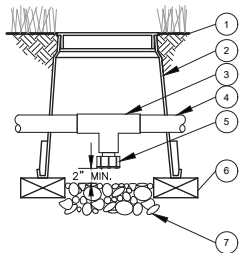


4 THRUST BLOCK REINFORCEMENT
L2.50 SECTION NTS

- INSTALLATION NOTES:
1. 3000 PSI CONCRETE OR BETTER IS TO BE USED FOR THRUST BLOCKS.
2. FOR 45/90° FITTINGS, MINIMUM OF 2 CUBIC FEET OF CONCRETE TO BE USED.
3. FOR 22-1/2° FITTINGS, MINIMUM OF 0.5 CUBIC FEET OF CONCRETE TO BE USED.
4. FOR TEES, MINIMUM OF 2 CUBIC FEET OF CONCRETE TO BE USED. THRUST
BLOCKS REQUIRED FOR IRRIGATION MAINLINE 2 1/2" AND LARGER.

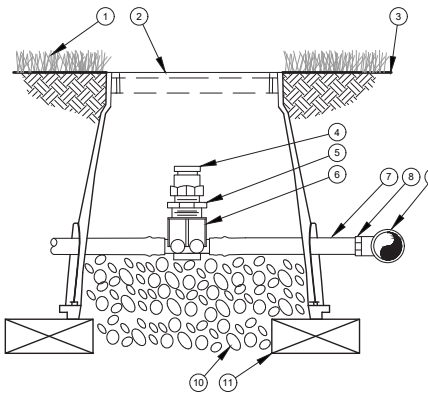


5 TYPICAL CONTROL VALVE
L2.50 SECTION NTS



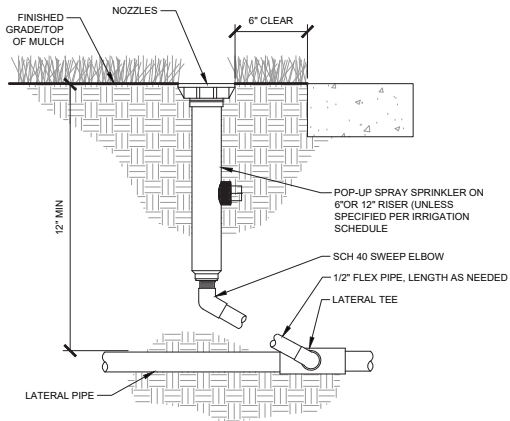
6 DRAIN VALVE
L2.50 SECTION NTS

- 1 FINISH GRADE/TOP OF MULCH
- 2 VALVE BOX WITH COVER:
- 3 PVC SCH 40 TEE
- 4 PVC LATERAL PIPE
- 5 FILTERED DRAIN VALVE:
- 6 BRICK (1 OF 2)
- 7 6-INCH MINIMUM DEPTH OF
3/4-INCH WASHED GRAVEL

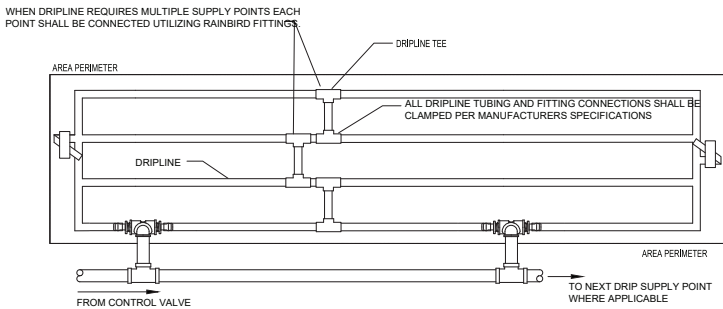


7 AIR RELIEF VALVE IN XFS DRIP LINE
L2.50 SECTION NTS

- 1 TURF GRASS
- 2 VALVE BOX LID
- 3 FINISH GRADE
- 4 1/2" AIR RELIEF VALVE:
TO BE INSTALLED AT HIGH POINTS IN DRIP ZONE
- 5 1/2" X 3/4" PVC REDUCER BUSHING
- 6 BARB X FEMALE THREAD CONNECTOR:
- 7 1/2" BLANK DRIPLINE TUBING:
- 8 BARB X MALE THREAD CONNECTOR:
- 9 PVC TEE CONNECTED TO PVC HEADER PIPE
- 10 3" MINIMUM DEPTH OF
1/2" WASHED GRAVEL
- 11 BRICK (1 OF 2)

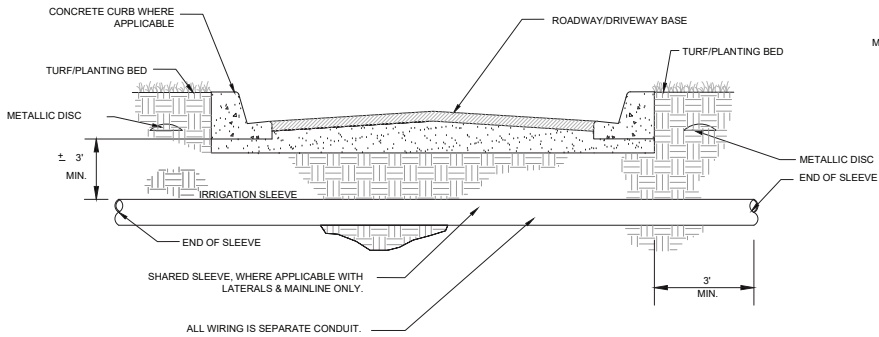


8 TYPICAL SPRAY / ROTAR HEAD
L2.50 SECTION NTS

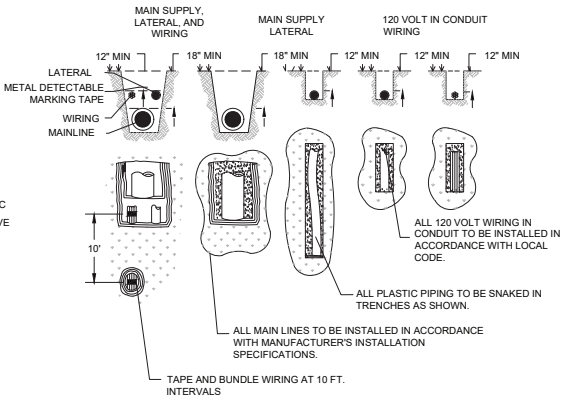


9 TYPICAL DRIP LINE
L2.50 PLAN NTS

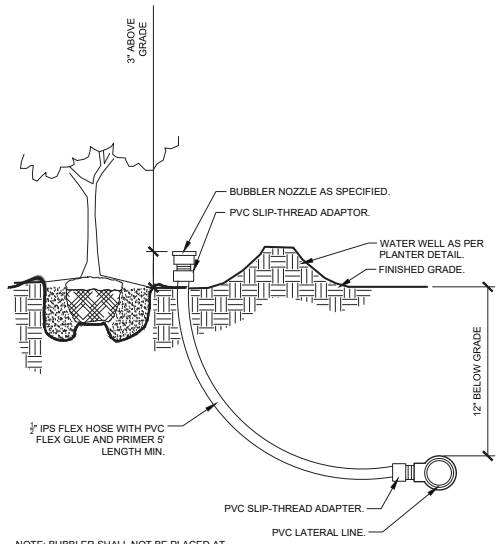
- CONTRACTOR TO REFER TO IRRIGATION PLAN FOR
LOCATION OF CONTROL VALVES THAT UTILIZE MULTIPLE
DRIPLINE SUPPLY CONNECTIONS. IF NOT SHOWN, INSTALL
WITHIN ADJACENT GREEN AREA NOT IN A HIGHLY VISIBLE
AREA.
- NOTE:
1. DRIP TUBING TO BE ROUTED IN THE PLANT MATERIAL
BED WITH AT MAXIMUM LATERAL SPACING OF 16 INCHES.
2. DRIP TUBING TO BE INSTALLED IN A GRID PATTERN. DRIP
TUBING SHALL NOT BE INSTALLED IN A LONG
CONTINUOUS RUN.
3. CONTRACTOR TO REFER TO IRRIGATION PLAN FOR
LOCATION OF CONTROL VALVES THAT UTILIZE
MULTIPLE DRIPLINE SUPPLY CONNECTIONS (IF
SHOWN).



10 TYPICAL SLEEVING
L2.50 SECTION NTS



11 TYPICAL TRENCHING
L2.50 SECTION / PLAN NTS



12 TYPICAL BUBBLER
L2.50 SECTION NTS

KHA PROJECT 249218001		DATE 1/26/2023		SCALE AS SHOWN		DESIGNED BY ASIL		DRAWN BY ASIL		CHECKED BY MIT		DATE 1/26/2023	
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IRRIGATION DETAILS

SHOPPES AT EAST SHORE MULTI-FAMILY

FLORIDA

CITY OF APOPKA

SHEET NUMBER
L2.50

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Plotted By: Wincey, Matthew - Sheet: Sht-SHOPPES AT EAST SHORE MULTI-FAMILY - Layout: L2.51 - March 17, 2023 - 11:38:41am - K:\OBL_Civil\249218001-Shoppes at East Shore_Alt\ADD\CONST\Master_Plan\PlanSheets\L2.00-IRRIGATION_Plan.dwg
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1
L2.51

TYPICAL SCHEMATIC IRRIGATION NOTES

IRRIGATION SYSTEM NOTES:

1. THE IRRIGATION MAINLINE LAYOUT IS DIAGRAMMATIC. ANY CHANGES MADE IN THE IRRIGATION MAINLINE DUE TO FIELD CONDITIONS OR CONTRACTOR'S SUBMITTED DESIGN SHALL BE IN ACCORDANCE WITH THESE STANDARDS.
 2. SET SPRAY HEADS 6" AND ROTORS 12" IN FROM BACK OF CURB OR 24" IF PAVEMENT HAS NO CURB.
 3. IRRIGATION CONTRACTOR IS RESPONSIBLE FOR PERFORMING ALL NECESSARY MODIFICATIONS REQUIRED TO MEET THE SCHEMATIC INTENT OF THESE PLANS PRIOR TO SUBMITTING PROPOSAL. THESE PLANS OUTLINE THE OVERALL LAYOUT THE SYSTEM AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ZONE THE SYSTEM ACCORDINGLY BASED ON FLOW AND PRESSURE AVAILABLE. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE FOLLOWING BUT NOT LIMITED TO AVAILABLE FLOW, AVAILABLE PRESSURE, CONNECTION ASSEMBLY, CAPACITY OF THE SYSTEM.
 4. CONTRACTOR TO PROVIDE NEW AUTOMATIC CONTROLLER FOR PROPOSED SYSTEM (NO BATTERY OPERATED CONTROLLERS ALLOWED). COORDINATE LOCATION WITH OWNER.
 5. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AUTOMATIC RAIN SENSOR. COORDINATE LOCATION W/ OWNER.
 6. IRRIGATION SHALL NOT BE COMBINED ON A SINGLE ZONE AND SHALL BE ZONED ACCORDING TO IRRIGATION TYPE, PRECIPITATION RATE, AND THE SYSTEM'S AVAILABLE WATER / PRESSURE. CONTRACTOR TO SUBMIT SHOP DRAWINGS TO OWNER FOR REVIEW PRIOR TO INSTALLATION.
 7. VERIFY LOCATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO INSTALLATION OF IRRIGATION SYSTEM. ALL UTILITIES AND STRUCTURES MAY NOT BE SHOWN ON THESE PLANS-CONTRACTOR SHALL FIELD VERIFY.
 8. CONTRACTOR TO FIELD VERIFY ALL POINT OF CONNECTION SOURCE INFORMATION INCLUDING PSI AND GPM PRIOR TO CONSTRUCTION.
 9. INSTALLATION OF WORK SHALL BE COORDINATED WITH OTHER CONTRACTORS IN SUCH A MANNER AS TO ALLOW FOR A SPEEDY AND ORDERLY COMPLETION OF ALL WORK ON-SITE.
 10. CONTRACTOR SHALL COORDINATE WITH THE PLANTING PLAN FOR PLANTER BED AND TREE LOCATIONS TO ENSURE ALL PLANT MATERIAL IS COVERED BY 100% HEAD-TO-HEAD IRRIGATION.
 11. CONTRACTOR SHALL PROVIDE "AS-BUILT" DRAWINGS OF THE FINAL INSTALLATION TO OWNER AT SUBSTANTIAL COMPLETION BEFORE RECEIVING FINAL PAYMENT.
 12. PRODUCTS SHALL BE AS SPECIFIED OR APPROVED EQUAL.
- PRE-APPROVED MANUFACTURERS:
1. TORO
 2. HUNTER
 3. RAINBIRD
13. IRRIGATION CONTRACTOR SHALL SECURE ANY AND ALL NECESSARY PERMITS FOR THE WORK PRIOR TO COMMENCEMENT OF HIS OPERATIONS ON-SITE. COPIES OF THE PERMITS SHALL BE SENT TO THE OWNER/GENERAL CONTRACTOR. WORK IN THE R.O.W. SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF LOCAL AND/OR STATE JURISDICTION.
 14. LOCATE ALL IRRIGATION LINES WITHIN LANDSCAPED AREAS WHENEVER POSSIBLE. ALL LINES UNDER PAVEMENT MUST BE SLEEVED WITHIN SCH. 40 PVC 2x SIZE OF PIPE AND FREE OF STONES/DEBRIS. ALL VALVES SHALL BE LOCATED WITHIN LANDSCAPED AREAS.
 15. MAINLINE SHALL NOT BE LOCATED WITHOUT PRIOR APPROVAL OF THE OWNER'S REPRESENTATIVE.
 16. THE IRRIGATION CONTRACTOR SHALL BE DIRECTLY RESPONSIBLE FOR SLEEVEING AND DIRECTIONAL BORES.
 17. ALL SLEEVES UTILIZED BY THE IRRIGATION CONTRACTOR WHETHER INSTALLED BY HIM OR NOT, SHALL BE LOCATED ON THE "AS-BUILT" DRAWINGS. THE DEPTH BELOW FINISH GRADE, TO THE NEAREST FOOT OF EACH END OF THE SLEEVE SHALL BE NOTED AT EACH SLEEVE LOCATION ON THE "AS-BUILT" DRAWINGS. ALL SLEEVES ON PLAN FOR WALL PENETRATIONS AND UNDER SIDEWALKS SHALL BE SIZED TWO PIPE SIZES GREATER THAN THE PIPE IT CARRIES.
 18. ALL PRESSURIZED MAINLINES AND LATERALS UNDER PAVEMENT SHALL BE WITHIN SCH. 40 PVC SLEEVES. WHERE ELECTRIC OR HYDRAULIC VALVE CONTROL LINES PASS THROUGH A SLEEVE WITH OTHER MAIN OR LATERAL LINES THEY SHALL BE CONTAINED WITHIN A SEPARATE, SMALLER CONDUIT.
 19. NUMBER THE TOP OF ALL VALVE BOX LIDS WITH MINIMUM 1" HEIGHT BLACK LETTERS TO CORRESPOND TO AUTOMATIC AND GATE VALVE DESIGNATIONS. ALL HOSE BIBB VALVE BOXES SHALL BE LABELED IN A SIMILAR MANNER WITH THE DESIGNATION "HB". LETTER OUTSIDE OF TIME CLOCK CABINETS TO CORRESPOND WITH IRRIGATION CLOCK PROGRAM DESIGNATION.
 20. THE IRRIGATION CONTRACTOR SHALL INSTALL A COLOR CODED METAL DETECTABLE MARKING TAPE WHICH CLEARLY NOTES: "CAUTION: IRRIGATION LINE BURIED BELOW." THE TAPE SHALL BE INSTALLED THE FULL LENGTH OF THE IRRIGATION MAINLINE.
 21. ELECTRIC SERVICE TO THE CONTROLLER SHALL BE PROVIDED BY THE GENERAL CONTRACTOR.
 22. ALL 24 VAC WIRING FROM DECODER TO VALVE SHALL BE OF DIRECT BURIAL COPPER WIRE. MAXIMUM LENGTH OF WIRE FROM DECODER TO VALVE SHALL NOT EXCEED 400 FEET. AS FOLLOWS:
CONTROL WIRES - #14
COMMON WIRES - #14
 23. ALL VALVES, SPLICES WITHIN CONTROL LINES, AND QUICK COUPLERS SHALL BE LOCATED WITHIN NDS VALVE BOXES AS FOLLOWS:
-RECTANGULAR 12"X17" HEAVY DUTY BOX. (PURPLE COVER FOR REUSE TO BE PROVIDED WHERE APPROPRIATE).
 24. ALL IRRIGATION HEADS/DRIP TUBING SHALL BE LOCATED ONE (1) FOOT FROM BACK OF CURB WHEN NEXT TO A ROADWAY. (THIS SHALL NOT INCLUDE PARKING AREAS OR DRIVE AISLES).
 25. HEADS, LATERALS, EMITTERS, AND VALVES ARE NOT SHOWN, BUT ARE NECESSARY FOR A FULLY FUNCTIONING IRRIGATION SYSTEM.
 26. LOCATE ALL VALVES IN PLANTING BEDS WITH A MINIMUM OF 3'-0" FROM BACK OF CURB OR EDGE OF PAVEMENT, UNLESS OTHERWISE NOTED. PIPE SIZES ON EITHER SIDE OF SECTION VALVES CONNECTING MAINLINE TO SECTION LATERAL SHALL BE ONE (1) PIPE SIZE LARGER THAN VALVE SIZE. WHERE MAINLINES RUN PARALLEL TO PAVEMENT OR CURBING, THE MAINLINE SHALL BE OFFSET 2'-0" FROM THE EDGE OF PAVEMENT OR CURB.
 27. IRRIGATION ZONES SHALL BE SEPARATED FOR HIGH AND LOW WATER USE REQUIREMENTS AND OPERATED ON DIFFERENT WATERING CYCLES. BUBBLERS, DRIPLINE, AND SPRAY HEADS SHALL BE SEPARATED ON DIFFERENT VALVES. AT NO TIME SHALL MULTIPLE IRRIGATION HEAD TYPES BE LOCATED ON THE SAME VALVE.
 28. ALL DRIP ZONES SHALL BE INSTALLED WITH A FLUSH VALVE AND AIR RELIEF VALVE. IN THE EVENT THAT A DRIP ZONE HAS MORE THAN ONE HIGH OR LOW POINT, MORE THAN ONE AIR RELIEF VALVE OR FLUSH VALVE WILL BE REQUIRED FOR THAT ZONE. DRIPLINE SHALL PROVIDE 0.9 GPH EMITTERS, 12" O.C. WITH 12" LINE SPACING AT A MINIMUM.
 29. ALL WIRING FOR CONNECTION OF THE VALVES TO THE CONTROLLER SHALL FOLLOW MANUFACTURERS SPECIFICATIONS. IF REQUIRED, ALL WIRING FOR A TWO WIRE PATH SHALL BE WITH RED/BLUE TWISTED PAIR 14 AWG. ELECTRIC CONTROL LINES FROM THE DECODER TO THE SOLENOID VALVES SHALL BE TWISTED PAIR 18 AWG. ALL DECODERS SHALL BE GROUNDED EVERY 1,000 L.F. OR EVERY 10 DEVICES. ALL WIRE SHALL BE FURNISHED IN MINIMUM 2,500' REELS AND SPLICING SHALL BE MINIMIZED. BURY SPLICE KIT. ALL 24 VOLT WIRING SHALL BE DONE IN ACCORDANCE WITH EXISTING CODES. SPLICING SHALL BE IN VALVE BOXES OR CONTROLLERS ONLY. IRRIGATION SYSTEM CONTROL SHALL BE TWO WIRE PATH. CONTRACTOR SHALL FOLLOW ALL MANUFACTURER'S REQUIREMENTS FOR THIS INSTALLATION. TWO WIRE SYSTEM SHALL HAVE 2-WAY COMMUNICATIONS FIELD PROGRAMMABILITY, STATION SPECIFICATIONS AND INTEGRATED SURGE PROTECTION.
 30. ALL CONTROL WIRE SHALL BE INSTALLED IN A 1 1/2" ELECTRICAL CONDUIT.
 31. SMALLEST DIAMETER LATERAL PIPE SHALL BE 3/4".
 32. IRRIGATION SYSTEM SHALL BE CAPABLE OF SUPPLYING AN AVERAGE OF 1.05" OF WATER PER WEEK WITHIN WATERING RESTRICTIONS AS APPLICABLE.
 33. IRRIGATION SYSTEM SHALL NOT BE INSTALLED THROUGH EXISTING, OR PRESERVED PLANT COMMUNITIES. DO NOT TRENCH THROUGH EXISTING ROOT SYSTEMS OF ANY VEGETATION INTENDED TO BE PRESERVED.
 34. CONTRACTOR TO MINIMIZE IRRIGATION OVERTHROW TO IMPERVIOUS AND NATURAL AREAS THROUGH FIELD ADJUSTMENTS TO INDIVIDUAL HEADS.
 35. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED BY THE CONTRACTOR TO THE CONDITION DENOTED ON THE LANDSCAPE PLAN.
 36. IRRIGATION PIPING INSTALLED UNDER ROADS AND SIDEWALKS SHALL BE IN SCHEDULE 40 PVC SLEEVEING AT 2X THE PIPE SIZE. ALL SLEEVEING SHALL BE FREE OF STONES AND DEBRIS.
 37. IRRIGATION SOURCE TO BE EITHER WELL, POTABLE, OR NON-POTABLE WATER. IRRIGATION CONTRACTOR TO VERIFY SOURCE PRIOR TO DESIGN.
 38. POINT OF CONNECTION TO BE DETERMINED BY OWNER. IRRIGATION SYSTEM CONNECTIONS TO THE LOCAL JURISDICTION SERVICE SHALL COMPLY WITH ALL APPLICABLE CODES.
 39. IRRIGATION CONNECTION MAY REQUIRE BACKFLOW PREVENTION, VERIFY WITH LOCAL JURISDICTION.
 40. IRRIGATION SYSTEM SHALL COMPLY WITH THE LOCAL JURISDICTION LAND DEVELOPMENT CODE.

SHOPPES AT EAST SHORE
MULTI-FAMILY

CITY OF APOPKA

FLORIDA

IRRIGATION
SPECIFICATIONS &
NOTES

LICENSED PROFESSIONAL

KHA PROJECT
249218001

DATE
1/26/2023

SCALE AS SHOWN

DESIGNED BY ASIL

DRAWN BY ASIL

CHECKED BY MIT

FLORIDA LICENSE NUMBER

DATE: 1/26/2023

Kimley»Horn

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189 S. ORANGE AVENUE, SUITE 1000, ORLANDO, FL 32801
PHONE: 407-898-1511
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

No.

REVISIONS

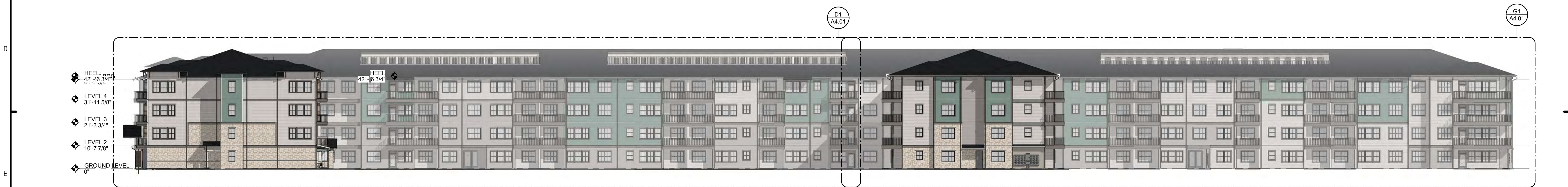
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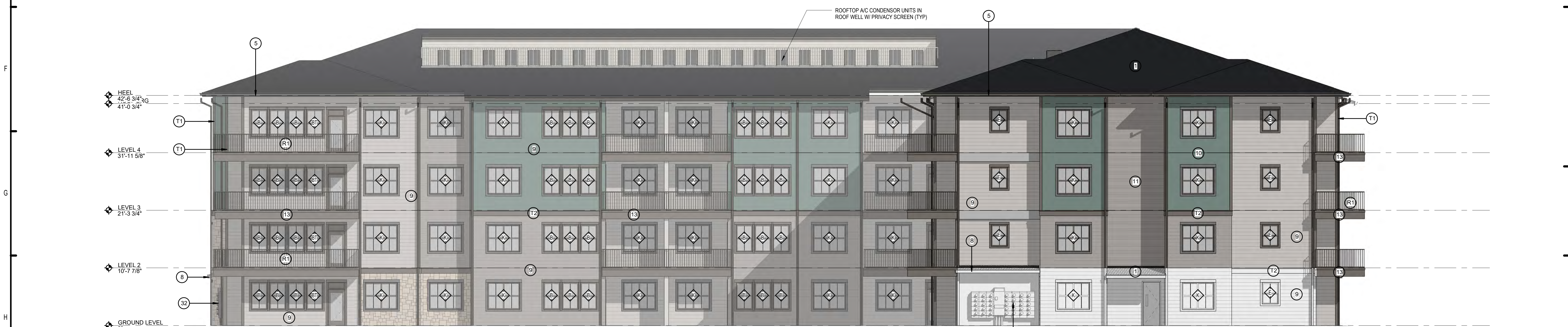
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L2.51



C1 WEST ELEVATION
1/8" = 1'-0"



E1 SOUTH ELEVATION
1" = 20'-0"



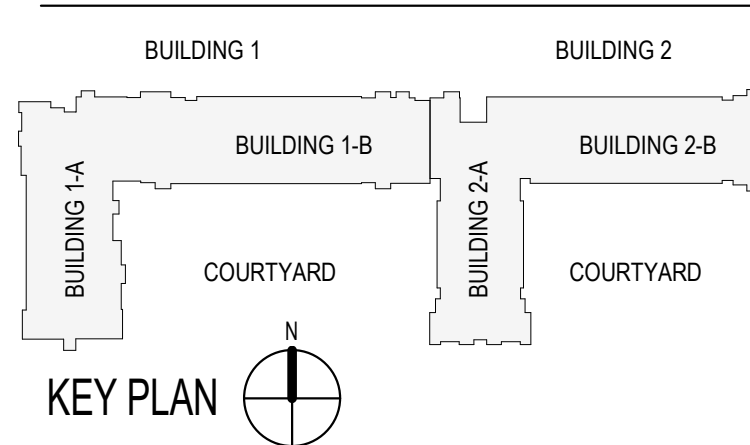
H1 EAST. ELEVATION
1/8" = 1'-0"



K1 NORTH ELEVATION
1" = 20'-0"

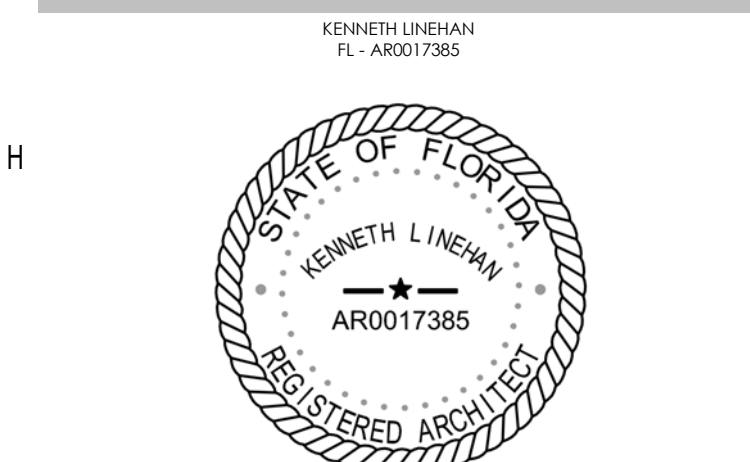
ELEVATION KEY NOTES:

1. ARCHITECTURAL ROOF SHINGLES
2. SINGLE PLY ROOFING SYSTEM
3. RIDGE VENT
4. OFF RIDGE VENT
5. ALUMINUM GUTTER - PREFINISHED
6. ALUMINUM DOWNSPOUT - PREFINISHED
7. HARD COAT FOAM ORNAMENTAL BRACKET - SEE C1A5.03
8. FIBER CEMENT FASCIA
9. 1 1/4" FIBER CEMENT LAP SIDING W/ 8" EXPOSURE
10. 5 1/2" FIBER CEMENT LAP SIDING W/ 4" EXPOSURE
11. FIBER CEMENT LAP SIDING - SKIP LAP PATTERN 4"X4"
12. FIBER CEMENT PANEL
13. FIBER CEMENT TRIM
14. 5/4X3" FIBER CEMENT TRIM
15. 5/4X8" FIBER CEMENT TRIM
16. 5/4X8" FIBER CEMENT TRIM
17. 1 1/4" FIBER CEMENT LAP SIDING W/ 10" EXPOSURE
18. 1 1/4" FIBER CEMENT SHAKES SIDING W/ 8" EXPOSURE
19. AWNING ROOF SUPPORT ROD SYSTEM
20. STONE VENEER
21. WINDOW SYSTEM - SEE SCHEDULE
22. SITE FENCING/RAILING - SEE LANDSCAPE
23. METAL GUARD RAIL - 36" H. (GROUND LEVEL). PROVIDE A 36" CLEAR WIDE GATE AT ALL YARDS.
24. METAL GUARD RAIL - 42" H. (TYP.). BRONZE FINISH
25. METAL GUARD RAIL - 42" H. (TYP.). BRONZE FINISH
26. SIGNAGE/AREA - SIGNAGE DESIGN BY OTHERS
27. BUILDING FIRE SIGN - TO BE LOCATED ON FRONT OF BUILDING ONLY (SEE SITE PLAN FOR BUILDING ORIENTATION)
28. LIGHT FIXTURE @ 20'-0" AFF - SEE ELECTRICAL
29. METER CENTER - SEE ELECTRICAL
30. LAUNDRY / BATHROOM EXHAUST VENTS
31. AC CONDENSING UNIT - SEE MECHANICAL
32. MECHANICAL UNIT DISCONNECT SWITCH - SEE MECHANICAL
33. FIRE DEPARTMENT CONNECTION
34. SURFACE MOUNTED FIRE EXTINGUISHER CAB W/ EXTINGUISHER
35. BALCONY PARTITION
36. BUILT-UP COLUMN
- A. STONE BASE W/ TAPERED F.C. PANEL TOP & TRIM
- B. FIBER CEMENT W/ TRIM
- C. FOAM TRUSS ACCENT



ISSUE HISTORY		
No.	Date	Description
1	01/13/2023	SCHEMATIC DESIGN
2	03/30/2023	100% DESIGN DEVELOPMENT
3	07/12/2023	100% CONSTRUCTION DOCUMENTS
4		

REVISION HISTORY		
No.	Date	Description

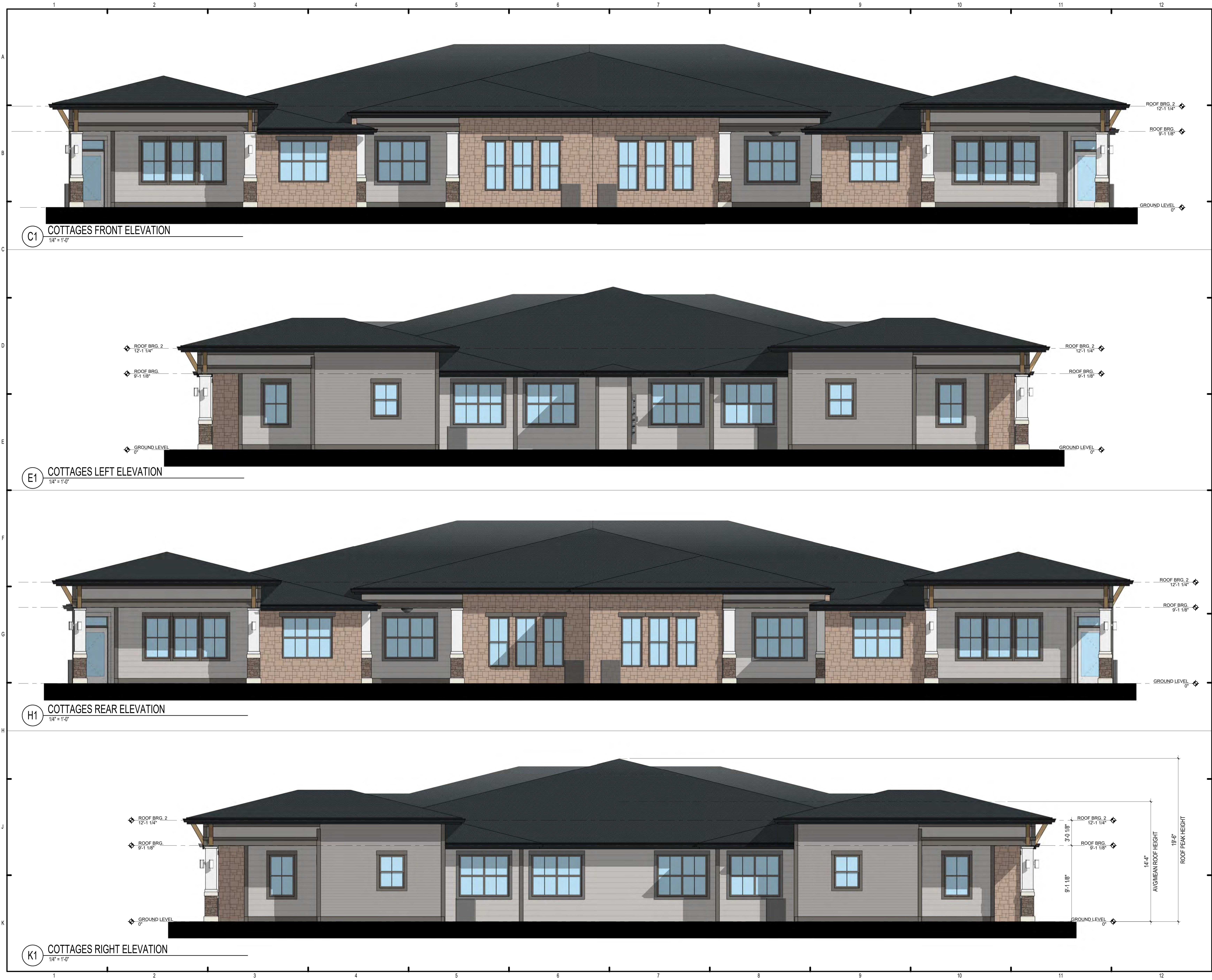


OCOE-APOKA
APOKA, FL

Drawn: _____ Author: _____
Checked: _____ Checker: _____
Approval: _____ Approver: _____
Date: 12/01/2022
Project #: 5906

BUILDING ELEVATIONS

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Keynote Legend	
Key Value	Keynote Text

ISSUE HISTORY		
No.	Date	Description
1	01/13/2023	SCHEMATIC DESIGN
2		
3		
4		

REVISION HISTORY		
No.	Date	Description



OCOE APOPKA
Apopka, FL

Drawn: _____ Author
Checked: _____ Checker
Approval: _____ Approver
Date: 11/01/2022
Project #: S906

COTTAGES EXTERIOR ELEVATION

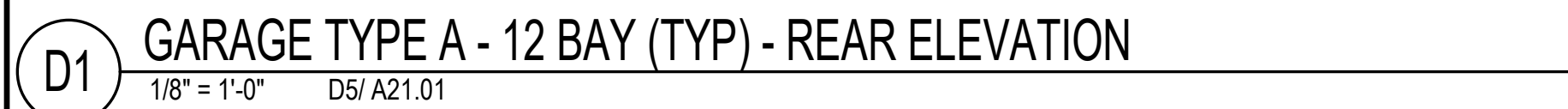
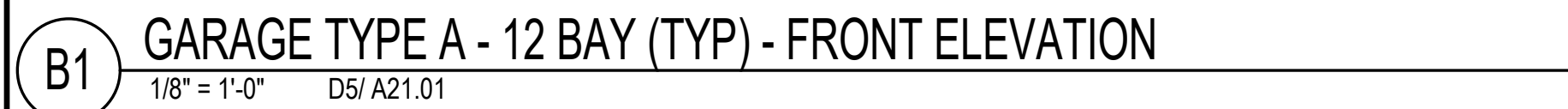
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1. ARCHITECTURAL ROOF SHINGLES
2. SINGLE PLY ROOFING SYSTEM

1. ARCHITECTURAL ROOFING SHINGLES
2. SINGLE PLY ROOFING SYSTEM
3. RIDGE VENT
4. OFF RIDGE VENT
5. ALUMINUM GUTTER - PRE-FINISHED
6. ALUMINUM DOWNSPOUT - PRE-FINISHED
7. HARD COAT FOAM ORNAMENTAL BRACKET - SEE C1/A5.03
8. FIBER CEMENT FASCIA
9. 1/4" FIBER CEMENT SIDING W/ 5" EXPOSURE
10. 1/2" FIBER CEMENT LAP SIDING W/ 4" EXPOSURE
11. 5/8" FIBER CEMENT LAP SIDING - SKIP LAP PATTEREN 5/16" R
12. FIBER CEMENT FINISH
13. FIBER CEMENT TRIM
14. 5/4X37 FIBER CEMENT TRIM
15. 5/4X37 FIBER CEMENT TRIM
16. 5/4X37 FIBER CEMENT TRIM
17. NOT USED-STUCCO FINISH
18. NOT USED-STUCCO FINISH CONTROL JOINT
19. NOT USED-STUCCO FINISH
20. HARD COAT FOAM TRIM - 80" STUCCO
21. BRICK VENEER
22. STONE TRIM
23. WINDOW SYSTEM - SEE SCHEDULE
24. NOT USED
25. ALUMINUM STOREFRONT SYSTEM
26. METAL GUARD RAIL - 36" H (GROUND LEVEL). PROVIDE A 36" CLEAR WIDE GATE AT ALL LEVELS. BRONZE FINISH
27. METAL GUARD RAIL - 42" H (TYP.). BRONZE FINISH
28. METAL GUARD RAIL - 48" H (TYP.). BRONZE FINISH
29. SIGNAGE/AREA - SIGNAGE DESIGN BY OTHERS
30. BUILDING FIRE SIGN - TO BE LOCATED ON FRONT OF BUILDING ONLY (SEE PLAN FOR BUILDING ORIENTATION)
31. LIGHT FIXTURE 20'-0" AFF. - SEE ELECTRICAL METRIC CATALOG
32. LAUNDRY / BATHROOM EXHAUST VENTS
33. A/C CONDENSING UNIT - SEE MECHANICAL
34. MECHANICAL UNIT DISCONNECT SWITCH - SEE MECHANICAL
35. FIRE DEPARTMENT CONNECTION
36. SURFACE MOUNTED FIRE EXTINGUISHER CAB W/ EXTINGUISHER
37. BALCONY PARTITION

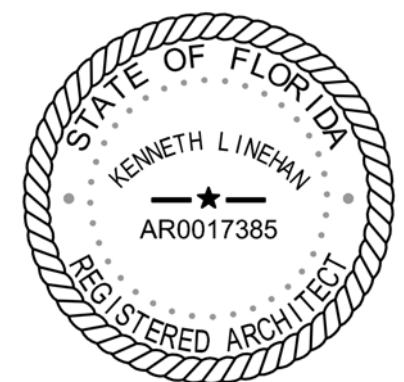
NOTE:
SEE CIVIL FOR FFE AND ADJACENT GRADE
INFORMATION.



ISSUE HISTORY		
No.	Date	Description
1	01/13/2023	SCHEMATIC DESIGN
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KENNETH LINEHAN
FL - AR0017385



OCOEE-APOPKA

APOPKA, FL

Drawn:	Author
Checked:	Checker
Approval:	KL
Date:	12/01/2022
Project #:	5906

K GARAGE ELEVATIONS AND
SECT.

A21.03

SHOPPES AT EAST SHORE

Project № 22057, v2.1

February 2023

**TRAFFIC IMPACT ANALYSIS
CITY OF AOPKA
FLORIDA**

Prepared by:



Traffic & Mobility Consultants

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Prepared for:

WMG Development
1200 Network Centre Drive, Suite 3
Effingham, Illinois 62401

EXECUTIVE SUMMARY

Project Information

Name: Shoppes at East Shore

Location: Northeast corner of the intersection of Ocoee Apopka Road and Keene Road

Jurisdiction: City of Apopka, Florida

Description: 224 senior adult housing units
4,200 square foot medical office
63,000 square foot shopping plaza
3,000 square foot fast-food restaurant with drive through window
3,000 square foot coffee shop with drive through window
Convenience market with 16 vehicle fueling positions

Findings

Trip Generation: 7,417 Daily / 638 PM Peak Hour Trips.

Access Plan: One (1) full access driveway and two (2) right-in/right-out driveways on Ocoee Apopka Road, and two (2) full access driveways and one (1) right-in/right-out driveway on Keene Road

Committed Roadway Improvements: Harmon Road: new 2-lane roadway from Ocoee Apopka Road to the existing Harmon Road
New signals at Binion Road and Ocoee Apopka Road, Ocoee Apopka Road and Keene Road, Ocoee Apopka Road and Harmon Road, and Keene Road and Marden Road

Roadway Capacity: All study segments are projected to operate within their adopted capacity at project buildout

Intersection Capacity: Ocoee Apopka Road and Keene Road is operating with delays on the westbound approach; however, with the proposed signal it is projected to operate at adequate LOS
All study intersections and project access driveways are projected to operate at adequate LOS

Recommendations

Turn Lanes: Construct a 355-foot westbound right turn lane on Keene Road and a 260-foot southbound left turn lane on Ocoee-Apopka Road at the Ocoee-Apopka Road and Keene Road intersection
Construct a 185-foot right turn lane at the three (3) project access driveways on Ocoee Apopka Road and on the middle and west access driveway on Keene Road
Construct a 270-foot southbound left turn lane on Ocoee Apopka Road at the north access driveway
Construct a 330-foot and a 235-foot eastbound left turn lane on Keene Road at the middle and west project access driveways, respectively

PROFESSIONAL ENGINEERING CERTIFICATION

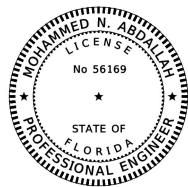
I hereby certify that I am a Professional Engineer properly registered in the State of Florida practicing with Traffic & Mobility Consultants LLC, a corporation authorized to operate as an engineering business, CA-30024, by the State of Florida Department of Professional Regulation, Board of Professional Engineers, and that I have prepared or approved the evaluations, findings, opinions, conclusions, or technical advice attached hereto for:

PROJECT: Shoppes at East Shore

LOCATION: City of Apopka, Florida

CLIENT: WMG Development

I hereby acknowledge that the procedures and references used to develop the results contained in these computations are standard to the professional practice of Transportation Engineering as applied through professional judgment and experience.



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY

Digitally signed by Mohammed N Abdallah
DN: CN=Mohammed N Abdallah,
dnQualifier=A01410D000001814951EAD600042192,
O=Florida, C=US
Date: 2023.04.03 21:35:34-04'00'

ON THE DATE ADJACENT TO THE SEAL

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TRAFFIC & MOBILITY CONSULTANTS LLC
3101 MAGUIRE BOULEVARD, SUITE 265
ORLANDO, FLORIDA 32803
CERTIFICATE OF AUTHORIZATION CA-30024
MOHAMMED N. ABDALLAH, P.E. NO. 56169

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1.0 INTRODUCTION

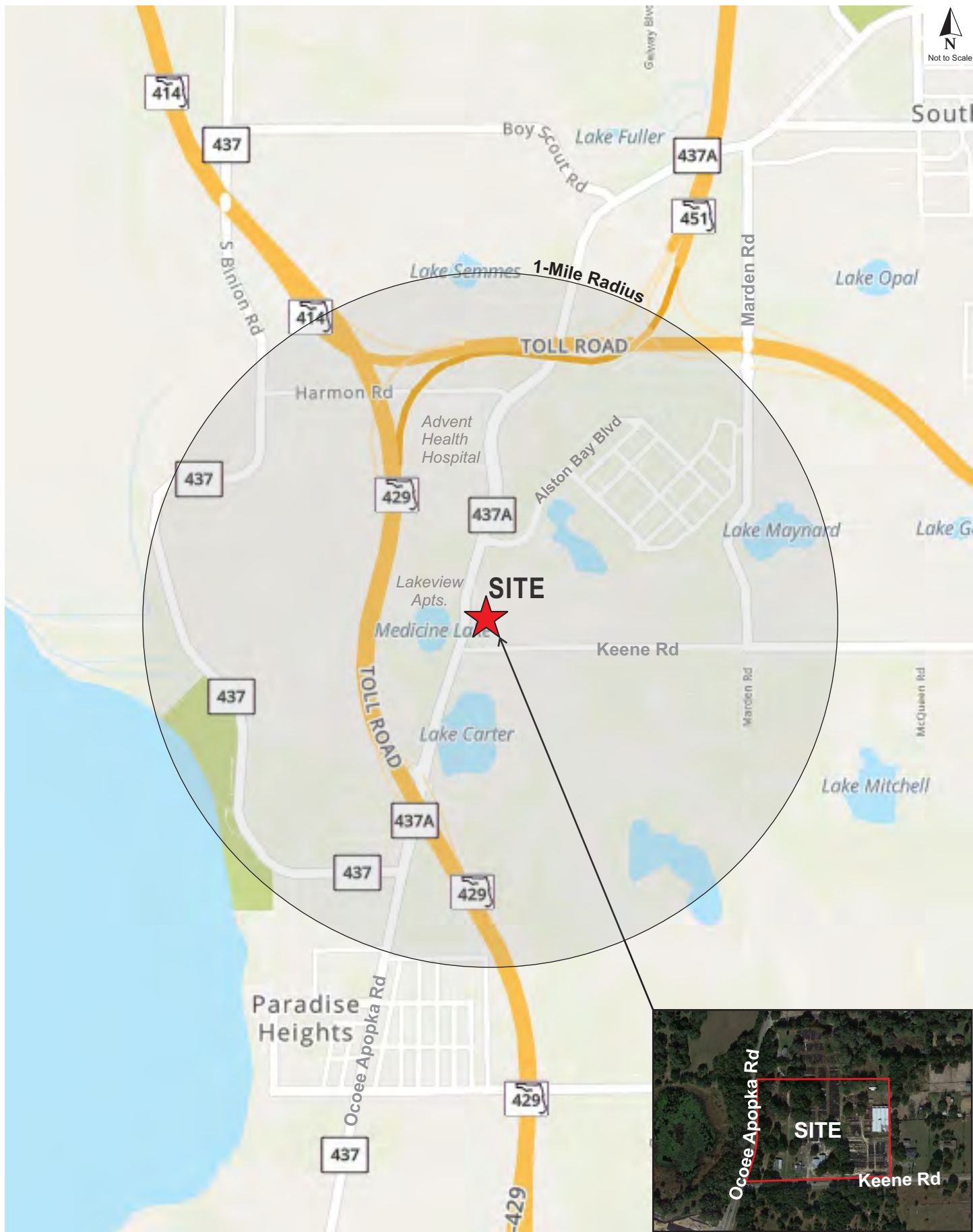
This traffic analysis was performed to assess the impact of the proposed Shoppes at East Shore development located on the northeast corner of the intersection of Ocoee Apopka Road and Keene Road in the City of Apopka, Florida. The development consists of 224 senior adult multifamily housing units, a 4,200 square foot medical office, a 63,000 square foot shopping plaza, a 3,000 square foot fast-food restaurant with drive through window, a 3,000 square foot coffee shop with drive through window, and a convenience market with 16 vehicle fueling positions (VFP). The projected buildout year is 2025. **Figure 1** depicts the location of the project site and the surrounding roadway network.

Access to the site is proposed via six (6) access driveways; one (1) full access driveway and two (2) right-in/right-out driveways on Ocoee Apopka Road, and two (2) full access driveways and one (1) right-in/right-out driveway on Keene Road. A preliminary site plan is provided in **Appendix A**.

The following analysis was conducted in accordance with the approved methodology, included in **Appendix B**.

Data used in the analysis consisted of site plan/development information provided by the project engineers, AM and PM peak hour traffic counts obtained by Traffic & Mobility Consultants LLC (TMC), road segment data obtained from the City of Apopka, and seasonal data obtained from Florida Department of Transportations (FDOT).

Figure 1 Site Location Map



2.0 STUDY AREA

The analysis considers the project's impacts on the following roadways and intersections, within the project's influence area:

Roadway Segments

- Ocoee Apopka Road
 - o Binion Road to SR 429
 - o SR 429 to Keene Road
 - o Keene Road to Harmon Road
 - o Harmon Road to Boy Scout Road
- Harmon Road
 - o Binion Road to Ocoee Apopka Road
- Keene Road
 - o Ocoee Apopka Road to Marden Road
 - o Marden Road to CR 435/Clarcona Road
- Marden Road
 - o Ocoee Apopka Road to SR 414
 - o SR 414 to Keene Road

Intersections

- Binion Road and Ocoee Apopka Road (unsignalized)
- Ocoee Apopka Road and SR 429 Ramps (signalized)
- Ocoee Apopka Road and Keene Road (unsignalized)
- Ocoee Apopka Road and Harmon Road (unsignalized)
- Keene Road and Marden Road (unsignalized)
- Keene Road and CR 435/Clarcona Road (signalized)
- Site Access Driveways (Proposed)

3.0 EXISTING CONDITIONS ANALYSIS

3.1 Roadway Segment Capacity

Table 1 presents a summary of the existing conditions for the roadway segments examined in this study. Roadway segments were analyzed by comparing the existing Level of Service (LOS) for each roadway segment with the adopted LOS standard. Existing Daily, PM peak hour directional traffic volumes, capacities, and committed trips were obtained from the *City of Apopka 2020 Encumbered Traffic Allocation Worksheets*, which are included in **Appendix C**.

Table 1
Existing Roadway Capacity Analysis

Roadway Segment	# of Lns	LOS Std	Daily Capacity	Volume	LOS	PM Peak Hour			
						Capacity	Volume	Dir	LOS
Ocoee Apopka Rd									
Binion Rd to SR 429	2	E	17,700	13,440	C	880	616	NB/EB	C
SR 429 to Keene Rd*	2	E	17,700	14,641	C	880	670	NB/EB	C
Keene Rd to Harmon Rd	2	E	17,700	10,919	C	880	474	NB/EB	C
Harmon Rd to Boy Scout Rd	2	E	17,700	10,919	C	880	474	NB/EB	C
Harmon Rd									
Binion Rd to Ocoee Apopka Rd	2	E	15,900	1,973	C	790	99	NB/EB	C
Keene Rd									
Ocoee Apopka Rd to Marden Rd	2	E	15,900	5,330	C	790	297	NB/EB	C
Marden Rd to Clarcona Rd	2	E	15,900	5,576	C	790	293	NB/EB	C
Marden Rd									
Ocoee Apopka Rd to SR 414	2	E	14,000	6,492	C	720	284	NB/EB	C
SR 414 to Keene Rd	2	E	14,000	6,492	C	720	260	NB/EB	C

Source: Apopka 2020 CMS

*Existing Volumes collected by TMC (Per City request)

The existing conditions analysis reveals that all study roadway segments currently operate within their adopted LOS.

3.2 Intersection Capacity

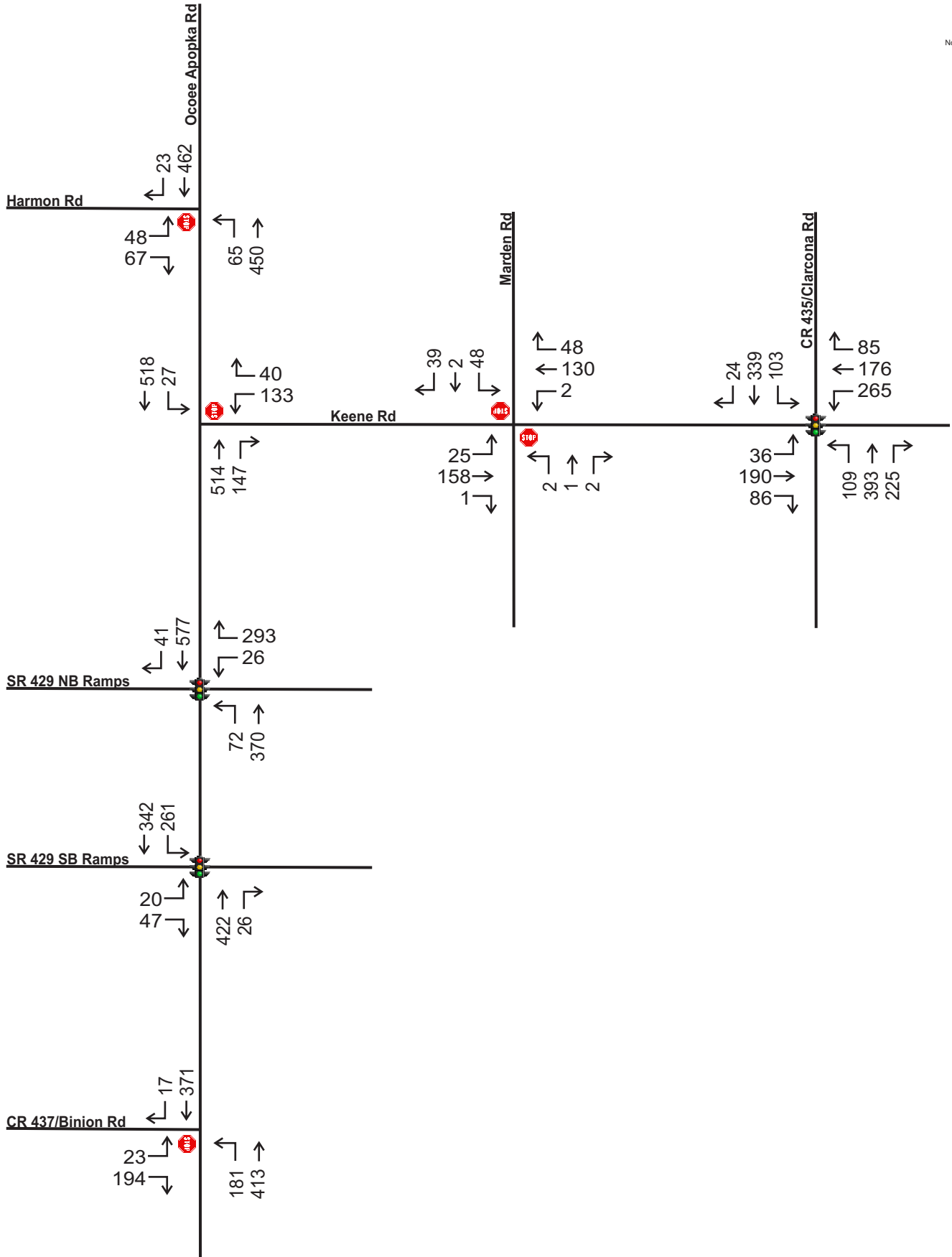
An intersection analysis was conducted using *Synchro* software and the methods of the *Highway Capacity Manual (HCM)*, 6th Edition. The capacity analysis was performed using the existing intersection geometries and traffic volumes during the AM and PM peak hour. Existing turning movement counts were collected during the peak season; since the peak seasonal factor is 1.00, no seasonal adjustment was applied. The raw intersection volume counts and *2021 Peak Season Factor Category Report* for Orange County (obtained from *Florida Traffic Online (FTO) website*) are provided in **Appendix D**. The existing intersection volumes are displayed in **Figure 2**.

A summary of the intersection capacity analysis is presented in **Table 2**, which reveals that all study intersections are currently operating overall at adequate Level of Service (LOS), except for the stop-controlled intersection of Ocoee Apopka Road and Keene Road, which is experiencing delays on the westbound approach during the PM peak hour. Detailed analysis worksheets and signal timings are included in **Appendix E**.

Table 2
Existing Intersection Capacity Analysis

Intersection	Control	EB		WB		NB		SB		Overall	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Binion Road & Ocoee Apopka Rd	TWSC	19.7	C	--	--	8.8	A	--	--	--	--
Ocoee Apopka Rd & SR 429 SB Ramps	Signal	34.9	C	--	--	12.5	B	4.9	A	9.1	A
Ocoee Apopka Rd & SR 429 NB Ramps	Signal	--	--	43.2	D	3.5	A	12.5	B	9.5	A
Ocoee Apopka Rd & Keene Rd	TWSC	--	--	74.0	F	--	--	9.2	A	--	--
Ocoee Apopka Rd & Harmon Rd	TWSC	18.8	C	--	--	8.7	A	--	--	--	--
Keene Rd & Marden Rd	TWSC	7.7	A	7.6	A	11.0	B	11.4	B	--	--
Keene Rd & Clarcona Rd	Signal	57.9	E	51.7	D	26.3	C	26.8	C	38.4	D

Delay Expressed in seconds



4.0 PROJECT TRAFFIC

4.1 Trip Generation

The trip generation of the proposed development was calculated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition* and *Trip Generation Handbook, 3rd Edition*. The trip generation for the project is summarized in **Table 3** and the ITE information sheets are provided in **Appendix F**.

Table 3
Trip Generation Analysis

ITE Code	Land Use	Size	Daily		PM Peak Hour			
			Rate	Trips	Rate	Total	Enter	Exit
252	Senior Adult Housing - Multifamily	224 DU	3.00	672	0.25	56	31	25
720	Medical Office	4,200 KSF	17.25	72	3.32	14	4	10
821	Shopping Plaza	63,000 KSF	94.49	5,953	9.03	569	273	296
934	Fast-Food Restaurant w/Drive-Through Window	3,000 KSF	467.48	1,402	33.03	99	51	48
937	Coffee Shop w/Drive-Through Window	3,000 KSF	533.37	1,601	38.99	117	58	59
945	Convenience/Gas Station	16 VFP	265.12	4,242	18.42	295	147	148
Total Trip Generation				13,942		1,150	564	586
Pass-by Retail 821 (34%)				2,024		193	93	101
Pass-by Fast-Food Restaurant (50%)				701		50	26	24
Pass-by Coffee Shop (89%)				1,425		104	52	52
Pass-by Gas Station (56%)				2,376		165	82	83
Net New External Trips				7,417		638	312	326

Source: Trip generation analysis based on ITE Trip Generation Manual, 11th Edition

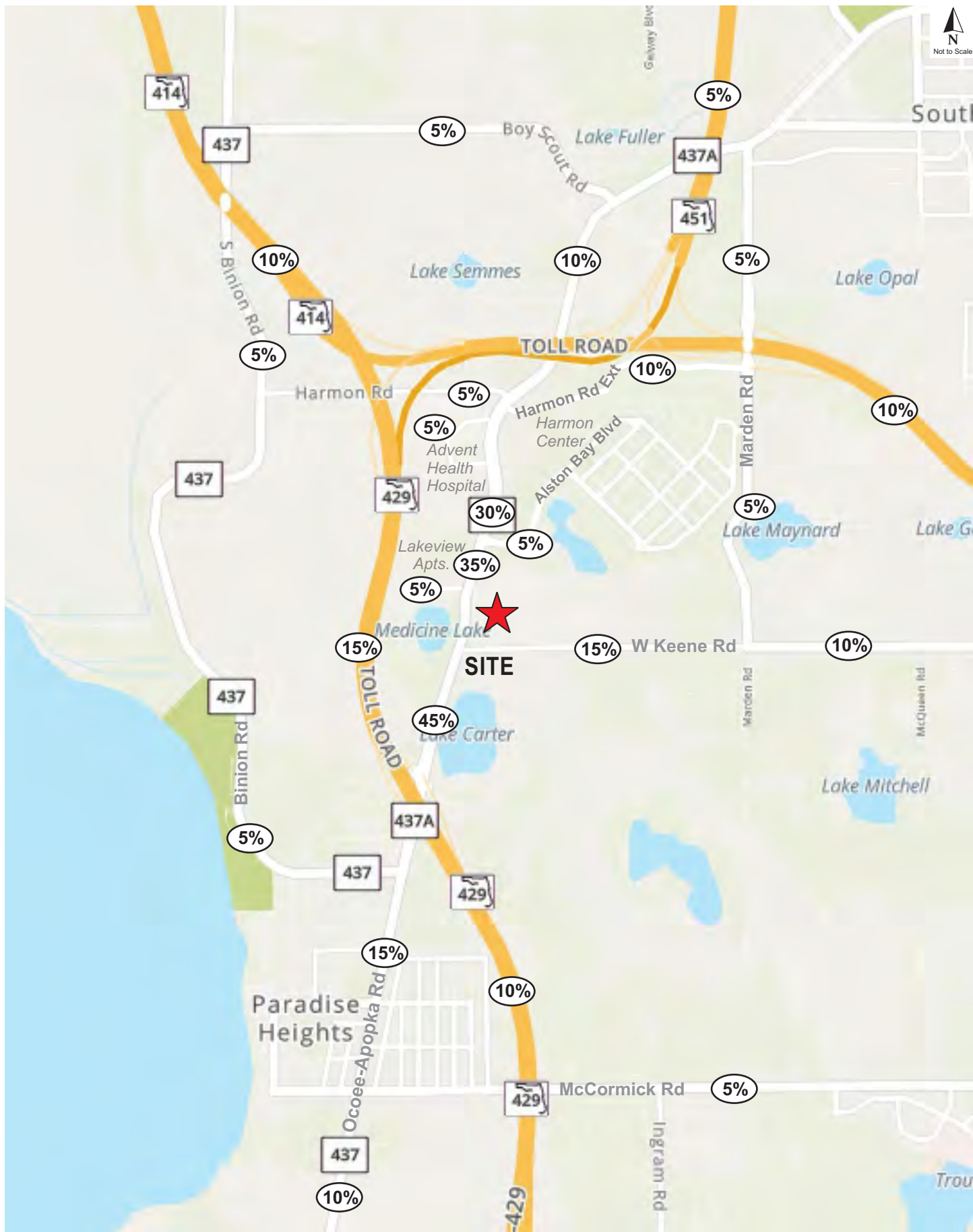
Pass-By rate based on ITE Trip Generation Manual, 3rd Edition

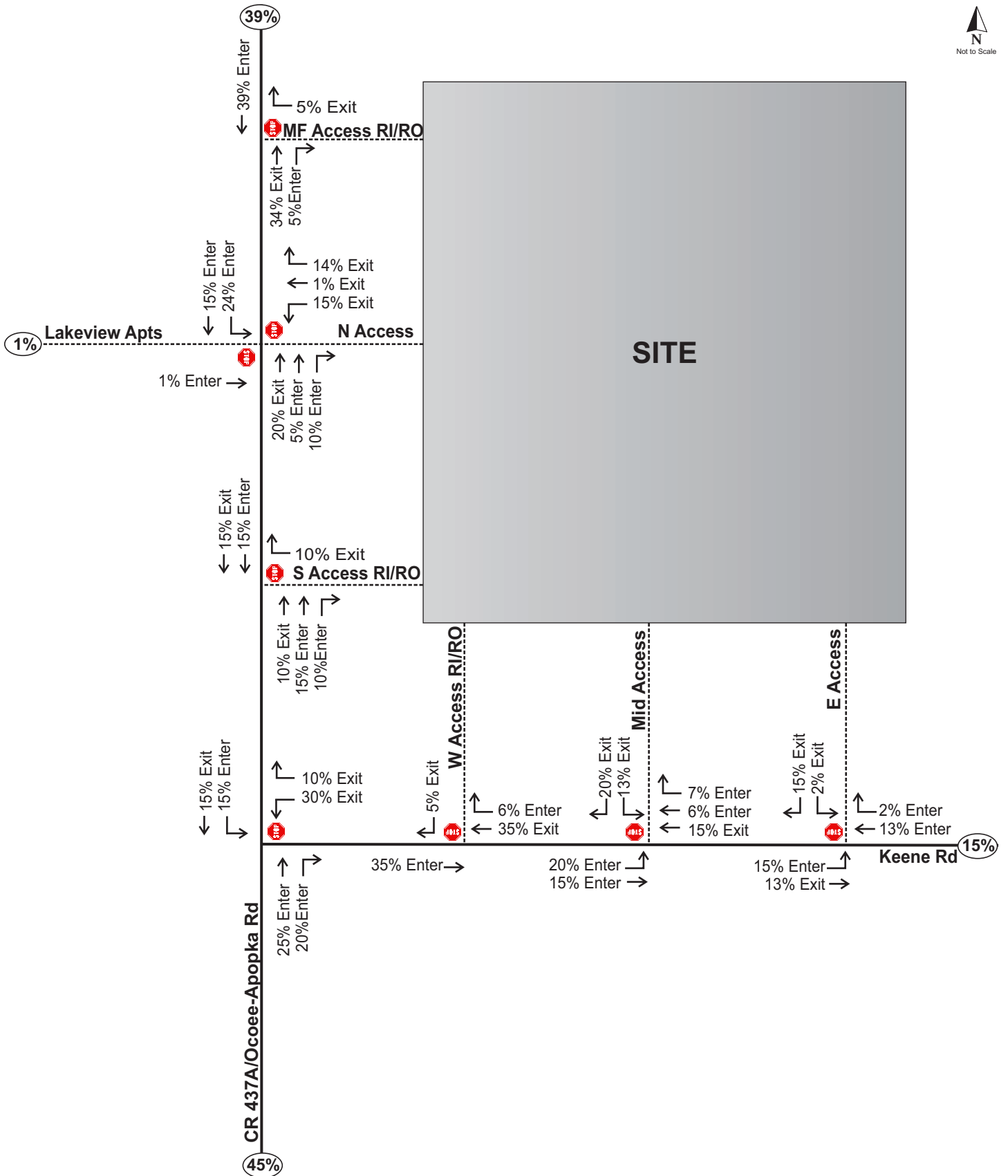
VFP: Vehicle Fuel Positions

The proposed development is projected to generate 7,417 net new trips per day, of which 638 trips occur during the PM peak hour.

4.2 Trip Distribution/Assignment

The project trip distribution was estimated based on *the Central Florida Regional Planning Model version 7 (CFRPM7 Cost Feasible 2025)* and was slightly modified to reflect prevailing patterns in the vicinity of the site. Surrounding approved developments were added to the model network, such as Lakeview Apartments and Harmon Center. The adjacent proposed apartment complex located north of the property was also added to the model. The model output is included in **Appendix G**. The final trip distribution pattern is presented in **Figure 3** and project trip assignment for the access driveways is shown in **Figure 4**.





5.0 PROJECTED CONDITIONS ANALYSIS

5.1 Traffic Projection

Projected traffic conditions for buildout year 2025 were analyzed for daily and peak hour traffic. The analysis was conducted for the projected background traffic volumes and project trips. Background traffic consists of existing traffic and committed trips (E+C), from approved developments in the area, which were obtained from the City of Apopka *2020 Encumbered Traffic Allocation Worksheets*. The total allocated committed trips from projects that are already built were not included in the analysis, such as Marden Ridge Apartments, Greystone Skilled Nursing Facility, Emerson North Townhomes, Central Florida Prep School and Oakmont Industrial Facility. Additionally, trips from two (2) surrounding proposed projects (Lakeview Apartments and Harmon Center) were added to the background traffic as vested trips.

5.2 Roadway Improvements

The *MetroPlan Orlando Transportation Improvements Plan*, and the Orange County and City of Apopka *Capital Improvement Plans (CIP)* were reviewed. Harmon Road is programmed to be extended as a new 2-lane roadway from Ocoee Apopka Road to the existing Harmon Road. Construction is programmed to begin in 2022. The roadway improvement includes a traffic signal at the intersection of Ocoee Apopka Road and Harmon Road. An excerpt of the *City of Apopka CIP* is included in **Appendix H**. The City of Apopka confirmed that the intersections of Binion Road and Ocoee Apopka Road, Ocoee Apopka Road and Keene Road, and Keene Road and Marden Road are projected to have traffic signals installed. Therefore, they were analyzed as signalized intersections in the projected conditions.

5.3 Roadway Segment Capacity

The roadway segment analysis was performed by comparing the projected LOS of the roadway with the adopted LOS standard. The projected conditions analysis is summarized in **Table 4**, which reveals that all study segments are projected to continue to operate within adopted LOS at project buildout.

Table 4
Projected Roadway Capacity Analysis

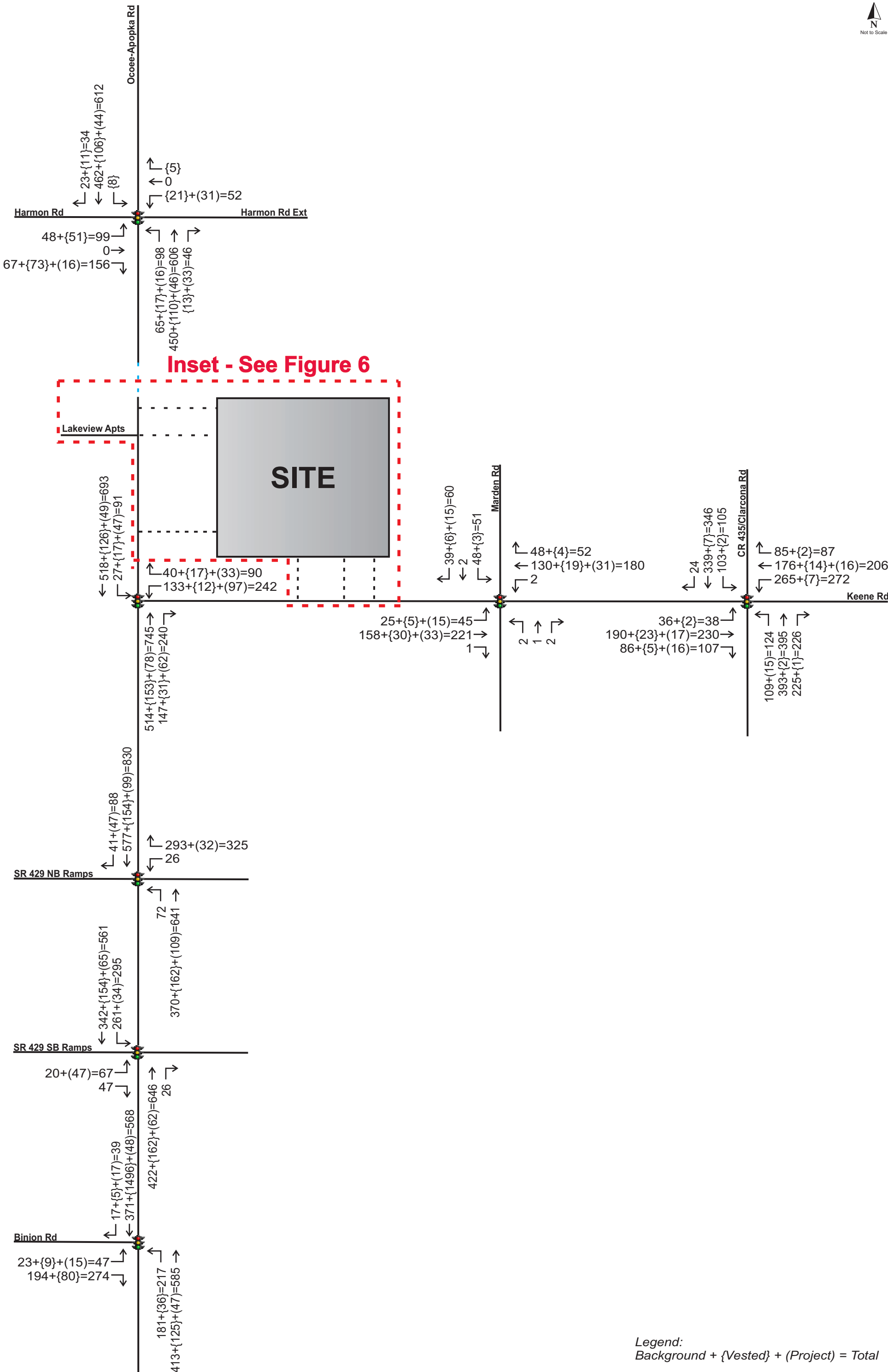
Roadway Segment	No Lns	LOS Std	Daily							PM Peak Hour							
			Capacity	Volume	Comm Trips	Trip Distr	Project Trips	Total	LOS	Capacity	Volume	Peak Dir	Comm Trips	Proj Dir	Project Trips	Total	LOS
Ocoee Apopka Rd																	
Binion Rd to SR 429	2	E	17,700	13,440	1,719	20%	1,483	15,159	C	880	616	NB/EB	119	IN	62	735	C
SR 429 to Keene Rd*	2	E	17,700	14,641	2,220	45%	3,337	16,861	D	880	670	NB/EB	141	IN	140	811	C
Keene Rd to Harmon Rd	2	E	17,700	10,919	1,514	40%	2,967	12,433	C	880	474	NB/EB	93	OUT	130	567	C
Harmon Rd to Boy Scout Rd	2	E	17,700	10,919	1,419	15%	1,112	12,338	C	880	474	NB/EB	65	OUT	49	539	C
Harmon Rd																	
Binion Rd to Ocoee Apopka Rd	2	E	15,900	1,973	2,220	5%	371	4,193	C	790	99	NB/EB	111	IN	16	210	C
Keene Rd																	
Ocoee Apopka Rd to Marden Rd	2	E	15,900	5,330	621	15%	1,112	5,951	C	790	297	NB/EB	22	OUT	49	319	C
Marden Rd to Clarcona Rd	2	E	15,900	5,576	349	10%	742	5,925	C	790	293	NB/EB	19	OUT	33	312	C
Marden Rd																	
Ocoee Apopka Rd to SR 414	2	E	14,000	6,492	165	5%	371	6,657	D	720	284	NB/EB	6	OUT	16	290	C
SR 414 to Keene Rd	2	E	14,000	6,492	17	5%	371	6,509	C	720	260	NB/EB	1	OUT	16	261	C

Source: Apopka 2020 CMS

* Existing Volumes collected by TMC

5.4 Intersection Capacity

To assess the projected operating conditions at the study intersections, an intersection capacity analysis was conducted using projected traffic volumes. Committed trips were estimated by assigning the segment peak hour peak direction committed trips to the intersection turning movements obtained from the *City of Apopka 2020 Encumbered Traffic Allocation Worksheets*. Additionally, trips from the Lakeview Apartments and the Harmon Center developments were added to the background traffic as vested trips. The off peak directional vested trips were calculated using the D factors obtained from the *City of Apopka 2020 Traffic Count Program Peak Hour/Direction Level of Service* worksheets, included in **Appendix C**. The pass-by trips were added to the analysis of the access driveways intersections. The results of the intersection analysis at project buildout are summarized in **Table 5**. The calculations of the background and projected volumes, pass-by trips and vested trips are included in **Appendix I**. Detailed worksheets are included in **Appendix J**. The projected turning movement volumes for PM peak hours are illustrated in **Figure 5**. The PM peak hour projected driveway turning movement volumes are illustrated in **Figure 6**.



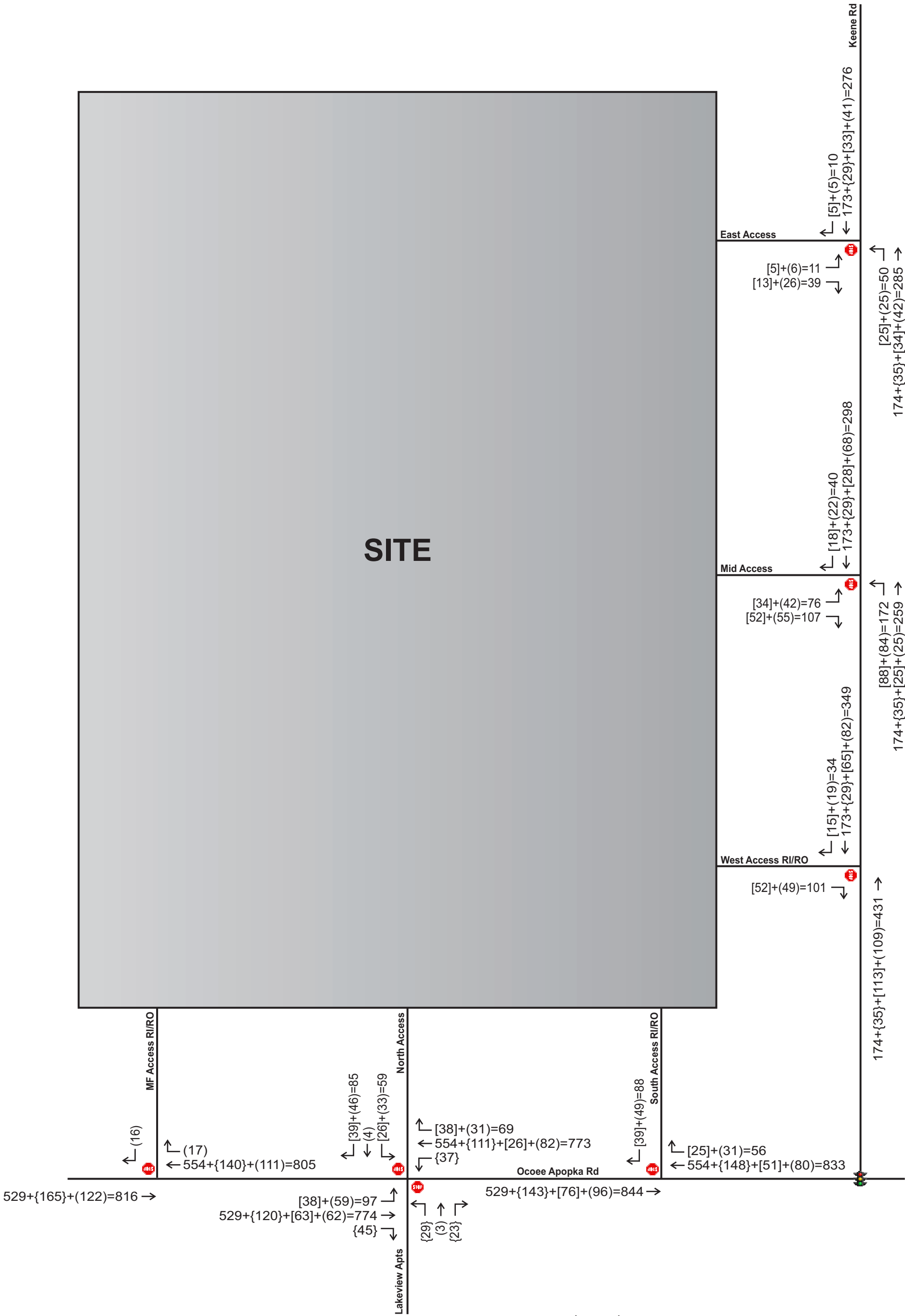


Table 5
Projected Intersection Capacity Analysis

Intersection	Control	EB		WB		NB		SB		Overall	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Binion Road & Ocoee Apopka Rd	Signal	23.5	C	--	--	9.1	A	6.7	A	10.9	B
Ocoee Apopka Rd & SR 429 SB Ramps	Signal	35.5	D	--	--	19.2	B	8.8	A	14.6	B
Ocoee Apopka Rd & SR 429 NB Ramps	Signal	--	--	43.2	D	5.0	A	19.3	B	13.2	B
Ocoee Apopka Rd & Keene Rd	Signal	--	--	52.0	D	35.5	D	11.6	B	29.1	C
Ocoee Apopka Rd & Harmon Rd	Signal	28.1	C	26.4	C	18.3	B	17.2	B	19.2	B
Keene Rd & Marden Rd	Signal	21.3	C	26.2	C	16.4	B	11.9	B	21.5	C
Keene Rd & Clarcona Rd	Signal	70.9	E	56.3	E	28.8	C	29.8	C	43.5	D
Ocoee Apopka Rd & Multifamily Access (R/I/RO)	TWSC	--	--	15.4	C	--	--	--	--	--	--
Ocoee Apopka Rd & North Access	TWSC	45.0	E	37.8	E	9.9	A	10.4	B	--	--
Ocoee Apopka Rd & South Access (R/I/RO)	TWSC	--	--	19.1	C	--	--	--	--	--	--
Keene Rd & West Access (R/I/RO)	TWSC	--	--	--	--	--	--	10.9	B	--	--
Keene Rd & Mid Access	TWSC	8.5	A	--	--	--	--	22.0	C	--	--
Keene Rd & East Access	TWSC	8.0	A	--	--	--	--	11.4	B	--	--

Delay Expressed in seconds

The results of the projected intersection capacity analysis reveal the following:

- The signalized intersection of Ocoee Apopka Road and SR 429 northbound and southbound ramps are projected to continue to operate at overall adequate LOS.
- With signalization, the intersections of Binion Road and Ocoee Apopka Road, Ocoee Apopka Road and Keene Road, Ocoee Apopka Road and Harmon Road, and Keene Road and Marden Road are projected to operate at adequate LOS.
- The intersection of Keene Road and Clarcona Road is projected to operate adequately.
- The project access driveways are projected to operate at adequate LOS.

5.5 Turn Lanes Review

Since the projected intersection analysis included a westbound right turn lane and a southbound left turn lane at the intersection of Ocoee-Apopka Road and Keene Road; a turn lane review was performed to determine the required dimensions of these turn lanes.

Westbound Right Turn Lane on Keene Road

The dimensions of the right turn lane was calculated based on the 95th percentile queue obtained from the projected *HCM* report, included in **Appendix J**, for the intersection of Ocoee-Apopka Road and Keene Road, as follows:

Keene Road:

Right Turn Lane = 95thile Queue + 50-foot taper

95thile Queue = 12.2 vehicles X 25 feet = 305 feet

Left Turn Lane = 305 + 50 = 355 feet (including a 50-foot taper)

Therefore, the intersection of Ocoee Apopka Road and Keene Road will be provided with a 355-foot westbound right turn deceleration lane.

Southbound Left Turn Lane on Keene Road

The dimensions of the left turn lane was calculated based on the 95th percentile queue obtained from the *HCM* report, included in **Appendix J**, for the intersection of Ocoee-Apopka Road and Keene Road, as follows:

Ocoee Apopka Road:

Left Turn Lane = Deceleration + 95thile Queue

Deceleration @ 45 mph speed = 185 feet

95thile Queue = 2.9 vehicles X 25 feet = 73 feet, use 75 feet

Left Turn Lane = 185 + 75 = 260 feet (including a 50-foot taper)

Therefore, the intersection of Ocoee Apopka Road and Keene Road will be provided with a 260-foot southbound left turn deceleration lane.

6.0 SITE ACCESS REVIEW

The site is proposed to be served via six (6) access driveways; one (1) full access driveway and two (2) right-in/right-out driveways on Ocoee Apopka Road, and two (2) full access driveways and one (1) right-in/right-out driveway on Keene Road. At the proposed project access locations, Ocoee Apopka Road is currently a 2-lane road with posted speed of 45 mph. Keene Road is currently a 2-lane road with posted speed of 45 mph.

Right Turn Lane Warrants

A review of the right turn lane warrants at the proposed access driveways on Ocoee Apopka Road and Keene Road was conducted to determine if exclusive deceleration lanes are necessary. Section 5.16.5 of the *City of Apopka Land Development Code (LDC)* requires deceleration turn lanes at project access driveways if the posted speed limit is equals or exceeds 35 mph or if the development will generate 100 or more right-turn movements during the peak hour. The project will assign less than 100 right turn trips entering at each of the six (6) access driveway; however, the applicant is proposing to add right turn deceleration lanes at five (5) of them. Since the east access driveway on Keene Road is projected to have 10 vehicles turning right, a right turn lane will not be added. The review was conducted based on *Exhibit 212-1* of the *Florida Design Manual (FDM)*, included in **Appendix K**. The dimensions of the right turn lanes were calculated based on the requirements of *FDM Exhibit 212.1*, which prescribes a total lane length of 185 feet (including a 50-foot taper) for a speed of 45 mph. Therefore, five (5) of the proposed access driveways; except for the east access driveway, will be improved with 185-foot right turn deceleration lanes.

Left Turn Lane Warrants

Per *City of Apopka LDC*, a left turn deceleration lane is required at the project full access driveways on Ocoee Apopka Road and Keene Road. The dimensions of the left turn lanes were calculated based on the requirements of *FDM Exhibit 212.1* for a design speed limit of 50 mph, as follows:

Ocoee Apopka Road and North Access Driveway:

Left Turn Lane = Deceleration + Queue Storage

Deceleration @ 45 mph speed = 185 feet

Queue length = $2 \times 25 \times \text{Left Turn Volume (97 veh)}/60 = 81$ feet, use 85 feet

Left Turn Lane = $185 + 85 = 270$ feet (including a 50-foot taper)

Therefore, the proposed north access driveway on Ocoee Apopka Road will be provided with a 270-foot southbound left turn deceleration lane.

Keene Road and Middle Access Driveway:

Left Turn Lane = Deceleration + Queue Storage

Deceleration @ 45 mph speed = 185 feet

Queue length = $2 \times 25 \times \text{Left Turn Volume (172 veh)}/60 = 143$ feet, use 145 feet

Left Turn Lane = $185 + 145 = 330$ feet (including a 50-foot taper)

Therefore, the proposed middle access driveway on Ocoee Apopka Road will be provided with a 330-foot eastbound left turn deceleration lane.

Keene Road and East Access Driveway:

Left Turn Lane = Deceleration + Queue Storage

Deceleration @ 45 mph speed = 185 feet

Queue length = $2 \times 25 \times \text{Left Turn Volume (50 veh)}/60 = 42$ feet, use 50 feet minimum

Left Turn Lane = $185 + 50 = 235$ feet (including a 50-foot taper)

Therefore, the proposed access driveway on Ocoee Apopka Road will be provided with a 235-foot eastbound left turn deceleration lane.

7.0 STUDY CONCLUSIONS

This traffic analysis was performed to assess the impact of the proposed Shoppes at East Shore. The site is on the northeast corner of the intersection of Ocoee Apopka Road and Keene Road in the City of Apopka, Florida. The project is a mixed-use development and consists of 224 senior adult multifamily housing units, a 4,200 square foot medical office, a 63,000 square foot shopping plaza, a 3,000 square foot fast-food restaurant with drive thru, a 3,000 square foot coffee shop with drive through, and a 16-pump convenience store/gas station, with a proposed buildout year of 2025.

The analysis evaluated project impacts to roadway segments and intersections within the site's primary influence area, and included a preliminary access review. The results of the analysis as documented herein are summarized below:

- The proposed development is projected to generate a new daily traffic volume of 7,417 net trips per day, of which 638 trips occur during the PM peak hour.
- Analysis of roadway segment capacity reveals that all study segments currently operate within their adopted capacity and are projected to continue to do so at project buildout.
- The stop-controlled intersection of Ocoee Apopka Road and Keene Road is currently operating with delays on the westbound approach; however, with the proposed signal installation it is projected to operate at adequate LOS.
- The signalized intersections of Ocoee Apopka Road and SR 429 northbound and southbound ramps, Binion Road and Ocoee Apopka Road, Ocoee Apopka Road and Keene Road, Ocoee Apopka Road and Harmon Road, Keene Road and Marden Road, and Clarcona Road and Keene Road are projected to operate at adequate LOS.
- Construct a 355-foot westbound right turn lane and a 260-foot southbound left turn lane at the Ocoee-Apopka Road and Keene Road intersection.
- The six (6) project access driveways are projected to operate adequately.
- Construct a 185-foot right turn lane at the three (3) project access driveways on Ocoee Apopka Road and on the middle and west access driveway on Keene Road.
- Construct a 270-foot southbound, 330-foot eastbound, and 235-foot eastbound left turn lanes at the north, middle, and east project access driveways, respectively.

APPENDICES

Appendix A
Preliminary Site Plan

Appendix B
Traffic Impact Analysis Methodology



MEMORANDUM

July 14, 2022

Re: Shoppes at East Shore (Apopka Publix)
Traffic Impact Analysis Methodology - Revised
City of Apopka, Florida
Project № 22057

The following revised methodology outlines the Traffic Impact Analysis (TIA) for the above referenced project. The methodology has been prepared in accordance with requirements and guidelines of City of Apopka for a TIA. It addresses the request from the City of Apopka to add 2 more intersections to the analysis.

Project Description

The proposed project is a mixed-use development, including a 48,387 square foot (SF) supermarket, 12,300 SF of strip retail plaza, 4,200 SF medical office, 2,100 SF liquor store, 3,000 SF fast-food restaurant with drive through window, 3,000 SF coffee shop with a drive-through window, and a convenience store with gas station with 16 vehicle fueling positions (VFP). The anticipated buildout year is 2025. A copy of the preliminary site plan is provided in the **Attachments**.

Project Location

The project site consists of parcels 20-21-28-0000-00- 021, 20-21-28-0000-00-024 and 20-21-28-0000-00-025. The +/-13.12-acre site is located on the northeast corner of Ocoee Apopka Road and Keene Road in City of Apopka, Florida, as depicted in **Figure 1**.

Project Access

Access to the site is proposed via five (5) access driveways, as shown on the site plan included in the **Attachments**. Two (2) access driveways, one (1) full access and one (1) right-in/right-out (RI/RO) are on Ocoee Apopka Road, and three (3) access driveways, two (2) full access and one (1) RI/RO are on Keene Road.

Trip Generation

The trip generation analysis was conducted using information published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual, 11th Edition* and *Trip Generation Handbook, 3rd Edition*. **Table 1** summarizes the resulting trip generation analysis. The ITE trip generation information and pass-by data sheets are included in the **Attachments**.

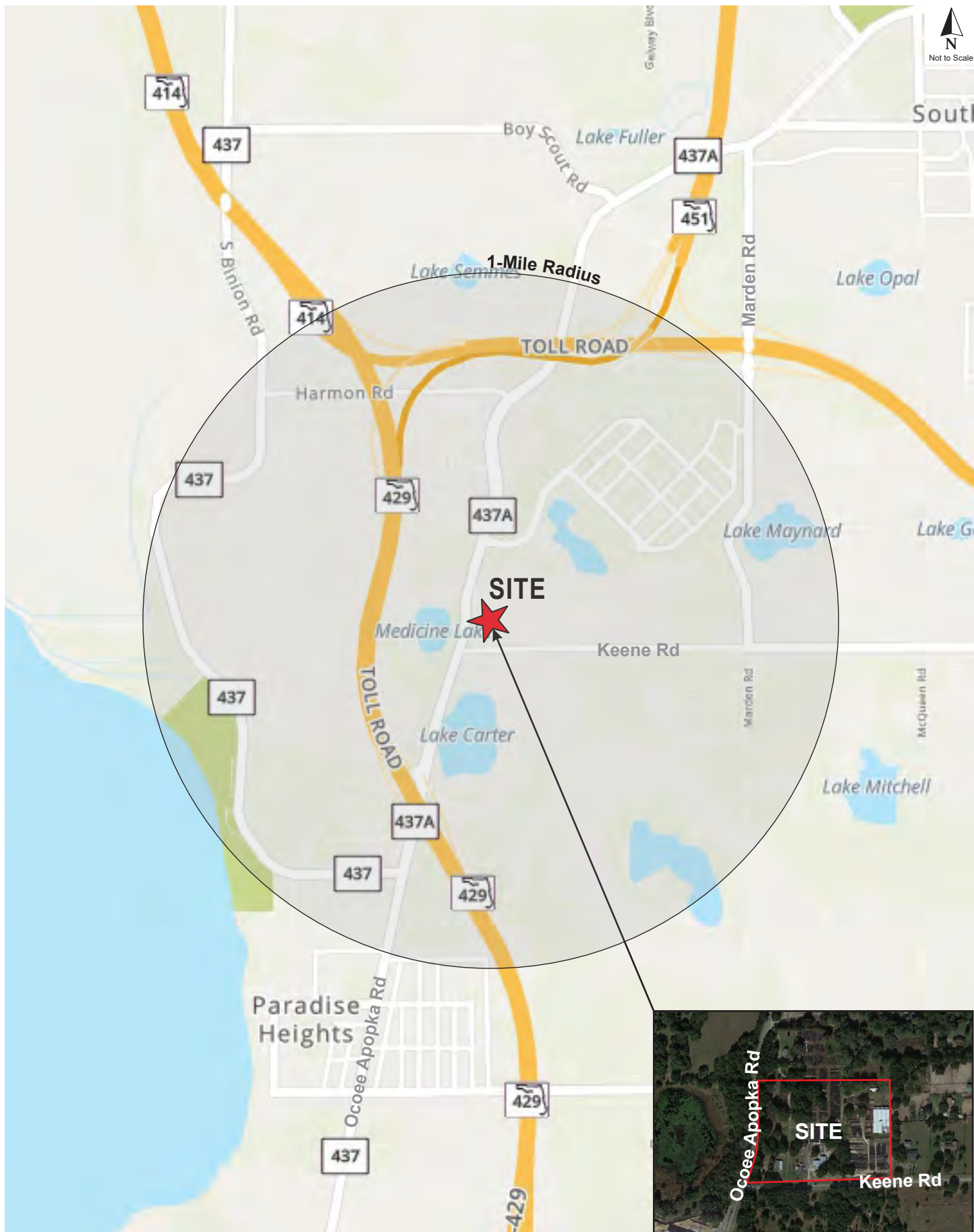


Table 1
Trip Generation

ITE Code	Land Use	Size	Daily		PM Peak Hour			
			Rate	Trips	Rate	Total	Enter	Exit
720	Medical Office	4.200 KSF	17.25	72	3.32	14	4	10
821	Shopping Plaza	63.000 KSF	94.49	5,953	9.03	569	273	296
934	Fast-Food Restaurant w/Drive-Through Window	3.000 KSF	467.48	1,402	33.03	99	51	48
937	Coffee Shop w/Drive-Through Window	3.000 KSF	533.37	1,601	38.99	117	58	59
945	Convenience/Gas Station	16 VFP	265.12	4,242	18.42	295	147	148
Total Trip Generation				13,270		1,094	533	561
Pass-by Retail 821 (34%)				2,024		193	93	101
Pass-by Fast-Food Restaurant (50%)				701		50	26	24
Pass-by Coffee Shop (89%)				1,425		104	52	52
Pass-by Gas Station (56%)				2,376		165	82	83
Net New External Trips				6,745		582	281	301

Source: Trip generation analysis based on ITE Trip Generation Manual, 11th Edition

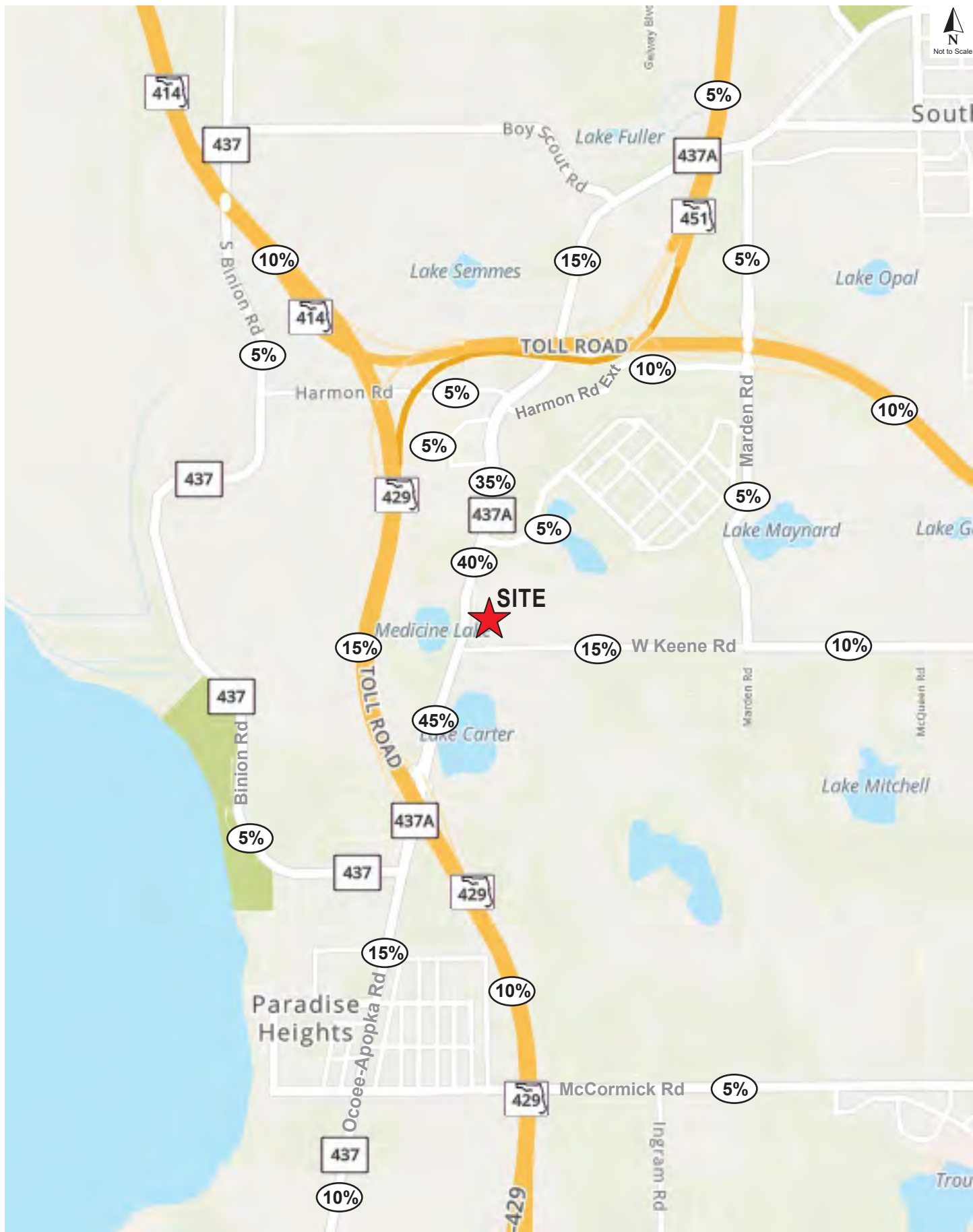
Pass-By rate based on ITE Trip Generation Manual, 3rd Edition

VFP: Vehicle Fuel Positions

The proposed development is projected to generate 6,745 new net external daily trips of which 582 trips occur during the PM peak hour.

Trip Distribution

The project trip distribution was estimated based on the *Central Florida Regional Planning Model version 7 (CFRPM7 Cost Feasible 2025)*, and was slightly modified to reflect prevailing patterns in the vicinity of the site. Surrounding approved developments were added to the model network, such as Lakeview Apartments and Harmon Center. The adjacent proposed apartment complex located north of the property was also added to the model. The CFRPM7 model printouts are included in the **Attachments**. The proposed trip distribution pattern is shown in **Figure 2**.



Study Area

The project primary impact area encompasses roadway segments and critical intersections within a one-mile radius of the proposed development. Accordingly, the following roadway segments will be analyzed for the PM peak hour:

- Ocoee-Apopka Road
 - o CR 437/Binion Road to SR 429
 - o SR 429 to Keene Road
 - o Keene Road to Harmon Road
 - o Harmon Road to Boy Scout Road
- Harmon Road
 - o CR 437/Binion Road to Ocoee-Apopka Road
- Keene Road
 - o Ocoee-Apopka Road to Marden Road
 - o Marden Road to CR 435/Clarcona Road
- Marden Road
 - o Ocoee-Apopka Road to Keene Road

The following intersections will be analyzed for the AM and PM peak hours:

- Ocoee-Apopka Road and SR 429 Ramps (Signalized)
- Ocoee-Apopka Road and Keene Road (Unsignalized)
- Ocoee-Apopka Road and Harmon Road (Signalized)
- Keene Road and Marden Road (Unsignalized)
- CR 437/Binion Road and Ocoee Apopka Road (Unsignalized)
- Keene Road and CR 435/Clarcona Road (Signalized)
- Site Access Driveways (Proposed)

Roadway Improvements

The *MetroPlan Orlando Transportation Improvements Plan*, the Central Florida Expressway Authority (CFX) *Five-Year Work Plan*, and the *Orange County and City of Apopka Capital Improvement Plans (CIP)* were reviewed. The review identified the following projects funded for construction:

- Harmon Road Extension; a new 2-lane roadway from Ocoee Apopka Road to the existing Harmon Road.
- SR 429 Corridor Capacity Improvements Project; widening SR 429 to 6-lanes from Tilden Road to SR 414.
- Ocoee-Apopka Road; widening to a 4-lane divided facility from Alston Bay Boulevard to Keene Road (proposed partnership project).

These funded improvements have been added to the model network. Excerpts of the *City of Apopka CIP* and the *CFX SR 429 Corridor Capacity Improvements Project* fact sheet are included in the **Attachments**.

Capacity Analysis

Roadway segment capacity will be analyzed for existing year 2022 and encumbered (vested) PM peak hour traffic and new project trips. Adopted service volumes, capacities, existing volumes and vested trips will be obtained from the City of Apopka *Concurrency Management System (CMS) 2020 Daily and PM Peak Hour/Peak Direction (PH/PD) Encumbered Traffic Allocation Worksheets* and *2020 Traffic Count Program Peak Hour/Direction Level of Service* spreadsheet, included in the **Attachments**. In addition, the study will include any developments committed trips not included in the published data, if provided by the City.

The study intersections will be analyzed for PM peak hour conditions using the methods of the *Highway Capacity Manual (HCM) 6th Edition*. The analysis will be performed for the existing year and project buildout year (2025).

The deceleration turn lanes on the project access driveways will be evaluated based on the City of Apopka's *Land Development Code (LDC)* guidelines.

Report

A traffic report will be prepared for submittal to the City of Apopka summarizing the methods, findings, and recommendations of the analysis.

Appendix C
City of Apopka CMS Data

City of Apopka CMS

2020 Daily and PM Peak Hour/Peak Direction (PH/PD) Encumbered Traffic Allocation Worksheets

FINAL REPORT

Base Traffic Volume: 2020

Revision Date:

4/1/2021

Roadway Section	# of Lanes	Adopted Standard Roadway Capacity			Applicant Inventory	Encumbered Trips		Daily Traffic (1)		PM PH/PD Traffic (1)		
		LOS	Daily	PHPD		Daily	PM PH/PD	Base Volume	Available Capacity	Base Volume	Available Capacity	Peak Direction
Minor Arterials (Continued)												
CR 435 (Rock Spring Road/Park Avenue/Clarcona Road) (Continued)												
Orange St to US 441	5L	E	33,800	1,700	Development Name	0	0	22,501	11,299	994	706	NB/EB
					Applicant Inventory Total	0	0		33.43%		41.55%	
US 441 to Michael Gladden Blvd	2L	E	15,600	800	Development Name	0	0	13,948	1,652	619	181	NB/EB
					Applicant Inventory Total	0	0		10.59%		22.60%	
Michael Gladden Blvd to Cleveland St	2L	E	15,600	800	Central Florida Prep School	74	3	10,791	4,735	472	325	NB/EB
					Applicant Inventory Total	74	3		30.35%		40.62%	
Cleveland St to Keene Rd	2L	E	17,700	880	Central Florida Prep School	74	2	9,420	8,060	423	446	SB/WB
					Silver Oaks	146	9		45.54%		50.63%	
					Applicant Inventory Total	220	11					
Keene Rd to McCormick Rd	2L	E	17,700	880	Silver Oaks	61	4	13,481	4,158	628	248	SB/WB
					Applicant Inventory Total	61	4		23.49%		28.24%	
CR 437A (Ocoee-Apopka Road/Michael Gladden Boulevard/Central Avenue)												
McCormick Rd to Binion Rd	2L	E	17,700	880	Carter Island Industrial	69	2	11,687	4,502	683	79	NB/EB
					Oak Point PD	449	17		25.43%		9.02%	
					Oak Point South (fka, Thompson Hills Estates)	993	99					
					Applicant Inventory Total	1,511	118					
Binion Rd to SR 429	2L	E	17,700	880	Carter Island Industrial	86	3	13,440	2,541	616	145	NB/EB
					Oak Point PD	561	22		14.36%		16.53%	
					Oak Point South (fka, Thompson Hills Estates)	880	88					
					Residences at Emerson Park	192	6					
					Applicant Inventory Total	1,719	119					
SR 429 to Keene Rd	2L	E	17,700	880	Carter Island Industrial	206	6	16,225	-1,439	796	-93	NB/EB
					Emerson North Townhomes (fka Emerson North Apartments)	DONE -21	-2		-8.13%		-10.58%	
					Greystone Skilled Nursing Facility	DONE ---224	-8					
					Marden Ridge Apartments	DONE ---439	26					
					Oak Point PD	898	35					
					Oak Point South (fka, Thompson Hills Estates)	880	88					
					Residences at Emerson Park	236	12					
					Applicant Inventory Total	2,220 2,914	141 172					
Keene Rd to Harmon Rd	2L	E	17,700	880	Alta East Shore	212	10	10,919	4,184	474	250	NB/EB
					Carter Island Industrial	69	5		23.64%		28.41%	
					Central Florida Prep School	DONE ---74	-3					
					Clearlake Landing	25	1					
					Emerson North Townhomes (fka Emerson North Apartments)	DONE -7	0					
					Emerson Point Apartments	DONE ---453	-9					
					Greystone Skilled Nursing Facility	DONE ---373	13					
					Marden Ridge Apartments	263	16					
					Oakmont Industrial Facility	DONE -213	-22					
					Oak Point PD	449	17					
					Oak Point South (fka, Thompson Hills Estates)	427	43					
					Residences at Emerson Park	332	17					
					Applicant Inventory Total	1,514 2,597	93 156					

VESTED TRIPS FROM PROJECTS
COMPLETED WERE REMOVED

City of Apopka CMS

2020 Daily and PM Peak Hour/Peak Direction (PH/PD) Encumbered Traffic Allocation Worksheets

FINAL REPORT

Base Traffic Volume: 2020

Revision Date:

4/1/2021

Roadway Section	# of Lanes	Adopted Standard Roadway Capacity			Applicant Inventory	Encumbered Trips		Daily Traffic (1)		PM PH/PD Traffic (1)		
		LOS	Daily	PHPD		Daily	PM PH/PD	Base Volume	Available Capacity	Base Volume	Available Capacity	Peak Direction
Minor Arterials (Continued)												
CR 437A (Ocoee-Apopka Road/Michael Gladden Boulevard/Central Avenue) (Continued)												
Harmon Rd to Boy Scout Rd	2L	E	17,700	880				10,919	4,343	474	269	NB/EB
					Alta East Shore	529	14					
					Central Florida Prep School DONE	149	-3		24.54%		30.57%	
					Clearlake Landing	25	1					
					Emerson North Townhomes (fka Emerson North Apartments) DONE	7	0					
					Emerson Point Apartments DONE	153	-9					
					Greystone Skilled Nursing Facility DONE	356	12					
					Marden Ridge Apartments DONE	439	26					
					Oakmont Industrial Facility DONE	213	22					
					Oak Point South (fka, Thompson Hills Estates)	427	43					
					Residences at Emerson Park	140	7					
					Applicant Inventory Total	1,419	65					
Boy Scout Rd to Bradshaw Rd	2L	E	17,700	880		2,438	132	13,385	2,075	569	169	NB/EB
					Central Florida Prep School	372	11		11.72%		19.18%	
					Clearlake Landing	8	0					
					Emerson North Townhomes (fka Emerson North Apartments)	24	1					
					Emerson Point Apartments	340	19					
					Johns Road Commerce Center	69	10					
					Lakeside (aka Lake Marshall)	578	35					
					Magnolia Commerce Center	5	1					
					Marden Ridge Apartments	527	32					
					Oakmont Industrial Facility	317	33					
					Applicant Inventory Total	2,240	142					
Bradshaw Rd to Central Ave	2L	E	15,600	800				7,518	6,042	355	317	NB/EB
					Central Florida Prep School	149	6		38.73%		39.60%	
					Emerson North Townhomes (fka Emerson North Apartments)	72	4					
					Emerson Point Apartments	952	53					
					Johns Road Commerce Center	23	3					
					Lakeside (aka Lake Marshall)	429	26					
					Magnolia Commerce Center	7	1					
					Marden Ridge Apartments	175	11					
					Oakmont Industrial Facility	233	24					
					Applicant Inventory Total	2,040	128					
Michael Gladden Blvd to US 441	2L	E	15,600	800				4,541	11,059	213	587	NB/EB
					Development Name	0	0		70.89%		73.38%	
					Applicant Inventory Total	0	0					
Lakeville Road												
Apopka Blvd to Wildwood St	2L	E	17,700	880				5,744	11,956	301	579	SB/WB
					Development Name	0	0		67.55%		65.75%	
					Applicant Inventory Total	0	0					
Plymouth-Sorrento Road (CR 437)												
County Line to Kelly Park Rd	2L	E	32,600	1,610				8,833	21,576	587	874	NB/EB
					Bridal Path	1,359	85		66.19%		54.31%	
					Cantero Golden Gem	135	5					
					Kelly Park Commercial (Publix)	518	48					
					Kelly Park Crossings	127	8					
					Orchid Estates (fka J.B. Nurseries)	52	3					
					Applicant Inventory Total	2,191	149					
Kelly Park Rd to Ponkan Rd	2L	E	17,700	880				6,535	8,769	363	315	NB/EB
					Bridal Path	169	11		49.54%		35.75%	
					Cantero Golden Gem	135	5					
					Kelly Park Commercial (Publix)	1,813	168					
					Kelly Park Crossings	190	12					
					Orchid Estates (fka J.B. Nurseries)	89	6					
					Applicant Inventory Total	2,396	202					

VESTED TRIPS FROM PROJECTS
COMPLETED WERE REMOVED

City of Apopka CMS

2020 Daily and PM Peak Hour/Peak Direction (PH/PD) Encumbered Traffic Allocation Worksheets

FINAL REPORT

Base Traffic Volume: 2020

Revision Date:

4/1/2021

Roadway Section	# of Lanes	Adopted Standard Roadway Capacity			Applicant Inventory	Encumbered Trips		Daily Traffic (1)		PM PH/PD Traffic (1)		
		LOS	Daily	PHPD		Daily	PM PH/PD	Base Volume	Available Capacity	Base Volume	Available Capacity	Peak Direction
Minor Collectors (Continued)												
Harmon Road												
Ocoee-Apopka Rd to Binion Rd	2L	D	15,900	790				1,973	11,672	99	579	SB/WB
					Alta East Shore	1,586	71		73.41%		73.29%	
					Binion Reserve	42	3					
					Greystone Skilled Nursing Facility	DONE -----35	DONE ---1					
					Residences at Emerson Park	74	2					
					Vistas at Waters Edge	518	35					
					Applicant Inventory Total	2,220	2,255	111	112			
Hawthorne Avenue												
US 441 to Ocoee-Apopka Rd	2L	D	13,300	680				1,552	11,748	72	608	NB/EB
					Development Name	0	0		88.33%		89.37%	
					Applicant Inventory Total	0	0					
Ocoee-Apopka Rd to 13th St	2L	D	13,300	680				1,593	11,707	75	605	SB/WB
					Development Name	0	0		88.03%		88.91%	
					Applicant Inventory Total	0	0					
Hermit Smith Road												
General Electric Rd to US 441	2L	E	15,900	790				1,380	14,119	119	637	NB/EB
					Hermit Smith - Apopka Warehouse	343	27		88.80%		80.63%	
					Mid-Florida Logistics Park	58	7					
					Applicant Inventory Total	401	34					
US 441 to Yothers Rd	2L	E	15,900	790				2,846	13,054	245	545	NB/EB
					Development Name	0	0		82.10%		68.99%	
					Applicant Inventory Total	0	0					
Hogshead Road												
Hermit Smith Rd to Conrad Rd	2L	E	14,000	720				533	13,462	64	655	NB/EB
					Mid-Florida Logistics Park	5	1		96.16%		90.92%	
					Applicant Inventory Total	5	1					
Jason Dwelley Parkway												
Kelly Park Rd to Ponkan Rd	2L	E	14,000	720				1,777	11,328	92	558	SB/WB
					Kelly Park Commercial (Publix)	466	43		80.91%		77.53%	
					Kelly Park Crossings	190	12					
					Orchid Estates (fka J.B. Nurseries)	239	15					
					Applicant Inventory Total	895	70					
Keene Road												
Ocoee-Apopka Rd to Marden Rd	2L	E	15,900	790				5,330	8,965	297	414	NB/EB
					Carter Island Industrial	69	2		56.39%		52.39%	
					Emerson North Townhomes (fka Emerson North Apartments)	DONE 36	DONE -2					
					Emerson Point Apartments	DONE ---51	DONE -3					
					Greystone Skilled Nursing Facility	DONE --148	DONE -5					
					Marden Ridge Apartments	DONE --702	DONE -42					
					Oakmont Industrial Facility	DONE -47	DONE -5					
					Oak Point PD	449	17					
					Residences at Emerson Park	103	3					
					Applicant Inventory Total	621	1,605	22	79			
Marden Rd to Clarcona Rd (CR 435)	2L	E	15,900	790				5,576	9,124	293	426	NB/EB
					Emerson North Townhomes (fka Emerson North Apartments)	DONE 96	DONE -6		57.39%		53.87%	
					Emerson Point Apartments	DONE 352	DONE -20					
					Marden Ridge Apartments	DONE 351	DONE -21					
					Oakmont Industrial Facility	DONE -47	DONE -5					
					Residences at Emerson Park	251	13					
					Silver Oaks	98	6					
					Applicant Inventory Total	349	1,200	19	71			
Clarcona Rd (CR 435) to Sheeler Rd	2L	D	15,900	790				9,463	6,132	451	320	NB/EB
					Silver Oaks	305	19		38.57%		40.56%	
					Applicant Inventory Total	305	19					

VESTED TRIPS FROM PROJECTS
COMPLETED WERE REMOVED

City of Apopka CMS

2020 Daily and PM Peak Hour/Peak Direction (PH/PD) Encumbered Traffic Allocation Worksheets

FINAL REPORT

Base Traffic Volume: 2020

Revision Date:

4/1/2021

Roadway Section	# of Lanes	Adopted Standard Roadway Capacity			Applicant Inventory	Encumbered Trips		Daily Traffic (1)		PM PH/PD Traffic (1)		
		LOS	Daily	PHPD		Daily	PM PH/PD	Base Volume	Available Capacity	Base Volume	Available Capacity	Peak Direction
Minor Collectors (Continued)												
Lester Road (Continued)												
Vick Rd to Schopke Lester Rd	2L	E	14,000	720				6,472	4,595	301	250	NB/EB
					Carriage Hills 1 and 2	308	28		32.82%		34.77%	
					Country Crossing	111	5					
					Equestrian Center Subdivision	363	23					
					Gateway Plaza	642	22					
					Legacy Hills	58	2					
					Meadow View Apartments	58	4					
					San Sabastian	410	26					
					Self Storage	152	7					
					Vista Reserve	831	52					
Schopke Lester Rd to Plymouth Sorrento Rd	2L	E	14,000	720	Applicant Inventory Total	2,933	169					
								4,309	8,303	210	419	NB/EB
					Carriage Hills 1 and 2	252	23		59.31%		58.19%	
					Equestrian Center Subdivision	209	13					
					Legacy Hills	48	3					
					San Sabastian	168	11					
					Self Storage	242	11					
					Stanton Ridge	31	2					
					Vista Reserve	438	28					
					Applicant Inventory Total	1,388	91					
Lust Road												
SR 429 to Ocoee Apopka Rd	2L	E	14,000	720				62	9,839	3	573	SB/WB
					Avian Pointe	4,099	144		70.28%		79.58%	
					Applicant Inventory Total	4,099	144					
Marden Road												
Ocoee Apopka Rd to Maden Meadows Dr	2L	E	14,000	720				6,492	3,973	284	261	NB/EB
					Carter Land Industrial	17	1		28.38%		36.24%	
					Central Florida Prep School	893	26					
					Emerson North Townhomes (fka Emerson North Apartments)	132	8					
					Emerson Point Apartments	1,292	72					
					Greystone Skilled Nursing Facility	0	0					
					Marden Ridge Apartments	1,053	63					
					Residences at Emerson Park	148	5					
Maden Meadows Dr to Keene Rd	2L	E	14,000	720	Applicant Inventory Total	165	3,535	6	475			
								6,492	4,703	284	288	NB/EB
					Carter Land Industrial	17	1		33.60%		39.99%	
					Central Florida Prep School	595	23					
					Emerson North Townhomes (fka Emerson North Apartments)	132	8					
					Emerson Point Apartments	1,292	72					
					Greystone Skilled Nursing Facility	67	2					
					Marden Ridge Apartments	702	42					
					Applicant Inventory Total	2,805	148					
Martin Street												
Park Ave to Lake Ave	2L	E	14,000	720				2,713	11,247	141	577	SB/WB
					Center of Faith	40	2		80.34%		80.16%	
					Applicant Inventory Total	40	2					
McCormick Road												
Ocoee-Apopka Rd to Clarcona Rd (CR 435)	2L	E	15,900	790				4,819	9,524	215	427	NB/EB
					Carter Land Industrial	17	1		59.90%		54.10%	
					Oak Point PD	112	4					
					Oak Point South (fka, Thompson Hills Estates)	1,428	143					
					Applicant Inventory Total	1,557	148					
Monroe Avenue												
Park Ave to Alabama Ave	2L	D	13,300	680				3,785	9,515	315	365	SB/WB
					Development Name	0	0		71.54%		53.69%	
					Applicant Inventory Total	0	0					

Encumbered

VESTED TRIPS FROM PROJECTS
COMPLETED WERE REMOVED

City of Apopka
2020 Traffic Count Program
Peak Hour/Direction Level of Service

Class Roadway Segment	Count Location Number	Type of Count	No. of Lanes	LOS Std.	Daily Volume	AM Peak Hour (7-9 AM Peak Period)						PM Peak Hour (4-6 PM Peak Period)					
						NB/EB	SB/WB	Time	K	D	LOS ¹	NB/EB	SB/WB	Time	K	D	LOS ¹
Minor Arterial (Continued)																	
CR 437A (Ocoee-Apopka Road/Michael Gladden Boulevard/Central Avenue)																	
McCormick Rd to Binion Rd	71	72 Hour	2L	E	11,687	302	387	07:00	0.059	0.561	C	683	533	16:45	0.104	0.562	C
Binion Rd to SR 429	29	24 Hour	2L	E	13,440	543	575	07:00	0.083	0.515	C	616	588	16:30	0.090	0.512	C
SR 429 to Keene Rd	702A	24 Hour	2L	E	16,225	644	690	07:15	0.082	0.517	C	796	655	16:45	0.089	0.549	C
Keene Rd to Boy Scout Rd	559A/29	72 Hour	2L	E	10,919	402	357	07:15	0.070	0.530	C	474	454	16:45	0.085	0.511	C
Boy Scout Rd to Bradshaw Rd	27	72 Hour	2L	E	13,385	594	472	07:15	0.080	0.557	C	569	544	16:45	0.083	0.511	C
Bradshaw Rd to Central Ave	7083	72 Hour	2L	E	7,518	267	256	07:15	0.070	0.511	C	355	274	16:30	0.084	0.565	C
Michael Gladden Blvd to US 441	567A	24 Hour	2L	E	4,541	139	140	07:30	0.061	0.502	C	213	211	16:15	0.093	0.502	C
Lakeville Road																	
Apopka Blvd to Wildwood St	657A	24 Hour	2L	E	5,744	172	96	07:00	0.047	0.641	C	234	301	17:00	0.093	0.563	C
Plymouth-Sorrento Road																	
County Line to Kelly Park Rd	14	48 Hour	2L	E	8,833	225	499	07:00	0.082	0.689	B	587	294	16:45	0.100	0.666	C
Kelly Park Rd to Ponkan Rd	11	72 Hour	2L	E	6,535	207	266	07:00	0.072	0.562	C	363	236	17:00	0.092	0.606	C
Ponkan Rd to Lester Rd/Yothers Rd	10	72 Hour	2L	E	6,661	235	225	07:30	0.069	0.511	C	371	267	16:30	0.096	0.581	C
Lester Rd/Yothers Rd to SR 429 Connector Rd	542A	24 Hour	2L	E	9,269	425	251	07:45	0.073	0.629	C	330	604	17:00	0.101	0.646	C
SR 429 Connector Rd to US 441	543A	24 Hour	2L	E	6,866	157	285	07:15	0.064	0.644	C	352	285	16:45	0.093	0.553	C
Sheeler Road																	
SR 436 to US 441	605A	24 Hour	3L	E	11,061	398	261	08:45	0.060	0.604	C	698	461	16:15	0.105	0.602	D
US 441 to Apopka Blvd	7006	72 Hour	2L	E	9,219	311	243	07:15	0.060	0.561	C	387	423	16:45	0.088	0.522	C
Apopka Blvd to Cleveland St	7007	72 Hour	2L	E	10,384	446	275	07:00	0.069	0.619	C	444	480	17:00	0.089	0.520	C
Cleveland St to Keene Rd	656A	72 Hour	2L	E	12,360	471	309	07:15	0.063	0.604	C	528	624	17:00	0.093	0.541	C
Wekiwa Springs Road/Piedmont-Wekiwa Road/Hiwassee Road																	
Welch Rd to Votaw Rd	799	72 Hour	3L	E	12,275	393	442	07:45	0.068	0.529	B	527	511	17:00	0.084	0.508	B
Votaw Rd to SR 436	25	72 Hour	5L	E	20,996	565	928	07:45	0.071	0.622	C	1,141	729	17:00	0.089	0.610	C
SR 436 to Piedmont Lakes Blvd	330	72 Hour	5L	E	31,479	910	1,149	07:30	0.065	0.558	C	1,591	1,261	17:00	0.091	0.558	C
Piedmont Lakes Blvd to US 441	606A	24 Hour	5L	E	28,984	769	955	08:15	0.059	0.554	C	1,454	1,226	17:00	0.092	0.543	C
US 441 to CR 424 (Apopka Blvd)	331	24 Hour	4LD	E	24,716	704	775	08:15	0.060	0.524	C	972	1,182	17:00	0.087	0.549	C
CR 424 (Apopka Blvd) to SR 414	222A	24 Hour	4LD	E	19,769	631	662	07:00	0.065	0.512	C	845	861	16:45	0.086	0.505	C
SR 414 to Beggs Rd	223A	72 Hour	4LD	E	27,547	732	930	07:45	0.060	0.560	C	1,360	1,083	16:45	0.089	0.557	C
Beggs Rd to Clarcona-Ocoee Rd	65	24 Hour	4LD	E	23,480	690	810	07:30	0.064	0.540	C	966	991	17:00	0.083	0.506	C
Welch Road																	
Vick Rd to Rock Springs Rd	501A	72 Hour	2L	E	9,894	359	259	07:00	0.062	0.581	C	488	447	16:30	0.094	0.522	D
Rock Springs Rd to Ustler Road	624A	72 Hour	3L	E	19,536	823	556	07:15	0.071	0.597	C	667	880	16:30	0.079	0.569	C
Ustler Road to Thompson Rd	7049	72 Hour	2L	E	16,750	723	450	07:15	0.070	0.616	C	580	780	16:45	0.081	0.574	C
Thompson Rd to Wekiwa Springs Rd	22	72 Hour	2L	E	15,163	693	372	07:00	0.070	0.651	C	515	775	17:00	0.085	0.600	C

City of Apopka
2020 Traffic Count Program
Peak Hour/Direction Level of Service

Class Roadway Segment	Count Location Number	Type of Count	No. of Lanes	LOS Std.	Daily Volume	AM Peak Hour (7-9 AM Peak Period)						PM Peak Hour (4-6 PM Peak Period)					
						NB/EB	SB/WB	Time	K	D	LOS ¹	NB/EB	SB/WB	Time	K	D	LOS ¹
Minor Collector (Continued)																	
General Electric Road																	
Hermit Smith Rd to Orange Ave	931A	24 Hour	2L	E	1,382	34	73	07:15	0.077	0.682	C	78	93	16:15	0.124	0.544	C
Golden Gem Road																	
Kelly Park Rd to Ponkan Rd	910A	24 Hour	2L	E	239	16	14	07:00	0.125	0.542	C	11	19	16:30	0.125	0.625	C
Greenacre Road																	
Piedmont-Wekiwa Rd to Neil Rd	820A	24 Hour	2L	E	5,353	162	187	07:15	0.065	0.536	C	213	213	16:45	0.080	0.500	C
Haas Road																	
Plymouth-Sorrento Rd (CR 437) to Mt Plymouth Rd	920A	24 Hour	2L	E	880	27	42	07:00	0.078	0.609	C	67	44	16:15	0.126	0.604	C
Harmon Road																	
Binion Rd to Ocoee-Apopka Rd	972A	24 Hour	2L	E	1,973	71	87	07:00	0.080	0.551	C	99	99	17:00	0.100	0.500	C
Hawthorne Avenue																	
US 441 to Ocoee-Apopka Rd	562A	24 Hour	2L	D	1,552	56	49	08:45	0.067	0.535	C	72	68	17:00	0.091	0.515	C
Ocoee-Apopka Rd to 13th St	561A	24 Hour	2L	D	1,593	40	50	08:45	0.056	0.552	C	68	75	17:00	0.090	0.525	C
Hermit Smith Road																	
Plymouth-Sorrento Rd (CR 437) to US 441	951A	24 Hour	2L	E	895	33	37	08:00	0.078	0.529	C	33	55	16:30	0.098	0.625	C
US 441 to General Electric Rd	950A	24 Hour	2L	E	1,380	61	65	07:00	0.091	0.516	C	119	28	16:30	0.107	0.810	C
General Electric Rd to US 441	952A	24 Hour	2L	E	411	23	18	07:45	0.100	0.561	C	8	23	16:15	0.075	0.742	C
Highland Avenue																	
Monroe Ave to US 441	405A	24 Hour	2L	E	1,647	78	38	08:15	0.070	0.673	C	104	41	17:00	0.088	0.715	C
US 441 to 6th St	406A	24 Hour	2L	E	632	40	36	07:15	0.120	0.529	C	27	36	16:45	0.099	0.571	C
Hogshead Road																	
West of Hermit Smith Rd	973A	24 Hour	2L	E	533	14	47	07:00	0.114	0.771	C	64	18	16:30	0.154	0.785	C
Jason Dwelley Parkway																	
Kelly Park Rd to Ponkan Rd	960A	24 Hour	2L	E	1,777	52	95	07:30	0.083	0.646	C	91	92	17:00	0.103	0.503	C
Keene Road																	
Ocoee-Apopka Rd to Marden Rd	930A	24 Hour	2L	E	5,330	266	256	07:30	0.098	0.509	C	297	215	16:45	0.096	0.580	C
Marden Rd to Clarcona Rd	568A	24 Hour	2L	E	5,576	226	227	07:15	0.081	0.501	C	293	221	17:00	0.092	0.571	C
Clarcona Rd to Sheeler Rd	7090	24 Hour	2L	E	9,463	384	318	07:00	0.074	0.547	C	451	427	17:00	0.093	0.514	C
Kelly Park Road																	
Round Lake Rd to SR 429	9.1	24 Hour	2L	E	4,606	249	201	07:15	0.098	0.553	B	251	220	17:00	0.102	0.533	B
SR 429 to Plymouth-Sorrento Rd (CR 437)	10A	24 Hour	2L	E	8,821	253	543	07:15	0.090	0.682	B	516	313	17:00	0.094	0.623	B
Plymouth-Sorrento Rd (CR 437) to Jason Dwelley Pkwy	9A	24 Hour	2L	E	5,233	162	307	07:15	0.090	0.654	B	314	220	16:45	0.102	0.588	B
Jason Dwelley Pkwy to Mt. Plymouth Rd	12	24 Hour	2L	E	6,385	255	235	07:00	0.077	0.520	B	322	313	17:00	0.099	0.507	B
Mt. Plymouth Rd to Rock Springs Rd	12A	24 Hour	2L	E	10,842	501	315	07:00	0.075	0.614	B	432	628	16:45	0.098	0.592	C
King Street																	
Peterson Rd to Orange Ave	585A	24 Hour	2L	E	332	10	19	07:30	0.087	0.655	C	17	1	16:00	0.054	0.944	C
Lake Avenue/Marvin C Zanders Avenue																	
Martin St to Orange St	513A	24 Hour	2L	D	1,967	65	90	08:00	0.078	0.581	C	123	88	16:00	0.107	0.584	C
Orange St to US 441	515A	24 Hour	2L	D	1,198	24	46	07:45	0.058	0.662	C	63	77	17:15	0.116	0.550	C
US 441 to 4th St	402A	24 Hour	2L	D	2,063	30	101	07:30	0.063	0.769	C	59	138	16:30	0.096	0.699	C
Lake Cortez Drive																	
SR 436 to Evelyn Dr	811A	24 Hour	2L	E	866	29	31	07:45	0.069	0.519	C	69	24	16:30	0.108	0.741	C
Lake Doe Boulevard																	
US 441 to Dunn Cove Dr	1015	24 Hour	2L	E	3,723	192	63	07:00	0.069	0.752	C	138	226	17:00	0.098	0.620	C
Lake Francis Drive																	
Schopke Lester Rd to Errol Pkwy	505A	24 Hour	2L	D	1,110	48	34	07:15	0.074	0.587	C	55	63	16:45	0.106	0.537	C
Errol Pkwy to Vick Rd	504A	24 Hour	2L	D	3,097	131	70	07:45	0.065	0.653	C	123	160	17:00	0.091	0.566	C

City of Apopka
2020 Traffic Count Program
Peak Hour/Direction Level of Service

Class Roadway Segment	Count Location Number	Type of Count	No. of Lanes	LOS Std.	Daily Volume	AM Peak Hour (7-9 AM Peak Period)						PM Peak Hour (4-6 PM Peak Period)					
						NB/EB	SB/WB	Time	K	D	LOS ¹	NB/EB	SB/WB	Time	K	D	LOS ¹
Minor Collector (Continued)																	
Lakeville Road																	
Wildwood St to Beggs Rd	30	72 Hour	2L	E	5,784	240	232	07:15	0.081	0.509	C	220	298	16:45	0.090	0.575	C
Beggs Rd to Clarcona Ocoee Rd	67	72 Hour	2L	E	6,335	251	268	07:15	0.082	0.516	C	234	331	16:45	0.089	0.586	C
Lester Road																	
Rock Springs Rd to Vick Rd	583A	24 Hour	2L	E	5,674	228	144	08:00	0.066	0.613	C	244	281	16:15	0.093	0.535	C
Vick Rd to Schopke Lester Rd	506A	24 Hour	2L	E	6,472	295	189	08:00	0.075	0.610	C	301	298	17:00	0.093	0.502	C
Schopke Lester Rd to Plymouth-Sorrento Rd (CR 437)	801A	24 Hour	2L	E	4,309	140	175	07:45	0.073	0.556	C	210	189	16:45	0.093	0.526	C
Marden Road																	
Ocoee Apopka Rd to SR 414	560A	24 Hour	2L	E	6,492	449	194	07:45	0.099	0.699	D	284	231	17:00	0.079	0.551	C
SR 414 to Keene Rd	569A	24 Hour	2L	E	5,274	258	306	07:30	0.107	0.543	C	260	200	17:00	0.087	0.565	C
Marshall Lake Road																	
SR 451 to Bradshaw Rd	584A	24 Hour	2L	E	415	17	26	07:00	0.104	0.605	C	22	8	16:00	0.072	0.733	C
Martin Street																	
Park Ave to Lake Ave	519A	24 Hour	2L	E	2,713	110	119	07:00	0.084	0.521	C	111	141	17:00	0.093	0.560	C
Maine Ave to Vick Rd	830A	24 Hour	2L	E	4,091	184	142	08:00	0.062	0.514	C	175	169	17:00	0.108	0.567	C
McCormick Road																	
Ocoee-Apopka Rd to Ingram Rd	970A	72 Hour	2L	E	4,819	165	144	07:30	0.064	0.535	C	215	206	17:00	0.087	0.510	C
Ingram Rd to Clarcona Rd	8075	72 Hour	2L	E	4,523	196	106	07:00	0.067	0.650	C	151	217	17:00	0.081	0.590	C
Midland Avenue																	
US 441 to 6th St	407A	24 Hour	2L	E	1,282	45	27	07:45	0.056	0.627	C	80	48	17:15	0.100	0.625	C
Monroe Avenue																	
Park Ave to Alabama Ave	603A	24 Hour	2L	D	3,785	144	85	07:15	0.060	0.630	C	147	315	16:45	0.122	0.682	C
Alabama Ave to Sheeler Rd	604A	24 Hour	2L	D	4,570	129	99	08:45	0.050	0.566	C	213	263	17:00	0.104	0.553	C
Mt. Plymouth Road																	
Kelly Park Rd to Haas Rd	17	72 Hour	2L	E	7,213	176	368	07:00	0.075	0.676	C	424	267	17:00	0.096	0.614	C
Haas Rd to Lake County Line	17A	24 Hour	2L	E	5,651	162	323	07:00	0.086	0.667	C	359	232	17:15	0.105	0.607	C
North Maine Avenue																	
Martin St to Old Dixie Hwy	512A	24 Hour	2L	D	4,616	124	170	07:00	0.064	0.578	C	236	153	16:30	0.084	0.606	C
Old Dixie Highway/West Highland Avenue/Orange Street																	
Plymouth-Sorrento Rd (CR 437) to Boy Scout Blvd	582	24 Hour	2L	E	2,378	70	66	07:15	0.057	0.516	C	125	103	16:45	0.096	0.548	C
Boy Scout Blvd to Errol Pkwy	510A	24 Hour	2L	E	4,341	188	115	07:00	0.070	0.621	C	219	253	16:45	0.109	0.535	C
Errol Pkwy to Vick Rd	511A	24 Hour	2L	E	7,178	259	160	07:00	0.058	0.618	C	324	406	17:00	0.102	0.556	D
Vick Rd to Bradshaw Rd	674A	24 Hour	2L	E	12,115	522	344	07:45	0.072	0.602	D	877	511	16:30	0.115	0.632	F
Bradshaw Rd to Hawthorne Ave	518A	24 Hour	2L	E	4,026	146	84	08:45	0.057	0.634	C	217	226	17:15	0.110	0.510	C
Hawthorne Ave to Park Ave	514A	24 Hour	2L	E	4,109	173	84	08:45	0.063	0.674	C	241	210	17:15	0.110	0.534	C
Ondich Road																	
Round Lake Rd to Effe Dr	901A	72 Hour	2L	E	490	13	17	07:15	0.061	0.567	C	22	26	16:00	0.098	0.542	C
Effe Dr to Plymouth-Sorrento Rd (CR 437)	8179	72 Hour	2L	E	541	12	23	07:00	0.065	0.657	C	29	22	16:15	0.094	0.569	C
Overland Road																	
Apopka Rd to Beggs Rd	672A	24 Hour	2L	E	5,927	183	165	08:45	0.059	0.526	C	267	268	16:15	0.090	0.501	C
Peterson Road																	
Grand Avian Pkwy to King St	586A	24 Hour	2L	E	278	6	16	07:15	0.079	0.727	C	16	1	16:00	0.061	0.941	C
Ponkan Road																	
Round Lake Rd to Plymouth-Sorrento Rd (CR 437)	13	72 Hour	2L	E	4,176	157	174	07:00	0.079	0.526	C	191	153	16:30	0.082	0.556	C
Plymouth-Sorrento Rd (CR 437) to Vick Rd	8115	72 Hour	2L	E	4,436	237	185	07:45	0.095	0.563	C	240	185	17:00	0.096	0.566	C
Vick Rd to Rock Springs Rd	326	72 Hour	2L	E	4,933	178	166	08:15	0.070	0.516	C	204	256	17:00	0.093	0.556	C

Appendix D
Traffic Counts & FDOT Seasonal Factors

TURNING MOVEMENT COUNT ANALYSIS
AUTOS & TRUCKS

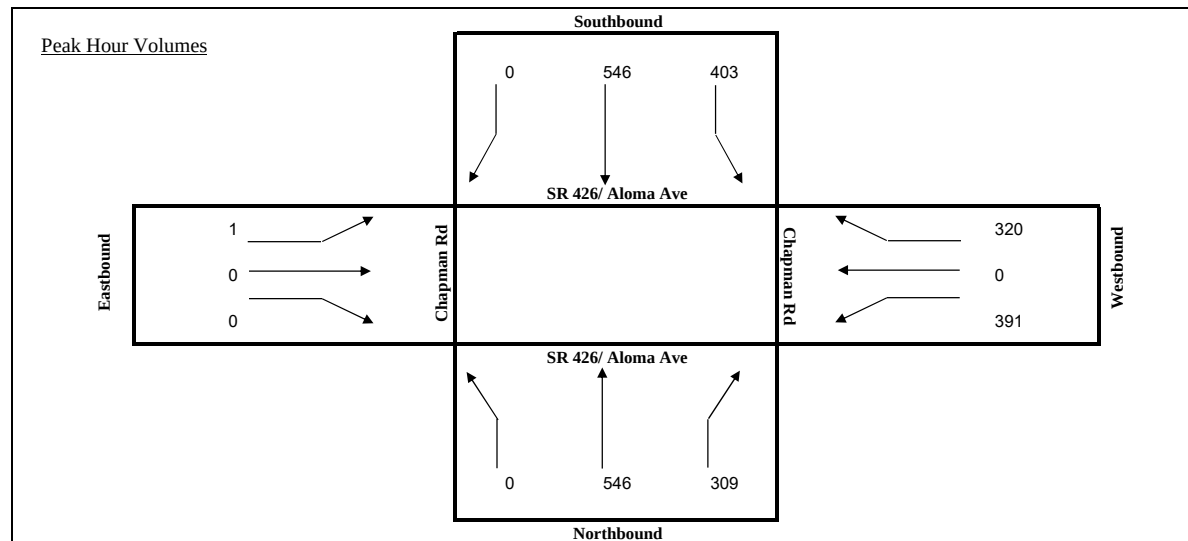
Intersection (N/S): SR 426/ Aloma Ave

Intersection (E/W): Chapman Rd

Date: 7/26/2022

SR 426/ Aloma Ave				SR 426/ Aloma Ave				Chapman Rd				Chapman Rd				TOTAL
Start	End	NB			SB			EB			WB					
		L	T	R	L	T	R	L	T	R	L	T	R			
7:00 AM	7:15 AM	0	75	35	35	87	0	0	0	0	80	0	40	352		
7:15 AM	7:30 AM	0	79	46	71	108	0	0	0	0	89	0	56	449		
7:30 AM	7:45 AM	0	138	46	98	120	0	1	0	0	137	0	78	618		
7:45 AM	8:00 AM	0	175	62	98	140	0	0	0	0	106	0	103	684		
8:00 AM	8:15 AM	0	136	58	104	136	0	0	0	0	97	0	55	586		
8:15 AM	8:30 AM	0	127	85	85	125	0	1	0	0	100	0	83	606		
8:30 AM	8:45 AM	0	140	70	101	142	0	0	0	0	93	0	63	609		
8:45 AM	9:00 AM	0	143	96	113	143	0	0	0	0	101	0	119	715		

Total for:	7:00 AM	8:00 AM	0	467	189	302	455	0	1	0	0	412	0	277	2103
Total for:	8:00 AM	9:00 AM	0	546	309	403	546	0	1	0	0	391	0	320	2516
Tota Peak Hour:	8:00 AM	9:00 AM	0	546	309	403	546	0	1	0	0	391	0	320	2516
Overall PHF:	0.88														



TURNING MOVEMENT COUNT ANALYSIS

TRUCKS

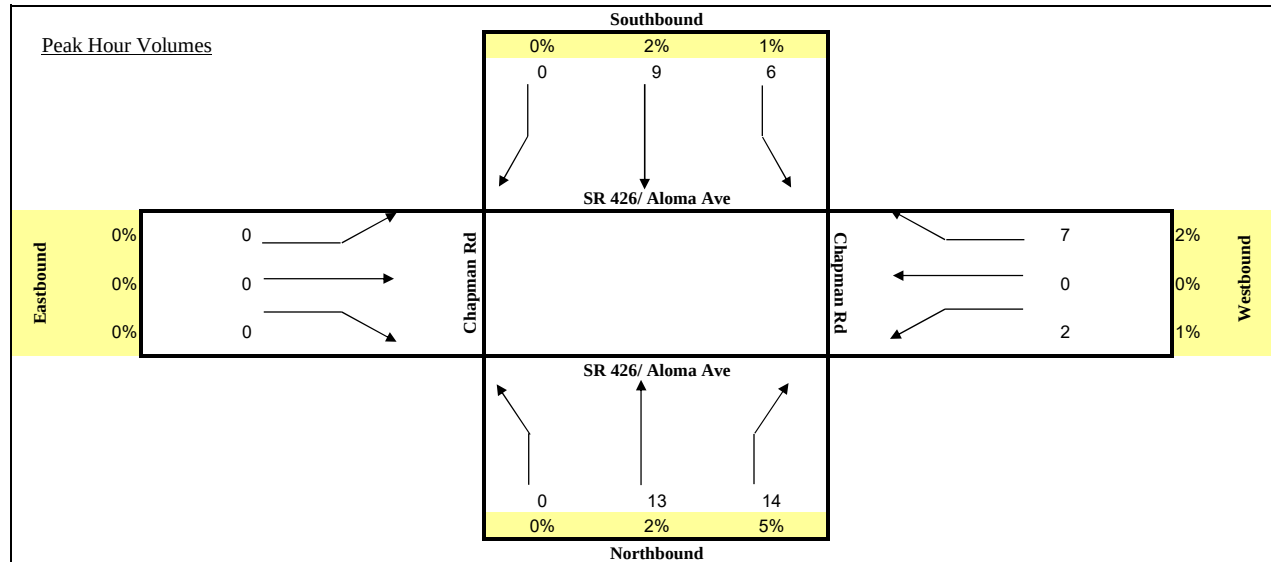
Intersection (N/S): SR 426/ Aloma Ave

Intersection (E/W): Chapman Rd

Date: 7/26/2022

		SR 426/ Aloma Ave			SR 426/ Aloma Ave			Chapman Rd			Chapman Rd			TOTAL
Start	End	NB			SB			EB			WB			
		R	T	L	R	T	L	R	T	L	R	T	L	
7:00 AM	7:15 AM	0	1	2	0	0	0	0	0	0	0	0	0	3
7:15 AM	7:30 AM	0	2	1	4	3	0	0	0	0	0	0	0	10
7:30 AM	7:45 AM	0	2	0	2	0	0	0	0	0	4	0	0	8
7:45 AM	8:00 AM	0	0	4	1	1	0	0	0	0	2	0	2	10
8:00 AM	8:15 AM	0	3	1	1	2	0	0	0	0	0	0	2	9
8:15 AM	8:30 AM	0	2	4	1	2	0	0	0	0	2	0	2	13
8:30 AM	8:45 AM	0	3	5	3	3	0	0	0	0	0	0	1	15
8:45 AM	9:00 AM	0	5	4	1	2	0	0	0	0	0	0	2	14

Total for:	7:00 AM	8:00 AM	0	5	7	7	4	0	0	0	0	6	0	2	31
Total for:	8:00 AM	9:00 AM	0	13	14	6	9	0	0	0	0	2	0	7	51
Tota Peak Hour:	8:00 AM	9:00 AM	0	13	14	6	9	0	0	0	0	2	0	7	51
Overall PHF:	0.85														



TURNING MOVEMENT COUNT ANALYSIS
AUTOS & TRUCKS

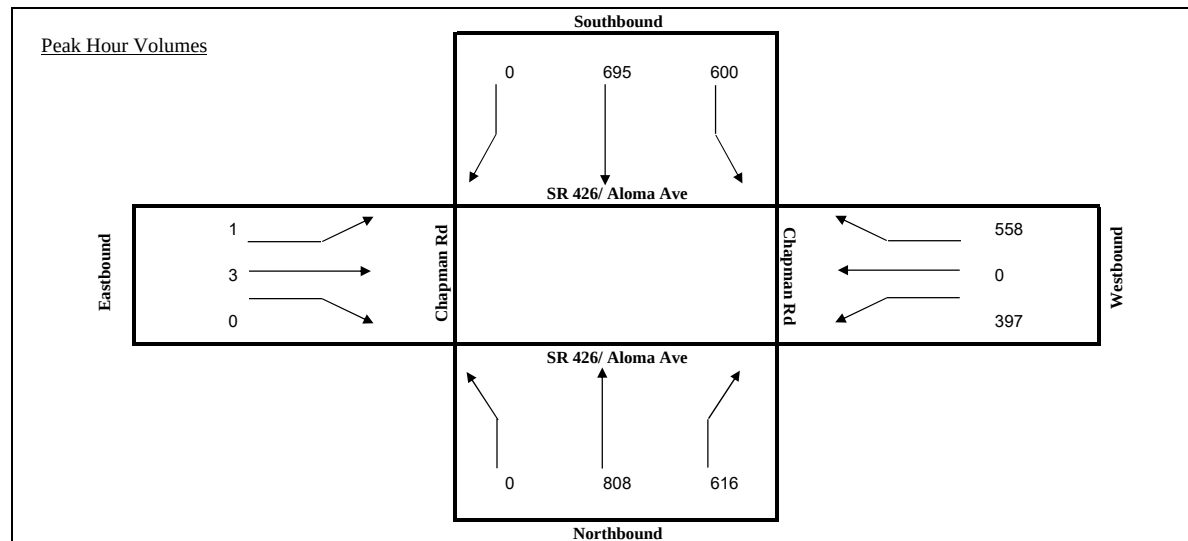
Intersection (N/S): SR 426/ Aloma Ave

Intersection (E/W): Chapman Rd

Date: 7/26/2022

SR 426/ Aloma Ave				SR 426/ Aloma Ave			Chapman Rd			Chapman Rd			TOTAL	
Start	End	NB			SB			EB			WB			
		L	T	R	L	T	R	L	T	R	L	T	R	
4:00 PM	4:15 PM	0	207	172	120	172	0	0	0	1	65	0	45	782
4:15 PM	4:30 PM	0	152	123	128	160	0	0	0	0	59	0	105	727
4:30 PM	4:45 PM	0	184	153	147	125	0	0	0	0	85	0	81	775
4:45 PM	5:00 PM	0	176	144	112	164	0	0	0	0	85	0	108	789
5:00 PM	5:15 PM	0	200	177	167	177	0	0	3	0	111	0	122	957
5:15 PM	5:30 PM	0	232	134	182	197	0	0	0	0	112	0	201	1058
5:30 PM	5:45 PM	0	200	161	139	157	0	1	0	0	89	0	127	874
5:45 PM	6:00 PM	0	135	137	155	149	0	0	0	1	74	0	114	765

Total for:	4:00 PM	5:00 PM	0	719	592	507	621	0	0	0	1	294	0	339	3073
Total for:	5:00 PM	6:00 PM	0	767	609	643	680	0	1	3	1	386	0	564	3654
Tota Peak Hour:	4:45 PM	5:45 PM	0	808	616	600	695	0	1	3	0	397	0	558	3678
Overall PHF:	0.87														



TURNING MOVEMENT COUNT ANALYSIS
TRUCKS

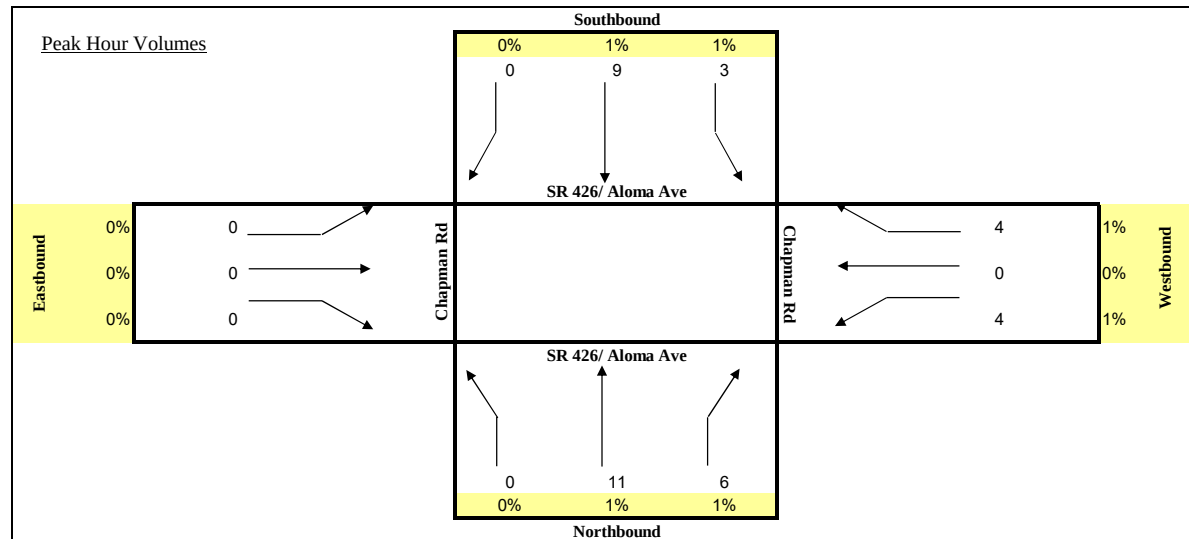
Intersection (N/S): SR 426/ Aloma Ave

Intersection (E/W): Chapman Rd

Date: 7/26/2022

SR 426/ Aloma Ave					SR 426/ Aloma Ave			Chapman Rd			Chapman Rd			TOTAL
Start	End	NB			SB			EB			WB			
		R	T	L	R	T	L	R	T	L	R	T	L	
4:00 PM	4:15 PM	0	4	1	1	4	0	0	0	0	0	0	2	12
4:15 PM	4:30 PM	0	1	0	1	3	0	0	0	0	4	0	1	10
4:30 PM	4:45 PM	0	5	1	1	2	0	0	0	0	0	0	0	9
4:45 PM	5:00 PM	0	1	4	0	0	0	0	0	0	0	0	1	6
5:00 PM	5:15 PM	0	0	2	0	0	0	0	3	0	1	0	2	8
5:15 PM	5:30 PM	0	0	1	0	0	0	0	0	0	2	0	3	6
5:30 PM	5:45 PM	0	1	0	0	1	0	0	0	0	1	0	0	3
5:45 PM	6:00 PM	0	0	1	0	0	0	0	0	0	2	0	1	4

Total for:	4:00 PM	5:00 PM	0	11	6	3	9	0	0	0	0	4	0	4	37
Total for:	5:00 PM	6:00 PM	0	1	4	0	1	0	0	3	0	6	0	6	21
Tota Peak Hour:	4:00 PM	5:00 PM	0	11	6	3	9	0	0	0	0	4	0	4	37
Overall PHF:	0.77														

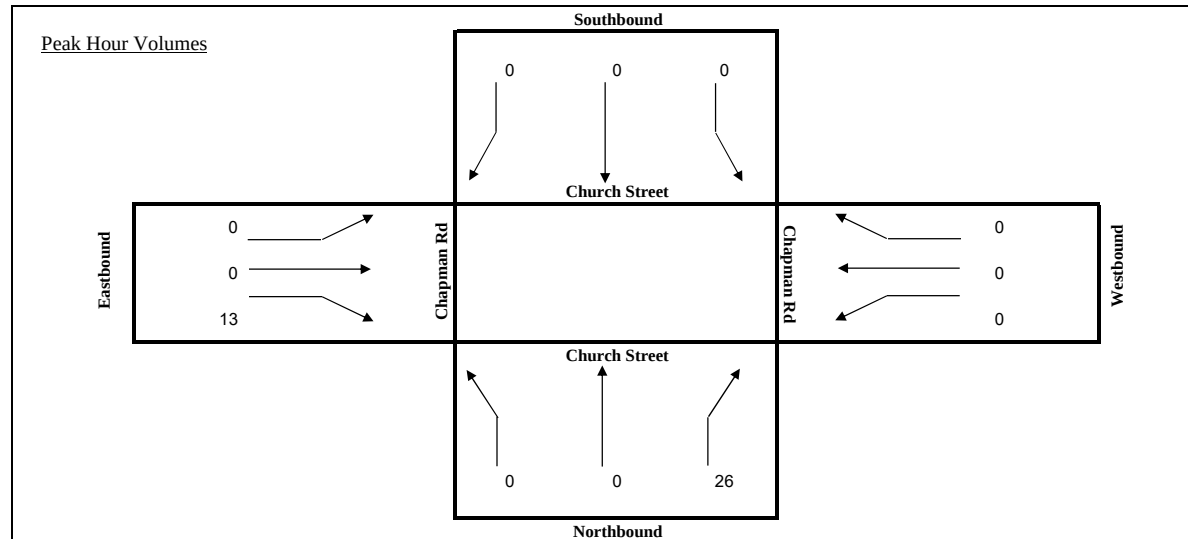


TURNING MOVEMENT COUNT ANALYSIS
AUTOS & TRUCKS

Intersection (N/S): Church Street
Intersection (E/W): Chapman Rd
Date: 7/26/2022

		Church Street			Church Street			Chapman Rd			Chapman Rd			
Start	End	NB			SB			EB			WB			TOTAL
		L	T	R	L	T	R	L	T	R	L	T	R	
7:00 AM	7:15 AM	0	0	3	0	0	0	0	0	0	0	0	0	3
7:15 AM	7:30 AM	0	0	2	0	0	0	0	0	0	0	0	0	2
7:30 AM	7:45 AM	0	0	1	0	0	0	0	0	1	0	0	0	2
7:45 AM	8:00 AM	0	0	6	0	0	0	0	0	2	0	0	0	8
8:00 AM	8:15 AM	0	0	9	0	0	0	0	0	8	0	0	0	17
8:15 AM	8:30 AM	0	0	4	0	0	0	0	0	0	0	0	0	4
8:30 AM	8:45 AM	0	0	7	0	0	0	0	0	3	0	0	0	10
8:45 AM	9:00 AM	0	0	5	0	0	0	0	0	1	0	0	0	6

Total for:	7:00 AM	8:00 AM	0	0	12	0	0	0	0	0	3	0	0	0	15
Total for:	8:00 AM	9:00 AM	0	0	25	0	0	0	0	0	12	0	0	0	37
Tota Peak Hour:	7:45 AM	8:45 AM	0	0	26	0	0	0	0	0	13	0	0	0	39
Overall PHF:	0.57														



TURNING MOVEMENT COUNT ANALYSIS

TRUCKS

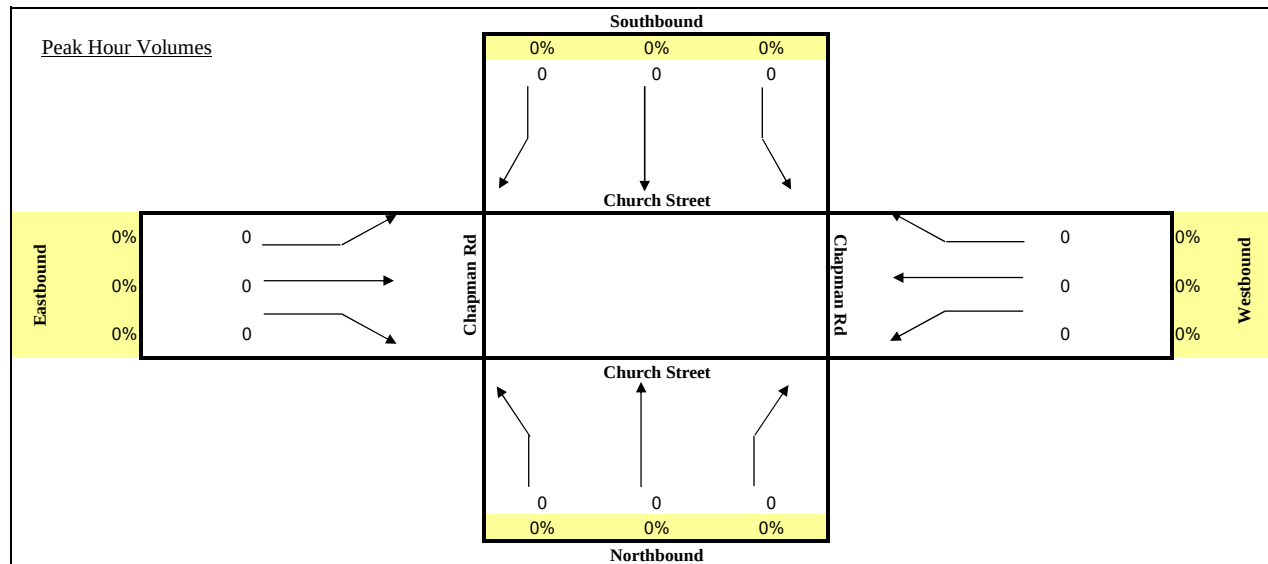
Intersection (N/S): Church Street

Intersection (E/W): Chapman Rd

Date: 7/26/2022

		Church Street			Church Street			Chapman Rd			Chapman Rd			TOTAL
Start	End	NB			SB			EB			WB			
		R	T	L	R	T	L	R	T	L	R	T	L	
7:00 AM	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0

Total for:	7:00 AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
Total for:	8:00 AM	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
Tota Peak Hour:	7:00 AM	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
Overall PHF:	#DIV/0!													

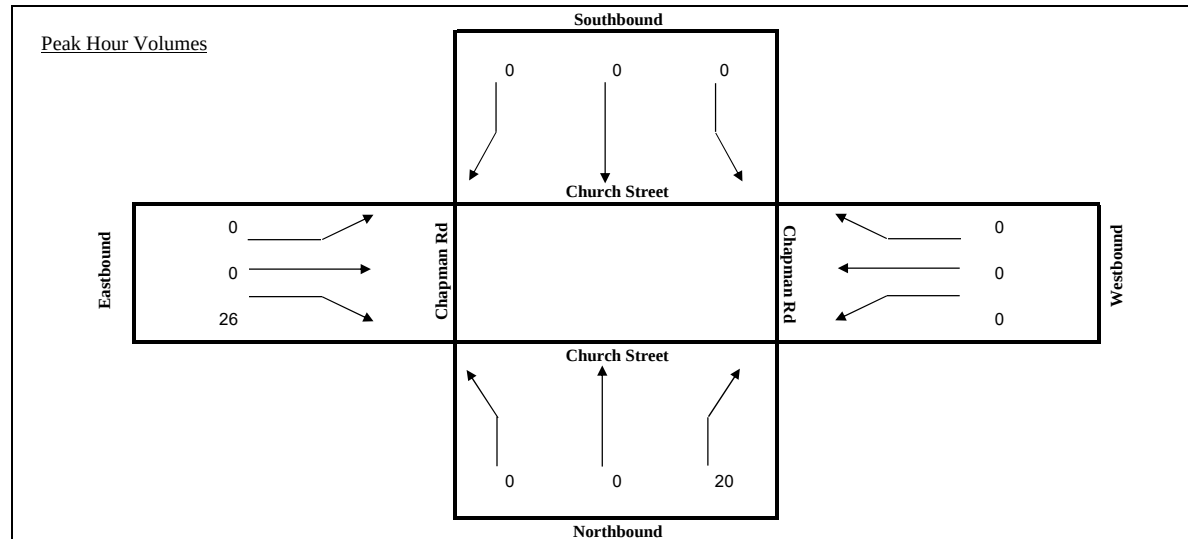


TURNING MOVEMENT COUNT ANALYSIS
AUTOS & TRUCKS

Intersection (N/S): Church Street
Intersection (E/W): Chapman Rd
Date: 7/26/2022

		Church Street			Church Street			Chapman Rd			Chapman Rd			
Start	End	NB			SB			EB			WB			TOTAL
		L	T	R	L	T	R	L	T	R	L	T	R	
4:00 PM	4:15 PM	0	0	4	0	0	0	0	0	3	0	0	0	7
4:15 PM	4:30 PM	0	0	6	0	0	0	0	0	4	0	0	0	10
4:30 PM	4:45 PM	0	0	3	0	0	0	0	0	3	0	0	0	6
4:45 PM	5:00 PM	0	0	5	0	0	0	0	0	7	0	0	0	12
5:00 PM	5:15 PM	0	0	8	0	0	0	0	0	8	0	0	0	16
5:15 PM	5:30 PM	0	0	2	0	0	0	0	0	5	0	0	0	7
5:30 PM	5:45 PM	0	0	5	0	0	0	0	0	6	0	0	0	11
5:45 PM	6:00 PM	0	0	8	0	0	0	0	0	4	0	0	0	12

Total for:	4:00 PM	5:00 PM	0	0	18	0	0	0	0	0	17	0	0	0	35
Total for:	5:00 PM	6:00 PM	0	0	23	0	0	0	0	0	23	0	0	0	46
Tota Peak Hour:	4:45 PM	5:45 PM	0	0	20	0	0	0	0	0	26	0	0	0	46
Overall PHF:	0.72														

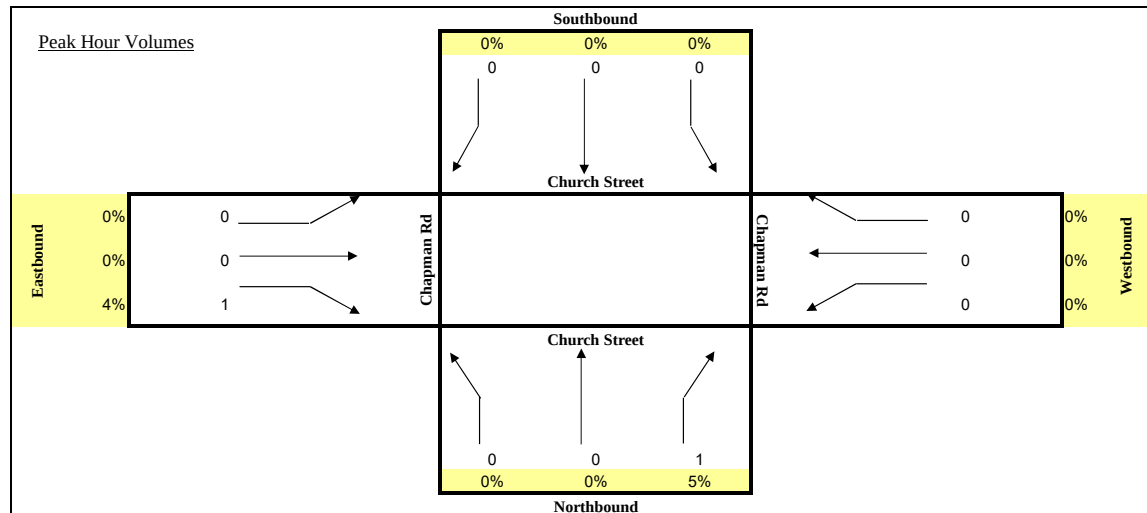


TURNING MOVEMENT COUNT ANALYSIS
TRUCKS

Intersection (N/S): Church Street
Intersection (E/W): Chapman Rd
Date: 7/26/2022

		Church Street			Church Street			Chapman Rd			Chapman Rd			TOTAL
Start	End	NB			SB			EB			WB			
		R	T	L	R	T	L	R	T	L	R	T	L	
4:00 PM	4:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
4:15 PM	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	5:15 PM	0	0	1	0	0	0	0	0	1	0	0	0	2
5:15 PM	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0

Total for:	4:00 PM	5:00 PM	0	0	1	0	0	0	0	0	0	0	0	1
Total for:	5:00 PM	6:00 PM	0	0	1	0	0	0	0	1	0	0	0	2
Total Peak Hour:	4:15 PM	5:15 PM	0	0	1	0	0	0	1	1	0	0	0	2
Overall PHF:	0.25													



TURNING MOVEMENT COUNT ANALYSIS
AUTOS & TRUCKS

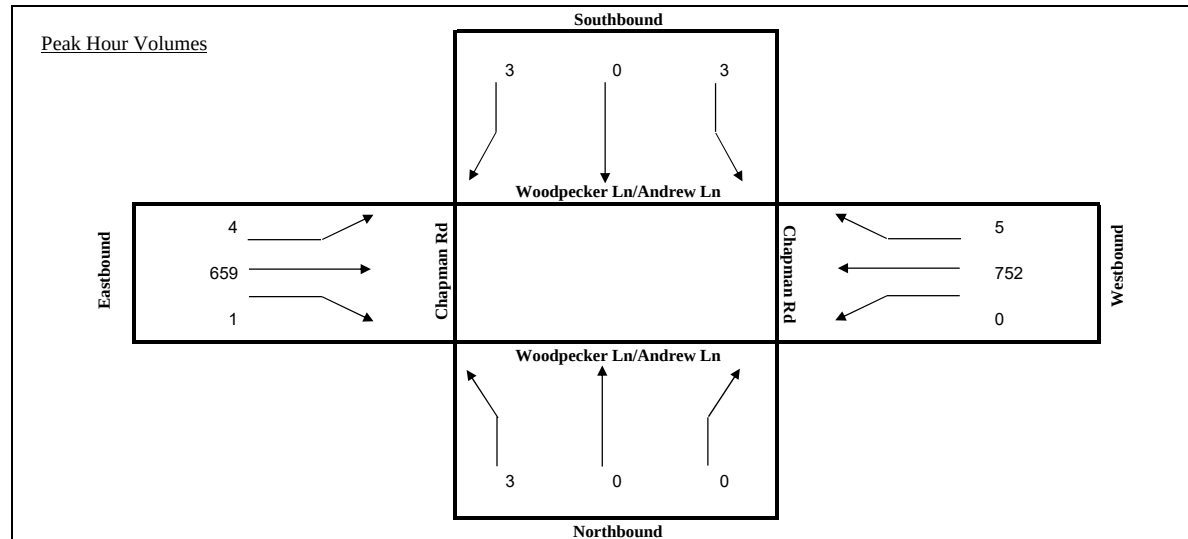
Intersection (N/S): Woodpecker Ln/Andrew Ln

Intersection (E/W): Chapman Rd

Date: 7/26/2022

		Woodpecker Ln/Andrew Ln			Woodpecker Ln/Andrew Ln			Chapman Rd			Chapman Rd			
Start	End	NB			SB			EB			WB			TOTAL
		L	T	R	L	T	R	L	T	R	L	T	R	
7:00 AM	7:15 AM	1	1	0	0	2	0	0	76	1	0	125	2	208
7:15 AM	7:30 AM	0	0	0	3	1	0	1	102	0	0	138	1	246
7:30 AM	7:45 AM	1	0	0	1	0	0	1	130	0	1	214	2	350
7:45 AM	8:00 AM	0	0	0	0	0	2	2	165	0	0	219	0	388
8:00 AM	8:15 AM	0	0	0	1	0	0	1	153	0	0	173	3	331
8:15 AM	8:30 AM	0	0	0	0	0	1	1	159	1	0	179	1	342
8:30 AM	8:45 AM	3	0	0	2	0	0	0	182	0	0	181	1	369
8:45 AM	9:00 AM	0	0	0	1	0	1	1	174	0	0	195	2	374

Total for:	7:00 AM	8:00 AM	2	1	0	4	3	2	4	473	1	1	696	5	1192
Total for:	8:00 AM	9:00 AM	3	0	0	4	0	2	3	668	1	0	728	7	1416
Tota Peak Hour:	7:45 AM	8:45 AM	3	0	0	3	0	3	4	659	1	0	752	5	1430
Overall PHF:	0.92														



TURNING MOVEMENT COUNT ANALYSIS

TRUCKS

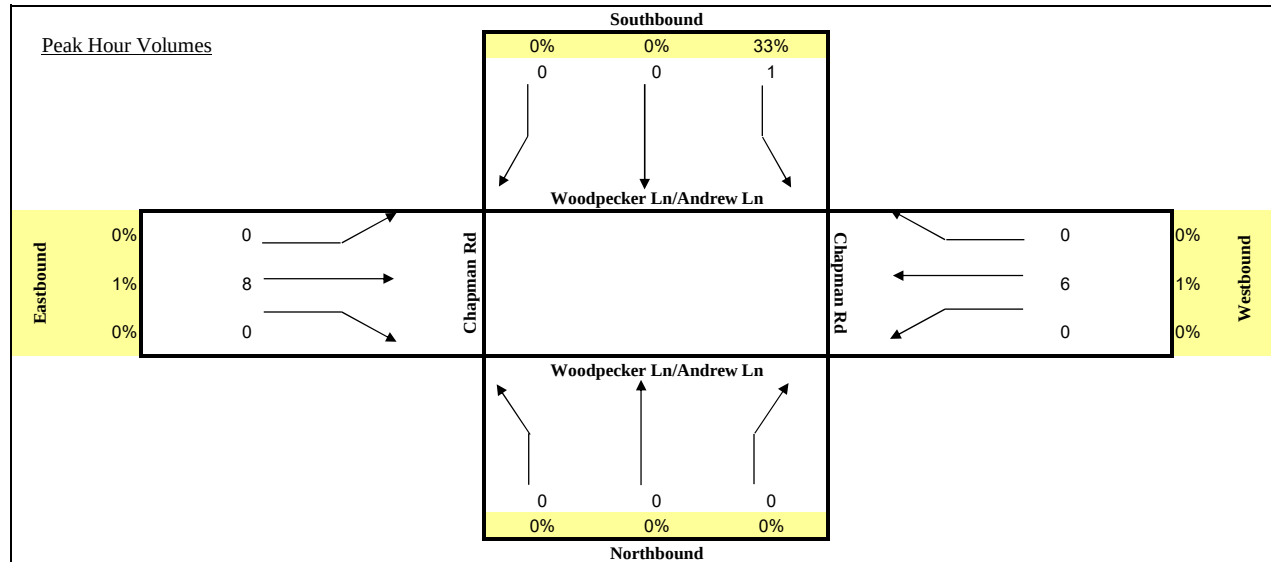
Intersection (N/S): Woodpecker Ln/Andrew Ln

Intersection (E/W): Chapman Rd

Date: 7/26/2022

		Woodpecker Ln/Andrew Ln			Woodpecker Ln/Andrew Ln			Chapman Rd			Chapman Rd			TOTAL
Start	End	NB			SB			EB			WB			
		R	T	L	R	T	L	R	T	L	R	T	L	
7:00 AM	7:15 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
7:15 AM	7:30 AM	0	0	0	1	0	0	0	4	0	0	1	0	6
7:30 AM	7:45 AM	0	0	0	0	0	0	0	1	0	0	3	0	4
7:45 AM	8:00 AM	0	0	0	0	0	0	0	1	0	0	2	0	3
8:00 AM	8:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:15 AM	8:30 AM	0	0	0	0	0	0	0	3	0	0	0	0	3
8:30 AM	8:45 AM	0	0	0	0	0	0	0	4	0	0	0	0	4
8:45 AM	9:00 AM	0	0	0	0	0	0	0	1	0	0	1	0	2

Total for:	7:00 AM	8:00 AM	0	0	0	1	0	0	0	8	0	0	6	0	15
Total for:	8:00 AM	9:00 AM	0	0	0	0	0	0	0	8	0	0	2	0	10
Tota Peak Hour:	7:00 AM	8:00 AM	0	0	0	1	0	0	0	8	0	0	6	0	15
Overall PHF:	0.63														



TURNING MOVEMENT COUNT ANALYSIS
AUTOS & TRUCKS

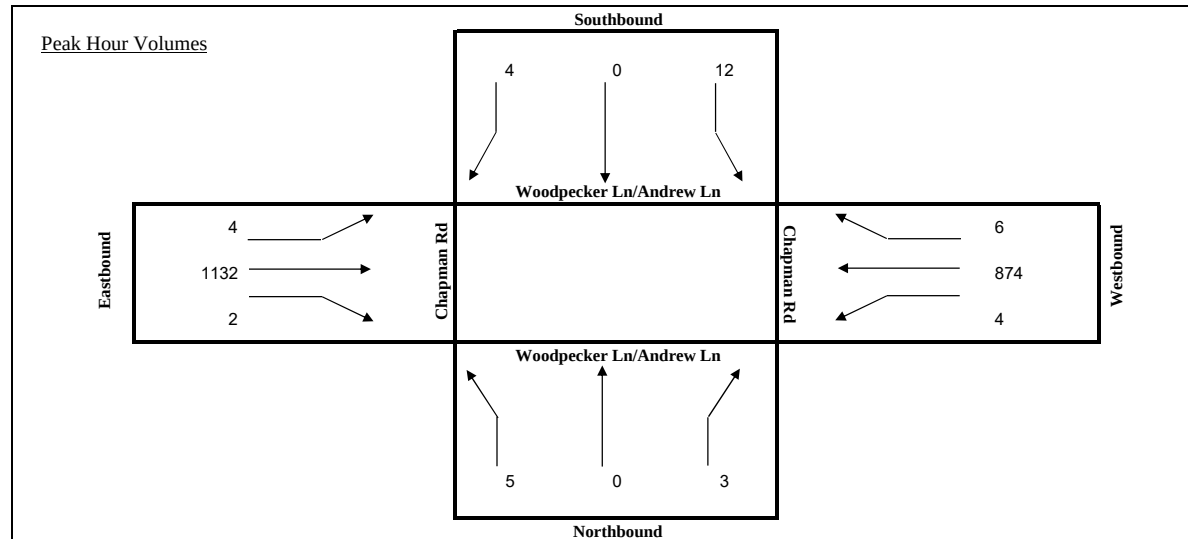
Intersection (N/S): Woodpecker Ln/Andrew Ln

Intersection (E/W): Chapman Rd

Date: 7/26/2022

Woodpecker Ln/Andrew Ln				Woodpecker Ln/Andrew Ln				Chapman Rd				Chapman Rd				TOTAL
Start	End	NB			SB			EB			WB					
		L	T	R	L	T	R	L	T	R	L	T	R			
4:00 PM	4:15 PM	0	0	0	1	0	1	1	174	0	0	107	2	286		
4:15 PM	4:30 PM	0	0	1	1	0	0	2	255	0	0	156	0	415		
4:30 PM	4:45 PM	1	0	1	1	0	1	1	250	0	0	169	0	424		
4:45 PM	5:00 PM	0	0	0	1	0	0	0	272	0	1	175	1	450		
5:00 PM	5:15 PM	3	0	0	3	0	4	3	273	0	0	186	2	474		
5:15 PM	5:30 PM	0	0	2	5	0	0	0	301	0	0	225	1	534		
5:30 PM	5:45 PM	0	0	0	3	0	0	1	268	2	2	245	2	523		
5:45 PM	6:00 PM	2	0	1	1	0	0	0	290	0	2	218	1	515		

Total for:	4:00 PM	5:00 PM	1	0	2	4	0	2	4	951	0	1	607	3	1575
Total for:	5:00 PM	6:00 PM	5	0	3	12	0	4	4	1132	2	4	874	6	2046
Tota Peak Hour:	5:00 PM	6:00 PM	5	0	3	12	0	4	4	1132	2	4	874	6	2046
Overall PHF:	0.96														



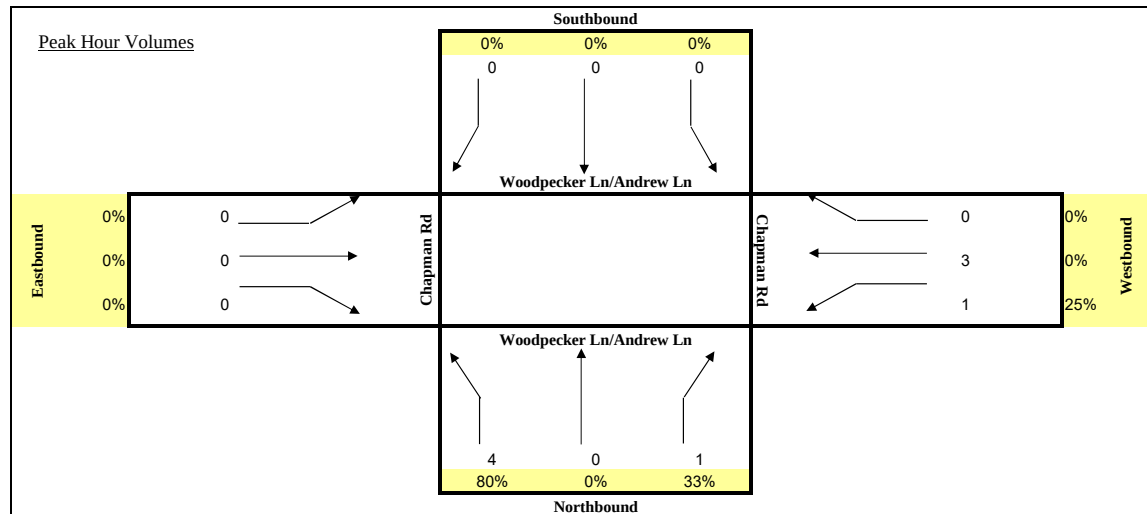
TURNING MOVEMENT COUNT ANALYSIS

TRUCKS

Intersection (N/S): Woodpecker Ln/Andrew Ln
 Intersection (E/W): Chapman Rd
 Date: 7/26/2022

Woodpecker Ln/Andrew Ln				Woodpecker Ln/Andrew Ln			Chapman Rd			Chapman Rd			TOTAL	
Start	End	NB			SB			EB			WB			
		R	T	L	R	T	L	R	T	L	R	T		L
4:00 PM	4:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
4:15 PM	4:30 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
4:30 PM	4:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
4:45 PM	5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:00 PM	5:15 PM	3	0	0	0	0	0	0	0	0	0	0	0	3
5:15 PM	5:30 PM	0	0	1	0	0	0	0	0	0	0	1	0	2
5:30 PM	5:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
5:45 PM	6:00 PM	1	0	0	0	0	0	0	0	0	1	0	0	2

Total for:	4:00 PM	5:00 PM	0	0	0	0	0	1	0	3	0	0	2	0	6
Total for:	5:00 PM	6:00 PM	4	0	1	0	0	0	0	0	0	1	3	0	9
Tota Peak Hour:	5:00 PM	6:00 PM	4	0	1	0	0	0	0	0	0	1	3	0	9
Overall PHF:	0.75														



2021 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 7500 ORANGE COUNTYWIDE

WEEK	DATES	SF	MOCF: 0.99 PSCF
1	01/01/2021 - 01/02/2021	0.99	1.00
2	01/03/2021 - 01/09/2021	1.04	1.05
3	01/10/2021 - 01/16/2021	1.09	1.10
4	01/17/2021 - 01/23/2021	1.08	1.09
5	01/24/2021 - 01/30/2021	1.07	1.08
6	01/31/2021 - 02/06/2021	1.06	1.07
7	02/07/2021 - 02/13/2021	1.05	1.06
8	02/14/2021 - 02/20/2021	1.04	1.05
9	02/21/2021 - 02/27/2021	1.03	1.04
10	02/28/2021 - 03/06/2021	1.02	1.03
11	03/07/2021 - 03/13/2021	1.01	1.02
12	03/14/2021 - 03/20/2021	1.00	1.01
13	03/21/2021 - 03/27/2021	1.00	1.01
14	03/28/2021 - 04/03/2021	1.00	1.01
15	04/04/2021 - 04/10/2021	1.00	1.01
16	04/11/2021 - 04/17/2021	1.00	1.01
17	04/18/2021 - 04/24/2021	0.99	1.00
18	04/25/2021 - 05/01/2021	0.99	1.00
19	05/02/2021 - 05/08/2021	0.98	0.99
20	05/09/2021 - 05/15/2021	0.98	0.99
21	05/16/2021 - 05/22/2021	0.98	0.99
22	05/23/2021 - 05/29/2021	0.99	1.00
23	05/30/2021 - 06/05/2021	0.99	1.00
24	06/06/2021 - 06/12/2021	0.99	1.00
25	06/13/2021 - 06/19/2021	1.00	1.01
26	06/20/2021 - 06/26/2021	1.00	1.01
27	06/27/2021 - 07/03/2021	1.00	1.01
28	07/04/2021 - 07/10/2021	1.00	1.01
29	07/11/2021 - 07/17/2021	1.00	1.01
30	07/18/2021 - 07/24/2021	1.00	1.01
31	07/25/2021 - 07/31/2021	1.00	1.01
32	08/01/2021 - 08/07/2021	1.00	1.01
33	08/08/2021 - 08/14/2021	0.99	1.00
34	08/15/2021 - 08/21/2021	0.99	1.00
35	08/22/2021 - 08/28/2021	0.99	1.00
36	08/29/2021 - 09/04/2021	0.99	1.00
37	09/05/2021 - 09/11/2021	0.99	1.00
38	09/12/2021 - 09/18/2021	0.99	1.00
*39	09/19/2021 - 09/25/2021	0.99	1.00
*40	09/26/2021 - 10/02/2021	0.98	0.99
*41	10/03/2021 - 10/09/2021	0.98	0.99
*42	10/10/2021 - 10/16/2021	0.97	0.98
*43	10/17/2021 - 10/23/2021	0.98	0.99
*44	10/24/2021 - 10/30/2021	0.98	0.99
*45	10/31/2021 - 11/06/2021	0.99	1.00
*46	11/07/2021 - 11/13/2021	0.99	1.00
*47	11/14/2021 - 11/20/2021	0.99	1.00
*48	11/21/2021 - 11/27/2021	0.99	1.00
*49	11/28/2021 - 12/04/2021	0.99	1.00
*50	12/05/2021 - 12/11/2021	0.99	1.00
*51	12/12/2021 - 12/18/2021	0.99	1.00
52	12/19/2021 - 12/25/2021	1.04	1.05
53	12/26/2021 - 12/31/2021	1.09	1.10

* PEAK SEASON

08-MAR-2022 12:36:27

830UPD

5_7500_PKSEASON.TXT

Appendix E
Existing Conditions Analysis Worksheets & Signal Timings

HCM 6th Signalized Intersection Summary 1: SR 429 SB Ramps & Ocoee-Apopka Rd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	0	47	0	0	0	0	422	26	261	342	0
Future Volume (veh/h)	20	0	47	0	0	0	0	422	26	261	342	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	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
Work Zone On Approach	No						No			No		
Adj Sat Flow, veh/h/ln	1604	0	1870				0	1870	1781	1856	1870	0
Adj Flow Rate, veh/h	22	0	25				0	459	0	284	372	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	20	0	2				0	2	8	3	2	0
Cap, veh/h	124	0	129				0	1014		675	1405	0
Arrive On Green	0.08	0.00	0.08				0.00	0.54	0.00	0.12	0.75	0.00
Sat Flow, veh/h	1527	0	1585				0	1870	1510	1767	1870	0
Grp Volume(v), veh/h	22	0	25				0	459	0	284	372	0
Grp Sat Flow(s),veh/h/ln	1527	0	1585				0	1870	1510	1767	1870	0
Q Serve(g_s), s	1.1	0.0	1.2				0.0	11.9	0.0	4.7	4.9	0.0
Cycle Q Clear(g_c), s	1.1	0.0	1.2				0.0	11.9	0.0	4.7	4.9	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	124	0	129				0	1014		675	1405	0
V/C Ratio(X)	0.18	0.00	0.19				0.00	0.45		0.42	0.26	0.00
Avail Cap(c_a), veh/h	254	0	264				0	1014		748	1405	0
HCM Platoon Ratio	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				0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	34.2	0.0	34.3				0.0	11.1	0.0	6.2	3.1	0.0
Incr Delay (d2), s/veh	0.7	0.0	0.7				0.0	1.5	0.0	0.4	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	0.0	2.0				0.0	7.9	0.0	2.1	1.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.9	0.0	35.0				0.0	12.5	0.0	6.7	3.5	0.0
LnGrp LOS	C	A	C				A	B		A	A	A
Approach Vol, veh/h	47						459			656		
Approach Delay, s/veh	34.9						12.5			4.9		
Approach LOS	C						B			A		
Timer - Assigned Phs	2			4			5			6		
Phs Duration (G+Y+Rc), s	66.7			13.2			16.7			50.0		
Change Period (Y+Rc), s	6.7			6.7			6.7			6.7		
Max Green Setting (Gmax), s	43.3			13.3			13.3			43.3		
Max Q Clear Time (g_c+I1), s	6.9			3.2			6.7			13.9		
Green Ext Time (p_c), s	2.1			0.0			0.4			2.7		
Intersection Summary												
HCM 6th Ctrl Delay	9.1											
HCM 6th LOS	A											
Notes												

HCM 6th Signalized Intersection Summary

2: Ocoee-Apopka Rd & SR 429 NB Ramps



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰		↰	↰	↱			↱	↰
Traffic Volume (veh/h)	0	0	0	26	0	293	72	370	0	0	577	41
Future Volume (veh/h)	0	0	0	26	0	293	72	370	0	0	577	41
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				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
Work Zone On Approach				No		No	No		No		No	
Adj Sat Flow, veh/h/ln				1841	0	1796	1811	1870	0	0	1856	1870
Adj Flow Rate, veh/h				28	0	158	77	398	0	0	620	0
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %				4	0	7	6	2	0	0	3	2
Cap, veh/h				154	0	133	555	1477	0	0	1181	
Arrive On Green				0.09	0.00	0.09	0.08	0.79	0.00	0.00	0.64	0.00
Sat Flow, veh/h				1753	0	1522	1725	1870	0	0	1856	1585
Grp Volume(v), veh/h				28	0	158	77	398	0	0	620	0
Grp Sat Flow(s),veh/h/ln				1753	0	1522	1725	1870	0	0	1856	1585
Q Serve(g_s), s				1.7	0.0	10.0	1.4	6.5	0.0	0.0	20.8	0.0
Cycle Q Clear(g_c), s				1.7	0.0	10.0	1.4	6.5	0.0	0.0	20.8	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				154	0	133	555	1477	0	0	1181	
V/C Ratio(X)				0.18	0.00	1.18	0.14	0.27	0.00	0.00	0.52	
Avail Cap(c_a), veh/h				154	0	133	568	1477	0	0	1181	
HCM Platoon Ratio				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	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				48.2	0.0	52.0	6.7	3.2	0.0	0.0	11.3	0.0
Incr Delay (d2), s/veh				0.6	0.0	135.6	0.1	0.4	0.0	0.0	1.7	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				1.4	0.0	14.5	0.7	3.2	0.0	0.0	12.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				48.8	0.0	187.6	6.9	3.7	0.0	0.0	13.0	0.0
LnGrp LOS				D	A	F	A	A	A	A	B	
Approach Vol, veh/h					186			475			620	A
Approach Delay, s/veh					166.7			4.2			13.0	
Approach LOS					F			A			B	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	7.4	80.0		16.6		97.4						
Change Period (Y+Rc), s	8.3	7.4		6.6		7.4						
Max Green Setting (Gmax), s	72.6			10.0		72.6						
Max Q Clear Time (g_c+I), s	22.8			12.0		8.5						
Green Ext Time (p_c), s	0.1	4.2		0.0		2.4						

Intersection Summary

HCM 6th Ctrl Delay	32.0
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th TWSC 3: Ocoee-Apopka Rd & Keene Rd

Intersection						
Int Delay, s/veh	9.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	133	40	514	147	27	518
Future Vol, veh/h	133	40	514	147	27	518
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	94	94	94	94	94	94
Heavy Vehicles, %	2	5	4	3	4	3
Mvmt Flow	141	43	547	156	29	551
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1234	625	0	0	703	0
Stage 1	625	-	-	-	-	-
Stage 2	609	-	-	-	-	-
Critical Hdwy	6.42	6.25	-	-	4.14	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.345	-	-	2.236	-
Pot Cap-1 Maneuver	195	479	-	-	885	-
Stage 1	534	-	-	-	-	-
Stage 2	543	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	186	479	-	-	885	-
Mov Cap-2 Maneuver	186	-	-	-	-	-
Stage 1	534	-	-	-	-	-
Stage 2	517	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	74	0		0.5		
HCM LOS	F					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-	217	885	-	
HCM Lane V/C Ratio	-	-	0.848	0.032	-	
HCM Control Delay (s)	-	-	74	9.2	0	
HCM Lane LOS	-	-	F	A	A	
HCM 95th %tile Q(veh)	-	-	6.5	0.1	-	

HCM 6th TWSC

4: Ocoee-Apopka Rd & Harmon Rd

Intersection

Int Delay, s/veh 2.4

Movement

	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	48	67	65	450	462	23
Future Vol, veh/h	48	67	65	450	462	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	200	0	235	-	-	-
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	52	73	71	489	502	25

Major/Minor

	Minor2	Major1	Major2			
Conflicting Flow All	1146	264	527	0	-	0
Stage 1	515	-	-	-	-	-
Stage 2	631	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	206	735	1038	-	-	-
Stage 1	565	-	-	-	-	-
Stage 2	529	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	192	735	1038	-	-	-
Mov Cap-2 Maneuver	192	-	-	-	-	-
Stage 1	527	-	-	-	-	-
Stage 2	529	-	-	-	-	-

Approach

	EB	NB	SB
HCM Control Delay, s	18.8	1.1	0
HCM LOS	C		

Minor Lane/Major Mvmt

	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1038	-	192	735	-	-
HCM Lane V/C Ratio	0.068	-	0.272	0.099	-	-
HCM Control Delay (s)	8.7	-	30.6	10.4	-	-
HCM Lane LOS	A	-	D	B	-	-
HCM 95th %tile Q(veh)	0.2	-	1.1	0.3	-	-

HCM 6th TWSC
5: Marden Rd & Keene Rd

Intersection												
Int Delay, s/veh	2.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	25	158	1	2	130	48	2	1	2	48	2	39
Future Vol, veh/h	25	158	1	2	130	48	2	1	2	48	2	39
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	27	172	1	2	141	52	2	1	2	52	2	42
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	193	0	0	173	0	0	420	424	173	399	398	167
Stage 1	-	-	-	-	-	-	227	227	-	171	171	-
Stage 2	-	-	-	-	-	-	193	197	-	228	227	-
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	1380	-	-	1404	-	-	544	522	871	561	540	877
Stage 1	-	-	-	-	-	-	776	716	-	831	757	-
Stage 2	-	-	-	-	-	-	809	738	-	775	716	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1380	-	-	1404	-	-	506	509	871	549	527	877
Mov Cap-2 Maneuver	-	-	-	-	-	-	506	509	-	549	527	-
Stage 1	-	-	-	-	-	-	759	700	-	813	755	-
Stage 2	-	-	-	-	-	-	766	737	-	755	700	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1			0.1			11			11.4		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	609	1380	-	-	1404	-	-	656				
HCM Lane V/C Ratio	0.009	0.02	-	-	0.002	-	-	0.147				
HCM Control Delay (s)	11	7.7	0	-	7.6	0	-	11.4				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.5				

HCM 6th TWSC
6: Ocoee-Apopka Rd & CR 437/Binion Rd

Intersection

Int Delay, s/veh 4.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	194	181	413	371	17
Future Vol, veh/h	23	194	181	413	371	17
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	-	-	-	-	370
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	25	211	197	449	403	18

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	1246	403	421
Stage 1	403	-	-
Stage 2	843	-	-
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	192	647	1138
Stage 1	675	-	-
Stage 2	422	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	148	647	1138
Mov Cap-2 Maneuver	148	-	-
Stage 1	519	-	-
Stage 2	422	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.7	2.7	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1138	-	477	-	-
HCM Lane V/C Ratio	0.173	-	0.494	-	-
HCM Control Delay (s)	8.8	0	19.7	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.6	-	2.7	-	-

HCM 6th Signalized Intersection Summary

7: Clarcona Rd & Keene Rd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	190	86	265	176	85	109	393	225	103	339	24
Future Volume (veh/h)	36	190	86	265	176	85	109	393	225	103	339	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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	39	207	75	288	191	92	118	427	123	112	368	21
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	318	234	85	306	499	423	396	743	630	350	687	39
Arrive On Green	0.03	0.18	0.18	0.12	0.27	0.27	0.06	0.40	0.40	0.05	0.39	0.39
Sat Flow, veh/h	1781	1310	475	1781	1870	1585	1781	1870	1585	1781	1752	100
Grp Volume(v), veh/h	39	0	282	288	191	92	118	427	123	112	0	389
Grp Sat Flow(s),veh/h/ln	1781	0	1785	1781	1870	1585	1781	1870	1585	1781	0	1852
Q Serve(g_s), s	1.9	0.0	17.0	13.2	9.2	5.0	4.3	19.6	5.6	4.1	0.0	17.8
Cycle Q Clear(g_c), s	1.9	0.0	17.0	13.2	9.2	5.0	4.3	19.6	5.6	4.1	0.0	17.8
Prop In Lane	1.00		0.27	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	318	0	319	306	499	423	396	743	630	350	0	726
V/C Ratio(X)	0.12	0.00	0.88	0.94	0.38	0.22	0.30	0.57	0.20	0.32	0.00	0.54
Avail Cap(c_a), veh/h	475	0	405	306	499	423	503	743	630	466	0	726
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.1	0.0	44.1	34.0	33.0	31.4	19.5	25.9	21.7	19.9	0.0	25.8
Incr Delay (d2), s/veh	0.2	0.0	17.0	36.2	0.5	0.3	0.4	3.2	0.7	0.5	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	1.5	0.0	13.6	14.0	7.3	3.4	3.1	13.8	3.8	3.0	0.0	12.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.3	0.0	61.1	70.2	33.4	31.7	20.0	29.2	22.4	20.4	0.0	28.6
LnGrp LOS	D	A	E	E	C	C	B	C	C	C	A	C
Approach Vol, veh/h	321			571			668			501		
Approach Delay, s/veh	57.9			51.7			26.3			26.8		
Approach LOS	E			D			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.4	50.3	10.3	36.2	12.8	50.8	20.0	26.5				
Change Period (Y+Rc), s	7.1	* 7.1	6.8	* 6.8	6.8	7.1	6.8	6.8				
Max Green Setting (Gmax), s	12.9	* 43	13.2	* 18	13.2	42.9	13.2	25.0				
Max Q Clear Time (g_c+I1), s	6.3	19.8	3.9	11.2	6.1	21.6	15.2	19.0				
Green Ext Time (p_c), s	0.1	2.1	0.0	0.7	0.1	2.7	0.0	0.7				
Intersection Summary												
HCM 6th Ctrl Delay	38.4											
HCM 6th LOS	D											
Notes												

Appendix F
Trip Generation Sheets

Senior Adult Housing - Multifamily (252)

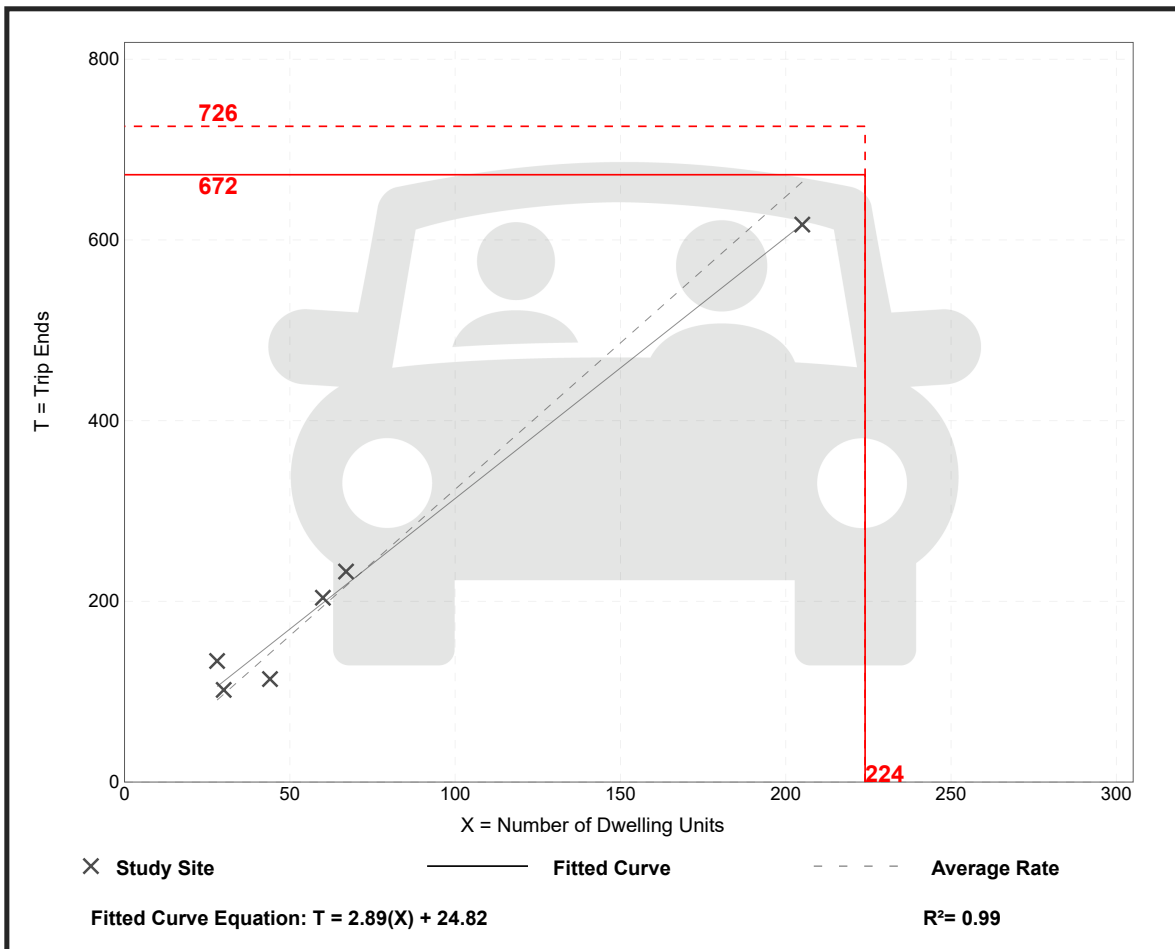
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 6
Avg. Num. of Dwelling Units: 72
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
3.24	2.59 - 4.79	0.53

Data Plot and Equation



Senior Adult Housing - Multifamily (252)

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: 9

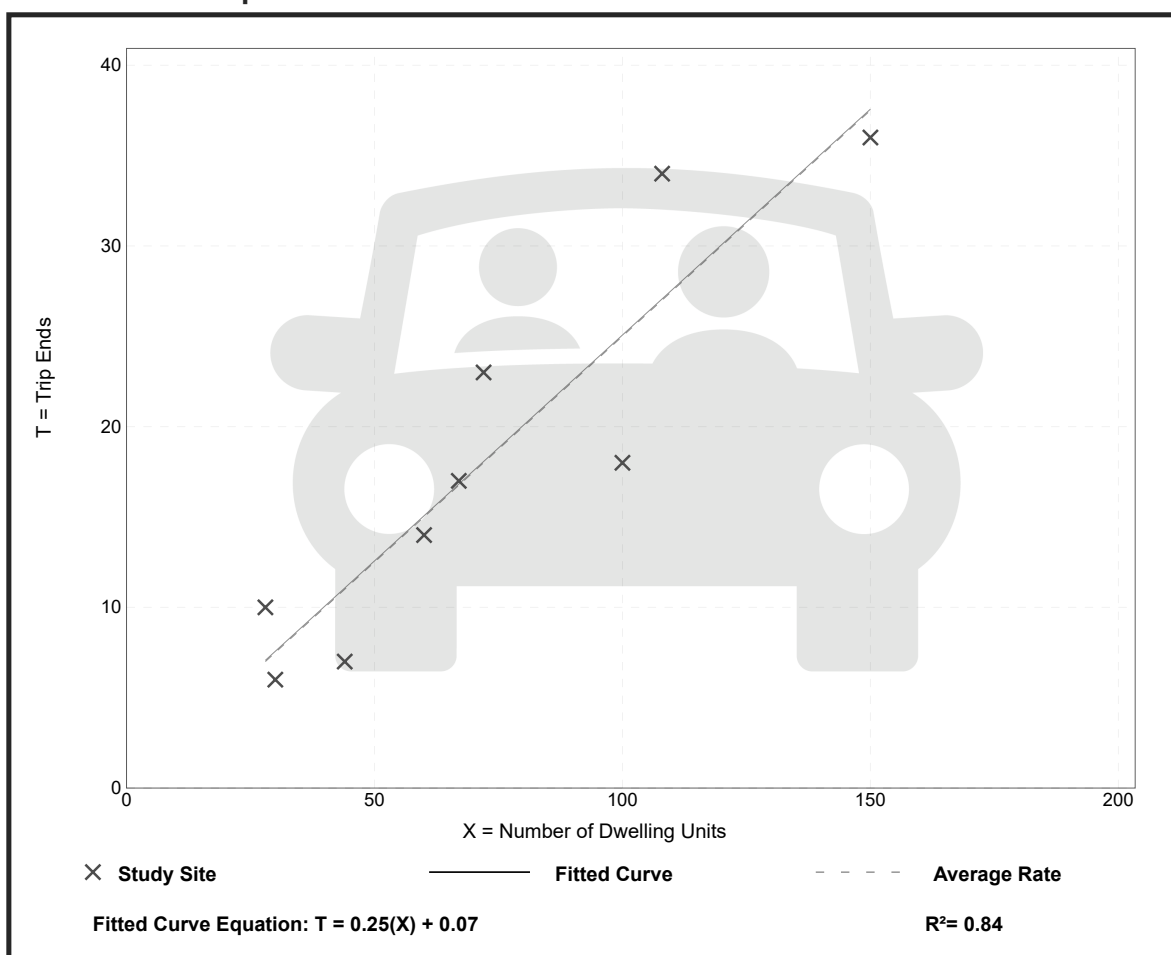
Avg. Num. of Dwelling Units: 73

Directional Distribution: 56% entering, 44% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.25	0.16 - 0.36	0.06

Data Plot and Equation



Medical-Dental Office Building - Stand-Alone (720)

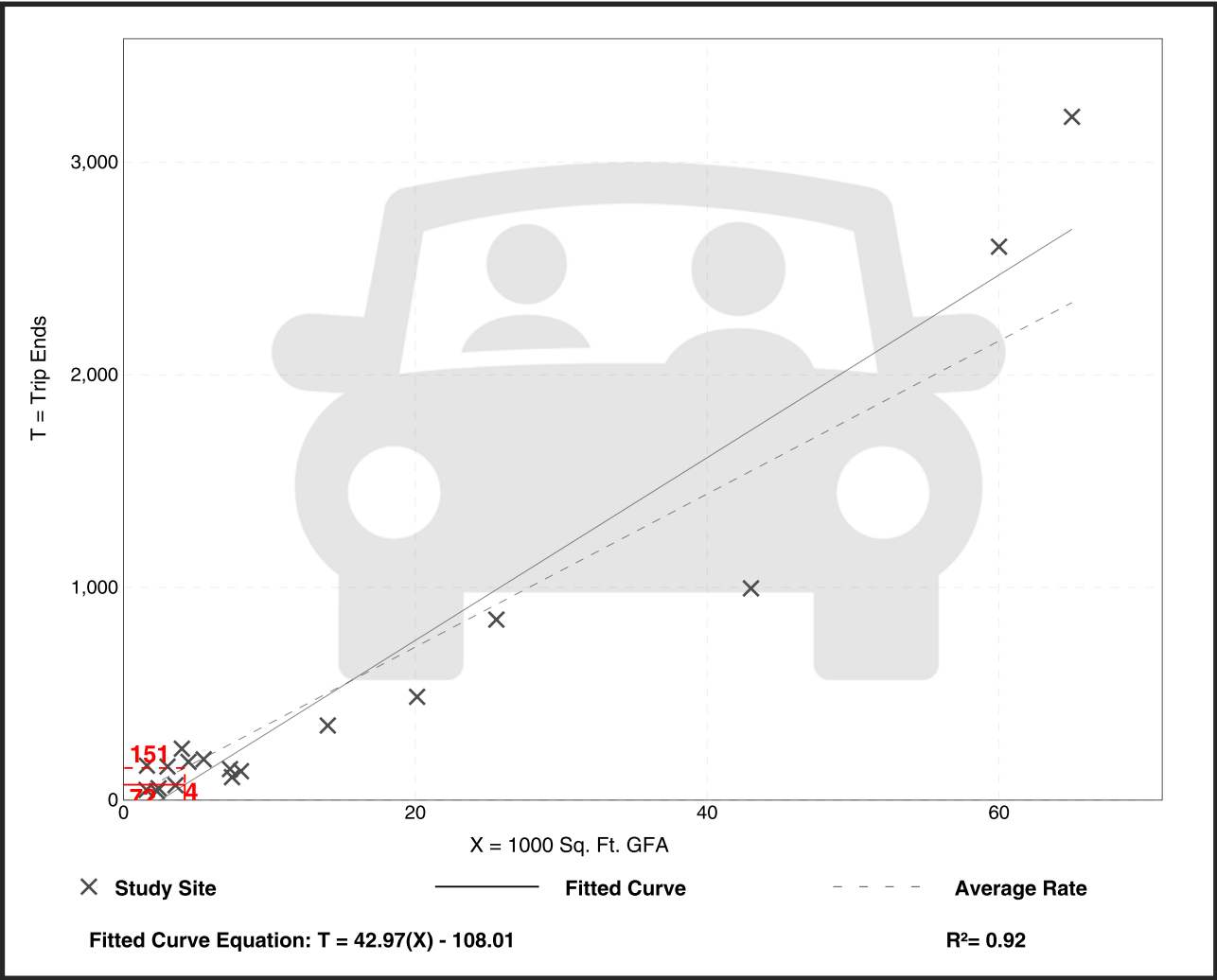
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 18
Avg. 1000 Sq. Ft. GFA: 15
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
36.00	14.52 - 100.75	13.38

Data Plot and Equation



Medical-Dental Office Building - Stand-Alone (720)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

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: 30

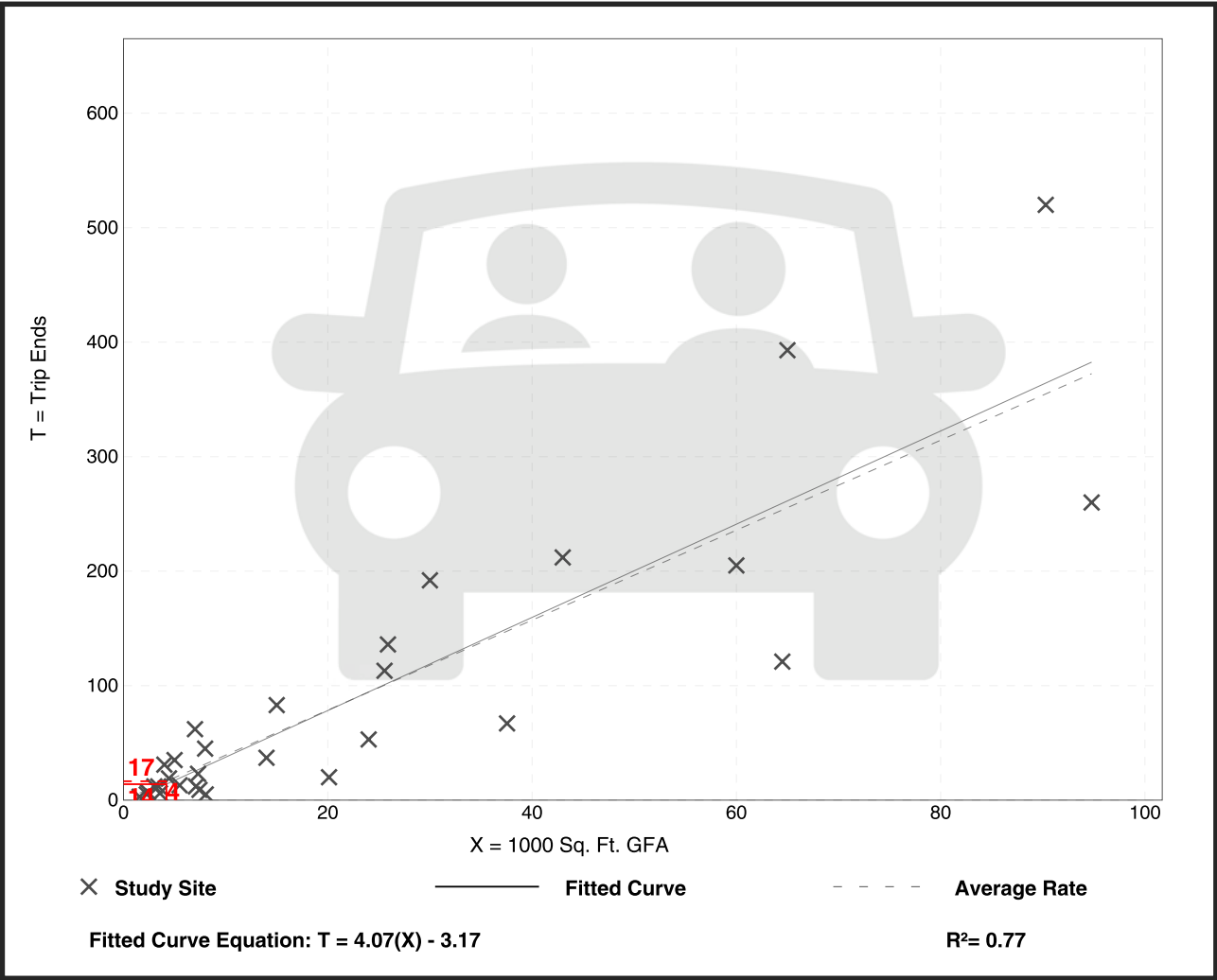
Avg. 1000 Sq. Ft. GFA: 23

Directional Distribution: 30% entering, 70% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
3.93	0.62 - 8.86	1.86

Data Plot and Equation



Shopping Plaza (40-150k) - Supermarket - Yes (821)

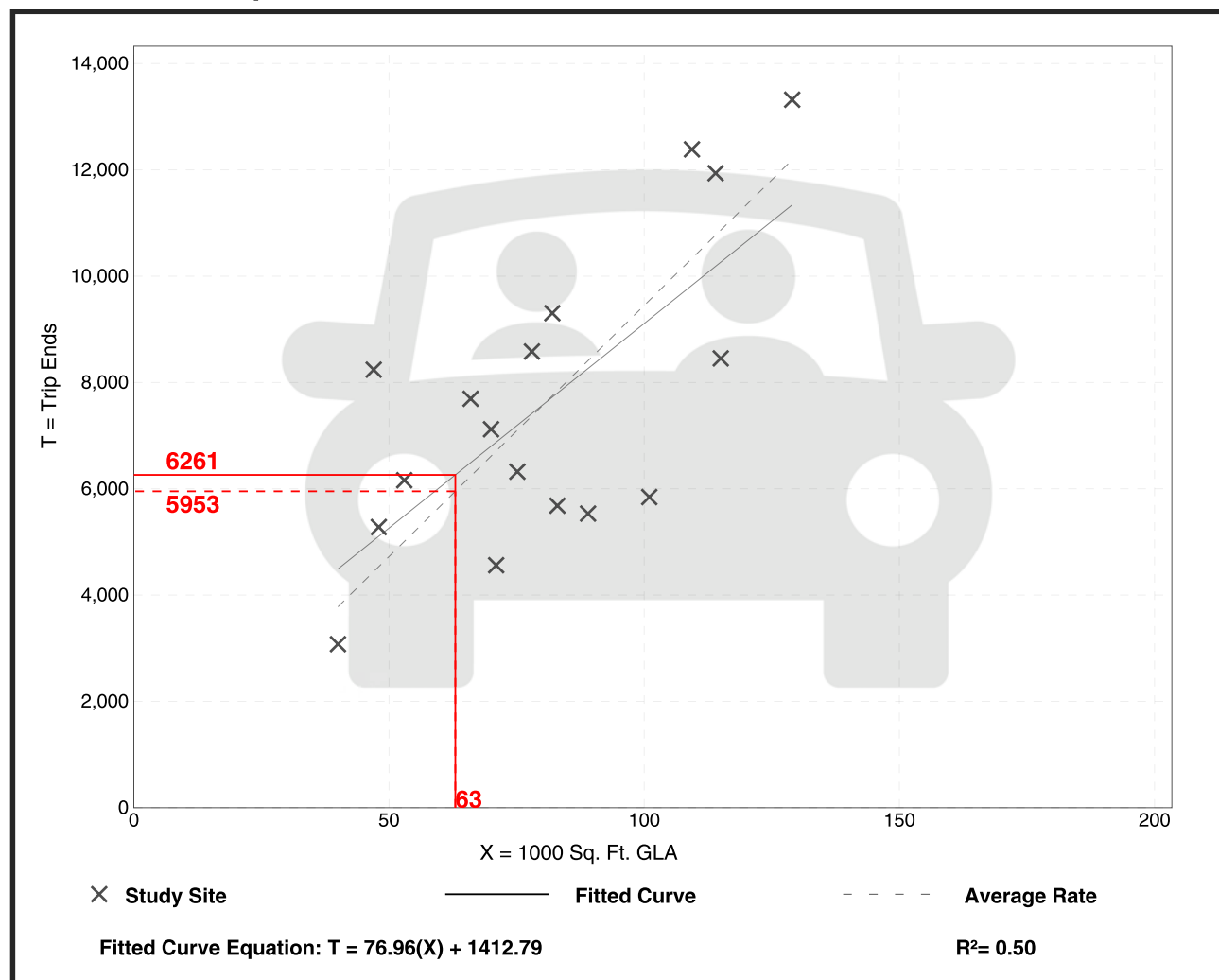
Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 17
Avg. 1000 Sq. Ft. GLA: 81
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
94.49	57.86 - 175.32	26.55

Data Plot and Equation



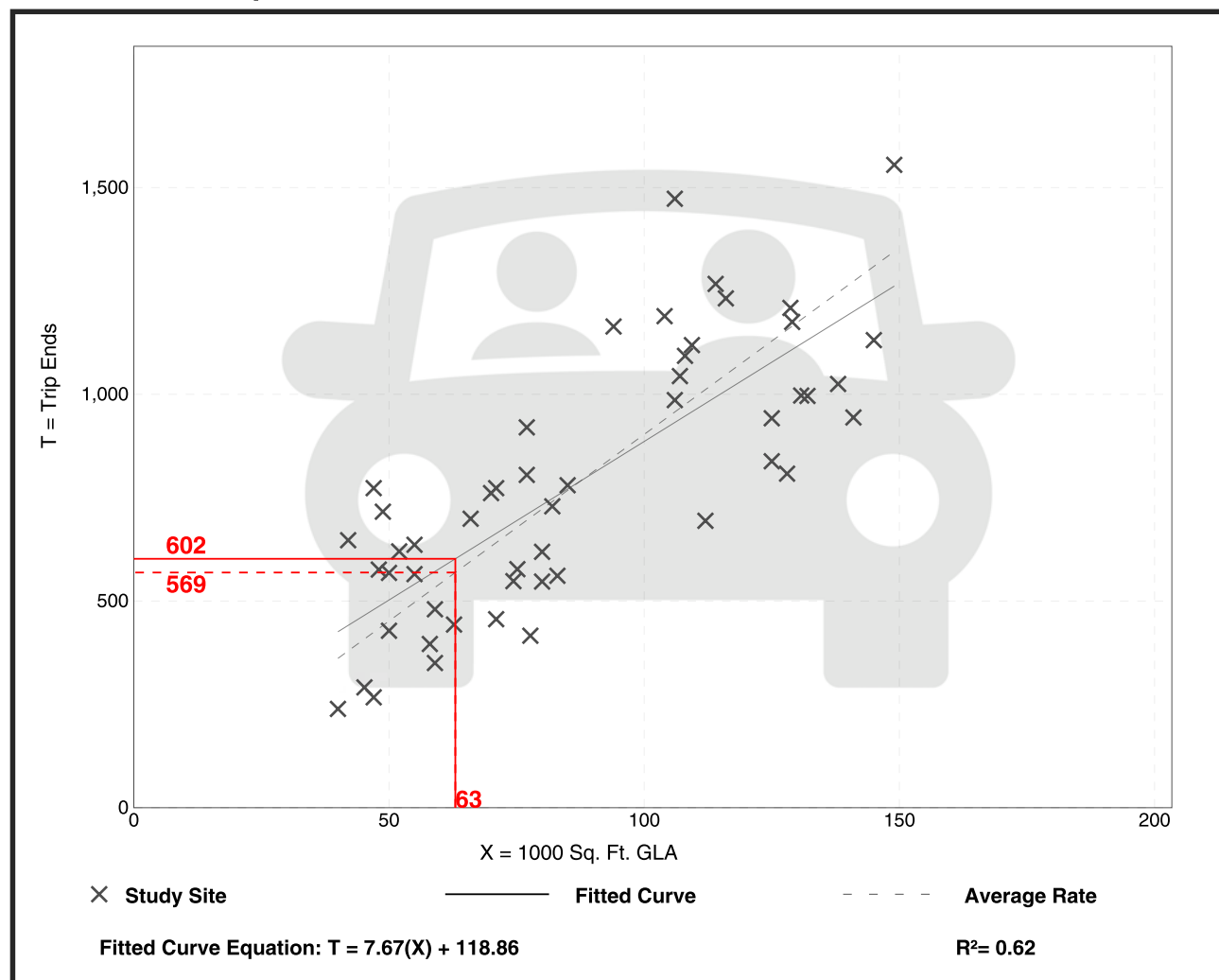
Shopping Plaza (40-150k) - Supermarket - Yes (821)

Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
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. 1000 Sq. Ft. GLA: 87
 Directional Distribution: 48% entering, 52% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
9.03	5.35 - 16.45	2.37

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window (934)

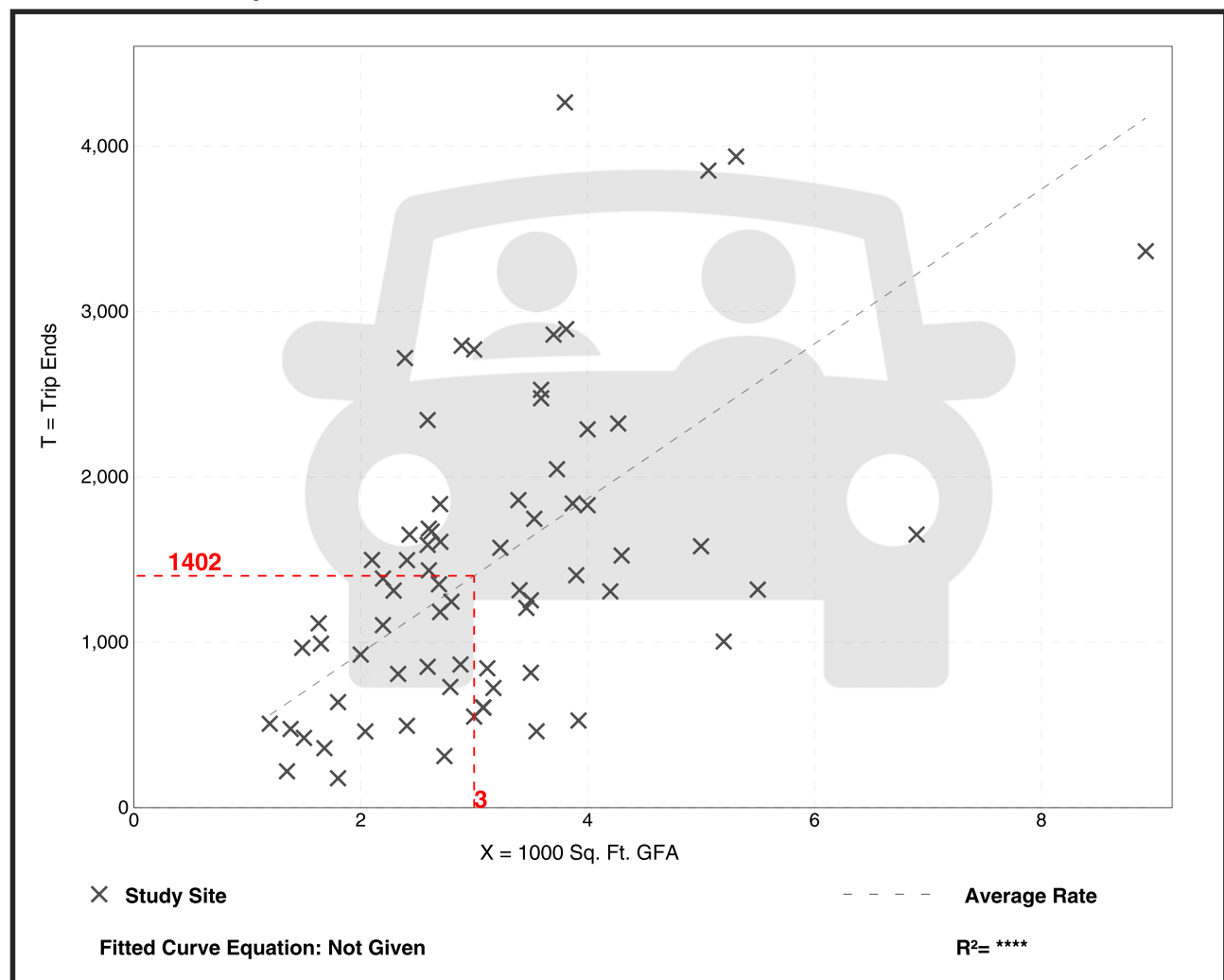
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 71
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
467.48	98.89 - 1137.66	238.62

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window (934)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

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: 190

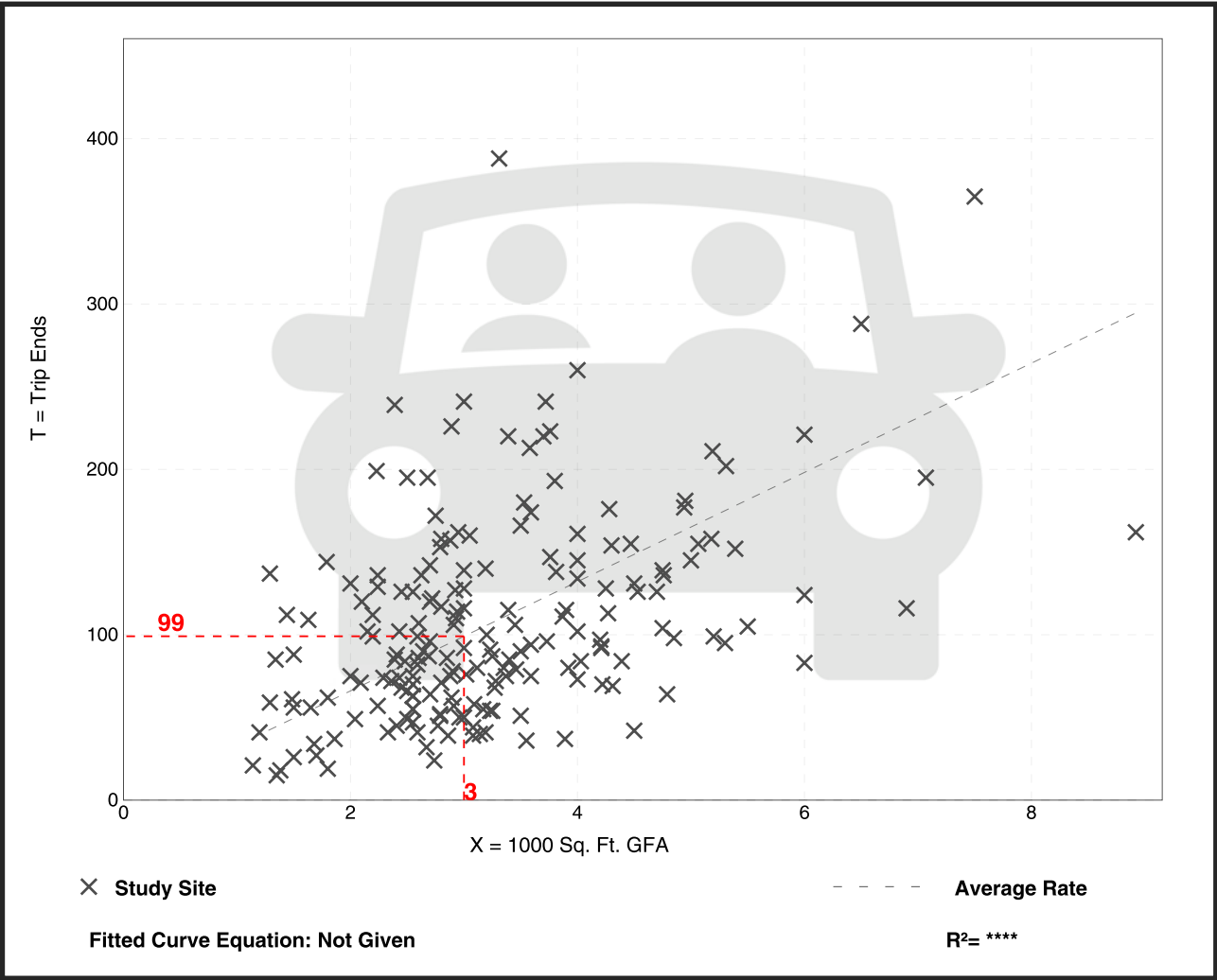
Avg. 1000 Sq. Ft. GFA: 3

Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
33.03	8.77 - 117.22	17.59

Data Plot and Equation



Coffee/Donut Shop with Drive-Through Window (937)

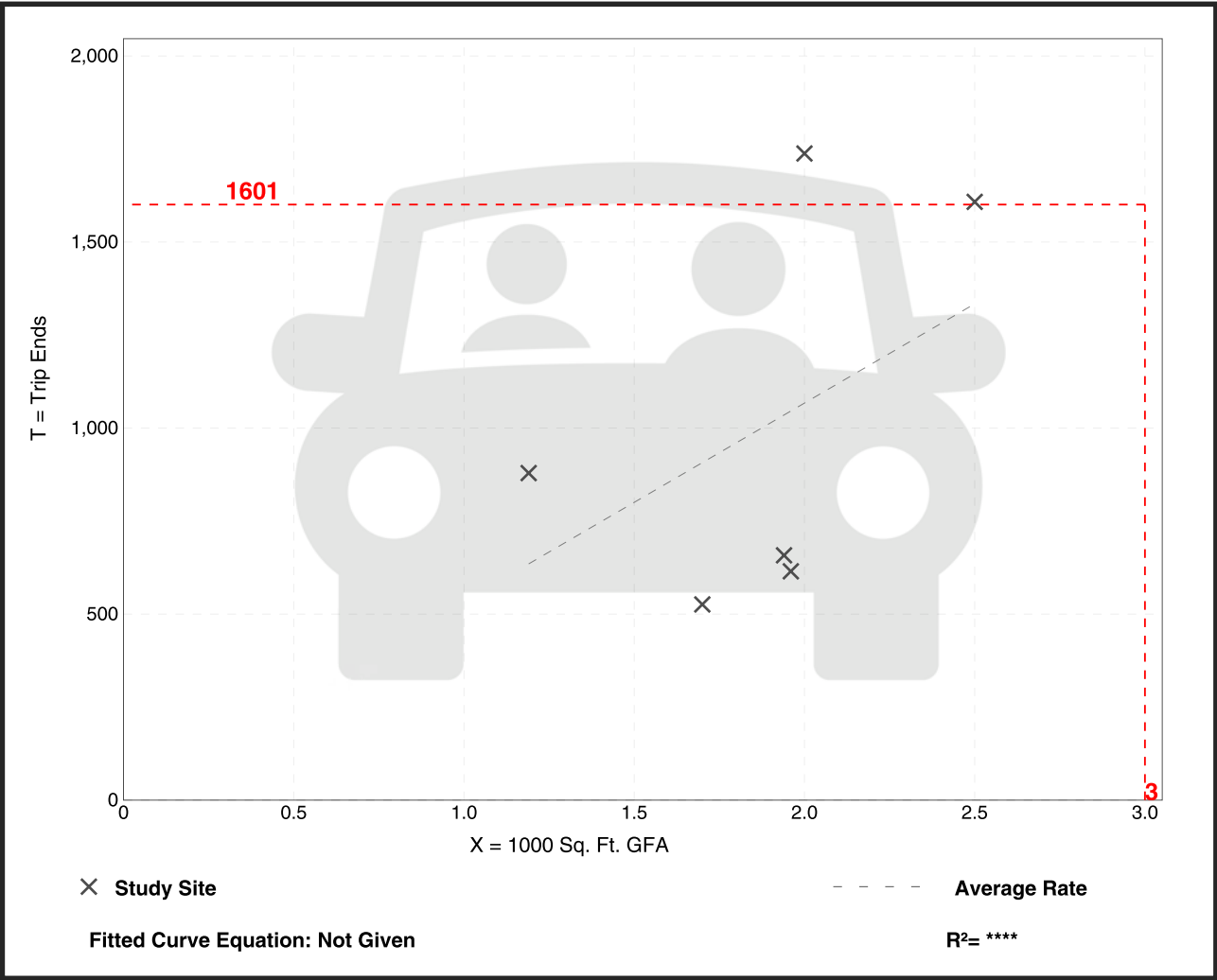
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 6
Avg. 1000 Sq. Ft. GFA: 2
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
533.57	309.41 - 869.00	243.65

Data Plot and Equation



Coffee/Donut Shop with Drive-Through Window (937)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

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: 36

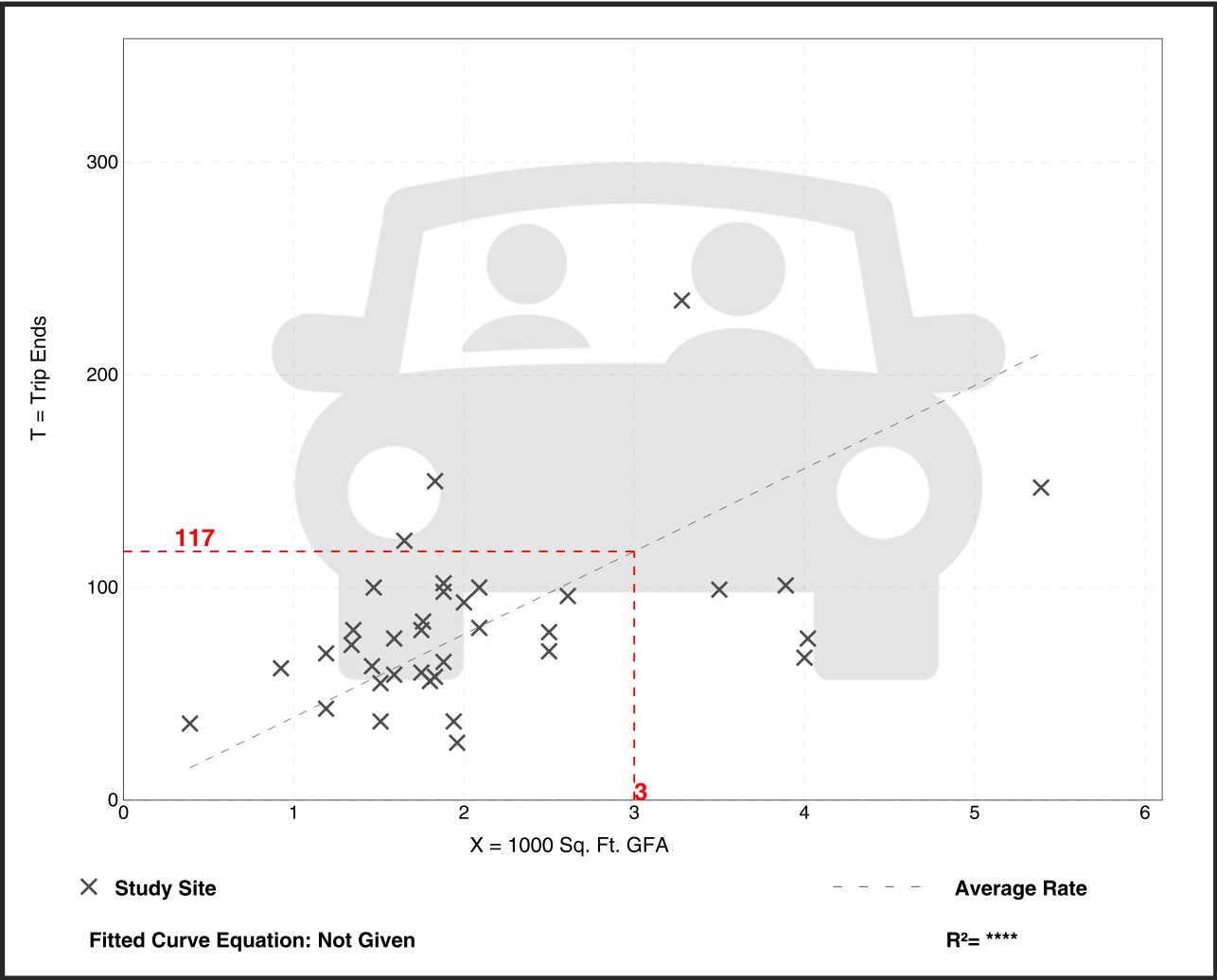
Avg. 1000 Sq. Ft. GFA: 2

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
38.99	13.78 - 92.31	17.79

Data Plot and Equation



Convenience Store/Gas Station - GFA (2-4k) (945)

Vehicle Trip Ends vs: Vehicle Fueling Positions
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 48

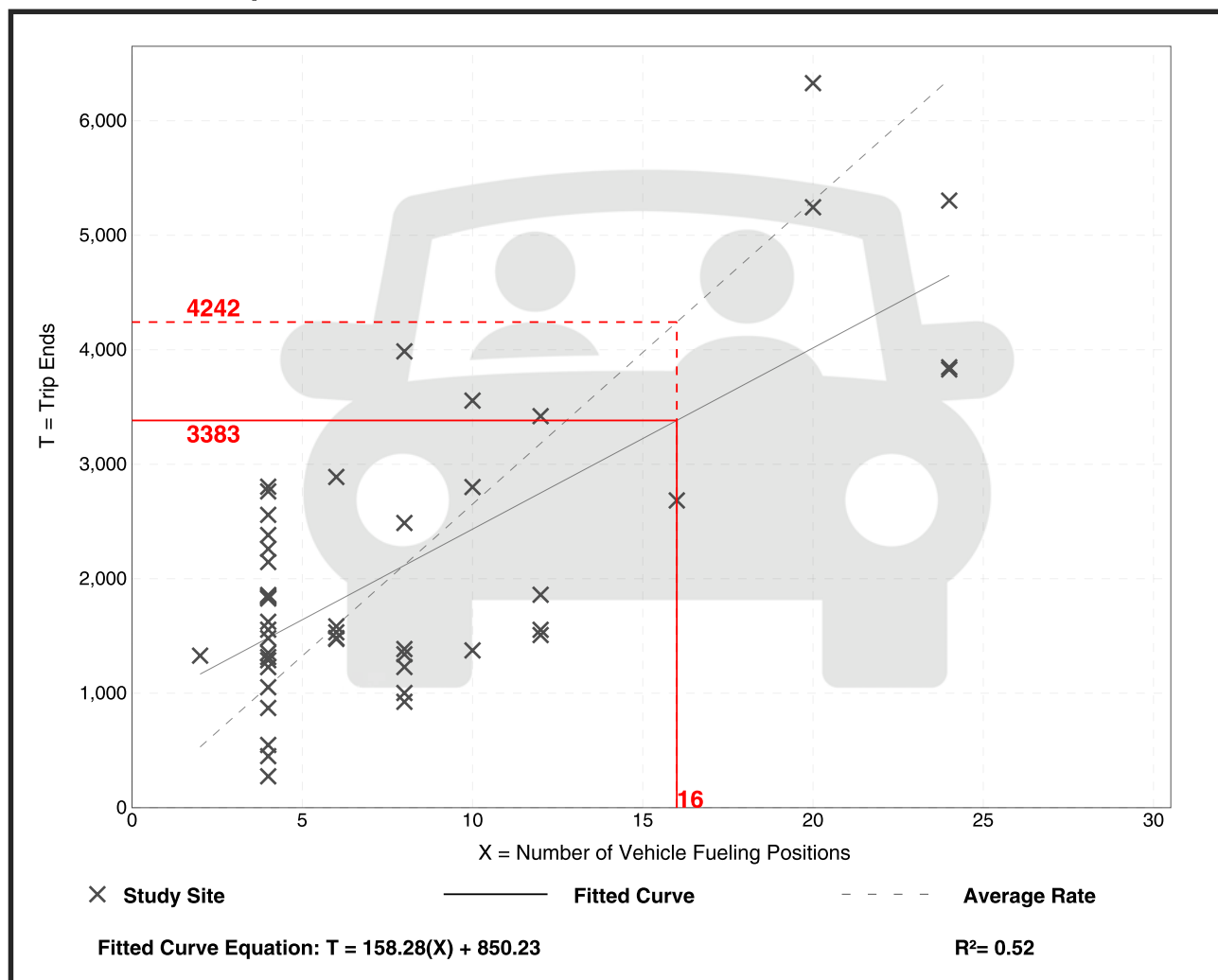
Avg. Num. of Vehicle Fueling Positions: 8

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Vehicle Fueling Position

Average Rate	Range of Rates	Standard Deviation
265.12	68.50 - 701.00	142.37

Data Plot and Equation



Convenience Store/Gas Station - GFA (2-4k)

(945)

Vehicle Trip Ends vs: Vehicle Fueling Positions

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: 93

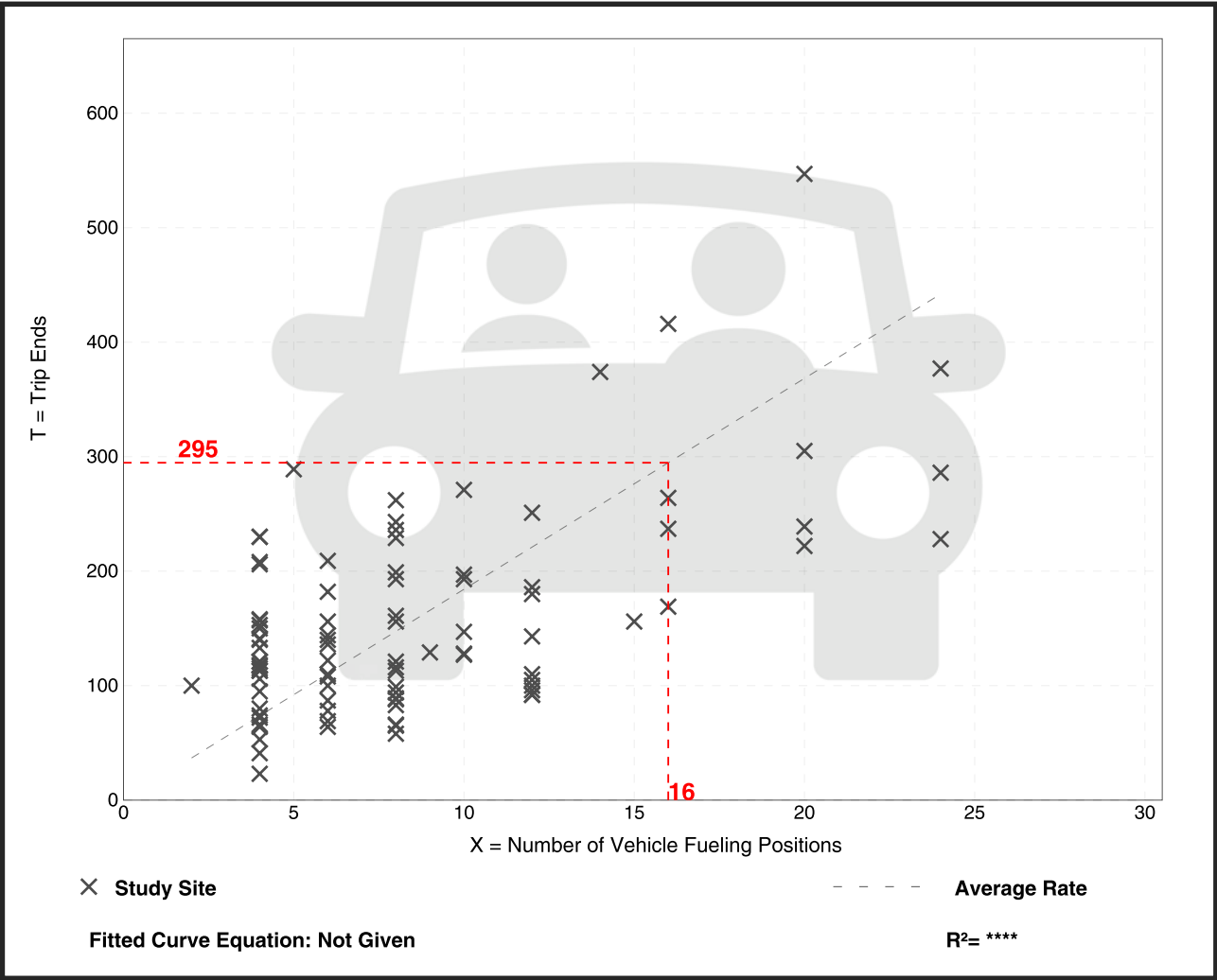
Avg. Num. of Vehicle Fueling Positions: 8

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Vehicle Fueling Position

Average Rate	Range of Rates	Standard Deviation
18.42	5.75 - 57.80	10.16

Data Plot and Equation



**Table F.9 (Cont'd) Pass-By and Non-Pass-By Trips Weekday, PM
Peak Period Land Use Code 820—Shopping Center**

SIZE (1,000 SQ. FT. GLA)	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS-BY TRIP (%)	NON-PASS-BY TRIP (%)			ADJ. STREET PEAK HOUR VOLUME	AVERAGE 24-HOUR TRAFFIC	SOURCE
						PRIMARY	DIVERTED	TOTAL			
921	Albany, NY	July & Aug. 1985	196	4:00–6:00 p.m.	23	42	35	77	—	60,950	Raymond Keyes Assoc.
108	Overland Park, KS	July 1988	111	4:30–5:30 p.m.	26	61	13	74	—	34,000	—
118	Overland Park, KS	Aug. 1988	123	4:30–5:30 p.m.	25	55	20	75	—	—	—
256	Greece, NY	June 1988	120	4:00–6:00 p.m.	38	62	—	62	—	23,410	Sear Brown
160	Greece, NY	June 1988	78	4:00–6:00 p.m.	29	71	—	71	—	57,306	Sear Brown
550	Greece, NY	June 1988	117	4:00–6:00 p.m.	48	52	—	52	—	40,763	Sear Brown
51	Boca Raton, FL	Dec. 1987	110	4:00–6:00 p.m.	33	34	33	67	—	42,225	Kimley-Horn and Assoc. Inc.
1,090	Ross Twp, PA	July 1988	411	2:00–8:00 p.m.	34	56	10	66	—	51,500	Wilbur Smith and Assoc.
97	Upper Dublin Twp, PA	Winter 1988/89	—	4:00–6:00 p.m.	41	—	—	59	—	34,000	McMahon Associates
118	Tredyffrin Twp, PA	Winter 1988/89	—	4:00–6:00 p.m.	24	—	—	76	—	10,000	Booz Allen & Hamilton
122	Lawnside, NJ	Winter 1988/89	—	4:00–6:00 p.m.	37	—	—	63	—	20,000	Pennoni Associates
126	Boca Raton, FL	Winter 1988/89	—	4:00–6:00 p.m.	43	—	—	57	—	40,000	McMahon Associates
150	Willow Grove, PA	Winter 1988/89	—	4:00–6:00 p.m.	39	—	—	61	—	26,000	Booz Allen & Hamilton
153	Broward Cnty., FL	Winter 1988/89	—	4:00–6:00 p.m.	50	—	—	50	—	85,000	McMahon Associates
153	Arden, DE	Winter 1988/89	—	4:00–6:00 p.m.	30	—	—	70	—	26,000	Orth-Rodgers & Assoc. Inc.
154	Doylestown, PA	Winter 1988/89	—	4:00–6:00 p.m.	32	—	—	68	—	29,000	Orth-Rodgers & Assoc. Inc.
164	Middletown Twp, PA	Winter 1988/89	—	4:00–6:00 p.m.	33	—	—	67	—	25,000	Booz Allen & Hamilton
166	Haddon Twp, NJ	Winter 1988/89	—	4:00–6:00 p.m.	20	—	—	80	—	6,000	Pennoni Associates
205	Broward Cnty., FL	Winter 1988/89	—	4:00–6:00 p.m.	55	—	—	45	—	62,000	McMahon Associates

**Table F.9 (Cont'd) Pass-By and Non-Pass-By Trips Weekday, PM Peak Period
Land Use Code 820—Shopping Center**

SIZE (1,000 SQ. FT. GLA)	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS-BY TRIP (%)	NON-PASS-BY TRIP (%)			ADJ. STREET PEAK HOUR VOLUME	AVERAGE 24-HOUR TRAFFIC	SOURCE
						PRIMARY	DIVERTED	TOTAL			
237	W. Windsor Twp, NJ	Winter 1988/89	—	4:00–6:00 p.m.	48	—	—	52	—	46,000	Booz Allen & Hamilton
242	Willow Grove, PA	Winter 1988/89	—	4:00–6:00 p.m.	37	—	—	63	—	26,000	McMahon Associates
297	Whitehall, PA	Winter 1988/89	—	4:00–6:00 p.m.	33	—	—	67	—	26,000	Orth-Rodgers & Assoc. Inc.
360	Broward Cnty., FL	Winter 1988/89	—	4:00–6:00 p.m.	44	—	—	56	—	73,000	McMahon Associates
370	Pittsburgh, PA	Winter 1988/89	—	4:00–6:00 p.m.	19	—	—	81	—	33,000	Wilbur Smith
150	Portland, OR	—	519	4:00–6:00 p.m.	68	6	26	32	—	25,000	Kittelson and Associates
150	Portland, OR	—	655	4:00–6:00 p.m.	65	7	28	35	—	30,000	Kittelson and Associates
760	Calgary, Alberta	Oct.–Dec. 1987	15,436	4:00–6:00 p.m.	20	39	41	80	—	—	City of Calgary DOT
178	Bordentown, NJ	Apr. 1989	154	2:00–6:00 p.m.	35	—	—	65	—	37,980	Raymond Keyes Assoc.
144	Manalapan, NJ	July 1990	176	3:30–6:15 p.m.	32	44	24	68	—	89,347	Raymond Keyes Assoc.
549	Natick, MA	Feb. 1989	—	4:45–5:45 p.m.	33	26	41	67	—	48,782	Raymond Keyes Assoc.

Average Pass-By Trip Percentage: 34

“—” means no data were provided

**Table F.32 Pass-By and Non-Pass-By Trips Weekday, PM Peak Period
Land Use Code 934—Fast-Food Restaurant with Drive-Through Window**

SEATS	SIZE (1,000 SQ. FT. GFA)	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS- BY TRIP (%)	NON-PASS-BY TRIPS (%)			ADJ. STREET PEAK HOUR VOLUME	SOURCE
							PRIMARY	DIVERTED	TOTAL		
—	<2.6	Minn-St. Paul, MN	1987	50	3:00–7:00 p.m.	25	27	48	75	—	—
—	<5.0	Chicago suburbs, IL	1987	80	3:00–6:00 p.m.	38	—	—	62	—	Kenig, O'Hara, Humes, Flock
—	<5.0	Chicago suburbs, IL	1987	100	3:00–6:00 p.m.	55	—	—	45	—	Kenig, O'Hara, Humes, Flock
—	<5.0	Chicago suburbs, IL	1987	159	3:00–6:00 p.m.	56	—	—	44	—	Kenig, O'Hara, Humes, Flock
—	<5.0	Chicago suburbs, IL	1987	225	3:00–6:00 p.m.	48	—	—	52	—	Kenig, O'Hara, Humes, Flock
—	<5.0	Chicago suburbs, IL	1987	88	3:00–6:00 p.m.	35	—	—	65	—	Kenig, O'Hara, Humes, Flock
—	<5.0	Chicago suburbs, IL	1987	84	3:00–6:00 p.m.	44	—	—	56	—	Kenig, O'Hara, Humes, Flock
88	1.3	Louisville area, KY	1993	—	4:00–6:00 p.m.	68	22	10	32	2,055	Barton- Aschman Assoc.
120	1.9	Louisville area, KY	1993	33	4:00–6:00 p.m.	67	24	9	33	2,447	Barton- Aschman Assoc.
87	4.2	New Albany, IN	1993	—	4:00–6:00 p.m.	56	25	19	44	1,632	Barton- Aschman Assoc.
150	3.0	Louisville area, KY	1993	—	4:00–6:00 p.m.	31	31	38	69	4,250	Barton- Aschman Assoc.
—	3.1	Kissimmee, FL	1995	28	2:00–6:00 p.m.	71	—	—	29	—	TPD Inc.
—	3.1	Apopka, FL	1996	29	2:00–6:00 p.m.	38	—	—	62	—	TPD Inc.
—	2.8	Winter Springs, FL	1995	47	2:00–6:00 p.m.	66	—	—	34	—	TPD Inc.
—	4.3	Longwood, FL	1994	304	2:00–6:00 p.m.	62	—	—	38	—	TPD Inc.
—	3.2	Altamonte Springs, FL	1996	202	2:00–6:00 p.m.	40	39	21	60	—	TPD Inc.
—	2.9	Winter Park, FL	1996	271	2:00–6:00 p.m.	41	41	18	59	—	TPD Inc.
—	3.3*	several	1996	varies	4:00–6:00 p.m.	62	—	—	38	—	Oracle Engineering

*Average of several combined studies.

Average Pass-By Trip Percentage: 50

“—” means no data were provided

**Table F.33 Pass-By and Non-Pass-By Trips Weekday
Land Use Code 938—Coffee/Donut Shop with Drive-Through Window
and No Indoor Seating (Coffee/Esspresso Stand)**

SIZE (1,000 SQ. FT. GFA)	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS-BY TRIP (%)	NON-PASS-BY TRIPS (%)			SOURCE
						PRIMARY	DIVERTED	TOTAL	
0.1	Vancouver, WA	Nov. 1997	69	6:00 a.m.–6:00 p.m.	83	—	—	17	Kittelson & Associates Inc.

“—” means no data were provided

**Table F.34 Pass-By and Non-Pass-By Trips Weekday
Land Use Code 938—Coffee/Donut Shop with Drive-Through Window
and No Indoor Seating (Coffee/Esspresso Stand)**

EMPLOYEES	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS-BY TRIP (%)	NON-PASS-BY TRIPS (%)			SOURCE
						PRIMARY	DIVERTED	TOTAL	
1	Vancouver, WA	Nov. 1997	70	6:00 a.m.–6:00 p.m.	83	—	—	17	Kittelson & Associates Inc.
1	Woodburn, OR	Feb. 1998	109	6:00 a.m.–6:00 p.m.	95	—	—	5	Kittelson & Associates Inc.
1	Vancouver, WA	Feb. 1998	83	6:00 a.m.–1:00 p.m.	89	—	—	11	Kittelson & Associates Inc.

Average Pass-By Trip Percentage: 89

“—” means no data were provided

**Table F.35 Pass-By and Non-Pass-By Trips Weekday, AM Peak Period
Land Use Code 944—Gasoline/Service Station**

SIZE (1,000 SQ. FT. GFA)	VEHICLE FUELING POSITIONS	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS-BY TRIP (%)	NON-PASS-BY TRIPS (%)			ADJ. STREET PEAK HOUR VOLUME	SOURCE
							PRIMARY	DIVERTED	TOTAL		
2.3	6	Gaithersburg, MD	1992	37	7:00–9:00 a.m.	32	41	27	68	2,080	RBA
2.1	6	Bethesda, MD	1992	26	7:00–9:00 a.m.	58	23	19	42	2,080	RBA
1.7	6	Wheaton, MD	1992	21	7:00–9:00 a.m.	67	14	19	33	900	RBA
2.0	8	Gaithersburg, MD	1992	46	7:00–9:00 a.m.	87	13	0	13	2,235	RBA
1.2	6	Damascus, MD	1992	21	7:00–9:00 a.m.	43	28	29	57	870	RBA
0.3	12	Wheaton, MD	1992	36	7:00–9:00 a.m.	61	8	31	39	3,480	RBA

Average Pass-By Trip Percentage: 58

“—” means no data were provided

Table F.38 Pass-By and Non-Pass-By Trips Weekday, PM Peak Period
Land Use Code 945—Gasoline/Service Station with Convenience Market

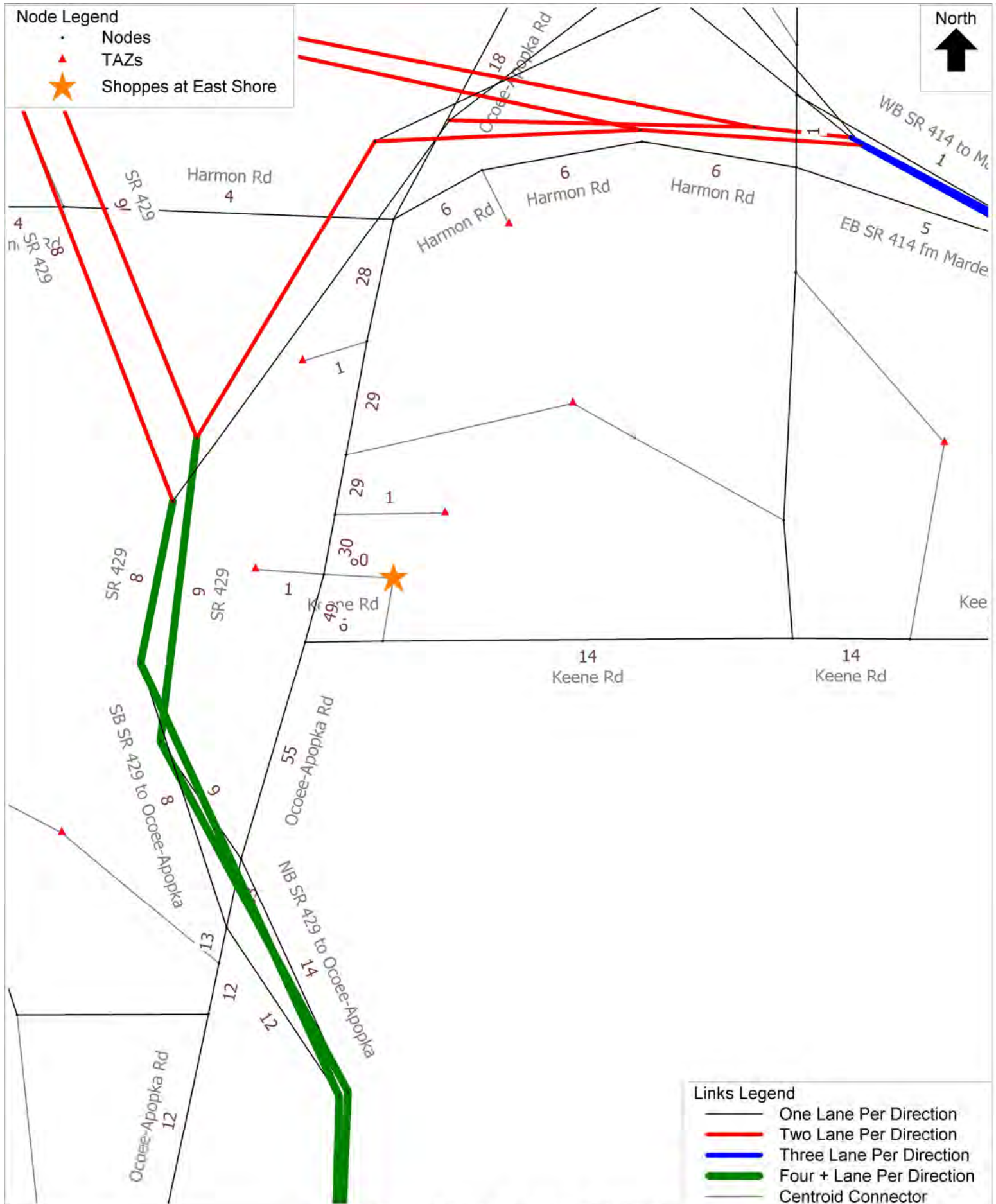
SIZE (1,000 SQ. FT. GFA)	VEHICLE FUELING POSITIONS	LOCATION	WEEKDAY SURVEY DATE	NO. OF INTERVIEWS	TIME PERIOD	PASS-BY TRIP (%)	NON-PASS-BY TRIPS (%)			ADJ. STREET PEAK HOUR VOLUME	SOURCE
							PRIMARY	DIVERTED	TOTAL		
0.8	8	Louisville area, KY	1993	83	4:00–6:00 p.m.	52	8	40	48	4,965	Barton- Aschman Assoc.
0.6	8	Louisville, KY	1993	60	4:00–6:00 p.m.	53	20	27	47	1,491	Barton- Aschman Assoc.
0.7	10	Louisville, KY	1993	—	4:00–6:00 p.m.	57	19	24	43	1,812	Barton- Aschman Assoc.
0.7	8	Louisville area, KY	1993	—	4:00–6:00 p.m.	72	7	21	28	2,657	Barton- Aschman Assoc.
0.7	10	Louisville area, KY	1993	—	4:00–6:00 p.m.	55	16	29	45	2,657	Barton- Aschman Assoc.
0.8	8	Silver Spring, MD	1992	36	4:00–6:00 p.m.	67	14	19	33	3,095	RBA
0.4	8	Derwood, MD	1992	46	4:00–6:00 p.m.	46	11	43	54	3,770	RBA
2.1	8	Kensington, MD	1992	31	4:00–6:00 p.m.	52	13	35	48	1,785	RBA
1	8	Silver Spring, MD	1992	35	4:00–6:00 p.m.	54	3	43	46	7,080	RBA

Average Pass-By Trip Percentage: 56

“—” means no data were provided

Appendix G

Model Distribution Plots



22057 Shoppes at East Shore - Apopka, FL - TAZ 7676

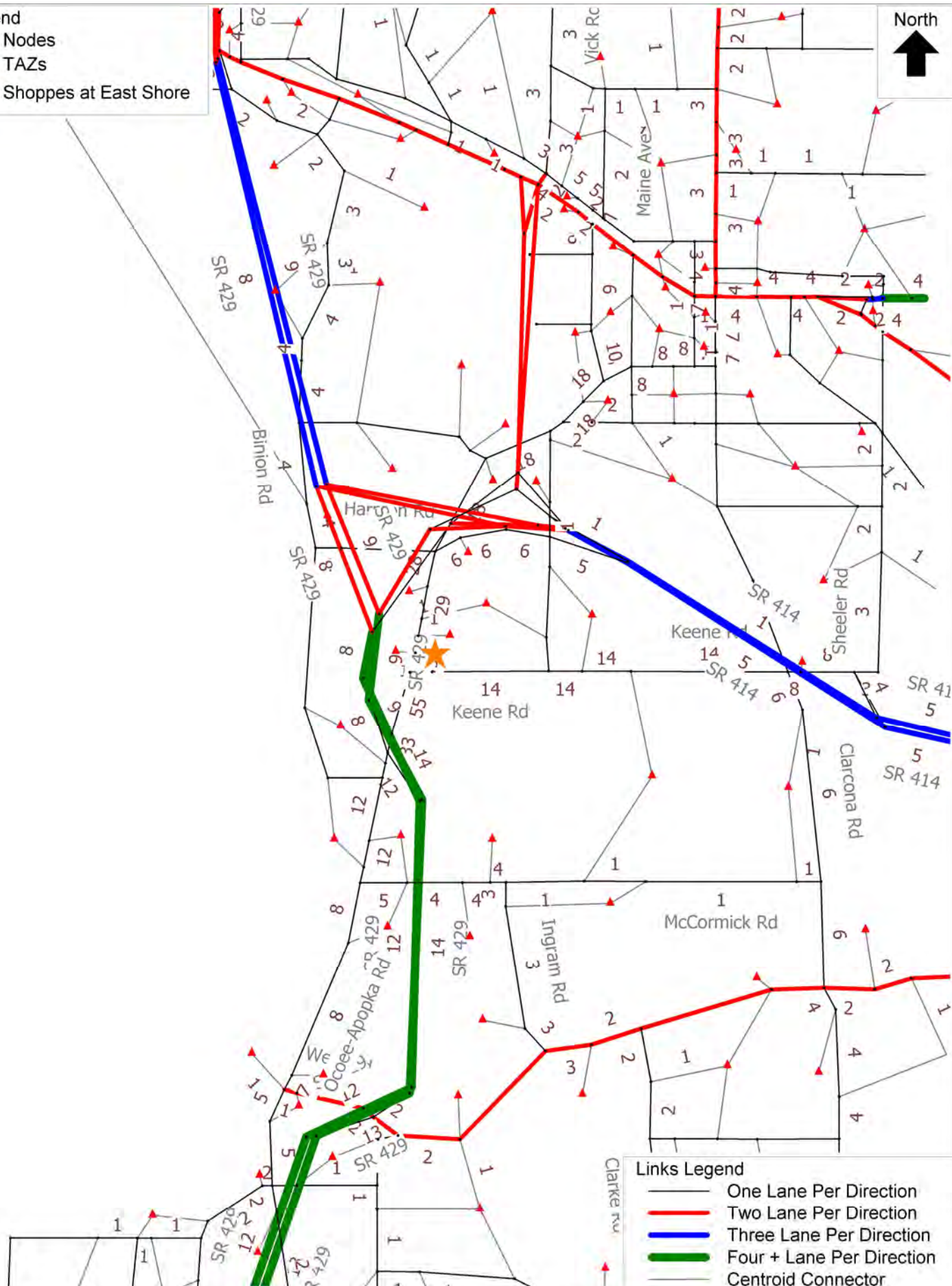
CFRPM7 CF2025 Project Distribution

V2.0 T:\AProjectFiles\2022\22057 Shoppes at East Shore (Apopka Publix)\Model\Model Files\HWYLOAD_SL_AllDay_A25.NET Tue 16 Aug 2022

Node Legend

- Nodes
- ▲ TAZs
- ★ Shoppes at East Shore

North



Links Legend

- One Lane Per Direction
- Two Lane Per Direction
- Three Lane Per Direction
- Four + Lane Per Direction
- Centroid Connector

22057 Shoppes at East Shore - Apopka, FL - TAZ 7676

CFRPM7 CF2025 Project Distribution

V2.0 T:\AProjectFiles\2022\22057 Shoppes at East Shore (Apopka Publix)\Model\Model Files\HWYLOAD_SL_AllDay_A25.NET Tue 16 Aug 2022

Appendix H
Roadway Improvements - City of Apopka CIP

CITY OF APOPKA

CAPITAL IMPROVEMENT PLAN

102/TRAFFIC IMPACT FUND

	FY20/21	FY21/22	FY22/23	FY23/24	FY24/25	TOTAL
Peterson Road/King Street Reconstruction and Safety Improvements	350,000					\$350,000
Harmon Road Extension - Ocoee-Apopka Road to Existing Harmon Road - New 2-Lane Road	500,000	1,300,000				\$1,800,000
Harmon Road at Ocoee-Apopka Road New Signal		450,000				\$450,000
West Kelly Park Road - Capacity and Safety	300,000	500,000		1,000,000	1,000,000	\$2,800,000
Vick Road at Lester Road New Signal - Design and Construction	500,000					\$500,000
St. Johns Water Management District Lake Apopka Site Driveway and Turn Lanes DSB	500,000					\$500,000
Rock Springs Road at Welch Road Intersection Improvements - Phase 2			1,500,000	1,500,000		\$3,000,000
Vick Road from Old Dixie to Ponkan Road - 4 Lanes						\$0
Segment 1 Old Dixie Highway to Sun Bluff Lane					300,000	\$300,000
Segment 2 Sun Bluff Lane to Lester Road					300,000	\$300,000
Segment 3 Lester Road to Ponkan Road					300,000	\$300,000
Sandpiper Road Realignment			50,000		550,000	\$600,000
Sandpiper Road at Park Avenue New Signal			50,000		250,000	\$300,000
Study and Construction from Vick Road to Hawthorn Road			50,000			\$50,000
Michael Gladden Road Intersection Improvements			250,000			\$250,000
New Sidewalk Program	100,000	100,000	100,000	100,000	100,000	\$500,000
						\$0

TOTAL TRAFFIC IMPACT FUND

\$2,250,000	\$2,350,000	\$2,000,000	\$2,600,000	\$2,800,000	\$12,000,000
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PROJECT COSTS:

Land						\$0
Buildings						
Improvements other than buildings	2,250,000	2,350,000	2,000,000	2,600,000	2,800,000	\$12,000,000
Equipment and machinery						

TOTAL COSTS:

\$2,250,000	\$2,350,000	\$2,000,000	\$2,600,000	\$2,800,000	\$12,000,000
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SOURCE OF FUNDS:

001 General Funds						\$0
101 Street Improvement Funds						
102 Transportation Impact Fees	2,250,000	2,350,000	2,000,000	2,600,000	2,800,000	\$12,000,000
104 Recreation Impact Fees						
120 Stormwater Fees						
401 Water/Sewer/Reclaim Operations						
402 Sanitation						
403 Water/Sewer/Reclaim Impact Fees						
403 Grant Funding						
Amount Unfunded	0	0	0	0	0	\$0

TOTAL FUNDING:

\$2,250,000	\$2,350,000	\$2,000,000	\$2,600,000	\$2,800,000	\$12,000,000
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SR 429 CORRIDOR CAPACITY IMPROVEMENTS PROJECT

PROJECT DESCRIPTION

In January 2022, the Central Florida Expressway Authority (CFX) began the 13-mile capacity improvements of State Road 429 (Daniel Webster Western Beltway) from Tilden Road to SR 414 (John Land Apopka Expressway). The capacity improvements, anticipated to be complete by late 2024, are broken into three segments to minimize impact to motorists.

CFX is adding a travel lane to SR 429 in each direction between Tilden Road and SR 414 as well as sound walls along several locations of the expressway. CFX is also implementing a new design element of wider median shoulders that can temporarily accommodate additional traffic during emergency response events, such as traffic accidents or hurricane evacuations.

WHAT TO EXPECT

Anticipated Start Dates

- Segment 1 – Mid 2022:
Tilden Road to south of Florida's Turnpike
- Segment 2 – January 2022:
South of Florida's Turnpike to West Road
- Segment 3 – February 2022:
West Road to State Road 414

WORK ZONE SAFETY

For the safety of motorists and work crews, speed limits will be strictly enforced during construction. Speeding fines are doubled in work zones when workers are present. Motorists are reminded to change lanes for safety when they see Road Rangers assisting other motorists or flashing lights — it's Florida law.

For more information:

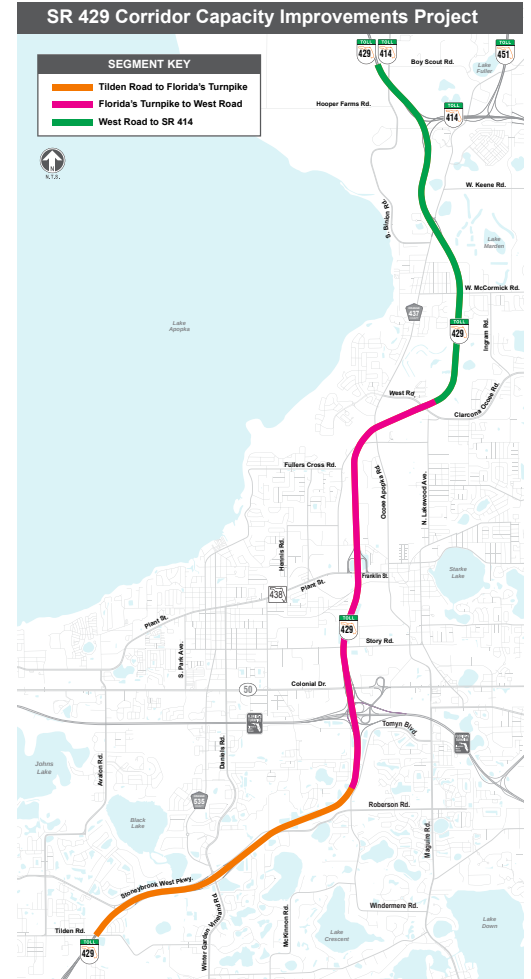
407-383-5817

www.CFXway.com

Construction@CFXway.com

[@DriveEPASS](https://twitter.com/DriveEPASS)

PROJECT MAP (LARGER MAP ON BACK)



QUICK FACTS

Project Timeline:
January 2022 - Late 2024

Estimated Project Cost:
\$399 Million

CENTRAL
FLORIDA
EXPRESSWAY
AUTHORITY



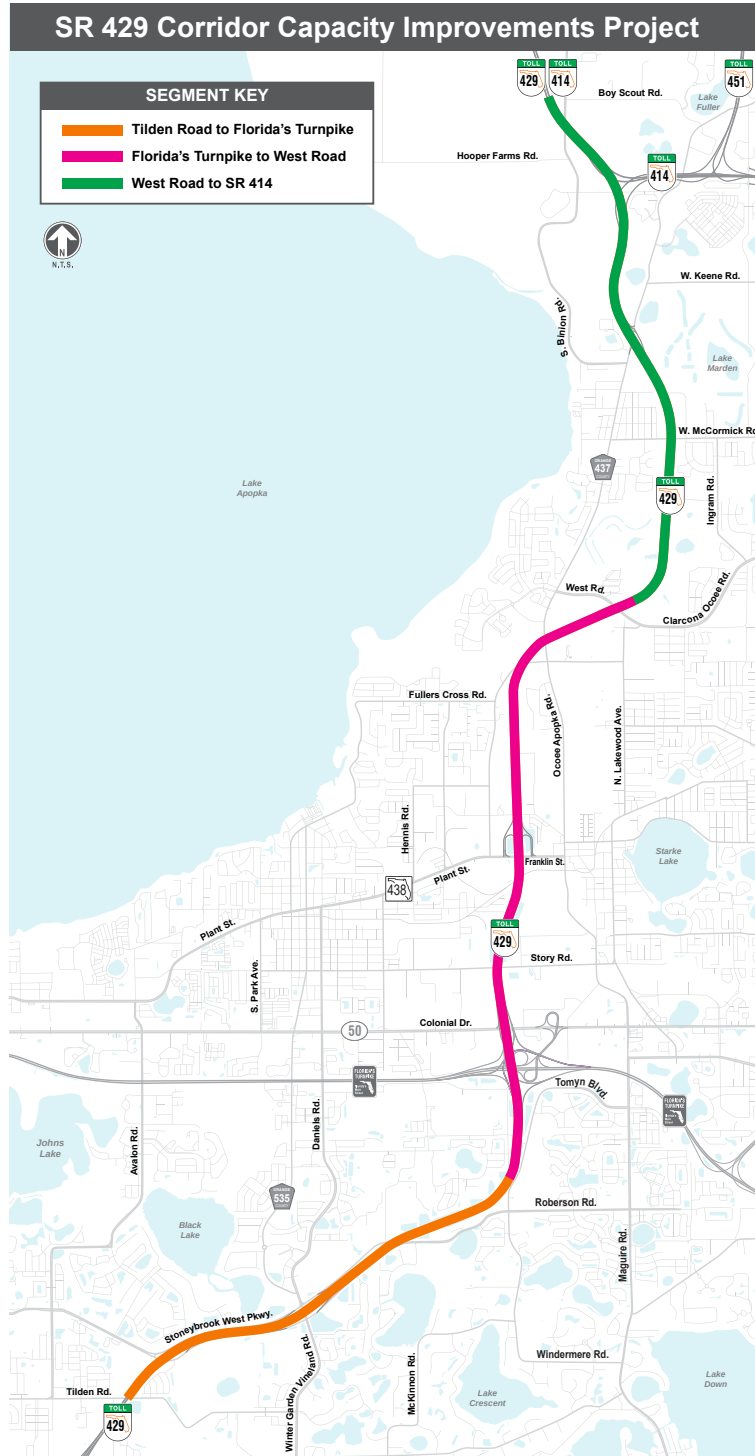
The Central Florida Expressway Authority (CFX) is an independent agency of the State of Florida that operates and maintains a regional network of expressways for 3.3 million residents of Brevard, Lake, Orange, Osceola, and Seminole counties and more than 75 million annual visitors to Central Florida. CFX's 125-centerline mile, user-funded system which includes 73 interchanges, 14 mainline toll plazas, 5 mainline gantries, 76 ramp toll plazas and 343 bridges. On average, more than 1.3 million toll transactions are recorded daily, over 95 percent of them electronically. CFX operates E-PASS, the first electronic toll collection system in Florida, with more than one million E-PASS accounts. For more information, visit CFXway.com.

Central Florida Expressway Authority: 4974 ORL Tower Road, Orlando, FL 32807
Phone: 407.690.5000 | Fax: 407.690.5011 | Email: Info@CFXWay.com



SR 429 CORRIDOR CAPACITY IMPROVEMENTS PROJECT

PROJECT MAP



Appendix I
Volume Projections, Pass-By Trips Assignment & Vested Trips

Project No. 22057 Shopes at East Shore

Intersection Volumes (2025 Projected PM)

Period		Tgen	Enter	Exit	Pass By		Enter	Exit	SF	Legend	
PM Peak			312	326			252	260	1.00	Backg'd + {Vested} + (Project) = Total	

Intersection= Binion Road & Ocoee Apopka Road																	1
pproac	Mvmt	Raw	SF	Adj Bg'd	Vested CMS	Harmon Ctr	Lakeview Apt	Total Vested	% PB Ent	% PB Ext	Passby	%Proj Ent	%Proj Ext	Project	Total	Formula	
EB	L	23	1.00	23	9			9			0	5%		15	47	23 + {9} + (15) = 47	
	T	0	1.00	0	0			0			0			0	0		
	R	194	1.00	194	80			80			0			0	274	194 + {80} = 274	
WB	L	0	1.00	0	0			0			0			0	0		
	T	0	1.00	0	0			0			0			0	0		
	R	0	1.00	0	0			0			0			0	0		
NB	L	181	1.00	181	36			36			0			0	217	181 + {36} = 217	
	T	413	1.00	413	82	14	29	125			0	15%		47	585	413 + {125} + (47) = 585	
	R	0	1.00	0	0			0			0			0	0		
SB	L	0	1.00	0	0			0			0			0	0		
	T	371	1.00	371	108	23	18	149			0		15%	48	568	371 + {149} + (48) = 568	
	R	17	1.00	17	5			5			0		5%	16	38	17 + {5} + (16) = 38	

Intersection= Ocoee Apopka Rd & SR 429 Southbound Ramps																2
pproac	Mvmt	Raw	SF	Adj Bg'd	Vested CMS	Harmon Ctr	Lakeview Apt	Total Vested	% PB Ent	% PB Ext	Passby	%Proj Ent	%Proj Ext	Project	Total	Formula
EB	L	20	1.00	20	0			0			0	15%		47	67	20 + (47) = 67
	T	0	1.00	0	0			0			0			0	0	
	R	47	1.00	47	0			0			0			0	47	47
WB	L	0	1.00	0	0			0			0			0	0	
	T	0	1.00	0	0			0			0			0	0	
	R	0	1.00	0	0			0			0			0	0	
NB	L	0	1.00	0	0			0			0			0	0	
	T	422	1.00	422	119	14	29	162			0	20%		62	646	422 + {162} + (62) = 646
	R	26	1.00	26	0			0			0			0	26	26
SB	L	261	1.00	261	0			0			0		10%	34	295	261 + (34) = 295
	T	342	1.00	342	113	23	18	154			0		20%	65	561	342 + {154} + (65) = 561
	R	0	1.00	0	0			0			0			0	0	

Intersection= Ocoee Apopka Rd & SR 429 Northbound Ramps																3
pproac	Mvmt	Raw	SF	Adj Bg'd	Vested CMS	Harmon Ctr	Lakeview Apt	Total Vested	% PB Ent	% PB Ext	Passby	%Proj Ent	%Proj Ext	Project	Total	Formula
EB	L	0	1.00	0	0			0			0			0	0	
	T	0	1.00	0	0			0			0			0	0	
	R	0	1.00	0	0			0			0			0	0	
WB	L	26	1.00	26	0			0			0			0	26	26
	T	0	1.00	0	0			0			0			0	0	
	R	293	1.00	293	0			0			0	10%		32	325	293 + (32) = 325
NB	L	72	1.00	72	0			0			0			0	72	72
	T	370	1.00	370	119	14	29	162			0	35%		109	641	370 + {162} + (109) = 641
	R	0	1.00	0	0			0			0			0	0	
SB	L	0	1.00	0	0			0			0			0	0	
	T	577	1.00	577	113	23	18	154			0		30%	99	830	577 + {154} + (99) = 830
	R	41	1.00	41	0			0			0		15%	47	88	41 + (47) = 88

Intersection= Ocoee Apopka Rd & Keene Rd																	4
pproac	Mvmt	Raw	SF	Adj Bg'd	Vested CMS	Harmon Ctr	Lakeview Apt	Total Vested	% PB Ent	% PB Ext	Passby	%Proj Ent	%Proj Ext	Project	Total	Formula	
EB	L	0	1.00	0	0			0			0			0	0		
	T	0	1.00	0	0			0			0			0	0		
	R	0	1.00	0	0			0			0			0	0		
WB	L	133	1.00	133	12			12			0		35%	112	257	133 + {12} + (112) = 257	
	T	0	1.00	0	0			0			0			0	0		
	R	40	1.00	40	4	5	8	17			0		5%	16	73	40 + {17} + (16) = 73	
NB	L	0	1.00	0	0			0			0			0	0		
	T	514	1.00	514	110	14	29	153			0	30%		95	762	514 + {153} + (95) = 762	
	R	147	1.00	147	31			31			0	15%		47	225	147 + {31} + (47) = 225	
SB	L	27	1.00	27	4	8	5	17			0	20%		62	106	27 + {17} + (62) = 106	
	T	518	1.00	518	85	23	18	126			0		10%	33	677	518 + {126} + (33) = 677	
	R	0	1.00	0	0			0			0			0	0		

Intersection= Ocoee Apopka Rd & Harmon Rd																5
Appr	Mvmt	Raw	SF	Adj Bg'd	Vested CMS	Harmon Ctr	Lakeview Apt	Total Vested	% PB Ent	% PB Ext	Passby	%Proj Ent	%Proj Ext	Project	Total	Formula
EB	L	48	1.00	48	46	5		51			0			0	99	48 + {51} = 99
	T	0	1.00	0	0			0			0			0	0	
	R	67	1.00	67	65		8	73			0	5%		16	156	67 + {73} + (16) = 156
WB	L	0	1.00	0	0		21	21			0	10%		31	52	{21} + (31) = 52
	T	0	1.00	0	0			0			0			0	0	
	R	0	1.00	0	0	5		5			0			0	5	{5}
NB	L	65	1.00	65	12		5	17			0		5%	16	98	65 + {17} + (16) = 98
	T	450	1.00	450	81	18	11	110			0		14%	46	606	450 + {110} + (46) = 606
	R	0	1.00	0	0		13	13			0		10%	33	46	{13} + (33) = 46
SB	L	0	1.00	0	0	8		8			0			0	8	{8}
	T	462	1.00	462	59	31	16	106			0	14%		44	612	462 + {106} + (44) = 612
	R	23	1.00	23	3	8		11			0			0	34	23 + {11} = 34

Intersection= Marden Rd & Keene Rd																6
pproac	Mvmt	Raw	SF	Adj Bg'd	Vested CMS	Harmon Ctr	Lakeview Apt	Total Vested	% PB Ent	% PB Ext	Passby	%Proj Ent	%Proj Ext	Project	Total	Formula
EB	L	25	1.00	25	3		2	5			0		5%	15	45	25 + {5} + (15) = 45
	T	158	1.00	158	19	8	3	30			0		10%	33	221	158 + {30} + (33) = 221
	R	1	1.00	1	0			0			0			0	1	1
WB	L	2	1.00	2	0			0			0			0	2	2
	T	130	1.00	130	10	5	4	19			0	10%		31	180	130 + {19} + (31) = 180
	R	48	1.00	48	4			4			0			0	52	48 + {4} = 52
NB	L	2	1.00	2	0			0			0			0	2	2
	T	1	1.00	1	0			0			0			0	1	1
	R	2	1.00	2	0			0			0			0	2	2
SB	L	48	1.00	48	3			3			0			0	51	48 + {3} = 51
	T	2	1.00	2	0			0			0			0	2	2
	R	39	1.00	39	2		4	6			0	5%		15	60	39 + {6} + (15) = 60

Project No. 22057 Shoppes at East Shore

Intersection Volumes (2025 Projected PM)

Period	Tgen	Enter	Exit	Pass By	Enter	Exit	SF	Legend
PM Peak		312	326		252	260	1.00	Backg'd + {Vested} + (Project) = Total

Intersection= Keene Rd & Clarcona Road																7
pproac	Mvmt	Raw	SF	Adj Bg'd	Vested CMS	Harmon Ctr	Lakeview Apt	Total Vested	% PB Ent	% PB Ext	Passby	%Proj Ent	%Proj Ext	Project	Total	Formula
EB	L	36	1.00	36	2			2			0			0	38	36 + {2} = 38
	T	190	1.00	190	12	8	3	23			0		5%	17	230	190 + {23} + (17) = 230
	R	86	1.00	86	5			5			0		5%	16	107	86 + {5} + (16) = 107
WB	L	265	1.00	265	7			7			0			0	272	265 + {7} = 272
	T	176	1.00	176	5	5	4	14			0	5%		16	206	176 + {14} + (16) = 206
	R	85	1.00	85	2			2			0			0	87	85 + {2} = 87
NB	L	109	1.00	109	0			0			0	5%		15	124	109 + (15) = 124
	T	393	1.00	393	2			2			0			0	395	393 + {2} = 395
	R	225	1.00	225	1			1			0			0	226	225 + {1} = 226
SB	L	103	1.00	103	2			2			0			0	105	103 + {2} = 105
	T	339	1.00	339	7			7			0			0	346	339 + {7} = 346
	R	24	1.00	24	0			0			0			0	24	24

Intersection= Ocoee Apopka Rd & MF Access RI/RO																8
pproac	Mvmt	Raw	SF	Adj Bg'd	Vested CMS	Harmon Ctr	Lakeview Apt	Total Vested	% PB Ent	% PB Ext	Passby	%Proj Ent	%Proj Ext	Project	Total	Formula
EB	L	0	1.00	0	0			0			0			0	0	
	T	0	1.00	0	0			0			0			0	0	
	R	0	1.00	0	0			0			0			0	0	
WB	L	0	1.00	0	0			0			0			0	0	
	T	0	1.00	0	0			0			0			0	0	
	R	0	1.00	0	0			0			0		5%	16	16	(16)
NB	L	0	1.00	0	0			0			0			0	0	
	T	663	1.00	554	93	18	29	140			0		34%	111	805	554 + {140} + (111) = 805
	R	0	1.00	0	0			0			0	5%		17	17	(17)
SB	L	0	1.00	0	0			0			0			0	0	
	T	651	1.00	529	89	31	45	165			0	39%		122	816	529 + {165} + (122) = 816
	R	0	1.00	0	0			0			0			0	0	

Intersection= Ocoee Apopka Rd & N Access/Lakeview Apartments																9
pproac	Mvmt	Raw	SF	Adj Bg'd	Vested CMS	Harmon Ctr	Lakeview Apt	Total Vested	% PB Ent	% PB Ext	Passby	%Proj Ent	%Proj Ext	Project	Total	Formula
EB	L	0	1.00	0	0		29	29			0			0	29	{29}
	T	0	1.00	0	0			0			0	1%		3	3	(3)
	R	0	1.00	0	0		23	23			0			0	23	{23}
WB	L	0	1.00	0	0			0		10%	26		10%	33	59	[26] + (33) = 59
	T	0	1.00	0	0			0			0		1%	4	4	(4)
	R	0	1.00	0	0			0		15%	39		14%	46	85	[39] + (46) = 85
NB	L	0	1.00	0	0		37	37			0			0	37	{37}
	T	554	1.00	554	93	18		111		10%	26	5%	20%	82	773	554 + {111} + [26] + (82) = 773
	R	0	1.00	0	0			0	15%		38	10%		31	69	[38] + (31) = 69
SB	L	0	1.00	0	0			0	15%		38	19%		59	97	[38] + (59) = 97
	T	529	1.00	529	89	31		120	25%		63	20%		62	774	529 + {120} + [63] + (62) = 774
	R	0	1.00	0	0		45	45			0			0	45	{45}

Intersection= Ocoee Apopka Rd & S Access RI/RO																10
pproac	Mvmt	Raw	SF	Adj Bg'd	Vested CMS	Harmon Ctr	Lakeview Apt	Total Vested	% PB Ent	% PB Ext	Passby	%Proj Ent	%Proj Ext	Project	Total	Formula
EB	L	0	1.00	0	0			0			0			0	0	
	T	0	1.00	0	0			0			0			0	0	
	R	0	1.00	0	0			0			0			0	0	
WB	L	0	1.00	0	0			0			0			0	0	
	T	0	1.00	0	0			0			0			0	0	
	R	0	1.00	0	0			0		15%	39		15%	49	88	[39] + (49) = 88
NB	L	0	1.00	0	0			0			0			0	0	
	T	554	1.00	554	93	18	37	148	15%	5%	51	15%	5%	64	817	554 + {148} + [51] + (64) = 817
	R	0	1.00	0	0			0	15%		38	15%		47	85	[38] + (47) = 85
SB	L	0	1.00	0	0			0			0			0	0	
	T	529	1.00	529	89	31	23	143	20%	10%	76	15%	15%	96	844	529 + {143} + [76] + (96) = 844
	R	0	1.00	0	0			0			0			0	0	

Intersection= Keene Road & W Access RI/RO																11
pproac	Mvmt	Raw	SF	Adj Bg'd	Vested CMS	Harmon Ctr	Lakeview Apt	Total Vested	% PB Ent	% PB Ext	Passby	%Proj Ent	%Proj Ext	Project	Total	Formula
EB	L	0	1.00	0	0			0			0			0	0	
	T	174	1.00	174	22	8	5	35	45%		113	35%		109	431	174 + {35} + [113] + (109) = 431
	R	0	1.00	0	0			0			0			0	0	
WB	L	0	1.00	0	0			0			0			0	0	
	T	173	1.00	173	16	5	8	29		25%	65		25%	82	349	173 + {29} + [65] + (82) = 349
	R	0	1.00	0	0			0	6%		15	6%		19	34	[15] + (19) = 34
NB	L	0	1.00	0	0			0			0			0	0	
	T	0	1.00	0	0			0			0			0	0	
	R	0	1.00	0	0			0			0			0	0	
SB	L	0	1.00	0	0			0			0			0	0	
	T	0	1.00	0	0			0			0			0	0	
	R	0	1.00	0	0			0		20%	52		15%	49	101	[52] + (49) = 101

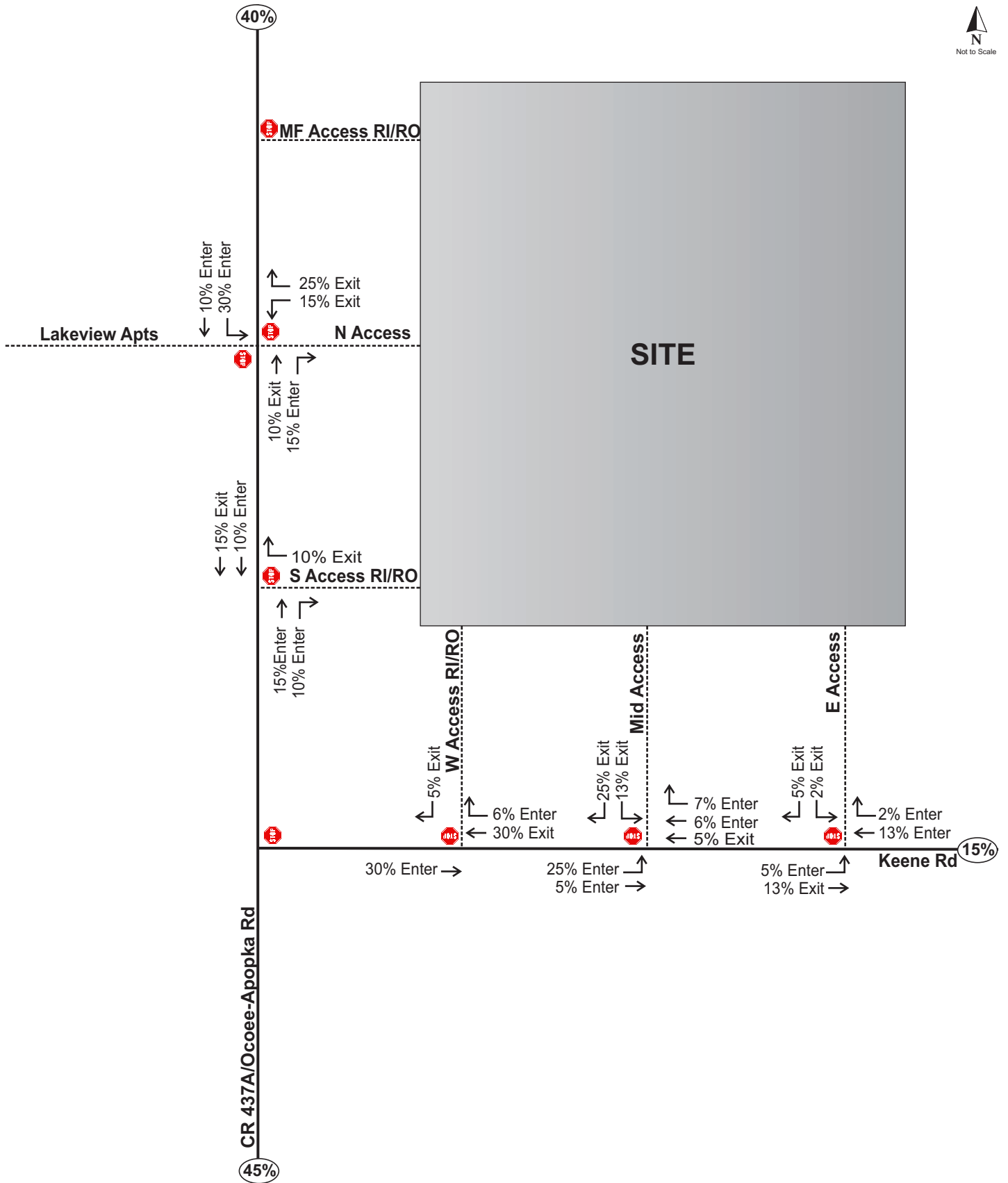
Intersection= Keene Road & Mid Access																12
pproac	Mvmt	Raw	SF	Adj Bg'd	Vested CMS	Harmon Ctr	Lakeview Apt	Total Vested	% PB Ent	% PB Ext	Passby	%Proj Ent	%Proj Ext	Project	Total	Formula
EB	L	0	1.00	0	0			0	35%		88	27%		84	172	[88] + (84) = 172
	T	174	1.00	174	22	8	5	35	10%		25	8%		25	259	174 + {35} + [25] + (25) = 259
	R	0	1.00	0	0			0			0			0	0	
WB	L	0	1.00	0	0			0			0			0	0	
	T	173	1.00	173	16	5	8	29	6%	5%	28	6%	8%	45	275	173 + {29} + [28] + (45) = 275
	R	0	1.00	0	0			0	7%		18	7%		22	40	[18] + (22) = 40
NB	L	0	1.00	0	0			0			0			0	0	
	T	0	1.00	0	0			0			0			0	0	
	R	0	1.00	0	0			0			0			0	0	
SB	L	0	1.00	0	0			0		13%	34		13%	42	76	[34] + (42) = 76
	T	0	1.00	0	0			0			0			0	0	
	R	0	1.00	0	0			0		20%	52		17%	55	107	[52] + (55) = 107

Project No. 22057 Shopes at East Shore

Intersection Volumes (2025 Projected PM)

Period	Tgen	Enter	Exit	Pass By	Enter	Exit	SF	Legend
PM Peak		312	326		252	260	1.00	Backg'd + {Vested} + (Project) = Total

Intersection= Keene Road & E Access																13
Approach	Mvmt	Raw	SF	Adj Bg'd	Vested CMS	Harmon Ctr	Lakeview Apt	Total Vested	% PB Ent	% PB Ext	Passby	%Proj Ent	%Proj Ext	Project	Total	Formula
EB	L	0	1.00	0	0			0	10%		25	8%		25	50	[25] + (25) = 50
	T	174	1.00	174	22	8	5	35		13%	34		13%	42	285	174 + {35} + [34] + (42) = 285
	R	0	1.00	0	0			0			0			0	0	
WB	L	0	1.00	0	0			0			0			0	0	
	T	173	1.00	173	16	5	8	29	13%		33	13%		41	276	173 + {29} + [33] + (41) = 276
	R	0	1.00	0	0			0	2%		5	2%		5	10	[5] + (5) = 10
NB	L	0	1.00	0	0			0			0			0	0	
	T	0	1.00	0	0			0			0			0	0	
	R	0	1.00	0	0			0			0			0	0	
SB	L	0	1.00	0	0			0		2%	5		2%	6	11	[5] + (6) = 11
	T	0	1.00	0	0			0			0			0	0	
	R	0	1.00	0	0			0		5%	13		8%	26	39	[13] + (26) = 39



3.0 PROJECT TRAFFIC

3.1 Trip Generation

The trip generation analysis of the proposed mixed-use development was conducted using the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition* and *Trip Generation Handbook 3rd Edition*. It should be noted that for the 990 square foot building, the Developer is reserving the option of either building a fast-food restaurant without drive through, or a general retail use; therefore, for the purpose of the trip generation calculation, the higher trip generating land use (fast food restaurant without drive through) was used to be conservative. The ITE information sheets are provided in **Appendix F**. **Table 3** summarizes the resulting trip generation analysis.

Table 3
Trip Generation Analysis

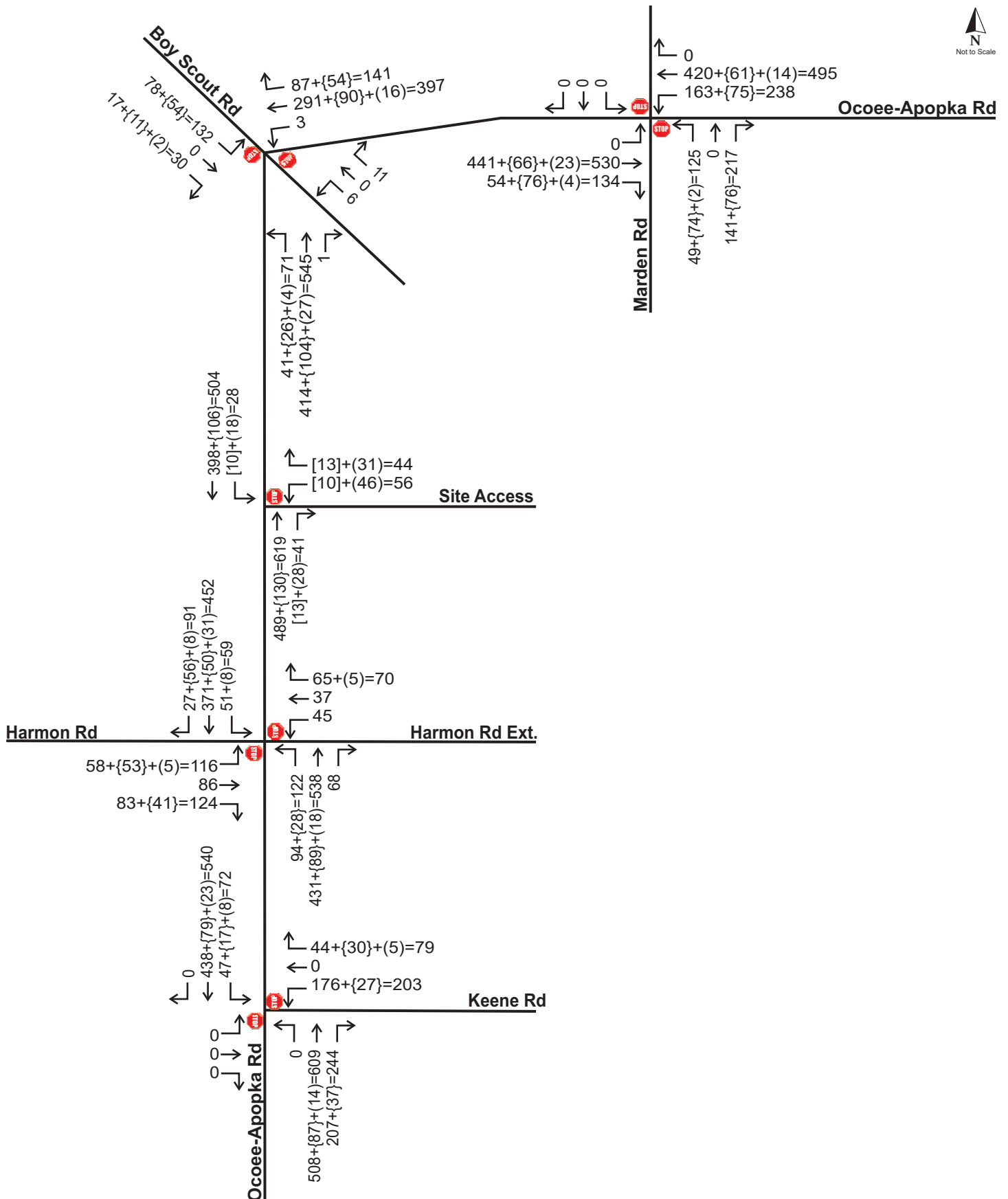
ITE Code	Land Use	Size	Daily		PM Peak Hour			
			Rate	Trips	Rate	Total	Enter	Exit
720	Medical Office Building	22.00 KSF	34.44	758	3.46	76	21	55
933	Fast Food Restaurant without Drive-Through Window	0.99 KSF	346.23	343	28.34	28	14	14
934	Fast Food Restaurant with Drive-Through Window	2.00 KSF	470.95	942	32.67	65	34	31
Gross Trip Generation				2,043		169	69	100
Pass-by Trips (FF w/o Drive Thru)				172		14	7	7
Pass-by Trips (FF with Drive Thru)				471		32	16	16
Net New External Trips				1,401		123	46	77

Source: ITE Trip Generation Manual, 10th Edition & Trip Generation Handbook 3rd Edition

The proposed development is projected to generate 1,401 new daily trips, of which 123 trips occur during the PM peak hour.

3.2 Trip Distribution

A trip distribution pattern was estimated using *Orlando Urban Area Transportation Study (OUATS)* model and *Cost Feasible 2025*. The model distribution was manually adjusted based on local knowledge, professional engineering judgement, and the location of the development with respect to the study area attractions and activity centers to reflect prevailing travel patterns in the vicinity of the site and the surrounding transportation network. The final trip distribution is presented in **Figure 3**. The model output plot is included in **Appendix G**.



Legend:
Existing + {Committed} + [Pass-by] + (Project) = Total

4.0 PROJECT TRAFFIC

4.1 Trip Generation

The trip generation of the proposed development was calculated using the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 10th Edition*. The trip generation for the project is summarized in **Table 3** and the ITE information sheets are provided in **Appendix F**.

Table 3
Trip Generation Analysis

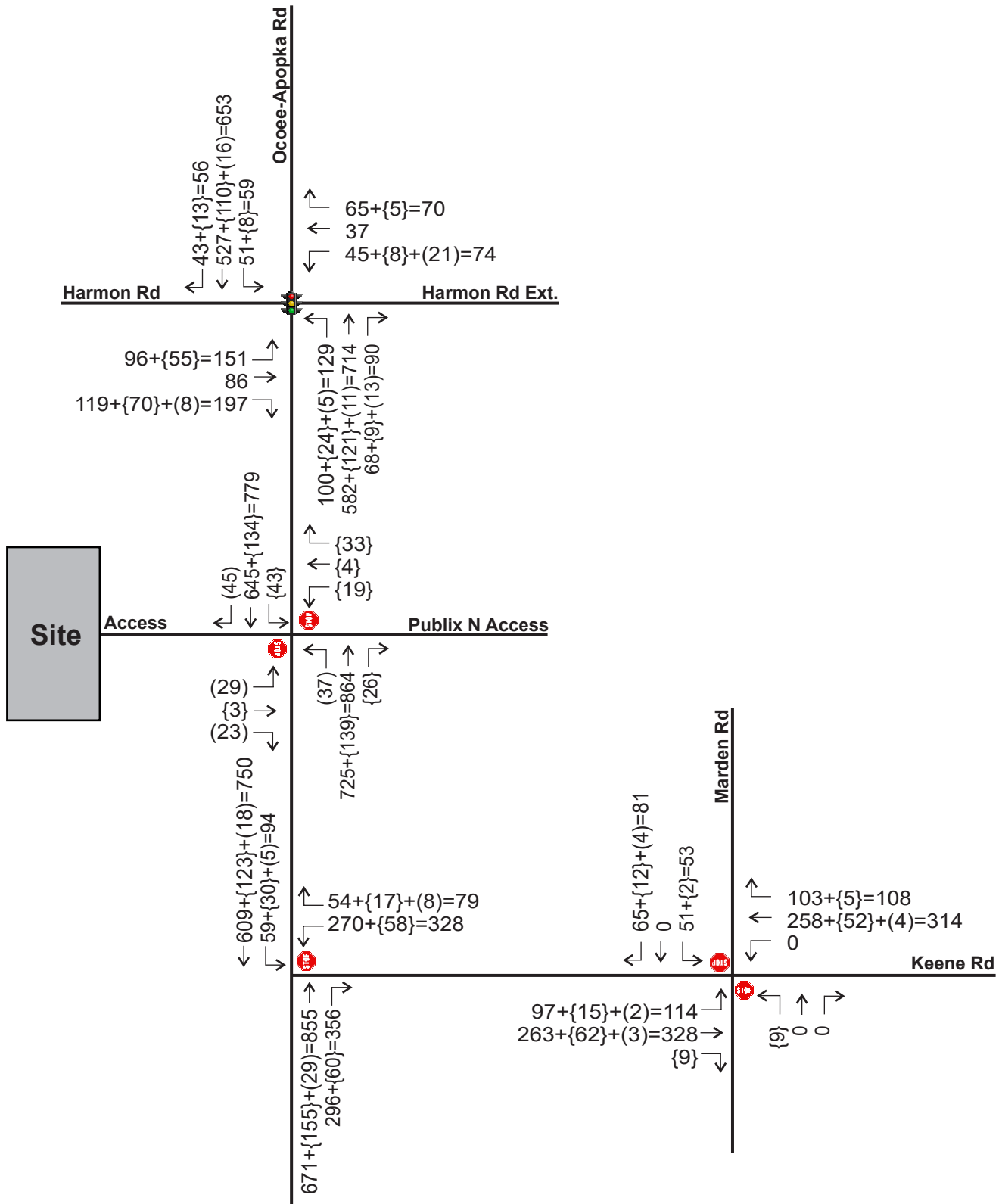
ITE Code	Land Use	Size	Daily		AM Peak Hour				PM Peak Hour			
			Rate	Trips	Rate	Total	Enter	Exit	Rate	Total	Enter	Exit
221	Multi-Family (Apartments)	304 DU	5.44	1,654	0.36	109	28	81	0.44	134	82	52

Trip generation analysis based on ITE Trip Generation Manual, 10th Edition

The proposed development will generate 1,654 trips per day, of which 109 trips occur during the AM peak hour and 134 trips occur during the PM peak hour.

4.2 Trip Distribution/Assignment

To assign the peak hour trips generated by the proposed development to the study roadways, a distribution pattern in the general vicinity of the project site was determined initially based on the Orlando Urban Area Transportation Study (OUATS) model. Adjustments were applied to the model generated distribution to better reflect the surrounding transportation network, land uses, and known access routes. Harmon Road Extension, a new 2-lane roadway from Ocoee-Apopka Road to the existing Harmon Road was added to the model network and the model output is included in **Appendix G**. The final trip distribution pattern is presented in **Figure 3**.



Legend

Existing 2020 + {Vested} + (Project) = Total

Appendix J
Projected Conditions Analysis Worksheets

HCM 6th Signalized Intersection Summary

1: Ocoee-Apopka Rd & CR 437/Binion Rd

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	47	274	217	585	568	38
Future Volume (veh/h)	47	274	217	585	568	38
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1767	1870	1870	1870	1870	1633
Adj Flow Rate, veh/h	51	298	236	636	617	41
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	9	2	2	2	2	18
Cap, veh/h	392	369	449	1135	1135	840
Arrive On Green	0.23	0.23	0.61	0.61	0.61	0.61
Sat Flow, veh/h	1682	1585	776	1870	1870	1384
Grp Volume(v), veh/h	51	298	236	636	617	41
Grp Sat Flow(s),veh/h/ln	1682	1585	776	1870	1870	1384
Q Serve(g_s), s	1.3	10.0	14.4	11.4	10.9	0.7
Cycle Q Clear(g_c), s	1.3	10.0	25.2	11.4	10.9	0.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	392	369	449	1135	1135	840
V/C Ratio(X)	0.13	0.81	0.53	0.56	0.54	0.05
Avail Cap(c_a), veh/h	1546	1456	1494	3653	3653	2703
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.0	20.3	13.9	6.6	6.5	4.5
Incr Delay (d2), s/veh	0.1	4.2	1.0	0.4	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	6.3	3.6	4.7	4.5	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.2	24.5	14.8	7.0	6.9	4.5
LnGrp LOS	B	C	B	A	A	A
Approach Vol, veh/h	349			872	658	
Approach Delay, s/veh	23.5			9.1	6.7	
Approach LOS	C			A	A	
Timer - Assigned Phs	2		4		6	
Phs Duration (G+Y+Rc), s	38.5		17.6		38.5	
Change Period (Y+Rc), s	4.5		4.5		4.5	
Max Green Setting (Gmax), s	109.5		51.5		109.5	
Max Q Clear Time (g_c+I1), s	27.2		12.0		12.9	
Green Ext Time (p_c), s	6.8		1.2		4.4	
Intersection Summary						
HCM 6th Ctrl Delay			10.9			
HCM 6th LOS			B			

HCM 6th Signalized Intersection Summary

2: SR 429 SB Ramps & Ocoee-Apopka Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	0	47	0	0	0	0	646	26	295	561	0
Future Volume (veh/h)	67	0	47	0	0	0	0	646	26	295	561	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	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
Work Zone On Approach	No						No			No		
Adj Sat Flow, veh/h/ln	1604	0	1870				0	1870	1781	1856	1870	0
Adj Flow Rate, veh/h	73	0	26				0	702	0	321	610	0
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	20	0	2				0	2	8	3	2	0
Cap, veh/h	166	0	172				0	983		480	1363	0
Arrive On Green	0.11	0.00	0.11				0.00	0.53	0.00	0.12	0.73	0.00
Sat Flow, veh/h	1527	0	1585				0	1870	1510	1767	1870	0
Grp Volume(v), veh/h	73	0	26				0	702	0	321	610	0
Grp Sat Flow(s),veh/h/ln	1527	0	1585				0	1870	1510	1767	1870	0
Q Serve(g_s), s	3.7	0.0	1.2				0.0	23.5	0.0	6.0	10.8	0.0
Cycle Q Clear(g_c), s	3.7	0.0	1.2				0.0	23.5	0.0	6.0	10.8	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	166	0	172				0	983		480	1363	0
V/C Ratio(X)	0.44	0.00	0.15				0.00	0.71		0.67	0.45	0.00
Avail Cap(c_a), veh/h	334	0	346				0	983		551	1363	0
HCM Platoon Ratio	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				0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	34.3	0.0	33.2				0.0	14.8	0.0	12.4	4.5	0.0
Incr Delay (d2), s/veh	1.8	0.0	0.4				0.0	4.4	0.0	2.6	1.1	0.0
Initial Q Delay(d3),s/veh	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	2.1				0.0	14.4	0.0	4.2	5.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.2	0.0	33.6				0.0	19.2	0.0	15.0	5.6	0.0
LnGrp LOS	D	A	C				A	B		B	A	A
Approach Vol, veh/h	99						702			A		
Approach Delay, s/veh	35.5						19.2			8.8		
Approach LOS	D						B			A		
Timer - Assigned Phs	2			4			5			6		
Phs Duration (G+Y+Rc), s	66.7			15.7			16.7			50.0		
Change Period (Y+Rc), s	6.7			6.7			6.7			6.7		
Max Green Setting (Gmax), s	43.3			18.0			13.3			43.3		
Max Q Clear Time (g_c+I1), s	12.8			5.7			8.0			25.5		
Green Ext Time (p_c), s	4.0			0.2			0.5			4.2		
Intersection Summary												
HCM 6th Ctrl Delay			14.6									
HCM 6th LOS			B									
Notes												

HCM 6th Signalized Intersection Summary

3: Ocoee-Apopka Rd & SR 429 NB Ramps



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↰		↰	↰	↱			↱	↰
Traffic Volume (veh/h)	0	0	0	26	0	325	72	641	0	0	830	88
Future Volume (veh/h)	0	0	0	26	0	325	72	641	0	0	830	88
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				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
Work Zone On Approach				No			No			No		
Adj Sat Flow, veh/h/ln				1841	0	1796	1811	1870	0	0	1856	1870
Adj Flow Rate, veh/h				28	0	0	77	689	0	0	892	0
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %				4	0	7	6	2	0	0	3	2
Cap, veh/h				97	0		388	1481	0	0	1127	
Arrive On Green				0.06	0.00	0.00	0.09	0.79	0.00	0.00	0.61	0.00
Sat Flow, veh/h				1753	0	1522	1725	1870	0	0	1856	1585
Grp Volume(v), veh/h				28	0	0	77	689	0	0	892	0
Grp Sat Flow(s),veh/h/ln				1753	0	1522	1725	1870	0	0	1856	1585
Q Serve(g_s), s				1.4	0.0	0.0	1.2	11.1	0.0	0.0	33.3	0.0
Cycle Q Clear(g_c), s				1.4	0.0	0.0	1.2	11.1	0.0	0.0	33.3	0.0
Prop In Lane				1.00		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				97	0		388	1481	0	0	1127	
V/C Ratio(X)				0.29	0.00		0.20	0.47	0.00	0.00	0.79	
Avail Cap(c_a), veh/h				256	0		446	1481	0	0	1127	
HCM Platoon Ratio				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	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				41.6	0.0	0.0	11.5	3.1	0.0	0.0	13.6	0.0
Incr Delay (d2), s/veh				1.6	0.0	0.0	0.2	1.1	0.0	0.0	5.7	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				1.2	0.0	0.0	1.0	4.2	0.0	0.0	20.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				43.2	0.0	0.0	11.7	4.2	0.0	0.0	19.3	0.0
LnGrp LOS				D	A		B	A	A	A	B	
Approach Vol, veh/h					28	A		766			892	A
Approach Delay, s/veh					43.2			5.0			19.3	
Approach LOS					D			A			B	
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	66.9	63.1		11.7		80.0						
Change Period (Y+Rc), s	8.3	7.4		6.6		7.4						
Max Green Setting (Gmax), s	12	52.6		13.4		72.6						
Max Q Clear Time (g_c+I), s	13.2	35.3		3.4		13.1						
Green Ext Time (p_c), s	0.1	6.6		0.0		5.0						

Intersection Summary

HCM 6th Ctrl Delay	13.2
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	242	90	745	240	91	693
Future Volume (veh/h)	242	90	745	240	91	693
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No		No	
Adj Sat Flow, veh/h/ln	1870	1826	1841	1856	1841	1856
Adj Flow Rate, veh/h	257	96	793	202	97	737
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	5	4	3	4	3
Cap, veh/h	296	257	850	217	192	1312
Arrive On Green	0.17	0.17	0.60	0.60	0.04	0.71
Sat Flow, veh/h	1781	1547	1415	361	1753	1856
Grp Volume(v), veh/h	257	96	0	995	97	737
Grp Sat Flow(s), veh/h/ln	1781	1547	0	1776	1753	1856
Q Serve(g_s), s	15.5	6.1	0.0	56.1	2.2	21.3
Cycle Q Clear(g_c), s	15.5	6.1	0.0	56.1	2.2	21.3
Prop In Lane	1.00	1.00		0.20	1.00	
Lane Grp Cap(c), veh/h	296	257	0	1067	192	1312
V/C Ratio(X)	0.87	0.37	0.00	0.93	0.51	0.56
Avail Cap(c_a), veh/h	452	393	0	1067	323	1312
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	40.9	0.0	20.0	25.1	7.9
Incr Delay (d2), s/veh	11.0	0.9	0.0	15.5	2.1	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.2	4.2	0.0	32.3	2.9	11.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	55.8	41.8	0.0	35.5	27.2	9.6
LnGrp LOS	E	D	A	D	C	A
Approach Vol, veh/h	353		995			834
Approach Delay, s/veh	52.0		35.5			11.6
Approach LOS	D		D			B
Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	11.7	73.3		25.3		85.0
Change Period (Y+Rc), s	7.0	7.0		7.0		7.0
Max Green Setting (Gmax), s	13.0	58.0		28.0		78.0
Max Q Clear Time (g_c+I), s	14.2	58.1		17.5		23.3
Green Ext Time (p_c), s	0.1	0.0		0.8		5.5
Intersection Summary						
HCM 6th Ctrl Delay			29.1			
HCM 6th LOS			C			

HCM 6th Signalized Intersection Summary 5: Ocoee-Apopka Rd & Harmon Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	0	156	52	0	5	98	606	46	8	612	34
Future Volume (veh/h)	99	0	156	52	0	5	98	606	46	8	612	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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	1752	1870	1796	1870	1870	1870	1737	1856	1870	1870	1856	1648
Adj Flow Rate, veh/h	104	0	85	55	0	3	103	638	48	8	644	29
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	10	2	7	2	2	2	11	3	2	2	3	17
Cap, veh/h	333	186	151	291	133	113	366	762	651	206	1223	55
Arrive On Green	0.08	0.00	0.10	0.05	0.00	0.07	0.06	0.41	0.41	0.01	0.36	0.36
Sat Flow, veh/h	1668	1870	1522	1781	1870	1585	1654	1856	1585	1781	3436	155
Grp Volume(v), veh/h	104	0	85	55	0	3	103	638	48	8	330	343
Grp Sat Flow(s),veh/h/ln	1668	1870	1522	1781	1870	1585	1654	1856	1585	1781	1763	1828
Q Serve(g_s), s	3.7	0.0	3.5	1.8	0.0	0.1	2.5	20.1	1.2	0.2	9.6	9.7
Cycle Q Clear(g_c), s	3.7	0.0	3.5	1.8	0.0	0.1	2.5	20.1	1.2	0.2	9.6	9.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	333	186	151	291	133	113	366	762	651	206	627	650
V/C Ratio(X)	0.31	0.00	0.56	0.19	0.00	0.03	0.28	0.84	0.07	0.04	0.53	0.53
Avail Cap(c_a), veh/h	745	807	657	506	519	439	819	2858	2441	407	2335	2421
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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.1	0.0	27.9	26.0	0.0	28.1	12.4	17.2	11.6	15.2	16.6	16.6
Incr Delay (d2), s/veh	0.5	0.0	3.2	0.3	0.0	0.1	0.4	2.5	0.0	0.1	0.7	0.7
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	2.4	1.3	0.0	0.1	1.4	11.9	0.7	0.1	6.1	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.7	0.0	31.1	26.3	0.0	28.2	12.9	19.7	11.7	15.3	17.3	17.2
LnGrp LOS	C	A	C	C	A	C	B	B	B	B	B	B
Approach Vol, veh/h	189		58			789			681			
Approach Delay, s/veh	28.1		26.4			18.3			17.2			
Approach LOS	C		C			B			B			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.7	33.7	10.1	13.5	11.2	30.1	12.0	11.6				
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0				
Max Green Setting (Gmax), s	100.0	100.0	11.0	28.0	22.0	86.0	21.0	18.0				
Max Q Clear Time (g_c+I2), s	12.2	22.1	3.8	5.5	4.5	11.7	5.7	2.1				
Green Ext Time (p_c), s	0.0	4.6	0.0	0.2	0.2	4.1	0.2	0.0				

Intersection Summary

HCM 6th Ctrl Delay	19.2
HCM 6th LOS	B

HCM 6th Signalized Intersection Summary

6: Marden Rd & Keene Rd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	221	1	2	180	52	2	1	2	51	2	60
Future Volume (veh/h)	45	221	1	2	180	52	2	1	2	51	2	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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	1722	1856	1870	1159	1841	1811	1159	1870	1159	1826	1870	1856
Adj Flow Rate, veh/h	46	228	1	2	186	44	2	1	2	53	2	50
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	12	3	2	50	4	6	50	2	50	5	2	3
Cap, veh/h	253	404	2	203	254	60	335	142	283	557	26	648
Arrive On Green	0.04	0.22	0.22	0.00	0.18	0.18	0.25	0.25	0.25	0.05	0.42	0.42
Sat Flow, veh/h	1640	1846	8	1104	1439	340	838	557	1113	1739	61	1533
Grp Volume(v), veh/h	46	0	229	2	0	230	2	0	3	53	0	52
Grp Sat Flow(s),veh/h/ln	1640	0	1854	1104	0	1779	838	0	1670	1739	0	1594
Q Serve(g_s), s	1.3	0.0	6.5	0.1	0.0	7.2	0.1	0.0	0.1	1.2	0.0	1.1
Cycle Q Clear(g_c), s	1.3	0.0	6.5	0.1	0.0	7.2	0.1	0.0	0.1	1.2	0.0	1.1
Prop In Lane	1.00		0.00	1.00		0.19	1.00		0.67	1.00		0.96
Lane Grp Cap(c), veh/h	253	0	405	203	0	314	335	0	425	557	0	673
V/C Ratio(X)	0.18	0.00	0.56	0.01	0.00	0.73	0.01	0.00	0.01	0.10	0.00	0.08
Avail Cap(c_a), veh/h	402	0	1164	349	0	1117	677	0	1105	707	0	1460
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	18.8	0.0	20.5	20.0	0.0	23.0	16.4	0.0	16.4	13.4	0.0	10.2
Incr Delay (d2), s/veh	0.3	0.0	1.2	0.0	0.0	3.3	0.0	0.0	0.0	0.1	0.0	0.0
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	0.8	0.0	4.6	0.0	0.0	5.2	0.0	0.0	0.1	0.8	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.2	0.0	21.8	20.0	0.0	26.3	16.4	0.0	16.4	13.5	0.0	10.2
LnGrp LOS	B	A	C	C	A	C	B	A	B	B	A	B
Approach Vol, veh/h	275					232		5		105		
Approach Delay, s/veh	21.3					26.2		16.4		11.8		
Approach LOS	C					C		B		B		
Timer - Assigned Phs	2		3		4		5		6		7	
Phs Duration (G+Y+Rc), s	31.9		9.6		17.4		9.9		22.0		7.2	
Change Period (Y+Rc), s	7.0		7.0		7.0		7.0		7.0		7.0	
Max Green Setting (Gmax), s	54.0		8.0		37.0		8.0		39.0		8.0	
Max Q Clear Time (g_c+I1), s	3.1		3.3		9.2		3.2		2.1		2.1	
Green Ext Time (p_c), s	0.3		0.0		1.2		0.0		0.0		1.2	
Intersection Summary												
HCM 6th Ctrl Delay			21.5									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary

7: Clarcona Rd & Keene Rd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	231	107	272	206	87	124	395	226	105	346	24
Future Volume (veh/h)	38	231	107	272	206	87	124	395	226	105	346	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
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	1811	1826	1826	1870	1870	1841	1870	1870	1870	1856	1870	1707
Adj Flow Rate, veh/h	39	236	109	278	210	89	127	403	231	107	353	24
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	6	5	5	2	2	4	2	2	2	3	2	13
Cap, veh/h	332	253	117	283	555	463	383	715	606	324	644	44
Arrive On Green	0.03	0.21	0.21	0.11	0.30	0.30	0.06	0.38	0.38	0.05	0.37	0.37
Sat Flow, veh/h	1725	1182	546	1781	1870	1560	1781	1870	1585	1767	1731	118
Grp Volume(v), veh/h	39	0	345	278	210	89	127	403	231	107	0	377
Grp Sat Flow(s),veh/h/ln	1725	0	1728	1781	1870	1560	1781	1870	1585	1767	0	1849
Q Serve(g_s), s	2.0	0.0	22.8	13.2	10.3	4.9	5.1	19.7	12.2	4.3	0.0	18.7
Cycle Q Clear(g_c), s	2.0	0.0	22.8	13.2	10.3	4.9	5.1	19.7	12.2	4.3	0.0	18.7
Prop In Lane	1.00		0.32	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	332	0	369	283	555	463	383	715	606	324	0	688
V/C Ratio(X)	0.12	0.00	0.93	0.98	0.38	0.19	0.33	0.56	0.38	0.33	0.00	0.55
Avail Cap(c_a), veh/h	475	0	372	283	555	463	473	715	606	430	0	688
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.9	0.0	44.8	33.6	32.3	30.4	21.8	28.2	25.9	22.1	0.0	28.7
Incr Delay (d2), s/veh	0.2	0.0	30.3	48.6	0.4	0.2	0.5	3.2	1.8	0.6	0.0	3.1
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	1.5	0.0	18.3	14.7	8.1	3.3	3.7	14.0	8.3	3.2	0.0	13.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.0	0.0	75.1	82.3	32.8	30.6	22.3	31.5	27.8	22.7	0.0	31.9
LnGrp LOS	C	A	E	F	C	C	C	C	C	C	A	C
Approach Vol, veh/h	384					577		761		484		
Approach Delay, s/veh	70.9					56.3		28.8		29.8		
Approach LOS	E					E		C		C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.2	50.3	10.4	41.2	13.0	51.5	20.0	31.6				
Change Period (Y+Rc), s	7.1	* 7.1	6.8	* 6.8	6.8	7.1	6.8	6.8				
Max Green Setting (Gmax), s	12.9	* 43	13.2	* 18	13.2	42.9	13.2	25.0				
Max Q Clear Time (g_c+I), s	17.1	20.7	4.0	12.3	6.3	21.7	15.2	24.8				
Green Ext Time (p_c), s	0.1	2.0	0.0	0.6	0.1	2.9	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			43.5									
HCM 6th LOS			D									
Notes												

HCM 6th TWSC

8: Ocoee-Apopka Rd & MF Access

Intersection

Int Delay, s/veh 0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↗	↗		↗
Traffic Vol, veh/h	0	16	805	17	0	816
Future Vol, veh/h	0	16	805	17	0	816
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	-	185	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	17	847	18	0	859

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	-	847	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.22	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.318	-
Pot Cap-1 Maneuver	0	362	-
Stage 1	0	-	-
Stage 2	0	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	362	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.4	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBT
Capacity (veh/h)	-	-	362
HCM Lane V/C Ratio	-	-	0.047
HCM Control Delay (s)	-	-	15.4
HCM Lane LOS	-	-	C
HCM 95th %tile Q(veh)	-	-	0.1

HCM 6th TWSC

9: Ocoee-Apopka Rd & Lakeview Apartments/North Access

Intersection

Int Delay, s/veh 4.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	3	23	59	4	85	37	773	69	96	774	45
Future Vol, veh/h	29	3	23	59	4	85	37	773	69	96	774	45
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	145	-	-	-	-	145	300	-	185	235	-	185
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	31	3	24	62	4	89	39	814	73	101	815	47

Major/Minor	Minor2		Minor1		Major1		Major2		Major2		Major2	
Conflicting Flow All	1992	1982	815	1946	1956	814	862	0	0	887	0	0
Stage 1	1017	1017	-	892	892	-	-	-	-	-	-	-
Stage 2	975	965	-	1054	1064	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	45	61	377	~ 49	64	378	780	-	-	763	-	-
Stage 1	287	315	-	337	360	-	-	-	-	-	-	-
Stage 2	303	333	-	273	300	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 29	50	377	~ 39	53	378	780	-	-	763	-	-
Mov Cap-2 Maneuver	85	132	-	121	145	-	-	-	-	-	-	-
Stage 1	273	273	-	320	342	-	-	-	-	-	-	-
Stage 2	217	316	-	219	260	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	45	37.8	0.4	1.1
HCM LOS	E	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	780	-	-	85	311	122	378	763	-	-
HCM Lane V/C Ratio	0.05	-	-	0.359	0.088	0.544	0.237	0.132	-	-
HCM Control Delay (s)	9.9	-	-	69.4	17.7	65.1	17.5	10.4	-	-
HCM Lane LOS	A	-	-	F	C	F	C	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	1.4	0.3	2.6	0.9	0.5	-	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC
10: South Access & Ocoee-Apopka Rd

Intersection						
Int Delay, s/veh	0.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	88	833	56	0	844
Future Vol, veh/h	0	88	833	56	0	844
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	-	185	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	93	877	59	0	888
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	-	877	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.22	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.318	-	-	-	-
Pot Cap-1 Maneuver	0	348	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	348	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	19.1	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBT		
Capacity (veh/h)	-	- 348		-		
HCM Lane V/C Ratio	-	- 0.266		-		
HCM Control Delay (s)	-	- 19.1		-		
HCM Lane LOS	-	- C		-		
HCM 95th %tile Q(veh)	-	- 1.1		-		

HCM 6th TWSC 11: Keene Rd & West Access

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↗		↗
Traffic Vol, veh/h	0	431	349	34	0	62
Future Vol, veh/h	0	431	349	34	0	62
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	185	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	454	367	36	0	65
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	-	367
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	678
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	678
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		10.9		
HCM LOS	B					
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	678		
HCM Lane V/C Ratio	-	-	-	0.096		
HCM Control Delay (s)	-	-	-	10.9		
HCM Lane LOS	-	-	-	B		
HCM 95th %tile Q(veh)	-	-	-	0.3		

HCM 6th TWSC 12: Keene Rd & Mid Access

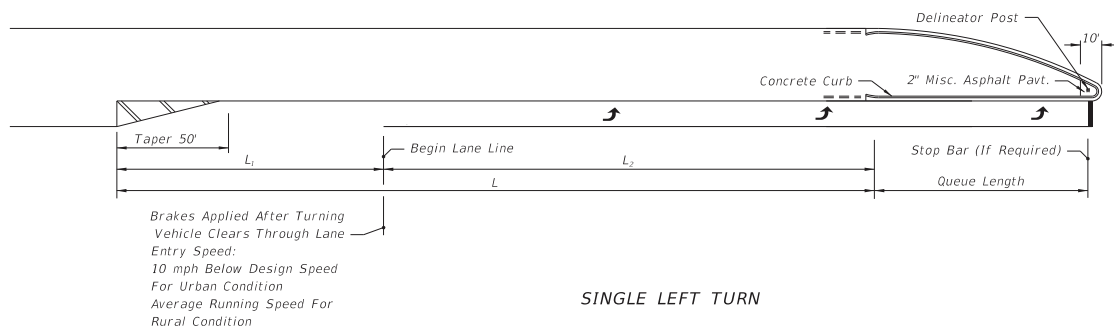
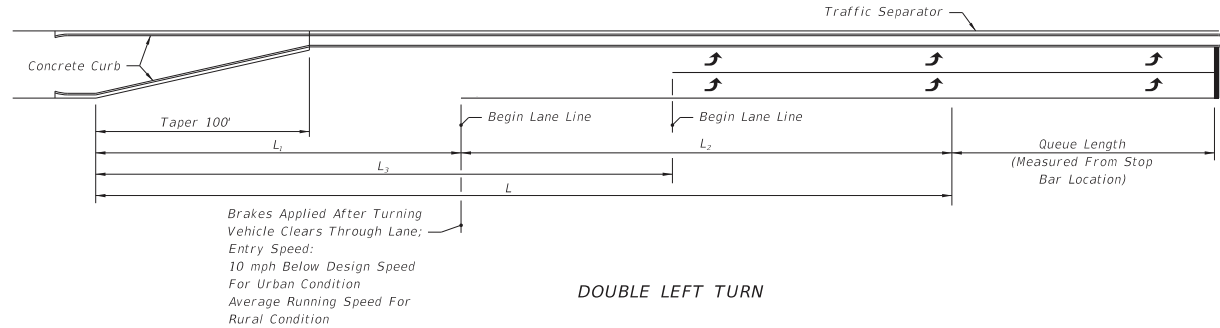
Intersection						
Int Delay, s/veh	5.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	172	259	298	40	76	107
Future Vol, veh/h	172	259	298	40	76	107
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	290	-	-	185	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	181	273	314	42	80	113
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	356	0	-	0	949	314
Stage 1	-	-	-	-	314	-
Stage 2	-	-	-	-	635	-
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	1203	-	-	-	289	726
Stage 1	-	-	-	-	741	-
Stage 2	-	-	-	-	528	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1203	-	-	-	246	726
Mov Cap-2 Maneuver	-	-	-	-	246	-
Stage 1	-	-	-	-	630	-
Stage 2	-	-	-	-	528	-
Approach	EB	WB		SB		
HCM Control Delay, s	3.4	0		22		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1203	-	-	-	401	
HCM Lane V/C Ratio	0.151	-	-	-	0.48	
HCM Control Delay (s)	8.5	-	-	-	22	
HCM Lane LOS	A	-	-	-	C	
HCM 95th %tile Q(veh)	0.5	-	-	-	2.5	

HCM 6th TWSC 13: Keene Rd & East Access

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	50	285	276	10	11	39
Future Vol, veh/h	50	285	276	10	11	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	290	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	300	291	11	12	41
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	302	0	-	0	703	297
Stage 1	-	-	-	-	297	-
Stage 2	-	-	-	-	406	-
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	1259	-	-	-	404	742
Stage 1	-	-	-	-	754	-
Stage 2	-	-	-	-	673	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1259	-	-	-	387	742
Mov Cap-2 Maneuver	-	-	-	-	387	-
Stage 1	-	-	-	-	722	-
Stage 2	-	-	-	-	673	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.2	0		11.4		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1259	-	-	-	617	
HCM Lane V/C Ratio	0.042	-	-	-	0.085	
HCM Control Delay (s)	8	-	-	-	11.4	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.3	

Appendix K
FDM Exhibit 212-1

MEDIAN TURN LANES **MINIMUM DECELERATION LENGTHS**



MEDIAN TURN LANES								
Design Speed (mph)	Entry Speed (mph)	Clearance Distance L ₁ (ft.)	URBAN CONDITIONS			RURAL CONDITIONS		
			Brake To Stop Distance L ₂ (ft.)	Total Decel. Distance L (ft.)	Clearance Distance L ₃ (ft.)	Brake To Stop Distance L ₂ (ft.)	Total Decel. Distance L (ft.)	Clearance Distance L ₃ (ft.)
35	25	70	75	145	110	—	—	—
40	30	80	75	155	120	—	—	—
45	35	85	100	185	135	—	—	—
50	40/44	105	135	240	160	185	290	160
55	48	125	—	—	—	225	350	195
60	52	145	—	—	—	260	405	230
65	55	170	—	—	—	290	460	270

NOT TO SCALE

EXHIBIT 212-1
01/01/2018