APOPKA PLANNING COMMISSION AGENDA

JUNE 09, 2020 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/channel/UCJKvoQzZuYfgsqrtkpjYLCw

CALL TO ORDER

OPENING AND INVOCATION

APPROVAL OF MINUTES

1. Approve minutes of the Planning Commission meeting held May 19, 2020.

PUBLIC COMMENT PERIOD

TO ACCESS A PUBLIC COMMENT FORM, PLEASE VISIT: http://www.apopka.net/planningcommissionform

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.

LEGISLATIVE

Public Hearings:

1. Apopka Code of Ordinances – Part III – Land Development Code – Glitch Amendments 2
   Applicant: City of Apopka
   Project: To update, clarify and amend the content of the LDC
   Project Manager: James Hitt, FRA-RA, Community Development Director

2. Change of Zoning/KPI Neighborhood Overlay District; Master Plan/Major Development Plan – Park View Place
   From: T (Transitional)
   To: "City" MU-KPI (Mixed Use Kelly Park Interchange)
   Owner: Cantero Holdings, LLC
   Applicant: Jimmy D. Crawford
   Location: 3845 and 4011 Golden Gem Road
   Project: 91.94 +/- acres; 282 single family homes – 121 rear-loaded, 161 front-loaded
   Project Manager: Bobby Howell, AICP, Senior Planner

3. Comprehensive Plan – Large Scale – Future Land Use Amendment – Floridian Town Center - Commercial
   From: "County" Rural
   To: "City" Commercial (Max. 0.25 Floor Area Ratio)
   Owners: Collier Benge Joint Venture LLC; Williams Family Trust
   Applicant: GAI Consultants, Inc., c/o Andrew McCown
   Location: North of West Orange Blossom Trail, west of S.R. 429
   Project: 23.73 +/- acres; +/- 258,419 sq. ft. non-residential
   Project Manager: Phil Martinez, Planner II

4. Comprehensive Plan – Large Scale – Future Land Use Amendment – Floridian Town Center - Residential
   From: "County" Rural
   To: "City" High Density Residential - 15 (0-15 du/ac)
   Owners: Collier Benge Joint Venture LLC; Williams Family Trust; Eugene and Willie Williams
   Applicant: GAI Consultants, Inc., c/o Andrew McCown
   Location: North of West Orange Blossom Trail, west of S.R. 429
   Project: 50.2 +/- acres; 753 Dwelling Units (Residential High, 0-15 du/ac)
   Project Manager: Phil Martinez, Planner II

5. Comprehensive Plan – Small Scale – Future Land Use Amendment
   From: "County" Rural
   To: "City" Industrial (Max. 0.60 FAR)
   Owner: AED Dewar Nursery 2019 Trust
   Applicant: Lowndes Law Firm, c/o Tara Tedrow
   Location: North of East Keene Road, west of Clarcona Road
   Project: 4.94 +/- acres; +/- 129,111 sq. ft. non-residential
   Project Manager: Phil Martinez

6. Change of Zoning
   From: T (Transitional)
   To: I-L (Light Industrial District)
   Owner: AED Dewar Nursery 2019 Trust
   Applicant: Lowndes Law Firm, c/o Tara Tedrow
   Location: North of East Keene Road, west of Clarcona Road
   Project: 4.94 +/- acres; +/- 129,111 sq. ft. non-residential
   Project Manager: Phil Martinez

Site Plans:

1. Major Development Plan – Coral Hills Road Self Storage
   Owner: A Space Storage Clarcona, LLC
   Applicant: RCE Consultants, Inc., c/o Larry Poliner, P.E.
   Location: 2200 Coral Hills Road
   Project: 9.0 +/- acres; Self-storage facility developed in two phases
   Project Manager: Jean Sanchez, Planner II

2. Plat – Hidden Lake Reserve Subdivision
   Owner: TGINF, LLC
   Applicant: M/I Homes of Orlando, LLC, c/o David Brown
   Engineer: Madden, Moorhead and Stokes, Inc., c/o Chadwyck H. Moorhead, P.E.
   Location: 501 Old Dixie Highway
   Project: 13.57 +/- acres; 92 Townhome Units within 18 buildings (8 buildings with 4 units and10 buildings with 6 units); Minimum Living Area: 1,350 square feet; Maximum Building Height: 35 feet
   Project Manager: Jean Sanchez, Planner II

3. Final Development Plan – Lakeside, Phase 1
   Owner: Avatar Properties, Inc.
   Applicant: Appian Engineering, LLC., c/o Luke M. Classon, P.E.
   Location: South of Marshall Lake, west of SR 451
   Project: 114.29 +/- acres; 177 single-family homes
   Project Manager: Bobby Howell, AICP, Senior Planner

QUASI-JUDICIAL

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 MAY 19, 2020, AT 5:30 P.M. IN THE CITY COUNCIL CHAMBERS, APOPKA, FLORIDA.

MEMBERS PRESENT: James Greene, William Gusler, Linda Laurendeau, Robert Ryan, Butch Stanley, and Howard Washington

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

STAFF PRESENT: Michael Rodriguez, Esq. – City Attorney, James Hitt, FRA-RA – Community Development Director, Robert Hippler – IT Director, Robert Shelton – Network Engineer, Kelly Robertson – Web Content/Social Media Analyst, David Moon, AICP – Planning Manager, Bobby Howell, AICP – Senior Planner, and Jeanne Green – Recording Secretary

OTHERS PRESENT: Julie Kendig, Kim Walsh, Teresa Sargeant, Jason Lews, James Taylor, Will Blaine, and Bill Blaine.

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

APPROVAL OF MINUTES: Chairperson Greene asked if there were any corrections or additions to the regular meeting minutes of April 14, 2020, at 5:30 p.m.

Motion: **Butch Stanley made a motion to approve the Planning Commission minutes from the regular meeting held on April 14, 2020, at 5:30 p.m. and seconded by Linda Laurendeau. Aye votes were cast by James Greene, William Gusler, Linda Laurendeau, Robert Ryan, Butch Stanley, and Howard Washington (6-0)**

PUBLIC COMMENT: Chairperson Greene opened the meeting to Public Comment.

Chairperson Greene stated there was an Intent to Speak form submitted online from Dan Charlotte with the following comments:

> "I have few concerns about a south Apopka area that's orange county district and not part of Apopka corporation. Its that area that's past South Apopka on Sheeler road going into seminonal county. That area really needs some TLC. That area has not seen much improvement in years. There are some new developments like ambergate that came along and uplifted that area however, much more improvement can be done. Trees are not trimmed or falling apart, Streets lights are extremely dark which cause potential opportunity for crime, and trash everywhere. I hope something can be done to redevelop that area especial with a propose city center that is being build to bring business opportunity to south Apopka with is really in demand. Hope to see some positive results hear and finally a change in south Apopka."

No one else spoke.

LEGISLATIVE - COMPREHENSIVE PLAN – TEXT AMENDMENT – FUTURE LAND USE ELEMENT – POLICY 3.1.i - COMMERCIAL - Chairperson Greene stated this is a request to recommend approval of a text amendment to the City of Apopka Comprehensive Plan, Future Land Use Element, Policy 3.1.i – Commercial; and recommend transmittal to the Florida Department of Economic Opportunity.

Staff Presentation: David Moon, AICP, Planning Manager, stated this is a request to recommend approval of a text amendment to the City of Apopka Comprehensive Plan, Future Land Use Element, Policy 3.1.i – Commercial; and recommend transmittal to the Florida Department of Economic Opportunity.

A text amendment to the Comprehensive Plan, per Florida Statute 163, is processed similar to a large-scale future land use amendment. After recommendation from the Planning Commission, the City Council transmits the amendment to the Florida Department of Economic Opportunity and other State agencies for a determination of consistency with State planning policies.

Based on a growing national need for assisted living facilities, nursing homes and independent care facilities to accommodate an aging population, an amendment to the Commercial Future Land Use Designation, Policy 3.1.i of the Future Land Use Element, will expand opportunities where such care facilities can locate within the City of Apopka.

The proposed amendment will allow assisted living facilities, nursing homes and independent care facilities within the Commercial FLUM District subject to Planning Commission approval of a special exception permit.

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.

In response to questions by Commissioner Stanley, Mr. Rodriguez, City Attorney, stated that although Commission Stanley works for the Agency for Health Care Administration (AHCA) there would be no conflict of interest associated with his voting since the agency does not regulate the locations of these types of living facilities.

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

Motion: **Butch Stanley made a motion to recommend approval of a text amendment to the City of Apopka Comprehensive Plan, Future Land Use Element, Policy 3.1.i – Commercial; and recommend transmittal to the Florida Department of Economic Opportunity. Motion Seconded by William Gusler. Aye votes were cast by James Greene, William Gusler, Linda Laurendeau, Robert Ryan, Butch Stanley, and Howard Washington (6-0)**

LEGISLATIVE – CHANGE OF ZONING; ASSIGNMENT OF THE KPI NEIGHBORHOOD OVERLAY DISTRICT; MASTER PLAN/MAJOR DEVELOPMENT PLAN – PARK VIEW PLAN – Chairperson Greene stated this is a request to find the proposed Rezoning, Master Plan/Major Development Plan consistent with the Comprehensive Plan and Land Development Code and Neighborhood Overlay District; and recommend approval of the rezoning of the subject parcels from Transitional (T) to Mixed-Use Kelly Park Interchange (MU-KPI); assign the Neighborhood Overlay District, and the Master Plan/Major Development Plan based on the findings and facts presented in the staff report and exhibits subject to the applicant obtaining a Capacity Enhancement Agreement (CEA) from Orange County Public Schools prior to City Council Second and Final Reading for the property owned by Cantero Holdings, LLC and located at 3845 and 4011 Golden Gem Road.

Staff Presentation: David Moon, AICP, Planning Manager, stated that staff is requesting that this item be pulled from the agenda because an advertising deadline was missed. He stated that the item would be re-advertised and rescheduled for the regular Planning Commission meeting on June 9, 2020.

The Planning Commission unanimously agreed to pull the item from the agenda and reschedule it for the June meeting.

LEGISLATIVE – PUD MASTER PLAN AMENDMENT – MID-FLORIDA LOGISTICS PARK - Chairperson Greene stated this is a request to find the PUD Master Plan amendment consistent with the Comprehensive Plan and Land Development Code; and recommend approval of the amendment to the Mid-Florida Logistics Park Planned Unit Development Master Plan based on the Conditions of Approval and findings and facts presented in the staff report for the property owned by Mid-Florida Freezer Warehouses LTD and the Mid-Florida Logistics Park Property Owners Association, generally located on the west side of SR 429, south of General Electric Road, and east of Hermit Smith Road.

Staff Presentation: David Moon, AICP, Planning Manager, stated this is a request to find the PUD Master Plan amendment consistent with the Comprehensive Plan and Land Development Code; and recommend approval of the amendment to the Mid-Florida Logistics Park Planned Unit Development Master Plan based on the Conditions of Approval and findings and facts presented in the staff report for the property owned by Mid-Florida Freezer Warehouses LTD and the Mid-Florida Logistics Park Property Owners Association, generally located on the west side of SR 429, south of General Electric Road, and east of Hermit Smith Road. The applicants are Bluescope Properties and Kimley-Horn and Associates. The future land use is Industrial and the zoning is PD (Planned Development). The existing use is a platted 5-Lot Industrial Park as indicated on the Mid-Florida Logistics Park Plat. The proposed uses are 1,781,060 square feet of industrial buildings to be developed in multiple phases. The tract size is 189.00 +/- acres.

On October 18, 2018, the City Commission approved a PUD Master Plan for Mid-Florida Logistics Park, which detailed the construct a subdivision consisting of five industrial warehouse buildings totaling 2,406,095 on property located west of SR 429, south of General Electric Road and east of Hermit Smith Road. On February 20, ,2019 City Council approved an amendment to the PUD Master to accomplish the following request from the developer: 1) reduce the overall permitted square footage from 2,406,095 square feet to 2,342,566 square feet, 2) relocate Building 2 into an east-west configuration from a north-south configuration, and extend Building 5 further to the east and rename Building 5 to Building 5A and 5B, 3) reconfigure two public rights-of-ways proposed for construction on the property. Following the City's approval of this amendment, the developer commenced construction of the industrial park and platted the five lots.

The amended PUD Master Plan proposes a new total building floor area of 1,781,060 square feet, down from a total of 2,342,566 square feet with the previous amendment. .At this time the developer requests to amend the PD Master Plan to accomplish the following:

a. Increase lot area of Lot 3 to accommodate the Amazon" Last Mile" Distribution Center, and reduce the area of Lot 4.

b. Change maximum building floor area assigned for both Lot 3 and Lot 4 based on the change to lot area for each. (Lot 3 is larger and Lot 4 is smaller as a result of the amendment.).

c. Obtain additional right-of-way for the south side of General Electric Road.

d. Landscape buffer along General Electric Road will decrease from a width of 15 feet to 10 feet to accommodate the additional five-feet of right-of-way for General Electric Road.

e. Lot 3 and Lot 4 driveway locations at Hermits Smith Road and Shelby Industrial Drive area shifted to accommodate Amazon site plan and the new lot design for Lot 3 and 4.

The proposed PUD Master Plan Amendment provides an industrial subdivision consisting of five lots accommodating a proposed 1,781,060 square feet, previously 2,342,566 square feet. No other substantial changes are proposed to the Master Plan other than those listed above in paragraphs a. to f.

Deviations: Deviation No. 3, approved with the February 2020 Master Plan, is proposed to be revised to reduce the landscape buffer along General Electric Road from a minimum of 15 feet wide to 10 feet wide. Any deviations must be consistent with the policies of the Comprehensive Plan.

3. LDC, Section 2.02.15.F. Yard requirements - Front yard – 25-feet, side yard – 10-feet, Yards adjacent to road right-of-way shall be a minimum of 25-feet, Rear Yard – 10-feet (30-feet adjacent to residential)

   The applicant is proposing 15-foot landscape buffer along General Electric Road, Hermit Smith Road to main entrance, 0-feet to 10-feet adjacent to SR 429, 10-feet to 25-feet adjacent to Peterson Road, 10-feet adjacent to Fern Industrial Drive.

   The amended Master Plan proposes reducing the landscape buffer along General Electric Road from 15 feet wide to 10 feet wide to add additional right-of-way to General Electric Road.

   The following justification has been provided: "The northwestern portion of the site is constrained by the encroachment of General Electric Road. SR 429 has 300-feet of right-of-way, 6 lanes, and provides a 20-foot high barrier to adjacent property to the east."

Roadway locations have not changed. Driveway locations have been modified for Lots 3 and 4 to accommodate the Amazon site plan.

An updated traffic impact analysis was prepared to address the change in traffic impacts generated from the proposed Amazon Distribution Center. Improvements needed to accommodate the new or revised road improvements will be addressed within a transportation or development agreement that will be reviewed and approved by City Council.

Conditions set forth in the existing PUD Ordinance No. 2709 are unchanged. That the zoning classification of the following described property be designated as Planned Unit Development (PUD), as defined in the Apopka Land Development Code, and with the following Master Plan provisions remain in effect from the PUD Ordinance No. 2709:

A. Zoning Standards - The following uses are permitted within the PUD district:

1. All permitted uses allowed under the I-1 Industrial zoning district;

2. The uses allowed by the "Developer's Agreement for Development of Copart, Inc. Apopka Property," as recorded as document number 20160275220 within the official records of Orange County, Florida, shall be available uses within this PUD if the Copart Developer's Agreement is terminated with the mutual consent of City Council and the property owner subject to the Copart Developer's Agreement;

3. Long-term outdoor vehicle (bus, car, cab, and truck) storage and terminal use is permitted within the PU as an accessory use if said vehicle parking is associated with an enclosed building having a minimum floor area of 10,000 square feet and located within the same Lot or abutting lots. All vehicles stored outdoors must be operable.

B. The following uses are Prohibited within the PUD district:

1. Flea markets
2. Day-care centers except when provided solely for on-site employees
3. Churches
4. Public or private schools (K-12th grade) except when located within a stand-alone building
5. Community residential homes
6. All prohibited uses for the I-1 zoning district (1993 LDC)

C. Special Exceptions: As set forth by Ordinance No. 2079 except if listed as a permitted or prohibited uses above.

Should any conflict occur between the Ord. No. 2709 Master Plan and the amended Master Plan, Ordinance No. 2709 shall apply with the exception to Lot 3 and 4. Should any conflict occur between Ord. No. 2709 and the amended Master Plan regarding Lot 3 and 4, the amended Master Plan shall apply.

The conditions of approval are:

1. Future improvements to General Electric Road will require stormwater capacity to accommodate water quality treatment and attenuate stormwater runoff from new impervious areas. The Property Owners Association for Mid-Florida Logistics Park will allow the City to use any available capacity within Ponds "A" and "B" for this stormwater runoff if requested by the City With the replat of Lot 3 and 4 of the Mid-Florida Logistic Park Plat, the Owner of Lot 3 and the Property Owners Association will grant an easement to the City to accommodate any underground stormwater drainage pipes to direct stormwater runoff from General Electric Road to Pond "A".

2. A development agreement for off-site transportation improvements, any other off-site improvements (if any), infrastructure schedule and any project phasing must be approved by City Council and recorded according to the schedule set forth by the City Administrator.

3. A re-plat of the Mid Florida Logistics Lots 3 and 4 and Tract "A" Stormwater Pond shall be approved by City Council and recorded prior to issuance of the first certificate of occupancy.

4. A five-foot wide sidewalk along General Electric Road, and next to the northern project line of Lot 3, shall be constructed within the road right-of-way, as demonstrated through the Final Development Plan.

5. Deviation No. 3 of the Master Plan, as addressed in the Staff Report, shall be revised to establish a minimum landscape buffer width of ten feet adjacent to General Electric Road right-of-way.

6. A five-foot wide strip of land shall be dedicated to the City along the northern edge of Lot 3.

7. At the time of the replat of Lot 3 and 4, a portion of the Pond "A" tract shall be dedicated to the City to accommodate right-of-way for that portion of Hermit Smith Road pavement and shoulder currently traversing the Pond "A" tract. The perimeter of the right-of-way dedication shall be determined at the time of the re-plat.

The proposed use of the property and the amendment to the PUD Master Plan is consistent with the proposed Industrial Future Land Use designation and is consistent with the Land Development Code, other than the deviations listed on the Master Plan.

Pursuant to the Joint Planning Area agreement, notification to Orange County was notified through distribution at the time of the original PUD zoning. The amendments do not create any substantial change to the density or intensity granted by the change of zoning necessitating special notice to Orange County. Therefore, Orange County was notified through distribution of the DRC agenda.

The Development Review Committee finds the proposed amendment to the Planned Unit Development (PUD) Master Plan consistent with the Comprehensive Plan and Land Development Code and recommends approval of the amendment to the Mid-Florida Logistics Park PUD Master Plan.

Staff recommended the Planning Commission find the amendment consistent with the Comprehensive Plan and Land Development Code; and recommend approval of the amendment to the Mid-Florida Logistics Park Planned Unit Development Master Plan based on the Conditions of Approval and findings and facts presented in the staff report for the property owned by Mid-Florida Freezer Warehouses LTD and the Mid-Florida Logistics Park Property Owner Association, located on the west side of SR 429, south of General Electric Road, and east of Hermit Smith Road

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.

In response to a question by Commissioner Ryan, Mr. Moon stated that Hermit Smith Road becomes a private road at the entrance to the Boughan Brothers, Inc.

In response to a question by Commission Washington, Mr. Moon stated the portion of Hermit Smith Road that runs north of Raynor Shine Recycling is private.

Jason A. Lewis, P.E., Kimley-Horn and Associates, Inc., 116 South Kentucky Avenue, Lakeland, stated that he represented the property owner. He stated they agree with staff and he was available to answer any questions.

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

Motion: **Linda Laurendeau made a motion to find the PUD Master Plan amendment consistent with the Comprehensive Plan and Land Development Code; and recommend approval of the amendment to the Mid-Florida Logistics Park Planned Unit Development Master Plan based on the Conditions of Approval and findings and facts presented in the staff report for the property owned by Mid-Florida Freezer Warehouses LTD and the Mid-Florida Logistics Park Property Owners Association, generally located on the**

west side of SR 429, south of General Electric Road, and east of Hermit Smith Road. Motion seconded by Howard Washington. Aye votes were cast by James Greene, William Gusler, Linda Laurendeau, Robert Ryan, Butch Stanley, and Howard Washington (6-0)

LEGISLATIVE – PRELIMINARY DEVELOPMENT PLAN – DFL5 APOPKA LAST MILE - Chairperson Greene stated this is a request to find the DFL5 Apopka Last Mile Preliminary Development Plan consistent with the 1993 Land Development Code, the Mid-Florida Logistics Park PD Master Plan and Comprehensive Plan; and recommend approval of the Preliminary Development Plan subject to the Conditions of Approval and the findings of the staff report for the property owned by Mid-Florida Freezer Warehouses, Ltd. and located at 2050 and 3150 Shelby Industrial Drive.

Staff Presentation: Bobby Howell, AICP, Senior Planner, stated this is a request to find the DFL5 Apopka Last Mile Preliminary Development Plan consistent with the 1993 Land Development Code, the Mid-Florida Logistics Park PD Master Plan and Comprehensive Plan; and recommend approval of the Preliminary Development Plan subject to the Conditions of Approval and the findings of the staff report for the property owned by Mid-Florida Freezer Warehouses, Ltd. and located at 2050 and 3150 Shelby Industrial Drive. The applicant is Kimley-Horn and Associates c/o Jason A. Lewis, P.E. The future land use is Industrial and the zoning is PD (Planned Development). The existing use is vacant land and the proposed use is a 201,475 square feet distribution facility for an e-commerce retailer. The floor area ratio is 0.07 (0.25 Maximum). The applicable code is the 1993 Land Development Code and the Mid-Florida Logistics Park PD Master Plan. The tract size is 41.55 +/- acres.

A Preliminary Development has been submitted for Lot 3 and a portion of Lot 4 of the Mid-Florida Logistics Park, which details the construction of a 201,475 square foot distribution facility for an e-commerce retailer with delivery occurring by vans dispatched from and stored on-site. The City Council approved a PD Master Plan/Preliminary Development Plan/Preliminary Site Plan for Mid-Florida Logistics Park on February 20, 2019, which details the development of the property as a five (5) lot industrial park subdivision with up to 2,342,566 square feet of building floor area. The Mid-Florida Logistics Park is located west of SR 429, south of General Electric Road and east of Hermit Smith Road. All elements of the Preliminary Development Plan are consistent with the approved PD Master Plan/Preliminary Development Plan/Preliminary Site Plan. The development of the property will necessitate an amendment to the Mid-Florida Logistics Park PD Master Plan to accommodate lot line reconfigurations that are related to this project.

Access to the site is located via two access points along General Electric Road, and two access points along Shelby Industrial Drive. A 5-foot wide sidewalks will be constructed along both General Electric Road and Shelby Industrial Drive. A 5-foot wide strip of right-of-way will be dedicated along the portion of the property located on General Electric Road to help facilitate improvements to General Electric Road.

The Mid-Florida Logistics Park subdivision has a master stormwater plan that is consistent with the approved PD Master Plan/Preliminary Development Plan/Preliminary Site Plan, and accommodates stormwater retention for all lots within the subdivision. Two tracts located on the northwestern and northeastern corners of the subdivision are reserved for stormwater retention. The stormwater retention areas are owned and maintained by the property owner's association. The closest retention pond, known as Pond "A" is located to the southwest of the proposed development.

The PDP proposes the development of a 201,475 square foot distribution facility for an e-commerce retailer where delivery vans will be dispatched from and stored on site. A total of 1,554 parking spaces will be provided at the project site. Of this, 422 associate/employee parking spaces will be provided on the northeastern corner of the site adjacent to the intersection of Shelby Industrial Drive and General Electric

Road. 1,132 van storage spaces are provided on the northwestern and southern portion of the site. 160 van loading, and 160 van staging spaces are provided on site adjacent to the main distribution building. 15 trailer/box truck loading spaces are provided adjacent to the south side of the main distribution building.

The landscaping is consistent with the approved PD Master Plan/Preliminary Development Plan/Preliminary Site Plan, trees including Red Maple, Crepe Myrtle, Dahoon Holly, Southern Magnolia, Slash Pine, and Live Oak are provided on site. A landscape bufferyard will be provided along General Electric Road and Shelby Industrial Drive, and along the southern property line.

A Development Agreement for the DFL-5 project is currently being drafted and will primarily address surrounding roadway network improvements, and will be presented to the City Council concurrent with the PD Master Plan amendment.

The conditions of approval:

1. The Final Development Plan shall identify location of a vehicle wash area and demonstrate that associated effluent will be directed to the City's wastewater treatment system. The vehicle wash system shall utilize water-saving recycling technology per FDEP standards.

2. A development agreement for off-site transportation improvements, any other off-site improvements (if any), infrastructure schedule and any project phasing must be approved by City Council and recorded.

3. City Council approval of the Amended Mid Florida Logistics Park PD Master Plan.

4. A re-plat of the Mid Florida Logistics Lots 3 and 4 and Tract "A" Stormwater Pond shall be approved by City Council and recorded prior to issuance of the first certificate of occupancy for Lot 3.

5. A five-foot wide sidewalk along General Electric Road and next to the northern protect line of Lot 3 shall be constructed within the road right-of-way, as demonstrated in the Final Development Plan.

The Development Review Committee recommends approval of the DFL5 Apopka Last Mile Preliminary Development Plan, subject to the Conditional of Approval above and the findings of this staff report.

Staff recommended the Planning Commission find the DFL5 Apopka Last Mile Preliminary Development Plan consistent with the 1993 Land Development Code, the Mid-Florida Logistics Park PD Master Plan and Comprehensive Plan; and recommend approval of the Preliminary Development Plan subject to the Conditions of Approval and the findings of this staff report.

The role of the Planning Commission for this development application is to advise the City Council to approve, deny, or approve with conditions based on consistency with the Comprehensive Plan and Land Development Code.

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.

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

Motion: **Linda Laurendeau made a motion to find the DFL5 Apopka Last Mile Preliminary Development Plan consistent with the 1993 Land Development Code, the Mid-Florida Logistics Park PD Master Plan and Comprehensive Plan; and recommend approval of the Preliminary Development Plan subject to the Conditions of Approval and the findings of the staff report for the property owned by Mid-Florida Freezer Warehouses, Ltd. and located at 2050 and 3150 Shelby Industrial Drive. Motion seconded by William Gusler. Aye votes were cast by James Greene, William Gusler, Linda Laurendeau, Robert Ryan, Butch Stanley, and Howard Washington (6-0)**

OLD BUSINESS:

James Hitt, FRA-RA, Community Development Director, announced that he would be presenting the next round of Land Development Code "Glitch" amendments at the June 9, 2020, Planning Commission meeting for recommendations.

NEW BUSINESS: None

ADJOURNMENT: The meeting was adjourned at 6:00 p.m.

_____
James Greene, Chairperson

_____
James K. Hitt, FRA-RA
Community Development Director

CITY OF APOPKA
PLANNING COMMISSION

___ CONSENT AGENDA
_X_ PUBLIC HEARING
___ SPECIAL REPORTS
___ OTHER:

MEETING OF: June 9, 2020
FROM: Community Development
EXHIBITS: "A" – Glitch Summary List
"B" – Ordinance No. 2775

SUBJECT: **APOPKA LAND DEVELOPMENT CODE AMENDMENTS**

REQUEST: **RECOMMEND APPROVAL TO THE 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 No. 2700 approving the update for the Land Development Code (LDC). On January 15, 2020, the City Council adopted the first set of "glitch" amendments to update, clarify and amend the content of the LDC.

This request is for the second set of amendments that staff has identified to help with those clarifications. The amendments effect seven of the 10 Articles and Appendix A – Kelly Park Interchange Form-Based Code, and about 14 Sections within those Articles. Because of the length of each section and sub-section being recommended for amendments, staff has provided a *Glitch Amendment #2 Summary List* (Exhibit "A") and the full Ordinance No. 2775 (Exhibit "B") for reference.

The approval process timeline:

- Planning Commission ~ June 9, 2020 at 5:30 PM
- City Council ~ 1st Reading, July 1, 2020 at 1:30 PM
- City Council ~ 2nd Reading/Adoption, July 15, 2020 at 7:00 PM

The Zoning Map amendment is being worked on by staff and expect to bring that to Planning Commission and City Council in late summer 2020, along with Comprehensive Plan changes later in 2020.

FUNDING SOURCE:

Not applicable

DISTRIBUTION

Mayor Nelson	Finance Director	Public Services Director
Commissioners	HR Director	Recreation Director
City Administrator	IT Director	City Clerk
Community Development Director	Police Chief	Fire Chief

RECOMMENDATION ACTION:

Recommend approval of the Apopka Land Development Code update to the Apopka City Council.

EXHIBIT "A"

Apopka Land Development Code

"Glitch" Amendment # 2 Summary List:

Article 2: Administration
Section 2.4 Standard Review Procedures
2.4.7. Schedule of Public Hearing and Public Notification
Table 2.4.7: Required Public Hearing

- Change Plats to "S" Standard. Allows plats to be on consent agenda

Section 2.5 Application – Specific Review Procedures and Decision Standards
2.5.4 Permits

- Corrects section number and item (driveway or sidewalk) reference.

Article 4: Use Regulations
Section 4.2 Principal Uses
Table 4.2.2C: Principal Use Table

- Adds Assisted Living Facilities and Nursing Homes as a Special Exception in the C-C Community Commercial zoning district. Adds Commercial vehicle sales and rentals to I-L

4.2.3. – Standards Specific to Principal Uses.
C. Residential Uses
1. Household Living Uses
b. Accessory Dwelling Units

- Add new districts for Accessory Dwelling Units (ADU)

e. Dwelling, single-family

- Increase the minimum SF units for recreation requirements (pools) from 100 to 250 units.

4.3.4. – Standards Specific to Accessory Uses and Structures
19. Swimming Pool (as an accessory use)

- Clarifies setback for a pool deck and the pool itself.

Article 5: Development Standards
Section 5.1. – Off-Street Parking, Bicycle Parking, and Loading Standards
5.1.10. – Vehicle Stacking Spaces and Lanes
Table 5.1.10.A.1.

- Increases the stacking spaces for restaurants, fast food, etc. from 4 to 8

Section 5.6. – Exterior Lighting
5.6.2. – Applicability
3. Streetlight Assessment

- Adds new section requiring streetlight assessment for new developments.

Section 5.14. - Utilities
5.14.3. – Utility Excavation, Trenching and Backfilling

- Corrects the names for the Apopka Utilities Design and Construction Standards Manual

Section 5.16. – Miscellaneous Standards
5.16.5. – Traffic Impact Analysis (TIA)

- Adds Bicycle and pedestrian facilities information and requirements.

NEW SECTION:
Section 5.17. – General Development Design and Improvement Provisions

- For site development, including grading.

Article 6: Environmental Standards
Section 6.7 – Stormwater Management Systems
6.7.2. Design Base

- Updates the rainfall amount from 11.3 to 11.8 (FEMA requirement)
- Table 6.7.4.A.1 Adds 4:1 slope and 4-feet depth to table.

Article 7: Concurrency Management System
Section 7.1 – Consistency and Concurrency Management Determinations
7.1.5. Level of Service (LOS) Standards

- C.1.a. – Updates the rainfall amount from 11.3 to 11.8 (FEMA requirement)
- C.2. – Updates rainfall discharge time and amounts

Article 8 – Nonconformities
Section 8.5. – Nonconforming Signs

- Updates nonconforming sign language

Article 10 – Definitions and Rules of Measurement
Section 10.2. – Rules of Measurement
10-2-4. – Exceptions and Variations

- Adds easement language
- Table 10.2.4.B – updates shed size from 100 sq. ft. to 120 sq. ft. to reflect building permit size limits.

Appendix A – Mixed Use Kelly Park Interchange (MU-KPI) Form-Based Code
E. – Review Process

- Updated to Section 2.4 – Standard Review Procedures

ORDINANCE NO. 2775

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF APOPKA, FLORIDA, AMENDING THE CODE OF ORDINANCES OF THE CITY OF APOPKA BY AMENDING PART III – LAND DEVELOPMENT CODE, ARTICLE 2, SECTION 2.4.7 SCHEDULING OF PUBLIC HEARING AND PUBLIC NOTIFICATION; BY AMENDING PART III, ARTICLE 2, SECTION 2.5.2 SITE DEVELOPMENT AND PLATTING; BY AMENDING PART III, ARTICLE 2, SECTION 2.5.4 PERMITS; BY AMENDING PART III, ARTICLE 4, SECTION 4.2.2 PRINCIPAL USE TABLE; BY AMENDING PART III, ARTICLE 4, SECTION 4.2.3. STANDARDS SPECIFIC TO PRINCIPAL USES, BY AMENDING PART III, ARTICLE 4, SECTION 4.3.4. STANDARDS SPECIFIC TO ACCESSORY USES AND STRUCTURES; BY AMENDING PART III, ARTICLE 5, SECTION 5.1.10 VEHICLE STACKING SPACES AND LANES; BY AMENDING PART III, ARTICLE 5, SECTION 5.6.2. APPLICABILITY; BY AMENDING PART III, ARTICLE 5, SECTION 5.14.3. UTILITY EXCAVATION, TRENCHING AND BACKFILLING; BY AMENDING PART III, ARTICLE 5, SECTION 5.16.5. TRAFFIC IMPACT ANALYSIS (TIA); BY CREATING PART III, ARTICLE 5, SECTION 5.17. GENERAL DEVELOPMENT DESIGN AND IMPROVEMENT PROVISIONS; BY AMENDING PART III, ARTICLE 6, SECTION 6.7.2. DESIGN BASE; BY AMENDING PART III, ARTICLE 6, SECTION 6.7.4. SLOPES; BY AMENDING PART III, ARTICLE 7, SECTION 7.1.5 LEVEL OF SERVICE (LOS) STANDARDS; BY AMENDING PART III, ARTICLE 8, SECTION 8.5. NONCONFORMING SIGNS; BY AMENDING PART III, ARTICLE 10, SECTION 10.2.4. EXCEPTIONS AND VARIATIONS; BY AMENDING PART III, APPENDIX A MIXED USE KELLY PARK INTERCHANGE (MU-KPI) FORM-BASED CODE, PARAGRAPH E REVIEW PROCESS; 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 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

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

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

(Words in ~~strike through~~ type are deletions; words in <u>underscore</u> type are additions; asterisks (****) indicate an omission from the existing text which is intended to remain unchanged.)

SECTION I: Article 2, Section 2.4.7 of the Land Development Code, Code of Ordinances, City of Apopka is hereby amended to read as follows:

2.4.7 Scheduling of Public Hearing and Public Notification

A. Public Hearing Scheduling

1. Table 2.4.7.A, Required Public Hearings, identifies the types of applications that require public hearings under this LDC, the review bodies responsible for conducting those public hearings, and the type of required public hearing (standard or quasi-judicial).

TABLE2.4.7.A: REQUIRED PUBLIC HEARINGS
S:STANDARD PUBLIC HEARING Q: QUASI-JUDICIAL PUBLIC HEARING

PROCEDURE	BOARD CONDUCTING PUBLIC HEARING	
	CITY COUNCIL	PLANNING COMMISSION
Discretionary Approvals		
Text Amendment	S	S
Map Amendment		
General	S	S
Site Specific	Q	S
Planned Development	Q	S
Special Exception	-	Q
Site Development and Platting		
Major Development Plan		
Preliminary	Q	S
Final	Q	-
Plat	~~Q~~ S	S
Plat Vacation	-	~~Q~~ S
Relief		
Variance (Zoning)	-	Q
Appeal	Q	-

2. If an application is subject to a public hearing in accordance with Table 2.4.7.A: Required Public Hearings, the Director shall ensure that the public hearing on the application is scheduled for a regularly scheduled meeting of the body conducting the hearing or a meeting specially called for that purpose by such body.

3. The public hearing on the application shall be scheduled so there is sufficient time for any required Technical Staff Report to be prepared and distributed in accordance with Sec. 2.4.6.B.1, Technical Staff Report, and for public notification in accordance with this subsection.

* * * *

SECTION II: Article 2, Section 2.5.2 of the Land Development Code, Code of Ordinances, City of Apopka is hereby amended to read as follows:

2.5.2 Site Development and Platting

* * * *

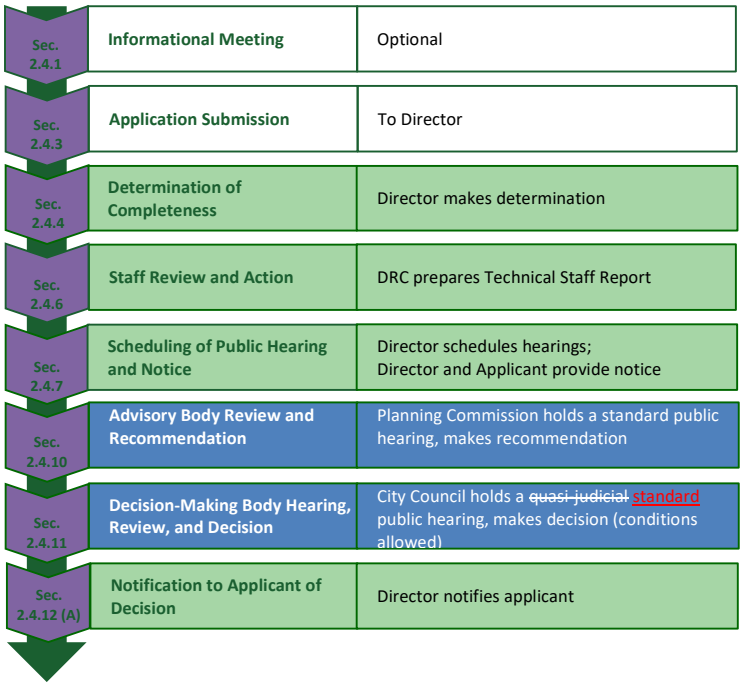
B. Plat (Subdivision)

* * * *

3. Plat (Subdivision) Procedure

This subsection identifies additions or modifications to the standard review procedures in Sec. 2.4, Standard Review Procedures, that apply to a plat. Figure 2.5.2.B.3 identifies key steps in the plat procedure.

Figure 2.5.2.B.3: Plat (Subdivision) Procedure



a. **Informational Meeting**
Optional (See Sec. 2.4.1, Informational Meeting).

* * * *

k. **Decision-Making Body Hearing, Review and Decision**
Applicable (See Sec. 2.4.11, Decision-Making Body Hearing, Review, and Decision). The City Council reviews the application at a ~~quasi-judicial~~ standard hearing and makes a decision based on the review standards in Sec. 2.5.2.B.4, Plat (Subdivision) Review Standards. The City Council's decision shall be one of the following:

1. Approval of the application; or
2. Denial of the application.

* * * *

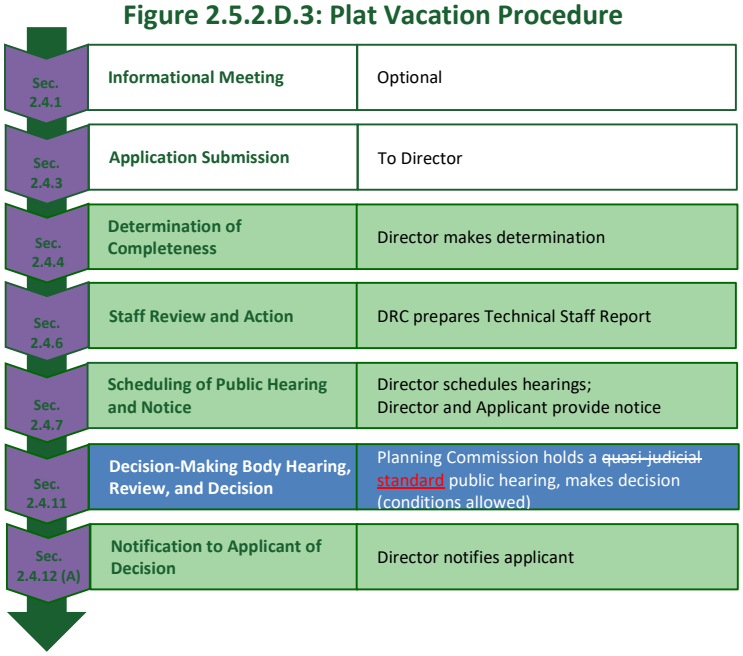
D. Plat Vacation

* * * *

3. Plat Vacation Procedure

This subsection identifies additions or modifications to the standard review procedures in Sec. 2.4, Standard Review Procedures, that apply to a plat vacation. Figure 2.5.2.D.3 identifies key steps in the plat vacation procedure.

Figure 2.5.2.D.3: Plat Vacation Procedure



a. **Informational Meeting**

Optional (See Sec. 2.4.1, Informational Meeting).

* * * *

k. **Decision-Making Body Hearing, Review and Decision**

Applicable (See Sec. 2.4.11, Decision-Making Body Hearing, Review, and Decision). The Planning Commission reviews the application at a ~~quasi-judicial~~ standard hearing and makes a decision based on the review standards in on Sec. 2.5.2.D.4, Plat Vacation Review Standards. The Planning Commission's decision shall be one of the following:

1. Approval of the application; or
2. Denial of the application.

* * * *

SECTION III: Article 2, Section 2.5.4 of the Land Development Code, Code of Ordinances, City of Apopka is hereby amended to read:

2.5.4 Permits

* * * *

E. Driveway and Sidewalk Permit

1. Purpose. The purpose of this section is to establish a uniform mechanism for ensuring that all development complies with the driveway and sidewalk standards in Sec. 5.13, Roads, Streets, Sidewalks, and Bikeways.

* * * *

4. Driveway and Sidewalk Review Standards.

An application for a driveway and sidewalk permit shall be approved upon a finding the applicant demonstrates by competent substantial evidence the proposed ~~fence or wall~~ driveway or sidewalk complies with all applicable standards in this section and Section ~~5.5 – Fences and Walls.~~ 5.13. – Roads, Streets, Sidewalks, and Bikeways.

*** * * ***

SECTION IV: Article 4, Section 4.2.2 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

[REMAINDER OF PAGE LEFT INTENTIONALLY BLANK]

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
																			MU-ES							
		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	NM	GT	RTE	INST	PR	AIR	PD	
Rural and Agricultural																										
Agriculture/Forestry Uses	Agricultural production	P	P																							
	Apiaries	P	P	P											S	P	P									4.2.3.B.1.a
	Community garden	P	P	P	P	P	P	P	P	P		P	P		P	P		P				P	P			4.2.3.B.1.b
	Forestry	P	P	P																						
	Greenhouse and nursery	P	P	P																						
	Keeping horses or ponies	P	P	P																						4.2.3.B.1.c
	Other agricultural use	P	P																							
Agricultural/Forestry-Related Uses	Agriculture research facility	P																			P					
	Agritourism ([ch.] 570, Fla. Stat.)	P		P																						
	Equestrian center	P																							A	4.2.3.B.1.d
	Farm distribution hub	P																								
	Farm supply sales and farm machinery/implement sales, rental, or repair	P														P										

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	Farm winery	P		P																					A	
	Riding stable	P		P																					A	4.2.3.B.1.e
	Rural corporate retreat	P		P																					A	
Open Space Uses	Arboretum or botanical garden		P	P	P	P	P	P	P			P			P	P									A	
	Cemetery	P	P																		S	P	S		A	4.2.3.B.2.a
	Park		P	P	P	P	P	P	P	P	P	P	P	P	P			P			P	P	P		A	
Residential																										
Household Living Uses	Accessory dwelling unit																	S								4.2.3.C.1.b
	Dwelling, live-work							P	P	P	P	P	P	P	P			P	P	P	P				A	4.2.3.C.1.a 4.2.3.C.1.b
	Dwelling, mobile home									P																4.2.3.C.1.a 4.2.3.C.1.d
	Dwelling, multifamily							P	P		P	P	P	P	P			P	P	P	P				A	4.2.3.C.1.a
	Dwelling, single-family detached	P	P	P	P	P	P	P										P	P	P					A	4.2.3.C.1.a 4.2.3.C.1.e
	Dwelling, townhome							P	P			P	P	P	P			P	P	P	P				A	4.2.3.C.1.a
	Dwelling, two-family (duplex)						P	P											P	P	P				A	4.2.3.C.1.a 4.2.3.C.1.e.2

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Group Living Uses	Assisted living facility	S		S	S	S	S	S	S			S						S	P	P	S				A	4.2.3.C.2.a
	Adult living facility, extended congregate care	S		S	S	S	S	S	S			S						S	S	S	S				A	4.2.3.C.2.a
	Adult foster home	S		S	S	S	S	S	S			S						S	S	S	S				A	4.2.3.C.2.a 4.2.3.C.2.b
	Boardinghouse or roominghouse	S		S	S	S	S	S	S			S						S	S	S	S					4.2.3.C.2.a
	Child foster home	S		S	S	S	S	S	S			S						S	S	S	S				A	4.2.3.C.2.a
	Continuing care retirement community	S		S	S	S	S	S	S			S						S	P	P	S				A	4.2.3.C.2.a 4.2.3.C.2.c
	Emergency shelter or home	S		S	S	S	S	S	S			S						S	S	S	S				A	4.2.3.C.2.a
	Family day care home	S		S	S	S	S	S	S			S						S	S	S	S				A	4.2.3.C.2.a
Public, Civic, and Institutional																										
Communications Uses	Broadcasting studio											P		P	P	P		P		P	P				A	
	Newspaper/periodical publishing establishment											P	P	P	P	P		P		P	P				A	
	Wireless telecommunications tower	See Sec. 70-24 Approved Uses and Sec. 70-25 Special Exceptions, of the Code of Ordinances																								4.2.3.D.1.a

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Community Service Uses	Adult day care facility	S		S	S	S	S	P	P		S	P	P	P	P			P	P	P	P				A	4.2.3.D.2.a
	Child care facility	S		S	S	S	S	P	P		S	S	S	S	S			P	P	P	P				A	4.2.3.D.2.b
	Club or lodge											P		P	P	P		P	P	P	P				A	
	Community center/facility							P	P			P	P	P	P			P	P	P	P		P		A	
	Cultural facility	S					S	S	P		S	P		P	P			P	P	P	P	P			A	
	Emergency services facility						S	P	P			P	P	P	P	P	P	P	P	P	P	P			A	
	Philanthropic institution							S	S		S	P			P			P	P	P	P	P			A	
	Post office	S							S		S	P	P	P				P	P	P	P	P			A	
	Place of worship	S		S	S	S	S	S	S		S	P	P	P	P			S	S	S	S	S			A	4.2.3.D.2.b.7
Educational Uses	Boarding school														P					P		P			A	
	College or university								S			P	P		P			S	S	P	P	P			A	
	School, elementary, middle, or high	S		S	S	S	S	S	P		S	P	S	P	P			P	P	P	P	P			A	
	Vocational or trade school	S						S	P			S	S	S	S	P		S	S	S	S	P			A	
Health Care Uses	Clinic	S						S	P		P	P	P	P	P	P		P	P	P		P			A	
	Hospital								S			P		P	P			P			P	P			A	4.2.3.D.3.a

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	Medical or dental lab							S	P			P	P	P	P	P		P		P	P	P			A	
	Medical marijuana dispensary																									
	Nursing home facility							S	S			S							P	P	P	P			A	4.2.3.D.3.b
Transportation Uses	Airport																							P		4.2.3.D.4.a
	Heliport																					S		P	A	4.2.3.D.4.b
	Park and ride facility											P		P	P	P		P		P	P				A	
	Parking facility (as a principal use)											P		P	P	P		P	S	S	S	P	P	P	A	4.2.3.D.4.c
	Terminal														P	P		P						P	A	
Utility Uses	Solar energy collection facility (large-scale)	P														P	P								A	
	Utility facility, major	P	P						S			P		S	P	P	P	S			S				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				A	
Commercial																										
Adult Uses	Adult book store or video store	See Chapter 10, Article III, Division 4. Locational Requirements, of the Code of Ordinances																								4.2.3.E.1
	Adult entertainment																									

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Animal Care Uses	Animal shelter	P										P		P	P	P	P			P	P				A	
	Kennel	P										P		P	P	P	P			P	P				A	4.2.3.E.2.a
	Kennel, hobby	P																			P				A	
	Pet beauty parlor								P		S	P		P	P	P		P	P	P	P				A	
	Veterinary hospital or clinic											P		P	P	P		P	P	P	P				A	4.2.3.E.2.b
Business Support Service Uses	Business service center								P			P	P	P	P	P		P	P	P	P				A	
	Conference or training center												P	P	P			P		P	P				A	4.2.3.E.3.a
	Data processing facility								P			P	P	P	P	P		P	P	P	P				A	
	Employment or travel agency								P			P	P	P	P			P	P	P	P				A	
	Telephone call center												P			P									A	
Eating or Drinking Establishment Uses	Alcoholic beverage establishments								P		P	P	P	P	P			P	P	P	P				A	4.2.3.E.4.a 4.2.3.E.4.b
	Brewpub or microbrewery								P		P	P	S	P	P			P	P	P	P				A	4.2.3.E.4.a 4.2.3.E.4.c
	Restaurant							S	P		P	P	P	P	P	P		P	P	P	P				A	4.2.3.E.4.a
	Restaurant, drive-in											P		P	P			S		P	P				A	4.2.3.E.4.a 4.2.3.E.4.d

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																			MU-ES							
		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	NM	GT	RTE	INST	PR	AIR	PD	
	Restaurant, fast food											P		P	P					P	P				A	4.2.3.E.4.a
Funeral and Mortuary Services Uses	Crematory													P	P	P	P								A	
	Funeral home or mortuary											P		P	P	P	P	P		P	P				A	
Office Uses	Contractor's office														P	P	P		P	P	P				A	
	General business								P		S	P	P	P	P	P		P	P	P	P				A	
	Office, professional								P		P	P	P	P	P	P		P	P	P	P				A	
Personal Service Uses	Art, music, dance, or martial arts studio/school								P		P	P		P	P	P		P	P	P	P				A	
	Beauty salon or barber shop								P		P	P	P	P	P			P	P	P	P				A	
	Confectionery store, ice cream, candy								P		P	P	S	P	P			P	P	P	P				A	
	Dry cleaning or laundry drop-off/pick-up establishment								P		P	P		P	P	P		P	P	P	P				A	
	Fortune telling establishment													P	P				P	P					A	
	Laundry, self-service								P		P	P		P	P			P	P	P					A	

Table 4.2.2.C: Principal Use Table
P= permitted use
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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
																			MU-ES							
		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	NM	GT	RTE	INST	PR	AIR	PD	
	Lawn care, pool, or pest control service													P	P	P		S		P					A	
	Massage establishment								P					P	P				P	P	P				A	
	Nail care establishment								P		P	P		P	P			P	P	P	P				A	
	Pawnshop														P					P	P				A	
	Personal or household goods repair establishment								P		P	P		P	P			P		P	P				A	
	Tanning salon								P					P	P			S	P	P	P				A	
	Tattoo or body-piercing establishment													P	P				P	P					A	
	Taxidermy													P	P	P									A	
	Tobacco shop								P		P	P	S	P	P			S	P	P	P				A	
	Vape/Hookah lounge																	S								
Recreation/Entertainment Uses	Arena, stadium, or amphitheater															S		P				S	S		A	4.2.3.E.5.a
	Cinema								P		S	P		P	P			P	P	P	P				A	
	Country club	P		P	P	P						P			P										A	
	Golf course	P	P	P	P	P	P	P							P						P		P		A	

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		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	NM	GT	RTE	INST	PR	AIR	PD	
	Golf driving range	P		P								P			P						P		P		A	
	Nightclub								P		S	P		P	P			P	P	P					A	
	Performance arts theater								P		S	P		P	P			P	P	P		P			A	
	Recreation facility, indoor								P			P		P	P	P	P	P	P	P	P		P		A	
	Recreation facility, outdoor	P					S	P	S			P			P	P				P	P		P		A	4.2.3.E.5.b
Retail Sales and Service Uses	Alcoholic beverage establishments	See alcoholic beverage establishments under Eating or Drinking Establishment Uses																								4.2.3.E.6.a
	Bank or other financial institution								P		P	P	S	P	P	P		P	P	P	P				A	4.2.3.E.6.b
	Check cashing business													P	P			P	P	P	P					0
	Consumer goods establishment								P		S	P		P	P			P	P	P	P				A	
	Drug store or pharmacy								P		P	P	S	P	P			P	P	P	P				A	
	Farmers' market	P							P		S	P		P	P			P	P	P	P				A	4.2.3.E.6.d
	Flea market														S	S	S				S				A	4.2.3.E.6.e
	Grocery store and food market								P		P	P		P	P			S	P	P	P				A	

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																			MU-ES							
		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	NM	GT	RTE	INST	PR	AIR	PD	
Vehicle Sales and Service Uses	Automobile service station								S			S		P	P	P	P	S		P	P				A	4.2.3.E.7.a
	Car wash (enclosed)											S		S	S											
	Commercial fuel depot														P		P									4.2.3.E.7.b
	Commercial vehicle repair and maintenance														P		P								A	4.2.3.E.7.c
	Commercial vehicle sales and rentals														P	P	P								A	
	Personal vehicle repair and maintenance											P		P	P										A	4.2.3.E.7.b.1
	Personal vehicle sales and rentals											P		P	P										A	4.2.3.E.7.e
	Taxi or limousine service facilities											P		P	P	P									A	
	Vehicle equipment and supplies sales and rentals											P		P	P		P								A	
	Vehicle paint finishing shop															P	P									
	Vehicle or trailer storage yard														S		P									

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	Vehicle towing or wrecker service														S		P									
Visitor Accommodation Uses	Bed & breakfast	S		S	S	S	S											P		P	P				A	
	Hotel or motel								P			P			P			P	P	P	P				A	
Water-Related Uses	Boat sales, rental, service, or repair													P	P		P								A	4.2.3.E.8.a
	Boat storage yard														P		P								A	
	Marina			S											P	P					P				A	
	Waterfront fuel sales			S											P	P									A	
Industrial																										
Extraction Uses	Surface mining																S									4.2.3.F.1 4.2.3.F.2.a
Industrial Service Uses	Building, heating/air conditioning, plumbing, or electrical contractor's storage yard															P	P	S								4.2.3.F.1
	Dry-cleaning, laundry, or carpet-cleaning plant															P	P									4.2.3.F.1 4.2.3.F.3.a
	Educational, scientific, or												P	P		P		P	P	P	P					4.2.3.F.1

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																			MU-ES							
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	industrial research and development																									
	Fuel oil or bottled gas distribution																S									4.2.3.F.1
	Fuel oil storage																P									4.2.3.F.1
	General industrial services (enclosed)															P	P	S								4.2.3.F.1
	Heavy equipment sales, rental, repair, servicing or storage															S	S									4.2.3.F.1
	Machine shop															P	P	S								4.2.3.F.1
	Metal-working, welding, plumbing, or gas, steam, or water pipe fitting															P	P	S								4.2.3.F.1
	Repair of scientific or professional instrument											P		P	P	P		P			P					4.2.3.F.1
Manufacturing and Production Uses	Asphalt plant																P									4.2.3.F.1
	Bakery													P	P	P	P	P								4.2.3.F.1
	Brewery or distillery													P	P	P	P	P			P				A	4.2.3.F.1
	Concrete batching plant																P									4.2.3.F.1

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																			MU-ES							
		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	NM	GT	RTE	INST	PR	AIR	PD	
	Food processing or beverage bottling															S	P								A	4.2.3.F.1
	Manufacturing, assembly, or fabrication, heavy																P				P					4.2.3.F.1
	Manufacturing, assembly, or fabrication, light															P	P	S								4.2.3.F.1 4.2.3.F.4.a
Warehouse and Freight Movement Uses	Consolidated storage (self-service storage)												S		S	P	P									4.2.3.F.1 4.2.3.F.5.b
	Moving and storage facility															P	P									4.2.3.F.1
	Outdoor storage (as a principal use)														S	S	P									4.2.3.F.1 4.2.3.F.5.a
	Warehouse, distribution															P	P	S			P					4.2.3.F.1
	Warehouse, storage															P	P	S			P					4.2.3.F.1
Waste-Related Uses	Composting facility															P	P								A	4.2.3.F.1
	Incinerator																P									4.2.3.F.1
	Land clearing debris disposal facility																P									4.2.3.F.1

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																			MU-ES							
		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	NM	GT	RTE	INST	PR	AIR	PD	
	Recovered materials processing facility																P									4.2.3.F.1 4.2.3.F.6.b
	Recycling drop-off center														S	P	P								A	4.2.3.F.1 4.2.3.F.6.a
	Salvage/recycling facility																P									4.2.3.F.1
	Solid waste transfer station														P	P	P									4.2.3.F.1 4.2.3.F.6.c
Wholesale Uses	Showroom, wholesale														P	P	P	S			P					4.2.3.F.1
	Other wholesale use															P	P	S								4.2.3.F.1

SECTION V: Article 4, Section 4.2.3 of the Land Development Code, Code of Ordinances, City of Apopka is hereby amended to read as follows:

4.2.3. - Standards Specific to Principal Uses

* * * *

C. Residential Uses

1. Household Living Uses

a. **All Household Living Uses**

All household living uses. All residential developments shall include an entrance feature complementary to and in keeping with the character and scale of the proposed development. Entrance features shall be provided at both primary and secondary entrances and shall contain signage that complies with the standards of this LDC. The major component of the entrance features shall be supplemental landscaping materials with appropriate irrigation systems, but other treatments may also be utilized. Entrance features shall be reviewed and approved by the DRC and the City Council during review of the final development plan.

b. Accessory Dwelling Unit (ADU)

1. Zoning District. A property owner may request approval to allow one accessory dwelling unit in the ~~MU-D Downtown district only.~~ following districts:

   (a) MU-D, Downtown district.

   (b) Ag, Agriculture (minimum one-acre).

   (c) RCE, Residential Country Estate (minimum one-acre).

   (d) RSF-1A, Residential Single-Family – Estate (one-acre minimum).

2. Existing Development on Lot. A single-family dwelling shall exist on the lot or will be constructed in conjunction with the ADU. The ADU is treated as a second principal use on the lot.

3. Location. The ADU may be attached to or detached from the principal dwelling.

4. Size. The ADU shall have a maximum gross floor area of 500 square feet in the MU-D zoning district, and 1,000 square feet in the Ag, RCE or RSF-1A zoning districts.

5. Owner Occupancy Required; Declaration of Restrictions. The property owner shall occupy either the principal structure or the ADU. Prior to the issuance of a building permit for construction of an ADU, an applicant shall record in the public records of Orange County a declaration of restrictions containing a reference to the legal description of the property and the deed under which the property was conveyed to the present owner stating that:

(a) The ADU shall not be sold or conveyed separate from the principal residence;

(b) The ADU is restricted to the approved size;

(c) The use permit for the ADU shall be in effect only so long as either the principal residence or the ADU is occupied by the owner of record as their principal residence;

(d) The declarations shall run with the land, shall be binding upon any successor in ownership of the property and that noncompliance shall be cause for code enforcement and/or revocation of the conditional use permit;

(e) The deed restrictions shall only be removed with the express, written approval of the City, but shall lapse upon removal of the accessory unit; and

(f) The ADU shall not be used for commercial purposes other than being leased for residential purposes.

6. Number per Lot or Parcel. Only one ADU shall be allowed for each lot or parcel.

7. Setbacks. The ADU shall meet the front, side and rear yard regulations for the zoning district in which it is located.

8. A mobile home or similar off-site constructed dwelling unit shall not be used as an ADU.

* * * *

e. Dwelling, single-family detached

1. Subdivisions with more than 20 single-family detached dwelling units shall include a neighborhood "pocket park" within the development. Pocket parks shall be provided at the rate of one park for every 100 units or less, and shall be sized as follows:

(a) 20—25 units: the equivalent of one lot

(b) 26—50 units: the equivalent of 1.5 lots

(c) 51—75 units: the equivalent of two lots

(d) 76—100 units: the equivalent of 2.5 lots

(e) Developments with more than 100 units shall provide the required number of parks, sized based on the increments listed above.

Each park shall provide both passive and active recreational opportunities. If a development is proposed to be phased, the required park shall be constructed in the phase in which the need is originally generated. Parks are to be constructed prior to 25 percent "build-out" of any subdivision or phase. If more than one park is required, the developer may request that the City Council consider the aggregation of all or a portion of the required parks into one or more larger parks.

2. Subdivisions with ~~100~~ 250 or more single-family detached dwelling units shall provide a community outdoor swimming pool. Land for the pool and surrounding area may be counted toward compliance with the requirement of subsection d.1, above.

3. In addition, subdivisions with ~~100~~ 250 or more single-family dwelling units shall provide one of the following recreation amenities for every ~~25~~ 50 dwelling units above ~~75~~ 250:

   (a) Tennis court;

   (b) Other outdoor sports facility (racquetball, pickleball, basketball, shuffleboard, bocce, or similar facility), in multiples or combination at least equal to the size of a tennis court~~.~~;

   (c) Playground or tot lot;

   (d) Outdoor fitness stations; or

   (e) Picnic or rest area with shaded shelter;

   Subdivisions required to provide more than one facility shall provide a variety of the options above. Subdivisions with ~~150~~ 300 or more single-family detached dwelling units may substitute a second pool for three required recreation amenities. Land used for this subsection may be counted toward compliance with the requirement of subsection d.1, above.

* * * *

2. **Group Living Uses**

a. **All Group Living Uses.**

Any group living use subject to approval of a special exception permit in accordance with Sec. 2.5.1.G, Special Exception Permit, shall comply with the following standards, in addition to those required for approval of a special exception permit.

1. In general:

   (a) The facility shall conform to all applicable building and fire codes and ordinances whether federal, state, county or City.

   (b) The facility shall comply with all applicable laws of the Florida Department of Health and Rehabilitative Services.

   (c) The facility shall comply with to all applicable requirements of this LDC, the City Code of Ordinances, and all applicable City licensing requirements.

   (d) The facility shall comply with Ch. 419, Fla. Stat., including notice requirements.

2. The external appearance of all structures and the building site on which the facility is located shall be consistent with the general character of the district in which it is located. Exterior building materials, building bulk, landscaping, fences and walls, parking areas,

and general design of the facility shall all be visually and functionally compatible with the surrounding uses.

3. The facility shall not be occupied by any person who has been convicted of, entered a plea of guilty or nolo contendere to, or has been found guilty by reason of insanity of a forcible felony under Ch. 776, Fla. Stat., a felony of the second degree under Ch. 800, Fla. Stat., or any of the sex offenses set forth under Ch. 794, Fla. Stat., regardless of whether an adjudication of guilt on imposition of sentence was suspended, deferred, or withheld.

4. Signage shall comply with Sec. 5.10 ~~Sec. 5.11~~, Signs.

* * * *

c. **Continuing care retirement community**

1. Age restrictions on community residents shall comply with the federal Fair Housing Act.

2. The number of nursing care beds shall not be more than 20 percent of the total number of permitted dwelling units.

3. The community may include retail commercial uses as ancillary to the principal residential and healthcare uses.

4. A minimum of 20 percent of the community's land area shall be devoted to outdoor open space, indoor or outdoor recreation facilities, and indoor or outdoor social-oriented amenities, including community centers. Such areas shall be located so as to be safely and conveniently accessible to community residents.

5. Each outdoor area intended for active recreation shall have a minimum area of 5,000 square feet and minimum dimension of 50 feet.

6. Nursing homes and assisted living facilities may be allowed as a special exception in the commercial land use category and consistent with the Land Development Code, with a maximum intensity of 2.0 FAR. Shall be the primary use and a stand-alone development.

* * * *

D. Public, Civic, and Institutional Uses

* * * *

3. Health Care Uses

a. Hospital.

A hospital shall comply with the following standards:

1. Be located on at least three acres of land.

2. Have direct vehicular access onto an arterial street, or provide adequate ingress and egress to the site as determined by the DRC.

3. Have a minimum street frontage of 200 feet.

4. Design vehicular access, circulation systems, and exterior signage to provide safe and separate emergency vehicle access to the hospital, with minimal conflicts with other vehicular or pedestrian traffic in the area.

5. Locate principal structures at least 100 feet from any property line.

b. Nursing home facility.

A nursing home facility shall comply with the following standards:

1. Have direct vehicular access to and from an arterial or collector street. Any vehicular access to or from any local street, shall be located and designed to inhibit its regular use.

2. Include security provisions (e.g., fencing) that restricts patients from leaving the property without authorization.

3. Comply with all applicable State laws regarding licensing and operation.

4. Nursing homes and assisted living facilities may be allowed as a special exception in the commercial land use category and consistent with the Land Development Code, with a maximum intensity of 2.0 FAR. Shall be the primary use and a stand-alone development.

* * * *

SECTION VI: Article 4, Section 4.3.4 of the Land Development Code, Code of Ordinances, City of Apopka is hereby amended to read as follows:

4.3.4. - Standards Specific to Accessory Uses and Structures

* * * *

B. Standards for Specific Accessory Uses and Structures

*** * * ***

19. **Swimming Pool (as an accessory use)**

a. An outdoor swimming pool accessory to a single-family dwelling may be located in a required side or rear yard except that it shall be set back at least ~~eight~~ five feet from the rear lot line and five feet from all side lot lines. With the exception of the five-foot side lot setback provisions, the requirements from Table 10.2.4.B, Allowable Encroachments into Required Yards/Build-to Zones, 2.b Rear deck, porch, patio or terrace (screened or unscreened), shall be adhered to.

b. An outdoor swimming pool accessory to a use other than a single-family detached dwelling shall comply with the minimum yard depth requirements for a principal building and any applicable locational standards in provisions ~~d and e~~ c below.

c. An outdoor swimming pool accessory to a townhome or multifamily development is subject to the following additional standards:

* * * *

SECTION VII: Article 5, Section 5.1.10 of the Land Development Code, Code of Ordinances, City of Apopka is hereby amended to read as follows:

5.1.10. - Vehicle Stacking Spaces and Lanes

A. Drive-Through and Similar Facilities

1. Required Number of Stacking Spaces.

In addition to meeting the off-street vehicular parking standards in Table 5.1.6.A: Minimum Number of Off-Street Vehicular Parking Spaces, uses with drive-through facilities and other auto-oriented uses where vehicles queue up to access a service facility shall provide at least the minimum number of stacking spaces established in Table 5.1.10.A.1: Minimum Stacking Spaces for Drive-Through and Similar Facilities.

Table 5.1.10.A.1: Minimum Stacking Spaces for Drive-Through and Similar Facilities

Use or Activity [1]	*Minimum Number of Stacking Spaces*	*Measured From*
Assisted living facility and Adult living facility, extended congregate care	3 spaces	Primary location for pick-up/drop-off
Automobile service station	1	Each end of the outermost gas pump island
Bank or financial Institution, with drive-through facility or with automated teller machine (ATM) as an accessory use	4 per lane	Teller window or teller machine
Consumer goods establishment, with drive-through facility	4 per lane	Agent window
Continuing care retirement community	3 spaces	Primary location for pick-up/drop-off
Elementary, middle, or high school Vocational or trade school	6 spaces	Primary Building entrance, if this is the primary location for student pick-up/drop-off
	8 spaces	Designated student waiting area, if this is the primary location for student pick-up/drop-off
Gated driveway (for any principal use)	3	Gate

Table 5.1.10.A.1: Minimum Stacking Spaces for Drive-Through and Similar Facilities		
Use or Activity [1]	*Minimum Number of Stacking Spaces*	*Measured From*
Personal vehicle repair and maintenance, specifically with car wash and auto detailing, automatic	4 per bay	Bay entrance
Personal vehicle repair and maintenance, specifically with car wash and auto detailing, self-service	2 per bay	Bay entrance
Personal vehicle repair and maintenance, specifically with oil change/lubrication shop	3 per bay	Bay entrance
Recycling center	3 per bay	Bay entrance
Restaurant, fast food restaurant, drive-in, or restaurant with drive-through facility [2]	~~4~~ 8	Order box
Other	Uses not specifically listed are determined by the Director based on standards for comparable uses, or alternatively based on a parking demand study	
Notes: [1] See Article 4: Use Regulations. [2] ~~Restaurants with drive-through facilities shall provide at least four additional~~ Stacking spaces between the order box and the pick-up window, unless otherwise approved by the Community Development Director or the DRC-Development Review Committee with validation through a transportation impact analysis.		

* * * *

SECTION VIII: Article 5, Section 5.6.2 of the Land Development Code, Code of Ordinances, City of Apopka is hereby amended to read as follows:

5.6.2. Applicability

A. General.

Unless exempted in accordance with Sec. 5.6.2.A.2, below, the standards of this section apply to:

1. All new development in the City; and

2. Any individual expansion or alteration of a building existing prior to March 6, 2019 if the expansion increases the building's floor area by 50 percent or more, or the alteration involves 50 percent or more of the building's floor area (including interior alterations).

B. Streetlight Assessment

1. All developments with public streets shall be required to enter into a Streetlight Special Assessment Agreement whereas the developer shall pay the streetlight assessment for the

subdivision until such time that each individual lot is sold or conveyed, at which time the new owner shall be assessed the proportionate share of the street lights.

2. After conveyance of the HOA to the subdivision's HOA, the unsold lots assessments shall be paid by the subdivision HOA. Each lot or parcel within the subdivision, except any City-owned lift stations or similar City sites, shall pay their proportionate share of the streetlight costs.

~~B~~ C. Exemptions

The following types of lighting are exempted from the standards of this section:

* * * *

SECTION IX: Article 5, Section 5.14.3 of the Land Development Code, Code of Ordinances, City of Apopka is hereby amended to read as follows:

Section 5.14.3. Utility Excavation, Trenching and Backfilling

This work shall be in accordance with the City of Apopka Utilities Design and Construction ~~Design~~ Standards Manual which is incorporated by reference into this LDC.

SECTION X: Article 5, Section 5.16.5 of the Land Development Code, Code of Ordinances, City of Apopka is hereby amended to read as follows:

5.16.5. Traffic Impact Analysis (TIA)

* * * *

B. Applicability

1. Each new development which generates more than 400 average daily trips, or at the discretion of the Director will potentially create significant transportation-related impacts on the City's transportation network, shall be required to submit a transportation impact analysis (TIA) with a development plan (major or minor) (Sec. 2.5.2.A, Development Plan (Major and Minor)) or plat (Subdivision)(Sec. 2.5.2.B, Plat (Subdivision)), whichever occurs first.

2. The TIA shall be prepared by a qualified transportation planner or professional engineer, in accordance with a methodology of transportation planning and engineering accepted by the Director. The expense of preparing the TIA is the responsibility of the owner or developer. The TIA shall be reviewed for accuracy and content by Director prior to its acceptance by the City. The cost of the review by the City's consultant is also the responsibility of the owner/developer.

3. TIA requirements shall include the following, along with a description of the methodology, practices, and principles utilized in determining the findings:

a. Existing Conditions

* * * *

d. Transportation-Related Improvements

1. **Access Improvements.**
Access improvements needed to ensure established LOS standards are maintained. For the purpose of this section, access improvements are road improvements necessary to provide safe and adequate ingress and egress for efficient traffic operations. Access improvements include, but are not limited to, the following:

(a) Rights-of-way and easements;

(b) Left and right turn lanes;

(c) Acceleration and deceleration lanes;

(d) Traffic control devices, signage, and markings; and

(e) Drainage and utilities as they relate to transportation improvements.

2. **Off-site or Near-site Improvements.**
Off-site or near-site road improvements needed to ensure established LOS standards are maintained in addition to impact fees to satisfy concurrency requirements. However, there shall be a rebuttal presumption that a left turn lane shall be required for all residential and nonresidential developments unless waived by the City Council. A right-turn lane shall be provided at each driveway when the speed limit equals or exceeds 35 miles per hour or if the development will generate 100 or more right-turn movements during the peak hour or if required by the City Engineer, unless waived by the City Council. Increased storage and transition queue lengths (waiting vehicle storage) may be required by the City Engineer to provide for additional storage, based upon a peak hour entering volume greater than 150 vehicles in the peak hour.

3. **On-site Improvements.**
On-site improvements needed to ensure safe and adequate ingress and egress to the site. On-site improvements are road improvements located within the boundaries of the specific parcel proposed for development, and road improvements which provide direct access (turn lane, taper, signalization, right-of-way dedication, etc.). They are the total responsibility of the developer and exclusive of the transportation impact fee.

4. **Traffic Signals.**
Traffic signals need to maintain established LOS, and ensure the roads and streets function properly. Traffic signals are optical communications (3-M) devices that are installed at all intersections requiring signaling devices for traffic control and to accommodate emergency vehicle responses. The terms and agreement of the installation of the devices are the responsibility of the developer and/or part of the transportation network and shall be coordinated through the Fire Department.

5. **Bicycle and Pedestrian Improvements.**
On site and off-site provisions shall be provided in accordance with City codes. City trail systems . . .

e. **Conclusions and Recommendations.**
Recommended improvements and mitigating measures made necessary by the proposed development ensuring the roadway network of the area does not fall below the established

level of service standard. On-site and off-site ~~R~~road improvements include but are not limited to:

1. Road widening;
2. Provision of turning, acceleration, and deceleration lanes;
3. Signalization;
4. Regulation of signage; ~~and~~
5. New roadway construction; and
6. Bicycle and pedestrian facilities and safety improvements.

* * * *

SECTION XI: Article 5, Section 5.17 of the Land Development Code, Code of Ordinances, City of Apopka is hereby created to read as follows:

Section 5.17. General Development Design and Improvement Provisions

5.17.1. Purpose

The purpose of this article is to provide development design and improvement standards applicable to all development activity within the City of Apopka.

5.17.2. Responsibility for improvements.

All improvements required by this article shall be designed, installed and paid for by the developer. A professional engineer registered in the State of Florida qualified by training and experience to practice the engineering disciplines shall be employed to design all required improvements and to provide such professional services during construction as are generally considered to be part of a complete engineering service. All plans for improvements shall be prepared by such engineer and approved by all appropriate agencies including but not limited to the Florida department of environmental regulation, the St. Johns River Water Management District, Florida department of transportation, the City of Apopka or its designated agent or representative and any other agencies having jurisdiction.

5.17.3. Principles of development design.

The provisions of this article are intended to ensure functional and attractive development, to ensure an adequate and efficient supply of utilities, and to provide for safe and convenient vehicular and pedestrian traffic circulation. All development shall not be subject to flooding, poor drainage, erosion, or other conditions detrimental to the health, safety, and general welfare of the public. All development shall be designed to avoid adverse effects of shadow, glare, noise, odor, traffic, drainage, and utilities on surrounding properties.

5.17.4. Inspections and tests.

A. Staged inspections during construction are required, and it shall be the responsibility of the developer or his contractor to notify the city engineering division and arrange for these inspections.

B. Tests which are required under this section shall be performed by a competent engineering testing laboratory which shall have an engineer registered in Florida as one of the responsible officials of the firm.

C. During construction and upon completion of the following construction stages, the owner/developer shall notify the engineering division, police department and zoning division,

when applicable, that each stage is ready for inspection and will await clearance by the engineering division before proceeding to the next stage:

1. Clearing and grubbing;

2. Utility systems;

3. Storm drainage;

4. Removal of unsuitable material;

5. Stabilization of subgrade;

6. Underdrains;

7. Curb and gutter;

8. Inlets, box culverts, and all other concrete structures when steel is in place prior to pouring;

9. Base course during construction or mixing;

10. Finishing base course prior to paving;

11. Wearing surface during application;

12. Cleanup and dressing of right-of-way;

13. Sodding and/or seeding;

14. Traffic control signs;

15. Pavement markings;

16. Final inspections.

D. The city engineer or his designee will require a minimum of 24 hours to schedule inspections.

E. The purpose of these inspections is to ensure compliance with the approved development plan and to verify the roads, storm drainage and utilities qualify for acceptance by the City. The City accepts no responsibility or liability for the work, or for any contractual conditions involving acceptance, payment or guarantees between the contractor and the developer, by virtue of these stage inspections. The City assumes no responsibility or commitment guaranteeing acceptance of the work, or for subsequent failure, by virtue of these stage inspections. However, if any aspect of the work being performed is determined as failing to comply with acceptable standards, corrections will be required by the City inspector as a condition for city acceptance. All required road, storm drainage, and utility improvements shall be installed and have the approval of the engineering division, the public services director, and/or other appropriate department(s) prior to acceptance by the City.

F. Any site work approved by the city to be performed any time other than 8:00 a.m. to 5:00 p.m., Monday through Friday, including holidays, shall be subject to inspections by the engineering

inspector. Should inspections be required, the developer shall be required to pay to the City the cost, based on the hourly salary rate, of the engineering inspector to make any required inspections.

5.17.5. Inspections of private facilities.

Inspections and verifications of private streets, drainage, sidewalks, and utilities in a private development shall be the same as public facilities.

5.17.6 Certificate of acceptance.

After successful completion of all improvements the following documents, as required, shall be submitted to the city engineer prior to the issuance of the certificate of acceptance by the City:

A. Water pressure test results;

B. Satisfactory water bacteriological analysis;

C. Sewer leakage test results;

D. Sewer lamping test results and videotape of same including written report prepared by the firm performing the video inspection;

E. Sewer force main pressure test results;

F. Storm sewer test results;

G. Laboratory test results for road subgrade;

H. Laboratory test results for road base;

I. Asphalt core results;

J. Sidewalk installation or executed sidewalk agreement;

K. DER water clearance letter;

L. DER sewer clearance letter;

M. Gas subordination agreement;

N. As-built drawings comprised of three sets certified blueprints and two sets of reproducibles, in which one set of reproducibles shall be on 11” x 17” paper;

O. Release of liens from the contractors, subcontractors and material suppliers of facilities accepted by the city;

P. Bill of sale for all utilities accepted by the City;

Q. Deed for lift station property;

R. Verification from the electric company that electrical service will be provided;

S. Verification from the telephone company that telephone service will be provided;

T. One-year maintenance bond in the amount of ten percent of all improvements to be owned and maintained by the city, unless otherwise approved by the Director or their designee;

U. Engineering inspection fees will be determined by City Council;

V. Reimbursement for any and all costs for street signs and other public facilities installed by the City;

W. Itemized cost sheet(s) for all facilities;

X. An engineer's certification of completion of all infrastructure improvements in substantial compliance with approved design;

Y. A surveyor's certification that all PRM's and PCP's have been installed; and

Z. Payment of any and all associated fees, permits, taxes, or any other cost as may be imposed by the City.

5.17.7. Responsibility during maintenance period.

All improvements to be owned and operated by the city will be covered by a maintenance bond in the amount of ten percent of the construction costs. The bond will be in the form of a surety bond, cash bond, or irrevocable letter of credit (see City of Apopka Utilities Design and Construction Standards Manual). The bond will be in effect for one year from the date of acceptance by the city. During that maintenance period, the owner/developer will be expected to provide any maintenance required. This includes, but is not limited to:

A. Repair and replacement of any system component, failed section of paving, etc.

B. Control of erosion, replacement of sod, removal of soil washed onto pavement or into drainage system.

5.17.8. Final inspection.

A. Approximately 60 days prior to the expiration of the scheduled one-year maintenance period, but only after formal request by the applicant, the city engineer will schedule a final inspection.

B. Prior to release of the maintenance bond the owner/developer will be required to correct any maintenance problems and design deficiencies which may have manifested themselves during the maintenance period.

5.17.9. Permit exemption.

The City shall be exempt from obtaining all municipal permits for public infrastructure projects.

5.17.10. Permit for mass grading, earthwork, excavation, or fill.

A. A permit for mass grading, earthwork, excavation, or fill shall be issued by the City Engineer prior to performing any of these development or construction activities.

B. The City Engineer shall not issue such a permit until approved by the Development Review Committee. Persons desiring such a permit shall submit a complete application and accurate plans for the proposed work to the City Engineer, who shall forward application and plans to the Development Review Committee. Proposed work shall not obstruct or materially interfere with any floodplain, natural watercourse, lake, water management system, environmentally sensitive area, wetland, roadway system, rights-of-way, or adjacent property.

C. No such permit shall be required for:

1. The installation of utilities;

2. Foundations for any buildings, when building permits have been issued;

3. Drainage ditch and canal maintenance, when permitted by the city;

4. Excavations related to the accessory use of land to be filled upon completion of excavation, such as graves, septic tanks, etc.;

5. Swimming pools in connection with residences, when building permits have been issued;

6. Mass grading, earthwork, excavation, or fill in conjunction with a development that has been formally approved by the City;

7. Any other activity similar in nature to those listed in subsections c.1 through c.6 of this section, when approved by the City; and

8. Any public use by a political subdivision or agency of the United States or state.

D. All work shall be in accordance with approved permits and plans approved by the issuing agency pursuant to this section.

E. For vacant, residential lots that have no impact on floodplain or drainage, a maximum of 1-foot fill may be permitted with City Engineer approval. Maximum area to spread such clean fill is a half-acre.

F. All permits for mass grading, earthwork, excavation, or fill shall be subject to the following requirements:

1. Final Major Development Plan approval from City Council or Final Development Plan approval from the Development Review Committee.

2. Final Construction Plan approved by the issuing agency.

3. Completion of the pre-construction meeting with the City Engineer prior to commencing any construction activity.

4. Submittal and acceptance by the issuing agency a performance bond or other surety that covers 110% of construction cost for the construction entrance, clearing and grubbing, perimeter control, earthwork, restoration plan, and vegetative soil stabilization.

5. Submittal of a tree removal permit issued by the Community Development Director or his designee, if required.

6. Submittal of an Environmental Resource Permit or a formal determination that no permit is required issued by the St. Johns River Water Management District prior to the pre-construction meeting.

7. Submittal and acceptance by the issuing agency of an approved haul route plan if soil will be imported or exported from the project site.

8. Submittal of an issued Florida Department of Environmental Protection Construction Generic Permit and a copy of the permittee's Qualified Stormwater Inspector license.

9. Submittal and acceptance by the issuing agency of a Florida Department of Environmental Protection Stormwater Pollution Prevention Plan.

G. As used in this section, the term "issuing agency" shall mean the City Council or the City Engineer, or such other officer or agency of the city designated by the City Council.

SECTION XII: Article 6, Section 6.7.2 of the Land Development Code, Code of Ordinances, City of Apopka is hereby amended to read as follows:

6.7.2. Design Base

All subdivisions, multifamily, and nonresidential projects must provide for retention and/or detention of stormwater runoff.

A. The post development peak rate of discharge shall not exceed the predevelopment peak rate of discharge for the 25-year, 24-hour storm.

B. Pollution abatement volume shall be in accordance with SJRWMD criteria.

C. Finished floor slab elevations of all habitable structures shall be constructed at least two feet above the 100-year storm elevation.

D. All drainage discharge structures and bleed-down devices shall be designed in accordance with SJRWMD criteria.

E. The City shall receive a copy of the SJRWMD permit before the City grants an approval of final engineering plans.

F. The 25-year/24-hour rainfall amount of 8.6 inches and the 100-year/24-hours rainfall amount of ~~11.3~~ 11.8 inches shall be used in runoff calculations.

G. All retention ponds and detention ponds shall be designed as dry bottom ponds unless otherwise approved by City Council.

H. Retention ponds and detention ponds shall meet the following requirements based on type:

1. Design criteria for pollution abatement utilizing retention or detention with filtration:

a. The bottom of a required retention or detention with filtration pond shall be a minimum of three feet above the estimated seasonal high-water table. Where this is not possible due to a high-water table, underdrains shall be installed with a minimum invert elevation of one foot below the pond bottom, along the entire perimeter of the pond, unless a geotechnical engineer can show to the satisfaction of the City Engineer that a lesser amount of underdrain can adequately control the high-water table.

b. Final design seepage rates shall be determined by a geotechnical engineer. All necessary calculations to support the above shall be submitted to the City Engineer.

2. Design criteria of detention facilities to reduce peak rate of flow for a 25-year/24-hour storm event:

a. The detention pond shall be sized to limit the peak rate of discharge from the developed site to that discharge generated prior to development. Supporting calculations shall be submitted and will contain, as a minimum, runoff hydrographs for the predeveloped site and the post developed site, and a discharge hydrograph after routing through the proposed detention facility. All routing calculations to be submitted must consider the tailwater of the receiving facility. If the receiving facility is an existing storm sewer, the hydraulic gradient line elevation (HGL) of this receiving facility can be assumed at one-half foot below its gutter in elevation unless a detailed study of the existing system indicates otherwise.

b. Credit for seepage to further reduce the peak rate of discharge will not be allowed unless accompanied by supporting documentation prepared by a geotechnical engineer.

c. All detention ponds shall be dry within 72 hours following the storm event.

3. Design criteria where a positive outfall is not available:

a. When a positive outfall is not available for stormwater discharge, the on-site pond shall be designed to retain the 100-year storm event. The pond shall be designed to evacuate a daily volume equivalent to one inch of runoff from the total area contributing to the pond. The pond shall be dry within 11 days following the storm event. If geotechnical data certified by a geotechnical engineer is submitted showing that an 11-day drawdown is impossible to achieve, City Council approval is required.

b. When the project discharges to landlocked lakes that have no positive outfall, which are adjacent to properties of one ownership, on-site detention ponds shall be designed to accommodate the pollution abatement volume as required by the SJRWMD from the developed site prior to discharge. At the request of the City Engineer, the certifying engineer may be required to demonstrate to the satisfaction of the City Engineer any impact of runoff from the developed site upon the landlocked lake(s).

c. When the project discharges to landlocked lakes that have no positive outfall, which are adjacent to properties of more than one ownership, on-site ~~detention~~ retention ponds shall be designed to accommodate the 100-year/24-hours storm (11.8 inches of rainfall)~~. Post development runoff rate and runoff volume shall not exceed predevelopment runoff rate and volume~~. The certifying engineering may be required at the request of the City Engineer to demonstrate to the satisfaction of the City Engineer any impact of runoff from the developed site upon the landlocked lake(s).

SECTION XIII: Article 6, Section 6.7.4 of the Land Development Code, Code of Ordinances, City of Apopka is hereby amended to read as follows:

6.7.4. Slopes

A. Fencing for retention ponds and detention ponds shall be provided as follows:

1. All retention ponds and detention ponds shall be fenced unless they can meet one of the following conditions identified in Table 6.7.4.A.1: Maximum Slope and Excavation Depth.

Table 6.7.4.A.1: Maximum Slope and Excavation Depth	
Maximum Side Slopes	Maximum Excavation Depth (feet)
2:1	2
3:1	3
4:1	4
5:1	5
6:1	—

* * * *

SECTION XIV: Article 7, Section 7.1.5 of the Land Development Code, Code of Ordinances, City of Apopka is hereby amended to read as follows:

7.1.5. Level of Service (LOS) Standards

* * * *

C. Drainage.

Development shall not be approved unless there is sufficient available capacity to sustain the following levels of service (LOS) for drainage as established in the drainage subelement of the comprehensive plan. Adequate stormwater retention is provided as follows:

1. Where no positive outfall is available:

   a. On-site retention for the 100-year, 24-hour storm (~~10.6~~ 11.8 inches of rainfall).

   b. Retention ponds shall be designed to percolate the total runoff volume within 11 days following the rainfall event.

2. When runoff is discharged to a landlocked lake with no positive outfall: on-site ~~detention~~ retention for the ~~25~~ 100-year, ~~96~~ 24-hour storm (~~12~~ 11.8 inches of rainfall).

3. When runoff is discharged to a positive outfall: on-site retention for the 25-year, 24-hour storm (8.6 inches of rainfall)

* * * *

SECTION XV: Article 8, Section 8.5 of the Land Development Code, Code of Ordinances, City of Apopka is hereby amended to read as follows:

Section 8.5. - Nonconforming Signs

8.5.1. ~~General~~ Intent

It is the intent of this section to allow nonconforming signs permitted before the adoption of the ordinance from which this land development code is derived to continue, ~~Nonconforming signs shall be~~ subject to the standards in this section, until they are no longer used, or become hazardous, but not to encourage their survival. Such signs are hereby declared to be incompatible with the overall intent of this chapter. Thereafter, all such nonconforming signs shall be deemed unlawful and prohibited and subject to the enforcement provisions of this article.

8.5.2. Exemptions

Signs that were in existence prior to or on December 6, 1972 (the date of the City's original sign ordinance) are deemed conforming, but shall be subject to the following standards herein.

8.5.3. Enlargement, ~~or~~ Alteration, and Use.

A nonconforming sign shall not:

A. Be enlarged or structurally altered in any way that increases the nonconformity.

B. Expanded.

C. Be structurally changed, but its pictorial content may be changed.

D. Be structurally altered to prolong the life of a sign except to meet safety requirements.

Casual, temporary or illegal use of any sign shall not be sufficient to establish the existence of a nonconforming sign or to create any rights in the continuance of such sign.

8.5.4. Reconstruction or Repair after Damage

The reconstruction or repair of a damaged nonconforming sign shall be subject to the following standards:

A. **Damage up to 50 Percent of Value**.
If a nonconforming sign is damaged by any means to an extent whereby the cost of restoring the sign to its before-damaged condition would be 50 percent or less of its replacement value before the damage, the sign may be reconstructed or repaired if:

1. The reconstruction or repair does not increase, expand, enlarge, or extend the degree of nonconformity; and

2. The reconstruction or repair is begun within ~~one year~~ six consecutive months after the damage and is diligently pursued to completion within eight consecutive months. Building permits as required.

B. **Damage Greater than 50 Percent of Value**

1. If a nonconforming sign is damaged by any means to an extent whereby the cost of restoring the sign to its before-damaged condition would exceed 50 percent of its replacement value before the damage, the sign shall not be reconstructed or repaired, and shall only be replaced with a sign conforming to the ~~except in conformity with the~~ provisions of this LDC.

2. In cases where businesses were in existence in the City under the same name and location prior to 1960, signs may be maintained or replaced even if damaged above 50 percent of their value, but shall be subject to section 8.5.3.

8.5.5. Abandonment or Discontinuance of a Sign

If a nonconforming sign is abandoned or ceases to be used for a period exceeding six consecutive months, it shall not be reestablished and shall only be replaced with a conforming sign. A sign shall be considered abandoned or discontinued if its copy area is no longer readable or comprehensible, or if the on-site business ~~it identifies or advertises~~ ceases to operate for over six months. Abandoned or discontinued signs must be removed within eight months.

8.5.6. Nonconforming Signs Along Federal Highways

If it is determined that a nonconforming sign along a federal interstate or primary aid highway may not be removed in accordance with the above provisions, the City shall develop a plan for their expeditious removal in accordance with state and federal law.

SECTION XVI: Article 10, Section 10.2.4 of the Land Development Code, Code of Ordinances, City of Apopka is hereby amended to read:

10.2.4. - Exceptions and Variations

* * * *

B. **Allowable Encroachments into Required Yards/Build-to Zones**

1. Every part of every required yard shall remain open and unobstructed from the ground to the sky except as otherwise allowed in Table 10.2.4.B, Allowable Encroachments into Required Yards/Build-to Zones, or allowed or limited elsewhere in this LDC.

2. No encroachments are allowed in utility or drainage easements.

3. Encroachments must be set back a minimum of 5 feet from the lot line and not within any utility easement, unless a different distance is required by the building code.

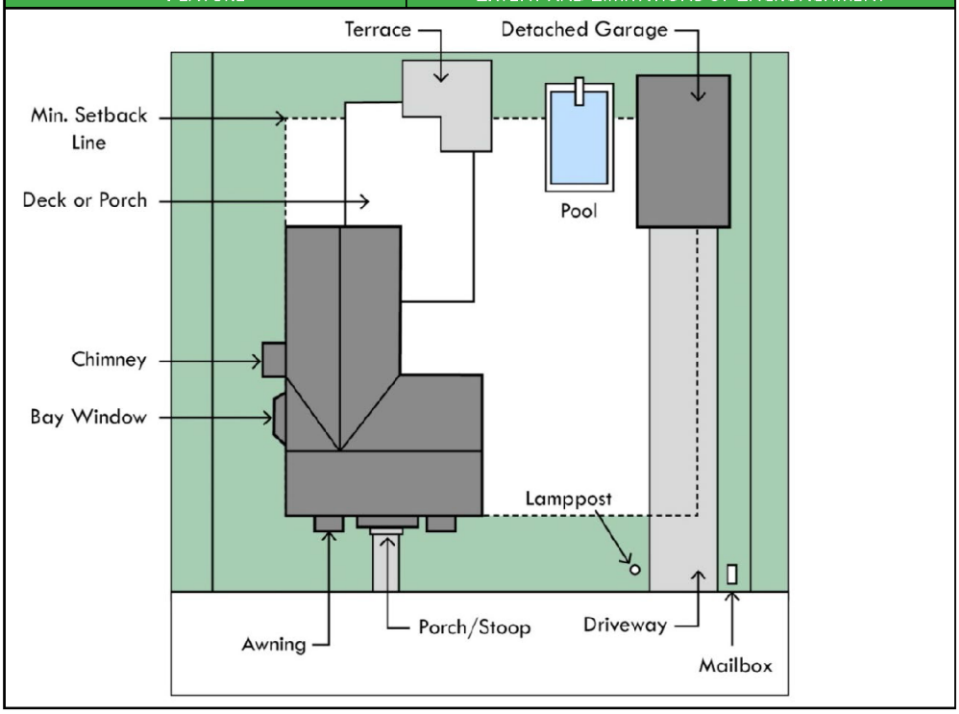
Table: 10.2.4.B, Allowable Encroachments into Required Yards/Build-to Zones	
Feature	Extent and Limitations of Encroachment
1. Open balconies and fire escapes	May extend up to five feet into any required minimum yard

2.a. Front decks, porches (screened or unscreened), stoops, or exterior stairways	On a single-family dwelling, may extend up to five feet into a required minimum front yard;
2.b. Rear deck, porch, patio or terrace (screened or unscreened)	On a single-family attached dwelling, may extend into a required rear yard provided at least a five-foot setback to the rear lot line is maintained, and not within a utility easement. Cannot be within any required side yard setback. One-foot maximum height within a required rear yard setback. Screen enclosure allowed only within the required rear yard setback — no solid roof.
3. Bay windows	May extend up to three feet into any required minimum yard if no more than nine feet wide
4. Chimneys or fireplaces	May extend up to three feet into any required minimum yard
5. Moveable awnings	
6. Roof eaves and overhangs, or marquees	
7. Window sills or entablatures	May extend up to 18 inches into any required minimum yard
8. Walkways	May extend into or be located in any required minimum yard if less than two-inches high and five-feet wide
9. Signs, projecting or free-standing	May extend into or be located in any required minimum yard in accordance with Section 5.10, Signs.
10. Driveways and parking areas	May be located in any minimum required yard unless restricted by other provisions in this LDC.
11. Garages, detached	May extend into or be located in any required minimum side or rear yard, subject to the height-related setback standards in Sec. 4.3.3, General Standards for all Accessory Uses and Structures. Setback from rear or interior side lot lines a minimum of five feet, not within a utility easement. However, a detached garage shall not extend into a street-side setback on a double-fronted lot.
12. Utility sheds	Within RSF-1A or RSF-1B districts, utility sheds with a maximum floor area of ~~100~~ 120 square feet may extend into or be located in any required minimum rear yard, setback from rear lot lines a minimum of five feet, not within a utility easement, and subject to the limitations in Sec. 4.3.3, General Standards for all Accessory Uses and Structures.
13. Flagpoles	May be located in any required minimum yard if less than 20 feet high, set back from side and rear lot lines by at least ten feet, and set back from abutting street rights-of-way by a distance equal to the flagpole height

14. Lighting fixtures, projecting or free-standing (including lampposts)	May be located in any required minimum yard
15. Mailbox, freestanding	May be located in any required minimum yard
16. Fences or walls (including associated gates and arbors)	May be located in any required minimum yard, subject to the limitations in Section 5.5, Fences and Walls.
17. Accessory structures other than those listed above	May be located in a required minimum side or rear yard, subject to the limitations in Sec. 4.3.3, General Standards for all Accessory Uses and Structures. However, an accessory structure other than those listed above shall not extend into a street-side setback on a double-fronted lot.
18. Swimming pool	May be located in any required minimum side or rear yard
19. Vegetation and landscaping and minor ornamental yard or garden features such as retaining walls, fountains, ponds, birdbath, sculptures and similar landscaping features.	May be located in any required minimum yard

TABLE: 10.2.4.B, ALLOWABLE ENCROACHMENTS INTO REQUIRED YARDS / BUILD-TO ZONES

FEATURE	EXTENT AND LIMITATIONS OF ENCROACHMENT



* * * *

SECTION XVII: Appendix A, Paragraph E of the Land Development Code, Code of Ordinances, City of Apopka is hereby amended to read as follows:

E. Review Process.

All proposed developments within the Kelly Park Interchange Form-Based Code Area will be required to obtain City Council approval of an Overlay Zoning Category *plan* and Master *Plan* for the entire site under an applicant's control. The purpose of the Master *Plan* is to demonstrate how the development will implement the vision *plan*, provide for a coordinated street network, make use of consolidated/shared infrastructure, and protect environmental resources. The Community Development Director shall prepare a list of submittal requirements for the Master *Plan* but at minimum shall follow Section ~~12.02.03 (*Concept Plans*)~~ 2.4. Standard Review Procedures of the LDC for submittal requirements. ~~All Overlay District will follow the public hearing process followed within LDC Section 12.02.04~~.

* * * *

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

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

SECTION XIX: CONFLICTING ORDINANCES. All ordinances or part thereof, in conflict herewith are, to the extent of such conflict, repealed.

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

PASSED UPON at the first reading of the City Council, this ____ day of June, 2020.

PASED UPON at the second and final reading of the City Council, this ____ day of June, 2020.

_____
BRYAN NELSON
Mayor

ATTEST:

_____
SUSAN M. BONE
Deputy City Clerk

APPROVED as to legal sufficiency and form:

_____
MICHAEL A. RODRÍGUEZ
City Attorney

DULY ADVERTISED FOR PUBLIC HEARING: May 29, 2020
July 10, 2020

CITY OF APOPKA
PLANNING COMMISSION

X	PUBLIC HEARING	MEETING OF:	June 9, 2020
	SITE PLAN	FROM:	Community Development
	SPECIAL REPORTS	EXHIBITS:	Zoning Report
X	OTHER: Master Plan/MDP		Vicinity Map
			Adjacent Zoning Map
			Adjacent Uses Map
			Kelly Park Form Based Code Area Map
			Ex. A – Master Plan/PDP

SUBJECT: **CHANGE OF ZONING, ASSIGNMENT OF KPI NEIGHBORHOOD OVERLAY DISTRICT, AND MASTER PLAN/MAJOR DEVELOPMENT PLAN – PARK VIEW PRESERVE RESIDENTIAL SUBDIVISION**

REQUEST: **RECOMMEND APPROVAL OF THE CHANGE OF ZONING, OVERLAY DISTRICT, AND MASTER PLAN/MAJOR DEVELOPMENT PLAN**
FROM: T (TRANSITIONAL)
TO: MU-KPI (MIXED USE KELLY PARK INTERCHANGE) AND KPI NEIGHBORHOOD OVERLAY

SUMMARY:

OWNER:	Cantero Holdings, LLC
APPLICANT:	Jimmy D. Crawford
LOCATION:	3845 and 4011 Golden Gem Road
PARCEL ID NUMBERS:	13-20-27-0000-00-054, 24-20-27-0000-00-097
EXISTING USE:	Vacant
FLUM DESIGNATION:	Mixed Use Interchange
CURRENT ZONING:	Transitional (T)
PROPOSED DEVELOPMENT:	282 single family homes – 121 rear loaded, 161 front loaded
PROPOSED ZONING:	Kelly Park Interchange Mixed-Use (KPI-MU)
TRACT SIZE:	91.94 +/- acres

DISTRIBUTION

Mayor Nelson	Finance Director	Public Services Director
Commissioners	HR Director	Recreation Director
City Administrator	IT Director	City Clerk
Community Development Director	Police Chief	Fire Chief

ADDITIONAL INFORMATION: The applicant is requesting a rezoning of 91.94 acres of property from Transitional (T) to Mixed-Use Kelly Park Interchange (MU-KPI), with a Neighborhood character zone to develop a 282-unit single-family residential subdivision subject to the requirements of the Kelly Park Interchange Form Based Code. The subject property is comprised of two parcels and is located at 3845 and 4011 Golden Gem Road. The owner of the properties is Cantero Holdings, LLC.

In accordance with the requirements of the Kelly Park Interchange Form Based Code, the owner has submitted a Master Plan in conjunction with the rezoning application detailing the development of 282 single-family homes on approximately 91.94 acres. The property is located within the one-mile radius from the SR 429/Kelly Park Road interchange.

Master Plan/Major Development Plan Profile

Number of residential lots:	282 single family homes (121 alley loaded, 161 front loaded)
Proposed Density:	3.07 du/ac
Maximum Density Allowed:	5 du/acre
Lot width:	34-feet alley loaded, 50-feet front loaded, 75-foot front loaded
Minimum lot size:	3,400 square feet (alley loaded), 5,000 square feet (front loaded)
Minimum house livable area:	1,250 square feet (alley loaded), 1,400 – 1,750 square feet (front loaded)
Setbacks:	
Front:	15-feet (alley loaded), 20-feet (front loaded)
Rear:	5-feet (alley loaded), 20-feet (front loaded)
Side:	5-feet
Garage:	Rear entry (alley loaded), Same as front (front loaded)
Parking:	Two spaces per house located on the lot (enclosed or exterior; FBC does not require enclosed parking), on-street parking provided
Amenities:	
Park-1	Community Cabana and Pool
Park-2	Tot lot and gathering place
Park-3	Dog Park and gathering place
Park-4	Bike trail along Golden Gem Road frontage

PROJECT DESCRIPTION: The Master Plan/Major Development Plan proposes development of the property with a total of 282 single-family homes. Of the 282 units, 121 are alley loaded on 34-foot wide lots with a minimum living area of 1,250 square feet. 161 units are front loaded on 50-foot and 70-foot wide lots with a minimum living area of 1,400 square feet and 1,750 square feet respectively. There are no minimum and maximum lot size and living area requirements in the Form Based Code. Notes provided on the Master Plan indicate the project will be developed in two phases.

The Master Plan/Major Development Plan details design of the proposed subdivision in accordance with the requirements of the Kelly Park Interchange Form Based Code, and the Neighborhood character zone, which primarily allows single-family homes as permitted uses. The surrounding properties consist of residential, agricultural and rural uses.

Access to the site is proposed via Golden Gem Road. A dedication of a 15-foot wide strip for future right-of-way needs for Golden Gem Road is detailed on the Master Plan. Within this strip, a 12-foot wide bicycle trail will be constructed by the developer. Behind this strip, Tracts A and C are reserved for recreation and open space that is to be owned and maintained by the homeowners association. The master stormwater pond is located in the eastern portion of the site. In accordance with the requirements of the Form Based Code, 20-percent of the total site area is required to remain as open space. The Master Plan/Major Development Plan reserves 40.30 acres, or 43-percent of the site as open space. Common recreation elements include a clubhouse with a pool, an internal trail system, and passive open space/recreation areas, a tot lot and gathering place, a dog park and gathering place, and the dedication of the bike trail along Golden Gem Road.

The Master Plan/Preliminary Development Plan details the design of the internal street system with public streets utilizing a walkable street design with pedestrian connections to the north via a proposed street connection and through the proposed multi-use trail along Golden Gem Road. The developer will provide a 12-foot wide multi-purpose trail along the portion of the development abutting Golden Gem Road to help facilitate the construction of the regional trail system that is conceptually proposed within the Kelly Park Form Based Code area.

DEVELOPMENT AND ZONING CONDITIONS OF APPROVAL: That the zoning classification of the following described property be designated as Mixed-Use Kelly Park Interchange (MU-KPI), Neighborhood character zone, as defined in the Kelly Park Interchange Form Based Code, and with the following provisions:

1. Development of the property is subject to the requirements of the Kelly Park Interchange Form Based Code, Neighborhood character zone.

2. The architectural design of the buildings must be consistent with Section K.2.g, and Appendix A of the Kelly Park Interchange Form Based Code.

3. A 12-foot wide multi-purpose trail will be constructed along the portion of the development abutting Golden Gem Road to facilitate the construction of a regional trail system. (Policy 20.19, FLUE; Sec. Q, FBC). The trail shall be placed in a tract that is dedicated to the City of Apopka.

4. The applicant shall obtain all approvals as required per the Orange County Charter and the Amended Interlocal Agreement for Public School Facility Planning and Implementation of Concurrency.

COMPREHENSIVE PLAN COMPLIANCE: The proposed use of the property as depicted on the Master Plan/Major Development Plan is consistent with the Mixed-Use Interchange Future Land Use designation as detailed within the Future Land Use Element of the Comprehensive Plan.

SCHOOL CAPACITY REPORT: A School Capacity Enhancement Agreement (CEA) has not been approved by Orange County Public Schools (OCPS) as of this time. The location is served by the following schools: Zellwood Elementary, Wolf Lake Middle, and Apopka High School. Additionally, no development activity shall occur on the subject property until the developer has obtained a school concurrency mitigation agreement or letter from OCPS.

ORANGE COUNTY NOTIFICATION: Pursuant to Section 7 of the Joint Planning Area agreement, Orange County was notified on March 30, 2020.

PUBLIC HEARING SCHEDULE:
June 9, 2020 - Planning Commission (5:30 pm)
June 17, 2020 - City Council (7:00 pm) - 1st Reading
July 1, 2020 – City Council (1:30 pm) - 2nd Reading

DULY ADVERTISED:
May 29, 2020 – Apopka Chief

RECOMMENDED ACTION:

The **Development Review Committee** finds the proposed rezoning to Mixed-Use Kelly Park Interchange (MU-KPI), and assignment of a Neighborhood character zone consistent with the Comprehensive Plan and Kelly Park Interchange Form Based Code, and recommends approval of the Park View Preserve Master Plan/Major Development Plan.

Recommended Motion: Find the proposed Rezoning, Master Plan/Major Development Plan consistent with the Comprehensive Plan and Land Development Code and Neighborhood Overlay District, recommend approval of the rezoning of the subject parcels from Transitional (T) to Mixed-Use Kelly Park Interchange (MU-KPI), and assignment of the Neighborhood Overlay District, and approval of the Master Plan/Major Development Plan, based on the findings and facts presented in the staff report and exhibits subject to the applicant obtaining all approvals as required per the Orange County Charter and the Amended Interlocal Agreement for Public School Facility Planning and Implementation of Concurrency.

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.

ZONING REPORT

RELATIONSHIP TO ADJACENT PROPERTIES:

Direction	*Future Land Use*	*Zoning*	*Present Use*
North (City, County)	Rural (County), Mixed-Use Interchange (City)	A-1 (County), T (City)	Agricultural, Vacant property
East	Rural Settlement	AG	Vacant
South	Rural Settlement, Conservation	AG, T	Manufactured home, future site of City water reservoir
West (County)	Rural	Hubbard Construction Company	Vacant

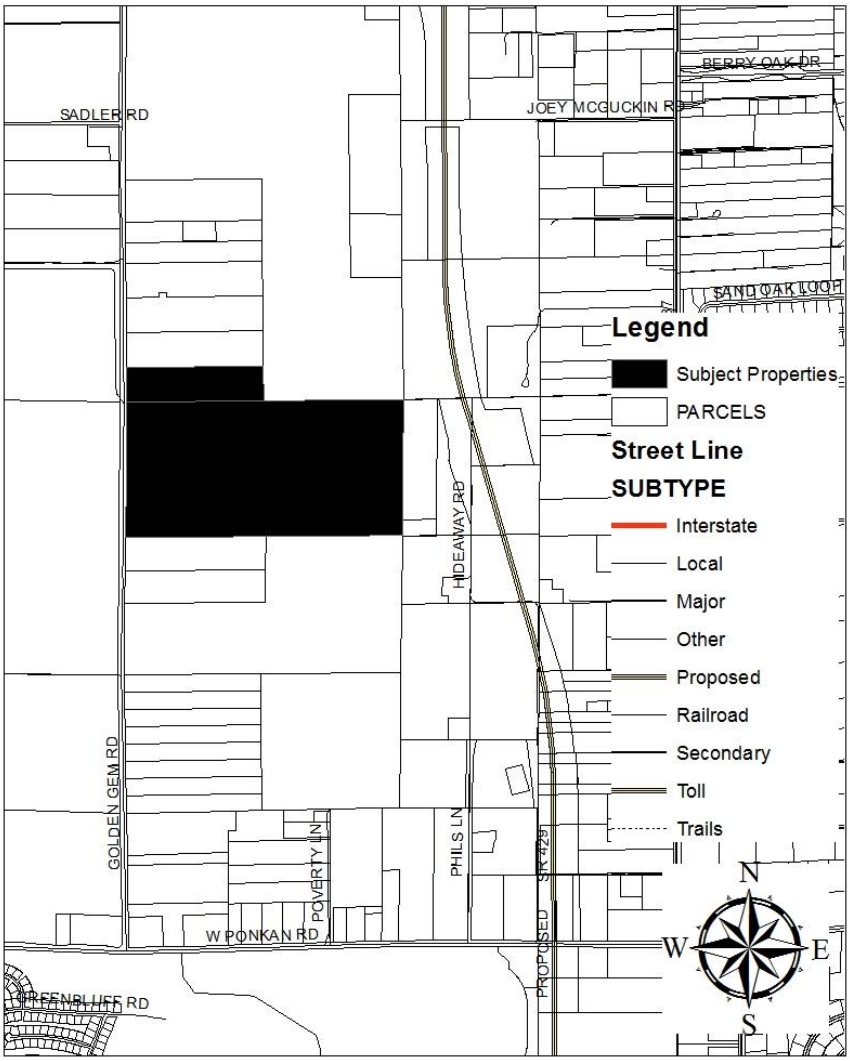
LAND USE & TRAFFIC COMPATIBILITY: The property is accessed via Golden Gem Road. Internal streets are public and will be owned and maintained by the City of Apopka. Future land use designations and zoning categories assigned to properties to the north, south, east, and west are predominantly residential, agricultural, and rural. Two future road connections are proposed to the north to allow internal connection to properties also located inside the Kelly Park Interchange Form-Based Code.

COMPREHENSIVE PLAN COMPLIANCE: The proposed Mixed-Use Kelly Park Interchange (MU-KPI) zoning is compatible with policies set forth in the Comprehensive Plan.

ALLOWABLE USES: Single-family residential uses as set forth within the Master Plan.

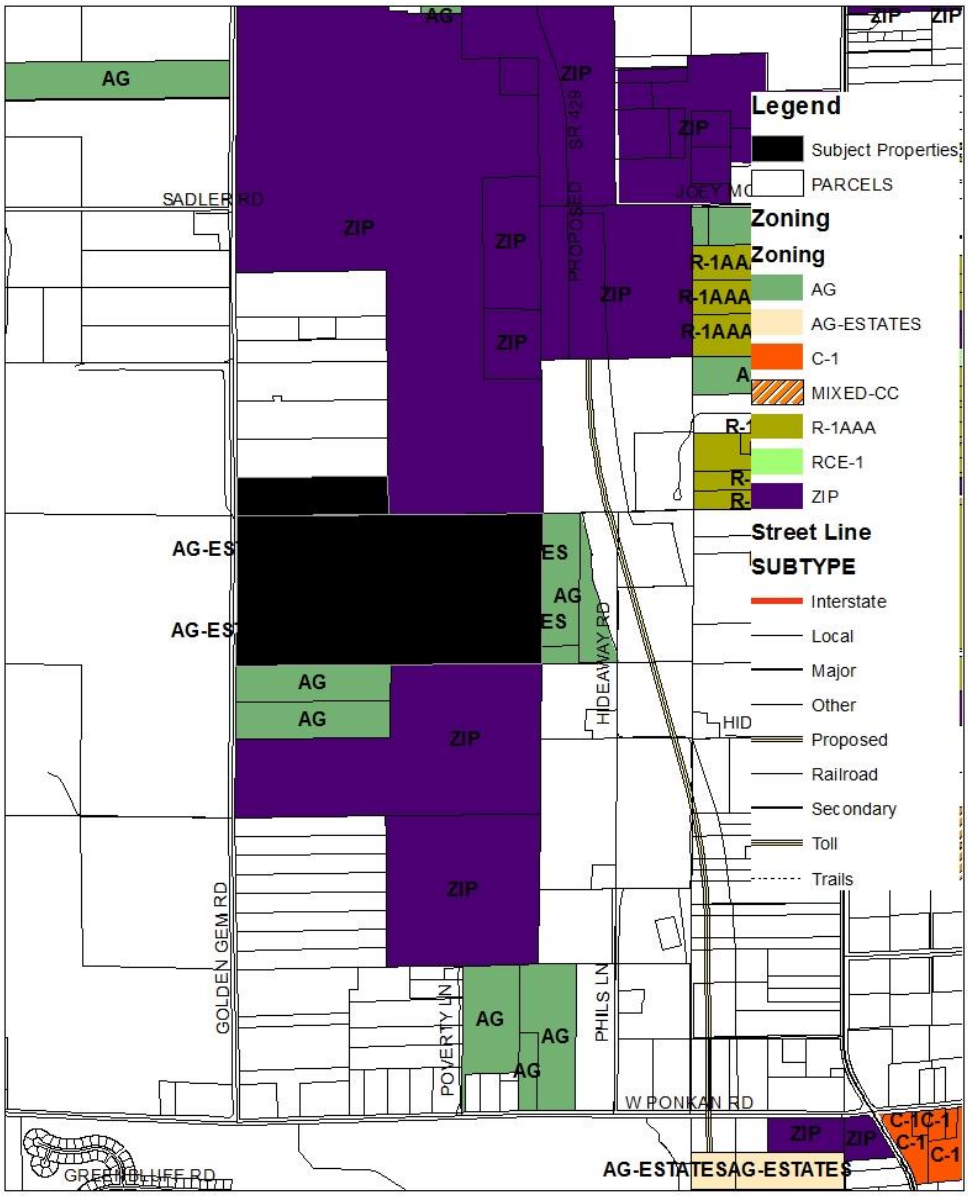
Project: **Park View Preserve**
Owned by: **Cantero Holdings, LLC**
Location: **3845 and 4011 Golden Gem Road**
Parcel ID#s: **13-20-27-0000-00-054, 24-20-27-0000-00-097**

VICINITY MAP



N

ADJACENT ZONING



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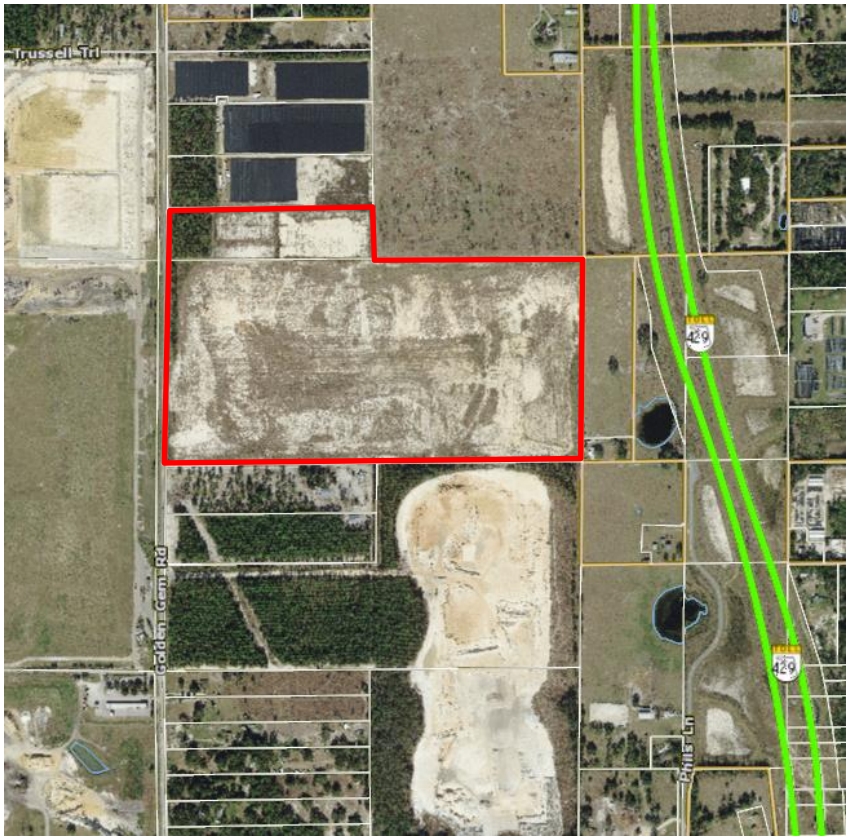
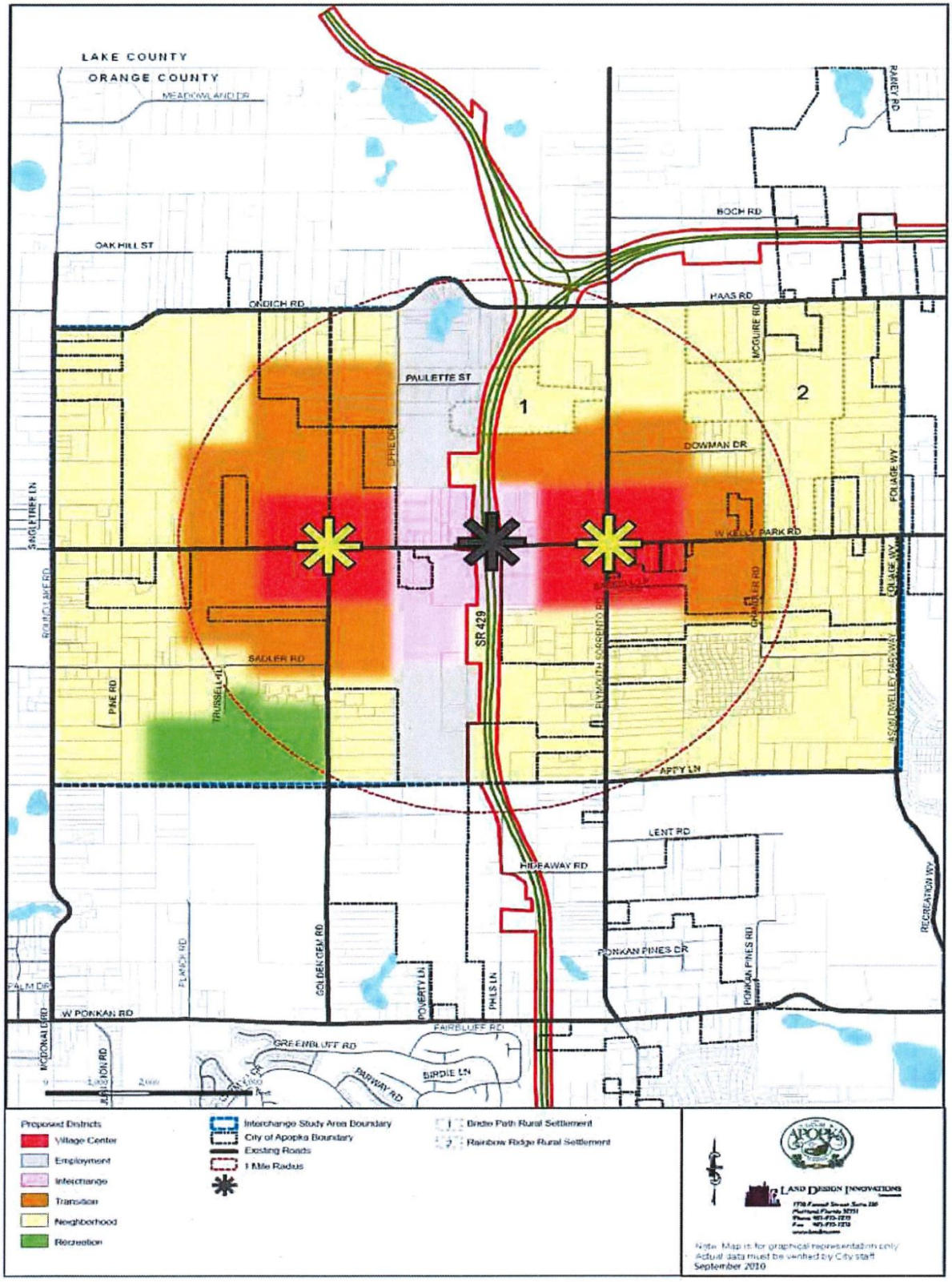
ADJACENT USES



N

Kelly Park Crossing Form-Based Code Area



Park View Preserve

KPI Master/Major Development Plan

City of Apopka Florida Parcel I.D. # 13-20-27-0000-00-054

24-20-27-0000-00-097

for

Cantero Holdings, LLC

NOTE:

1. THE CONTRACTOR SHALL INSTALL, AS PART OF THE INFRASTRUCTURE AND PRIOR TO CERTIFICATE OF COMPLETION, DROP CURBS AND HANDICAP RAMPS AT ALL INTERSECTIONS OF THE SIDEWALK WITH THE PROPOSED PAVEMENT TO MEET CITY OF APOPKA AND A.D.A. SPECIFICATIONS.
2. THESE CONSTRUCTION PLANS WERE PREPARED IN ACCORDANCE WITH THE MANUAL OF UNIFORM STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE FOR STREETS AND HIGHWAYS, FDOT GREEN BOOK AND CITY OF APOPKA REGULATIONS & SPECIFICATIONS.
3. A DEVELOPMENT AGREEMENT OR INFRASTRUCTURE AGREEMENT WILL BE PROVIDED WITH THE CONSTRUCTION PLAN.

by

G L SUMMITT
ENGINEERING INC

Project Team

Owner
Cantero Holdings, LLC
7252 LAKE WILLIS DR
Orlando, FL 32821
Ph:
Fx:

Developer
Cantero Holdings, LLC
7252 LAKE WILLIS DR
Orlando, FL 32821
Ph:
Fx:

Surveyor
Allen & Company, Inc.
16 E. Plant St.
Winter Garden, FL 34787
Ph: (407) 654-5355
Fx: (407) 654-5356

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.
3208-C E. Colonial Dr.
#294
Orlando, FL 32803
Ph: (407) 647-1213
Fx:

Utilities

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

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

Garbage Disposal
City of Apopka
748 E. Cleveland St.
Apopka, FL 32703
Ph: (407) 703-1731
Fx: (407) 703-1748

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

Electric Service
Duke Energy
3250 Bonnet Creek Rd,
Orlando, FL 32830
Ph: (800) 700-8744

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

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

Vicinity Map

STR: 13,24, 27S, 28E 1" = 1,500'

Drawing Index

No.	Title	Revised
1	Coversheet	04-24-20
2	Symbols & Abbreviations	04-24-20
3	Boundary & Topo Survey	04-24-20
4	Overall Site Plan	04-24-20
5	Open Space Rec. Plan	04-24-20
6	Neighborhood Block Plan	04-24-20
7	Design Standards Plan	04-24-20
8	Phasing Plan	04-24-20
9	Key Map Plan	04-24-20
10-13	Detailed Site Plan(s)	04-24-20
14-17	Utility Plan(s)	04-24-20
18-21	Drainage & Grading Plan(s)	04-24-20
22-25	Landscape Plan(s)	04-24-20
26-27	Landscape Details	04-24-20
28-31	Truck Turning Plan(s)	04-24-20
32-33	General Details	04-24-20
34-37	Architectural Elevations	04-24-20

G L SUMMITT
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Cantero Holding, LLC
12601 Avalon Road
Winter Garden, FL 34787
407-239-4565
407-239-6011

Park View Preserve Subdivision
City of Apopka, Florida

KPI Master/Major Development Plan

Coversheet

Plans not valid unless Signed, Dated and Sealed below.

GEOFFREY L. SUMMITT, P.E.
Date: April 23, 2020
FL Registration #58775
Certificate of Authorization #29665

Revisions

NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

SHEET NUMBER
1 OF 37

ABBREVIATIONS

A	
A	AREA
AB	ANCHOR BOLT
ABO	ABANDON(ED)
AC	ACRE(S)
AC-FT	ACRE FOOT/FEET
ACP	ASBESTOS CEMENT PIPE
ADDL	ADDITIONAL
ADT	AVERAGE DAILY TRAFFIC
AL	ALUMINUM
ALT	ALTERNATE
AM	BEFORE NOON
AMP	AMPERE(S)
APPROX	APPROXIMATE
ARV	AIR RELEASE VALVE
ARVV	AIR RELEASE VACUUM VALVE
ASPH	ASPHALT
ASSY	ASSEMBLY
AVE	AVENUE
AVG	AVERAGE
AZ	AZIMUTH
B	
BFP	BACKFLOW PREVENTER
BL	BASELINE
BLDG	BUILDING
BLVD	BOULEVARD
BM	BENCH MARK
BND	BOUNDARY
BO	BLOWOFF
BOC	BACK OF CURB
BOT	BOTTOM
BRG	BEARING
BS	BOTTOM OF SLOPE
BV	BUTTERFLY VALVE
C	
CAP	CAPACITY
CB	CATCH BASIN
CC	CENTER TO CENTER
CEM	CEMENT
CF	CUBIC FEET
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
C&G	CURB AND GUTTER
CI	CAST IRON
CIP	CAST IRON PIPE
CJ	CONSTRUCTION JOINT
C/L	CENTER LINE
CLP	CONCRETE LIGHT POLE
CLR	CLEAR/CLEARANCE
CLS	CLASS
CM	CONCRETE MONUMENT
CMP	CORRUGATED METAL PIPE
CMPA	CORRUGATED METAL PIPE ARCH
CND	CONDUIT
CO.	COUNTY
CO	CLEANOUT
COL	COLUMN
COMP	COMPLETE
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCT(ION)
CONT	CONTINUOUS
COORD	COORDINATE(S)
COR	CORNER
CPLG	COUPLING
CPP	CONCRETE POWER POLE
CS	CONTROL STRUCTURE
CTG	COATING
CTR	CENTER
CTV	CABLE TELEVISION
CULV	CULVERT
CY	CUBIC YARD
CYL	CYLINDER
D	
DBL	DOUBLE
DEG OR °	DEGREE
DEFL	DEFLECT(ION)
DEPT	DEPARTMENT
DET	DETAIL
DHWL	DESIGN HIGH WATER LEVEL
DI	DUCTILE IRON
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIP	DUCTILE IRON PIPE
DISCH	DISCHARGE
DIST	DISTANCE
DMH	DROP MANHOLE
DN	DOWN
DRN	DRAIN
DWG	DRAWING
DWY	DRIVEWAY
E	
E	EAST
EA	EACH
EC	EDGE OF CONCRETE
ED	ENERGY DISSIPATOR
EF	EACH FACE
EFF	EFFLUENT
EG	EXISTING GRADE
E/L	EASEMENT LINE
ELB	ELBOW
ELEC	ELECTRIC
ELEV	ELEVATION
ELLIP	ELLIPSE/ELLIPTICAL
ENC	ENCASEMENT
ENG	ENGINEER(ING)
EOP	EDGE OF PAVEMENT
EQ	EQUAL/EQUATION
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ESMT	EASEMENT
EST	ESTIMATE
EW	EACH WAY
EWL	ENDWALL
EXC	EXCAVATE/EXCAVATION
EXIST	EXISTING
EXP	EXPAND/EXPANSION
EXT	EXTEND/EXTENSION
F	
F&C	FRAME AND COVER
FD	FLOOR DRAIN
FDN	FOUNDATION
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION
FF	FINISHED FLOOR
FG	FINISHED GRADE
FH	FIRE HYDRANT
F&I	FURNISH AND INSTALL
FIG	FIGURE
FIN	FINISHED
FIT	FITTING
FL	FENCE LINE
FLR	FLOOR
FLEX	FLEXIBLE
FLG	FLANGE
FM	FORCE MAIN
FND	FOUND
FPH	FEET PER HOUR
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FT	FEET/FOOT
FTG	FOOTING
G	
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GM	GAS MAIN
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GPS	GALLONS PER SECOND
GR	GUARD RAIL
GRD	GROUND/GRADE
GSP	GALVANIZED STEEL PIPE
GV	GATE VALVE
GVBX	GATE VALVE AND BOX
GW	GUY WIRE
GWT	GROUND WATER TABLE
H	
HB	HOSE BIBB
HDPE	HIGH DENSITY POLYETHYLENE
HDW	HARDWARE
HORIZ	HORIZONTAL
HP	HORSEPOWER
HR	HOUR
HT	HEIGHT
HW	HEADWALL
HWL	HIGH WATER LEVEL
HWY	HIGHWAY
HYD	HYDRAULIC
I	
I-4	INTERSTATE HIGHWAY
IA	INTERSECTION ANGLE
ID	INSIDE DIAMETER
IF	INSIDE FACE
IN	INCHES
INL	INLET
INS	INSERT
INST	INSTALL
IP	IRON PIPE
IR	IRON ROD
INT	INTERSECT/INTERSECTION
INV	INVERT
J	
JB	JUNCTION BOX
JCT	JUNCTION
JST	JOIST
JT	JOINT
L	
L	LENGTH
LAT	LATITUDE
LATL	LATERAL
LB	POUND
LF	LINEAR FEET/FOOT
LG	LONG
LIM	LIMIT(S)
LP	LIGHT POLE
LONG	LONG
LT	LEFT
LWL	LOW WATER LEVEL
M	
MAINT	MAINTENANCE
MATL	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
ME	MITERED END
MFR	MANUFACTURER
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MHC	MANHOLE COVER
MHWL	MEAN HIGH WATER LEVEL
MIN	MINIMUM
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MLP	METAL LIGHT POLE
MLWL	MEAN LOW WATER LEVEL
MON	MONUMENT
MPH	MILES PER HOUR
MSL	MEAN SEA LEVEL
MTG	MOUNTING
N	
NORTH	NORTH
N	NORTH
NA	NOT APPLICABLE
NAC	NAIL AND CAP
NE	NORTHEAST
NG	NATURAL GROUND
NIC	NOT IN CONTRACT
NO OR #	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
NW	NORTHWEST
NWL	NORMAL WATER LEVEL
O	
OC	ON CENTER
OD	OUTSIDE DIAMETER
OE	OR EQUAL
OPNG	OPENING
OPP	OPPOSITE
ORCP	OVAL REINFORCED CONCRETE PIPE
OS	OUTFALL STRUCTURE
OVFL	OVERFLOW
OVHD	OVERHEAD
P	
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PEP	POLYETHYLENE PIPE
PFGP	PROFILE GRADE POINT
PI	POINT OF INTERSECTION
P/L	PROPERTY LINE
POB	POINT OF BEGINNING
POJ	PUSH ON JOINT
PP	POWER POLE
PR	PHONE RISER
PRC	POINT OF REVERSE CURVATURE
PRESS	PRESSURE
PROJ	PROJECT
PROP	PROPOSED
PRVC	POINT OF REVERSE VERTICAL CURVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PWR	POWER
Q	
Q	FLOW RATE
R	
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
RD	ROAD
RDY	ROADWAY
RED	REDUCER
REF	REFERENCE
REINF	REINFORCE(D)
REQD	REQUIRED
REV	REVISE/REVISION
RPM	REVOLUTIONS PER MINUTE
RR	RAILROAD
RT	RIGHT
RV	RELIEF VALVE
R/W	RIGHT-OF-WAY
RWM	REUSE WATER MAIN
S	
S	SOUTH
SAN	SANITARY SEWER
SB	SPLASH BLOCK
SCH	SCHEDULE
SD	SIDE DRAIN
SDN	SHELF DRAIN
SE	SOUTHEAST
SEC	SECONDS
SECT	SECTION
SH	SHEET
SHGWT	SEASONAL HIGH GROUND WATER TABLE
SIM	SIMILAR
S/L	SETBACK LINE
SL	SLOPE
SM	SHEET METAL
SPEC	SPECIFICATION(S)
SQ	SQUARE
SQ IN	SQUARE INCH(ES)
SQ FT	SQUARE FOOT/FEET
SQ YD	SQUARE YARD(S)
SR	STATE ROAD
SS	STAINLESS STEEL
ST	STREET
STA	STATION
STD	STANDARD
STL	STEEL
STR	STRUCTURE
STS	STORM SEWER
SUP	SUPPORT
SUSP	SUSPEND/SUSPENSION
SVC	SERVICE
SW	SOUTHWEST
SWK	SIDEWALK
SYM	SYMBOL(S)
SYMM	SYMMETRICAL
SYS	SYSTEM
T	
T	TANGENT
TB	TURFBLOCK
T&B	TOP AND BOTTOM
TBM	TEMPORARY BENCH MARK
TC	TIME OF CONCENTRATION
TD	TRENCH DRAIN
TDH	TOTAL DYNAMIC HEAD
TECH	TECHNICIAN/TECHNICAL
TEMP	TEMPORARY
TL	TERMINAL LAMPHOLE
TOB	TOP OF BANK
TOC	TOP OF CURB
TOS	TOE OF SLOPE
TOT	TOTAL
TS	TOP OF SLOPE
TWP	TOWNSHIP
TYP	TYPICAL
U	
UD	UNDERDRAIN
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
UTC	UNDERGROUND TELEPHONE CABLE
V	
VB	VALVE BOX
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VPC	VERTICAL POINT OF CURVE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
W	
W	WEST
W/	WITH
WM	WATER MAIN
W/O	WITHOUT
WP	WATER/WEATHER PROOF
WPP	WOOD POWER POLE
WS	WATER SURFACE
WSWT	WET SEASON WATER TABLE
WT	WEIGHT
WV	WATER VALVE
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
Y	
YD	YARD
YR	YEAR
MISC	
&	AND
@	AT
Δ	DELTA

EXISTING SYMBOLS

LINES

- CENTER LINE
- WIRE FENCE
- CHAIN LINK FENCE
- WOOD FENCE
- GUARDRAIL
- EXISTING PLATS
- RETAINING WALL
- R/W — RIGHT-OF-WAY LINE
- SHORELINE
- SWALE
- BUILDING LINE
- 81 / 80 — CONTOURS
- RAILROAD TRACKS
- GAS — GAS MAIN
- UE — UNDERGROUND ELECTRIC
- UGT — UNDERGROUND TELEPHONE
- OVERHEAD ELECTRIC
- OVERHEAD TELEPHONE
- CTV — UNDERGROUND CABLE TELEVISION
- EASEMENT

SANITARY

- SANITARY SEWER LINE
- CLEANOUT
- FM — FORCE MAIN
- MANHOLE

WATER & REUSE WATER

- 6" WM — WATER MAIN 6" PVC PIPE
- RM — REUSE WATER MAIN
- BACKFLOW PREVENTOR
- WATER VALVE
- FIRE HYDRANT
- WATER METER

STORM DRAIN

- STORM SEWER
- MANHOLE
- MITERED END
- STORM INLET
- FDOT TYPE 6 INLET
- FDOT TYPE 1 INLET
- FDOT TYPE 2 INLET
- FDOT TYPE 3 INLET
- FDOT TYPE 4 INLET
- FDOT TYPE 5 INLET

HIGHWAY & UTILITIES

- BENCHMARK
- RECOVERED 4x4 CM
- SET 4x4 CM
- SET IRON ROD
- RECOVERED IRON ROD
- CONCRETE
- COUNTY ROADS
- INTERSTATE ROADS
- STATE ROADS
- WOOD AND/OR METAL LIGHT POLE
- CONCRETE LIGHT POLE
- YARD LIGHT
- MISCELLANEOUS SIGN
- 16 15 / 21 22 — SECTION CORNER
- EDGE OF PAVEMENT W/O CURB
- EDGE OF PAVEMENT W/CURB
- GUY POLE
- WOOD UTILITY POLE
- CONCRETE UTILITY POLE
- ELECTRIC MANHOLE
- TELEPHONE MANHOLE
- TELEPHONE RISER
- ELECTRIC BOX / TRANSFORMER
- WELL
- MONITORING WELL
- DUMPSTER
- RR CROSSING SIGN
- RR CROSSING GATE
- TRAFFIC SIGNAL POLE
- SATALITE DISH
- GUY WIRE
- HANDICAP PARKING
- SPOT ELEVATION
- BRICK PAVERS
- DIRT ROAD
- 8" MAPLE TREE
- 8" OAK TREE
- 8" PINE TREE
- 8" PALM TREE
- 8" MISC. TREE

PROPOSED SYMBOLS

LINES

- BOUNDARY
- CONSERVATION SETBACK
- CENTER LINE
- CHAIN LINK FENCE
- 81 / 80 — CONTOUR
- EASEMENT
- FENCE
- GUARDRAIL
- LOT LINE
- P/L — PROPERTY LINE
- RETAINING WALL
- R/W — RIGHT-OF-WAY LINE
- SETBACK LINE
- SHORELINE
- SWALE
- TREE LINE

SANITARY

- 100 LF SAN 8 PVC 0.40% — 100 LINEAR FEET SANITARY 8" PVC PIPE @ 0.40% SLOPE
- CLEANOUT
- DOUBLE SANITARY SERVICE
- FM — FORCE MAIN
- MANHOLE

WATER & REUSE WATER

- WM — WATER MAIN
- 11 1/2° BEND
- 22 1/2° BEND
- 45° BEND
- 90° BEND
- TEE
- CROSS
- CHECK VALVE
- DOUBLE DETECTOR CHECK VALVE
- DOUBLE WATER SERVICE
- GATE VALVE
- FIRE HYDRANT
- M — METER
- REDUCER
- BLOWOFF
- BACKFLOW PREVENTER
- SP 2 — SAMPLE POINT
- UNDERDRAIN CEANOUT
- RM — RECLAIMED WATER MAIN
- REUSE WATER SYSTEM CONNECTION
- DOUBLE REUSE WATER SERVICE

STORM DRAIN

- 100 LF STS 24 RCP @ 0.20% — 100 LINEAR FEET STORM PIPE 24" REINFORCED CONCRETE PIPE @ 0.20%
- UNDERDRAIN 6" PVC PIPE
- DRAINAGE FLOW DIRECTION
- FDOT INLET TYPE 1
- FDOT INLET TYPE 2
- FDOT INLET TYPE 3
- FDOT INLET TYPE 4
- FDOT INLET TYPE 5
- FDOT INLET TYPE 6
- MANHOLE
- MITERED END SECTION
- SLOPE DIRECTION ARROW FOR POND SIDE SLOPE
- 100.00 — SPOT ELEVATION
- STORM INLET

HIGHWAY & UTILITIES

- BOUND CORNER
- CONCRETE
- 575 — COUNTY ROADS
- 901 / 24 — DETAIL REFERENCE
- DUMPSTER PAD
- FF=98.76 / TYPE A — FINISHED FLOOR ELEVATION W/ FHA LOT TYPE
- GUY POLE
- HANDICAP PARKING
- 95 — INTERSTATE ROADS
- LIGHT POLE
- SIGNS
- 16 15 / 21 22 — SECTION CORNER
- 60 — STATE ROADS
- SILT FENCE
- TRAFFIC FLOW PAVEMENT MARKING
- UTILITY POLE
- BLDG OR STRUCTURE
- TYPE F CURB & GUTTER
- MIAMI CURB
- 901 / 24 — CROSS SECTION DETAIL

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Park View
Preserve Subdivision
City of Apopka, Florida

KPI Master/Major Development Plan

Symbols & Abbreviations

Plans not valid unless Signed, Dated and Sealed below.

GEOFFREY L. SUMMITT, P.E.
Date: April 23, 2020
FL Registration #58775
Certificate of Authorization #29665

Revisions

No.	DATE	DESCRIPTION
1		
2		
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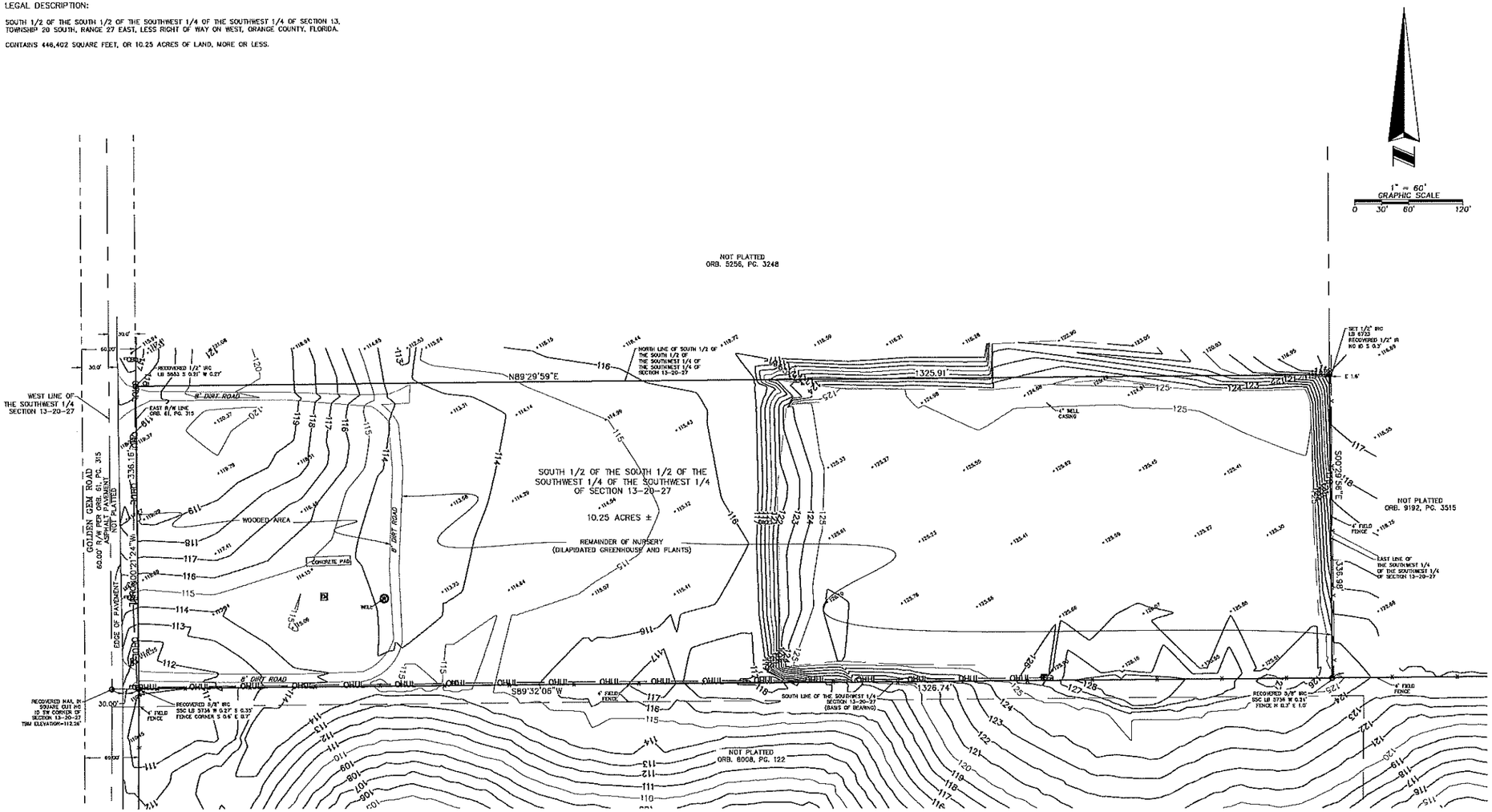
SHEET NUMBER
2 OF 37

LEGAL DESCRIPTION:

SOUTH 1/2 OF THE SOUTH 1/2 OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 13, TOWNSHIP 20 SOUTH, RANGE 27 EAST, LESS RIGHT OF WAY ON WEST, ORANGE COUNTY, FLORIDA.

CONTAINS 446,402 SQUARE FEET, OR 10.25 ACRES OF LAND, MORE OR LESS.



LEGEND:

IRC	IRON ROD AND CAP
IR	IRON ROD
ORB.	OFFICIAL RECORDS BOOK
PG.	PAGE
CM	CONCRETE MONUMENT
LB	LICENSED BUSINESS
R/W	RIGHT-OF-WAY
ID	IDENTIFICATION
A/C	AIR CONDITIONER
—OHUL—	OVERHEAD UTILITY LINE
⊗	SET 1/2" IRC LB 6723
O	RECOVERED MONUMENT AS LABELED
	MAILBOX
	ELECTRIC BOX
	ELECTRIC METER
	WELL
	POWER POLE
	GUY WIRE
	BARBED WIRE FENCE
	DIRT ROAD
TBM	TEMPORARY BENCHMARK
NAVD88	NORTH AMERICAN VERTICAL DATUM OF 1988

SURVEYOR'S NOTES:

1. BEARINGS SHOWN HEREON ARE ASSUMED AND RELATIVE TO THE SOUTH LINE OF THE SW 1/4 OF SECTION 13, TOWNSHIP 20 SOUTH, RANGE 27 EAST, ORANGE COUNTY, FLORIDA, BEING SOUTH 89°31'38" WEST.
2. THIS BOUNDARY SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A COMMITMENT TO INSURE TITLE. NO ABSTRACT FOR RIGHT-OF-WAY, EASEMENTS, OWNERSHIP OR OTHER INSTRUMENTS OF RECORD HAVE BEEN PROVIDED TO THIS FIRM.
3. THE LEGAL DESCRIPTION SHOWN HEREON IS IN ACCORD WITH THE DESCRIPTION FURNISHED BY THE CLIENT.
4. THIS MAP OF BOUNDARY SURVEY IS NOT VALID UNLESS IT BEARS THE SIGNATURE AND ORIGINAL RAISED SEAL OF THE FLORIDA LICENSED SURVEYOR AND MAPPER IDENTIFIED BELOW.
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7. ADJOINING PARCEL OWNER AND RECORDING INFORMATION DELINEATED HEREON WAS OBTAINED FROM THE ORANGE COUNTY PROPERTY APPRAISER'S PUBLIC ACCESS SYSTEM.
8. THE PROPERTY SHOWN HEREON IS AN INACTIVE NURSERY. THERE MAY BE THE EXISTENCE OF ADDITIONAL UTILITIES WITHIN THE SURVEYED LANDS THAT WERE NOT LOCATED AS PART OF THIS SURVEY.
9. 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.
10. THERE MAY BE ENVIRONMENTAL ISSUES AND/OR OTHER MATTERS REGULATED BY VARIOUS DEPARTMENTS OR FEDERAL, STATE, OR LOCAL GOVERNMENTS AFFECTING THE SUBJECT PROPERTY NOT SHOWN ON THIS SURVEY.
11. ELEVATIONS SHOWN HEREON ARE BASED ON ORANGE COUNTY BENCHMARK NUMBER S758018 BEING AN ELEVATION OF 114.206 FEET NAVD88 (NORTH AMERICAN VERTICAL DATUM OF 1988).

ALLEN & COMPANY
Professional Surveyors & Mappers
16 EAST PLANT STREET
WINTER GARDEN, FLORIDA • 34787
(407) 654-5355/(407)654-5356 FAX

BOUNDARY & TOPOGRAPHIC SURVEY
OF
4011 GOLDEN GEM ROAD
SECTION 13, TOWNSHIP 20 SOUTH, RANGE 27 EAST
ORANGE COUNTY, FLORIDA

FOR:
CANTERO HOLDINGS, LLC

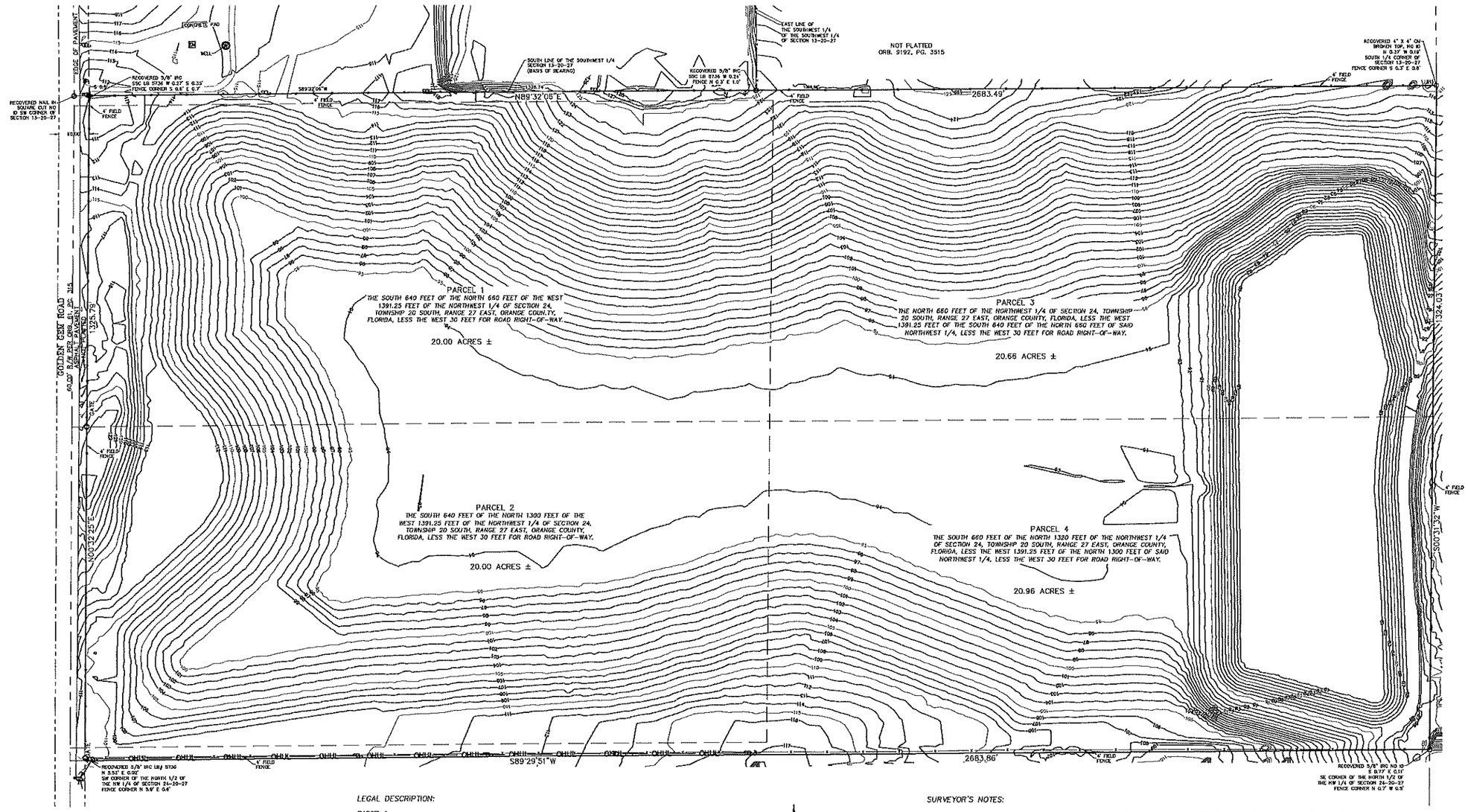
FOR THE LICENSED BUSINESS FIRM #6723 BY:

JAMES L. ROHMAN P.S.M. # 5632

DATE	REVISIONS

JOB # 20170284
DATE: 08/10/2018
SCALE: 1 inch = 60 feet
CALC BY: JLR
FIELD BY: ST/DH
DRAWN BY: JPC/DR/JMM
CHECKED BY: JPC

SHEET 1 OF 1



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	MAILBOX
	ELECTRIC BOX
	ELECTRIC METER
	WELL
	POWER POLE
	GUY WIRE
	BARBED WIRE FENCE
	DIRT ROAD

LEGAL DESCRIPTION:

PARCEL 1:
THE SOUTH 640 FEET OF THE NORTH 660 FEET OF THE WEST 1391.25 FEET OF THE NORTHWEST 1/4 OF SECTION 24, TOWNSHIP 20 SOUTH, RANGE 27 EAST, ORANGE COUN.TY, FLORIDA, LESS THE WEST 30 FEET FOR ROAD RIGHT-OF-WAY.

PARCEL 2:
THE SOUTH 640 FEET OF THE NORTH 1300 FEET OF THE WEST 1391.25 FEET OF THE NORTHWEST 1/4 OF SECTION 24, TOWNSHIP 20 SOUTH, RANGE 27 EAST, ORANGE COUNTY, FLORIDA, LESS THE WEST 30 FEET FOR ROAD RIGHT-OFWAY.

PARCEL 3:
THE NORTH 660 FEET OF THE NORTHWEST 1/4 OF SECTION 24, TOWNSHIP 20 SOUTH, RANGE 27 EAST, ORANGE COUNTY, FLORIDA, LESS THE WEST 1391.25 FEET OF THE SOUTH 640 FEET OF THE NORTH 660 FEET OF SAID NORTHWEST 1/4, LESS THE WEST 30 FEET FOR ROAD RIGHT-OF-WAY.

PARCEL 4:
THE SOUTH 660 FEET OF THE NORTH 1320 FEET OF THE NORTHWEST 1/4 OF SECTION 24, TOWNSHIP 20 SOUTH, RANGE 27 EAST, ORANGE COUNTY, FLORIDA, LESS THE WEST 1391.25 FEET OF THE NORTH 1300 FEET OF SAID NORTHWEST 1/4, LESS THE WEST 30 FEET FOR ROAD RIGHT-OF-WAY.

CONTAINING 3,555,076 SQUARE FEET, OR 81.61 ACRES OF LAND MORE OR LESS.

1" =100'
GRAPHIC SCALE
0 50 100 200

SURVEYOR'S NOTES:

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BOUNDARY SURVEY OF 3845 GOLDEN GEM ROAD

SECTION 13, TOWNSHIP 20 SOUTH, RANGE 27 EAST
ORANGE COUNTY, FLORIDA

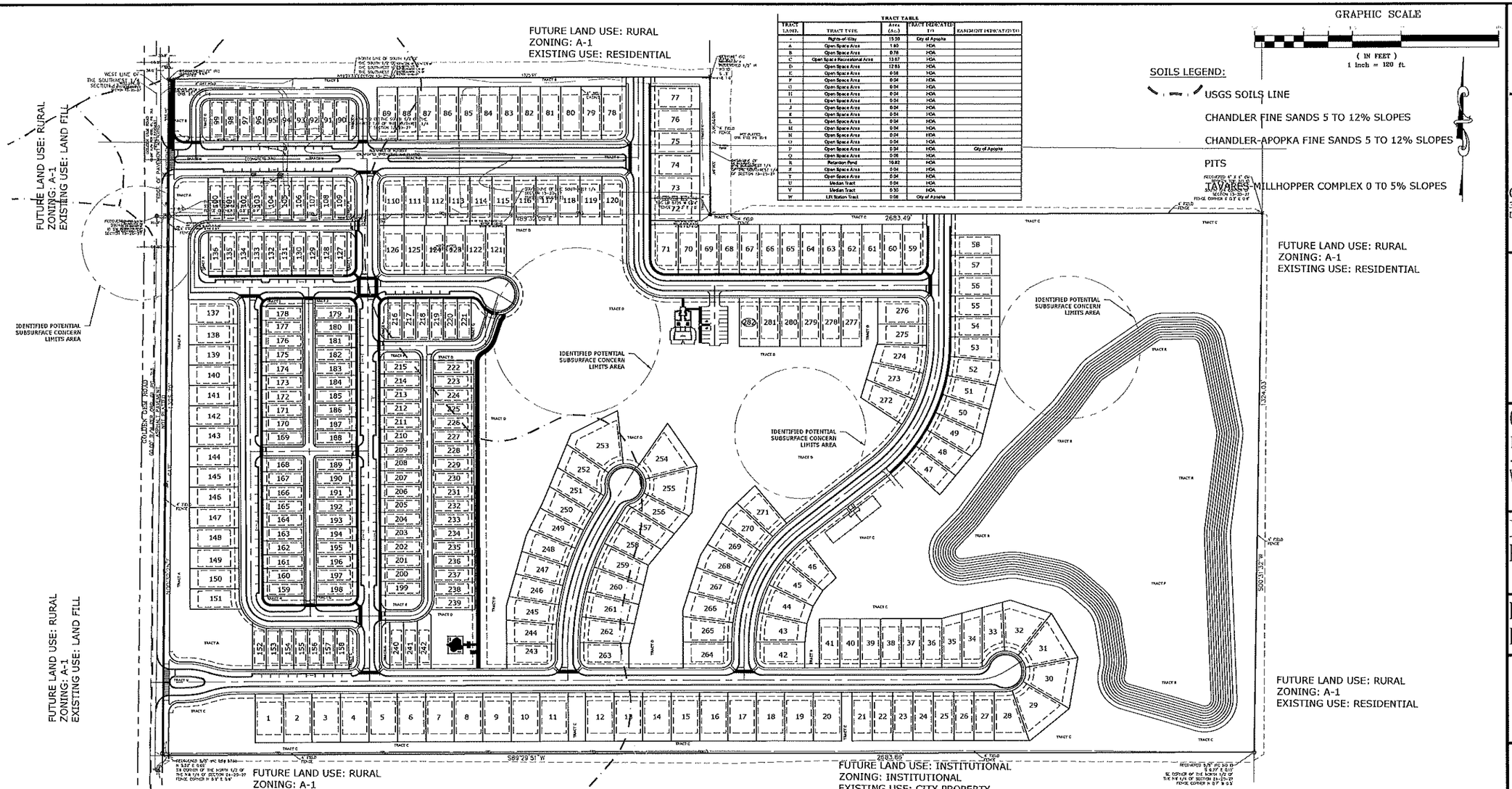
FOR:
CANTERO HOLDINGS, LLC

FOR THE LICENSED BUSINESS FORM #6723 BY:
JAMES L. REDMAN P.S.M. # 5633

DATE	REVISIONS

JOB #	20170184
DATE:	06/20/2018
SCALE:	1 inch = 100 feet
CALC BY:	JLR
FIELD BY:	ST/BH/JPG
DRAWN BY:	DR/MHH
CHECKED BY:	JPC

SHEET 1 OF 1



TRACT TABLE

TRACT IDENT.	TRACT TYPE	Area (Ac.)	TRACT OWNERSHIP	EASEMENT (YES/NO/AT/ST/U)
-	Right-of-Way	15.50	City of Apopka	
A	Open Space Area	1.80	HOA	
B	Open Space Area	0.76	HOA	
C	Open Space Recreational Area	13.67	HOA	
D	Open Space Area	12.53	HOA	
E	Open Space Area	0.08	HOA	
F	Open Space Area	0.04	HOA	
G	Open Space Area	0.04	HOA	
H	Open Space Area	0.04	HOA	
I	Open Space Area	0.04	HOA	
J	Open Space Area	0.04	HOA	
K	Open Space Area	0.04	HOA	
L	Open Space Area	0.04	HOA	
M	Open Space Area	0.04	HOA	
N	Open Space Area	0.04	HOA	
O	Open Space Area	0.04	HOA	
P	Open Space Area	0.04	HOA	City of Apopka
Q	Open Space Area	0.06	HOA	
R	Retention Pond	10.82	HOA	
S	Open Space Area	0.04	HOA	
T	Open Space Area	0.04	HOA	
U	Median Tract	0.04	HOA	
V	Median Tract	0.50	HOA	
W	Lift Station Tract	0.06	City of Apopka	

SITE DATA:

Parcel I.D. #: 13-20-27-0000-00-054, 24-20-27-0000-00-097

Property FLU: Wekiva Parkway Interchange Mixed-Use
Property Zoning: Wekiva Parkway Interchange Mixed-Use
Character Zone: Neighborhood

Gross Land Area: 91.94 acres
Lakes/Wetland Area: 0.00 acres
Gross Developable Area: 91.94 acres
Net Developable Area: 91.94 acres

Stormwater Management Area: 10.82 acres
Right-of-Way Area: 15.50 acres
Right-of-Way Dedication: 0.00 acres
Public Open Space Tracts: 29.73 acres

Proposed Residential Units: 282 Single-Family Detached Lots
Net Residential Density: 3.07 dwelling units/Net Developable Acre

Minimum Living Area: 1,250 sqft. (Heated/cooled space)WPI-NU (Average will be more than 1,250)

Maximum Building Height: Two Stories, 35'
Minimum Lot Width: 34'
Minimum Lot Depth: N/A
Minimum Lot Size: 3,400
Maximum Lot Coverage: 70%
Minimum Open Space %: 20%

Setbacks:
Front: 15' (Alley-Loaded), 20' (Front-Loaded)
Side: 5' (Alley-Loaded), 5' (Front-Loaded)
Side Street: 15' (Alley-Loaded), 15' (Front-Loaded)
Rear: 5' (Alley-Loaded), 20' (Front-Loaded)

Open Space Requirements:

Land Development Code (Residential 20%)
91.94 ac. * .20 = 18.40 acres (required)
Open Space Provided:

Tract A:	1.80 acres
Tract B:	0.76 acres
Tract C:	13.67 acres
Tract D:	12.53 acres
Tract E:	0.08 acres
Tract F:	0.04 acres
Tract G:	0.04 acres
Tract H:	0.04 acres
Tract I:	0.04 acres
Tract J:	0.04 acres
Tract K:	0.04 acres
Tract L:	0.04 acres
Tract M:	0.04 acres
Tract N:	0.04 acres
Tract O:	0.06 acres
Tract P:	0.04 acres
Tract Q:	0.06 acres
Tract R:	10.82 acres
Tract S:	0.04 acres
Tract T:	0.04 acres
Total:	40.30 acres (18.40 required)

Major Street Setbacks:

Golden Gem Road. 50' (setback from right-of-way line)

Additional Notes:

1. Billboards and pole signs shall be prohibited.
2. There is no proposed 100 yr. Flood Plain encroachment.
3. 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.
4. A Homeowner's Association will be created for maintenance and ownership of common area tracts as reflected in the tract table.
5. Fire Protection will be provided by City of Apopka in accordance with the 2015 Florida Fire Prevention Code.
6. The project will be constructed in two phases as noted by the phase line.
7. All construction access to the site will be from Golden Gem Rd.

Off-Street Parking:

Required Parking:

2.0 spaces per Unit (for Single-Family Residences):	(282 units x 2.0 spaces/unit) = 564
Total Required Parking:	564
Provided Parking:	
2 Garage Spaces per Unit:	564 spaces
2 Driveway Spaces per Unit:	564 spaces
On-Street Parallel Parking:	120 spaces
Total Parking Provided:	1248 spaces

Phasing:

This project is to be developed in a multiple phases.

Traffic:

Single-Family Residential: 282 d.u. * 9.57 trip/d.u. = 2,699 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.

School Age Population:

282 d.u. * .478 children/unit = 135 children

Needed Fire Flow (NFF): (Based on FFPC 2012 Edition Chapter 18 & Annex I)

Single-Family (less than 5,000 sqft.): 1,000 gpm

Water, Sewer and Solid Waste Demand:

Water Demand:
282 Units * 300 gallons/day = 84,600 gallons/day

Sewer Demand:
282 Units * 280 gallons/day = 78,960 gallons/day

Solid Waste Demand:
282 Units * 2.6 persons/unit * 4.3 Lb./person/day = 3,153 Lb/day

Recreational/Open Space Demand:
282 Units * 2.6 persons/unit /1,000 * 3.0 ac/1,000 persons = 2.20 ac.

Green Building Standards Points Allocation:

- Installation of Energy Star HVAC: 0.50 points
- Orient at least 50% of the residential units within 20° of east-west axis: 1.50 points
- Installation of Paver driveways to create pervious pavement areas: 1.00 points
- Preserve 5 or more trees 20' in height & 24" DBH or greater: 1.00 points

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Park View
Preserve Subdivision
City of Apopka, Florida

KPI Master/Major Development Plan

Overall Site Plan

Plans not valid unless Signed, Dated and Sealed below.

GEOFFREY L. SUMMITT, P.E.
Date: April 23, 2020
FL Registration #58775
Certificate of Authorization #29665

Revisions

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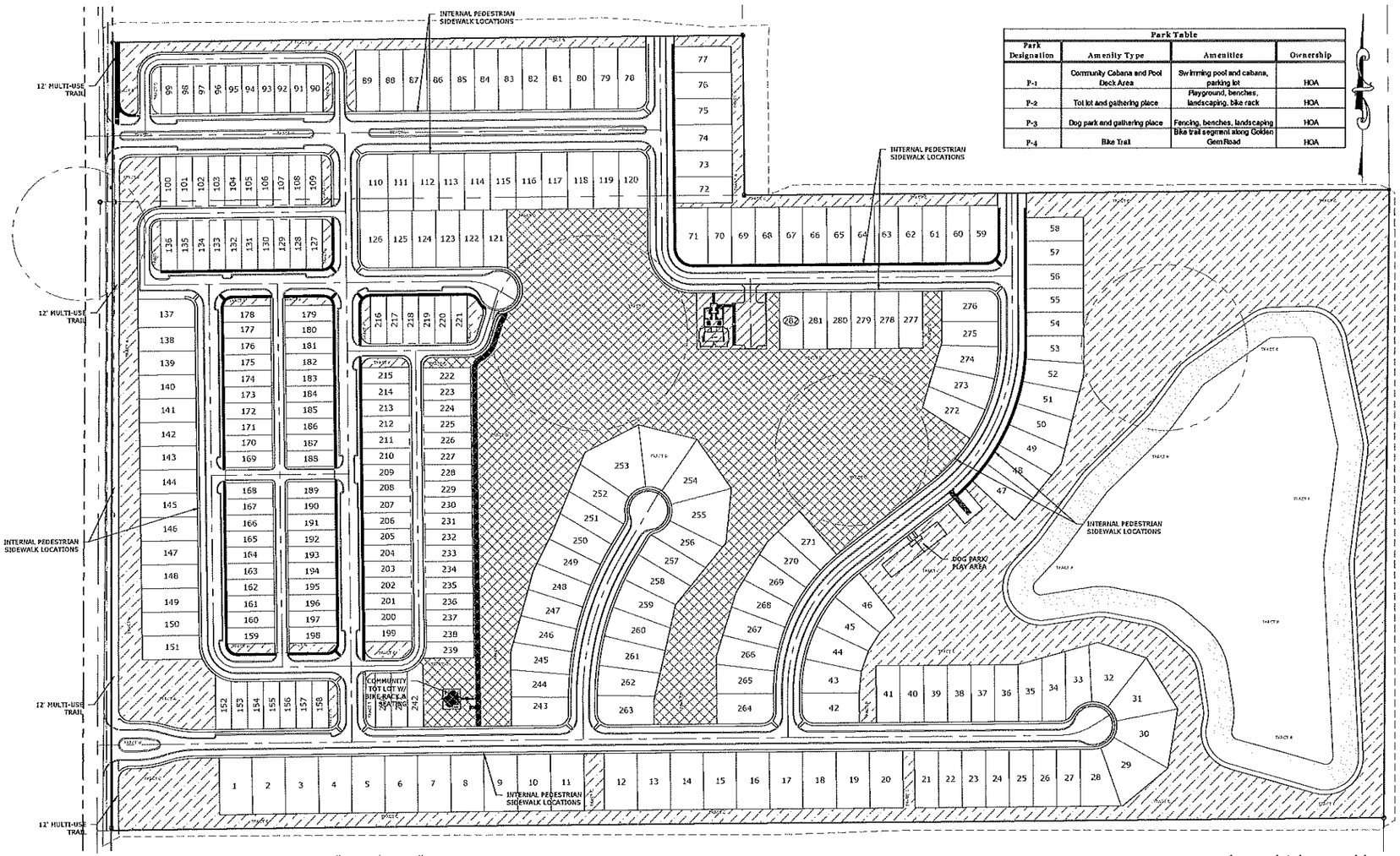

Park Table			
Park Designation	Amenity Type	Amenities	Ownership
P-1	Community Cabana and Pool Deck Area	Swimming pool and cabana, parking lot	HOA
P-2	Tot lot and gathering place	Playground, benches, landscaping, bike rack	HOA
P-3	Dog park and gathering place	Fencing, benches, landscaping	HOA
P-4	Bike Trail	Bike trail segment along Golden Gem Road	HOA

GRAPHIC SCALE

(IN FEET)
1 inch = 120 ft.

OPEN SPACE SET-ASIDE HATCH LEGEND

ACTIVE RECREATIONAL OPEN SPACE

COMMUNITY SQUARE OPEN SPACE AREAS

GENERAL GREEN OPEN SPACE AREAS

Land Development Code (Residential 20%)
91.94 ac. * .20 = 18.40 acres (required)

Open Space Provided:

Tract A:	1.80 acres
Tract B:	0.76 acres
Tract C:	13.67 acres
Tract D:	12.40 acres
Tract E:	0.08 acres
Tract F:	0.04 acres
Tract G:	0.04 acres
Tract H:	0.04 acres
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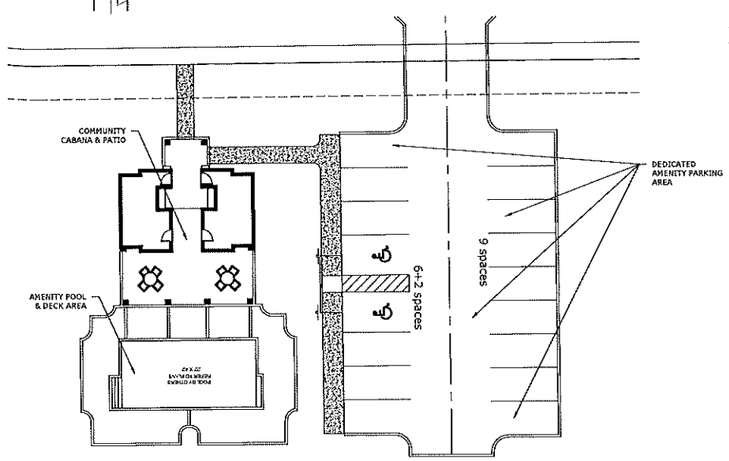
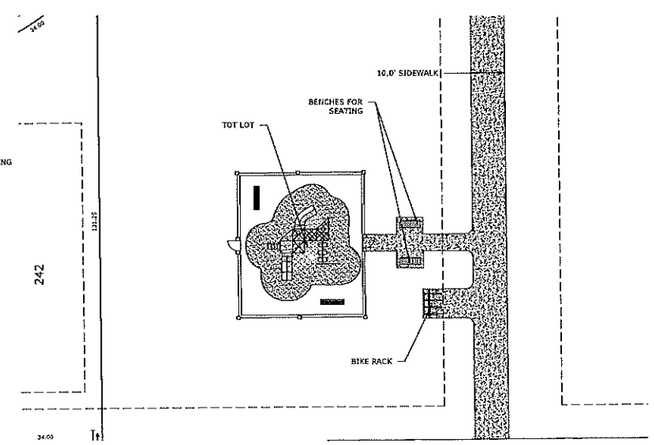
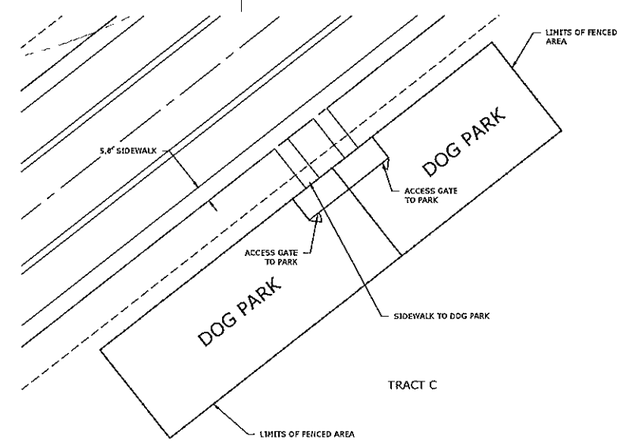
Tract M:	0.04 acres
Tract N:	0.04 acres
Tract O:	0.06 acres
Tract P:	0.04 acres
Tract Q:	0.06 acres
Tract R:	10.82 acres
Tract S:	0.04 acres
Tract T:	0.04 acres
Total:	40.17 acres
	(18.40 required)



ACTIVE RECREATIONAL AREA BLOW-UP DETAIL
1" = 20'



TOT-LOT RECREATIONAL AREA BLOW-UP DETAIL
1" = 20'



TRACT C DOG PARK RECREATIONAL AREA BLOW-UP DETAIL
1" = 20'

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Park View Preserve Subdivision

City of Apopka, Florida

KPI Master/Major Development Plan

Parks & Open Space Plan

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Date: April 23, 2020

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SHEET NUMBER
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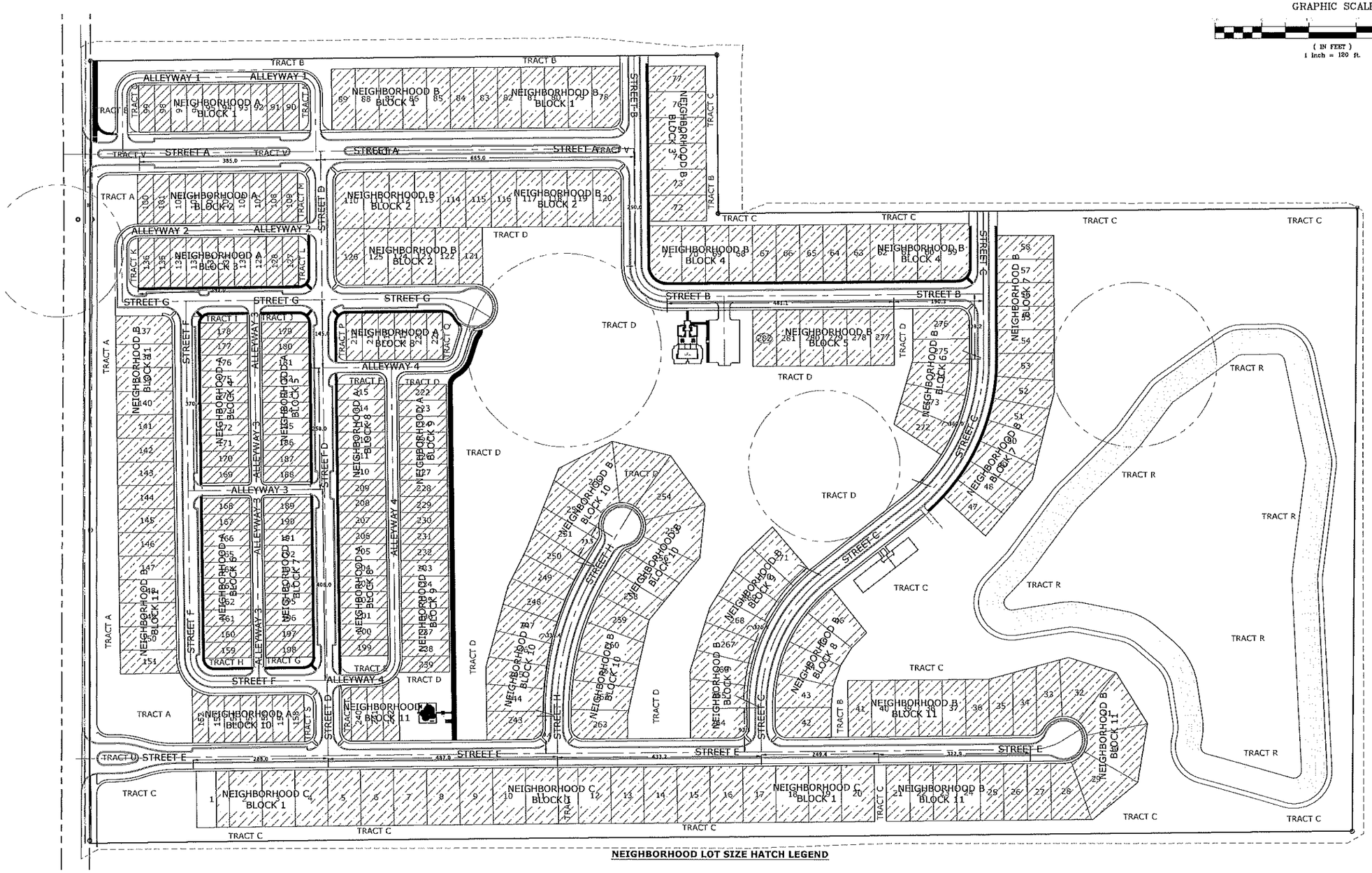
GRAPHIC SCALE

(IN FEET)
1 inch = 120 ft.



NEIGHBORHOOD LOT SIZE HATCH LEGEND

NEIGHBORHOOD 'A' 34' BUNGALOW LOTS

NEIGHBORHOOD 'B' 50' SINGLE-FAMILY LOTS

NEIGHBORHOOD 'C' 70' SINGLE-FAMILY LOTS

NEIGHBORHOOD STREETS DESIGNATION

STREET NAME	STREET DESIGNATION	STREET NAME	STREET DESIGNATION
STREET 'A' 90' RIGHT-OF-WAY	STREET TYPE 'E'	STREET 'G' 90' RIGHT-OF-WAY	STREET TYPE 'E'
STREET 'B' 60' RIGHT-OF-WAY	STREET TYPE 'E'	STREET 'H' 60' RIGHT-OF-WAY	STREET TYPE 'E'
STREET 'C' 60' RIGHT-OF-WAY	STREET TYPE 'E'	ALLEYWAY '1' 30' RIGHT-OF-WAY	STREET TYPE 'F'
STREET 'D' 60' RIGHT-OF-WAY	STREET TYPE 'E'	ALLEYWAY '2' 30' RIGHT-OF-WAY	STREET TYPE 'F'
STREET 'E' 60' RIGHT-OF-WAY	STREET TYPE 'E'	ALLEYWAY '3' 30' RIGHT-OF-WAY	STREET TYPE 'F'
STREET 'F' 60' RIGHT-OF-WAY	STREET TYPE 'E'	ALLEYWAY '4' 30' RIGHT-OF-WAY	STREET TYPE 'F'

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Neighborhood Block Plan

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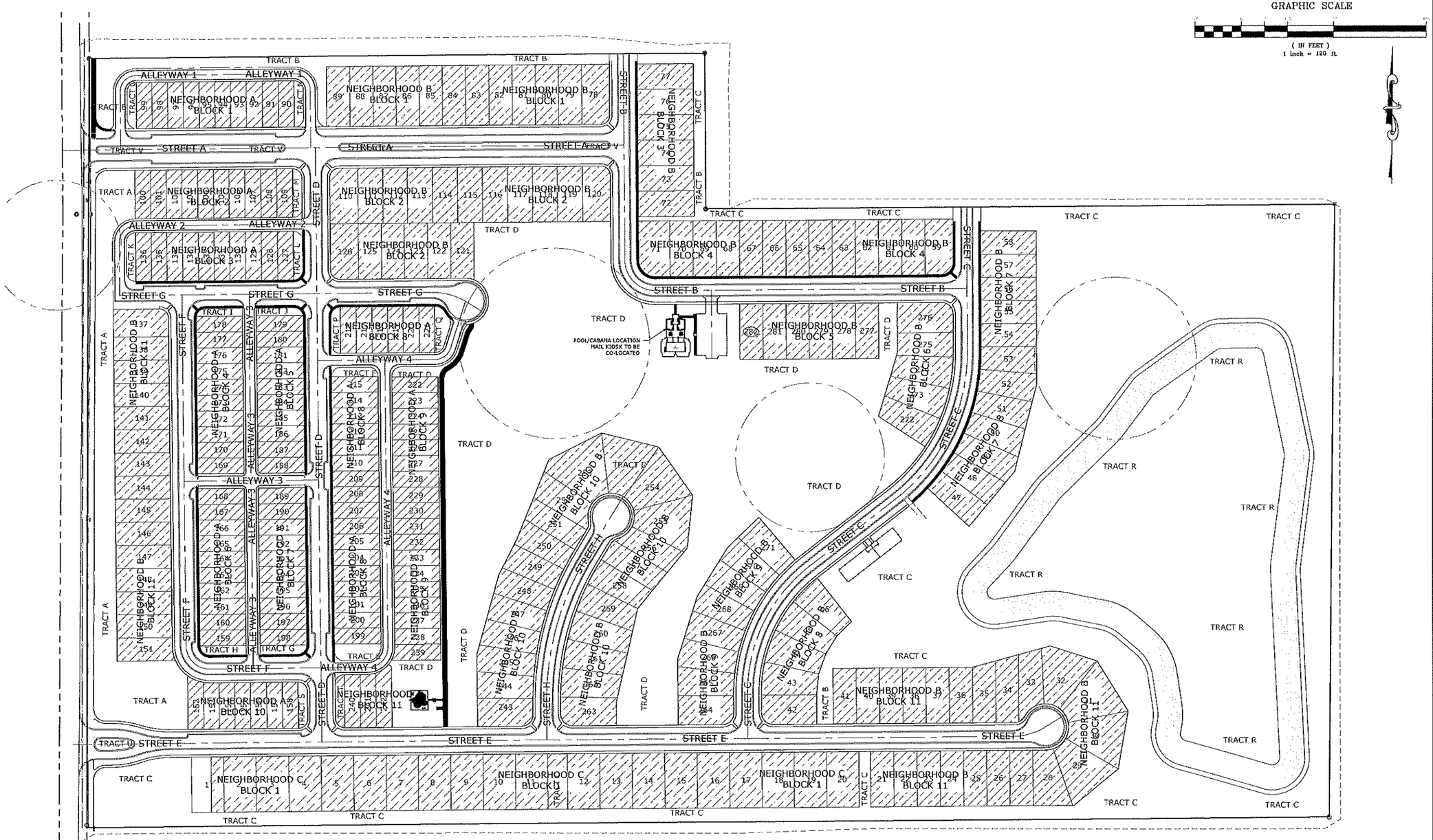

SITE DESIGN STANDARDS PLAN:

NEIGHBORHOOD 'A' DESIGN DETAILS:

Minimum Living Area:	1,250 sqft. (Heated/cooled space)
Maximum Building Height:	Two Stories, 35'
Minimum Lot Width:	34'
Minimum Lot Depth:	100'
Minimum Lot Size:	3,400
Maximum Lot Coverage:	70%
Minimum Open Space %:	20%
Garage Location:	Rear-Entry (2-Car)
Setbacks:	
Front:	15'
Side:	5'
Side Street:	15'
Rear:	5'
Accessory Uses:	Those permitted by code
Architectural Design:	Consistent with Section K of the form-based code

NEIGHBORHOOD 'B' DESIGN DETAILS:

Minimum Living Area:	1,400 sqft. (Heated/cooled space)
Maximum Building Height:	Two Stories, 35'
Minimum Lot Width:	50'
Minimum Lot Depth:	120'
Minimum Lot Size:	5,000
Maximum Lot Coverage:	70%
Minimum Open Space %:	20%
Garage Location:	Front-Entry (2-Car)
Setbacks:	
Front:	20'
Side:	5'
Side Street:	20'
Rear:	5'
Accessory Uses:	Those permitted by code
Architectural Design:	Consistent with Section K of the form-based code

NEIGHBORHOOD 'C' DESIGN DETAILS:

Minimum Living Area:	1,750 sqft. (Heated/cooled space)
Maximum Building Height:	Two Stories, 35'
Minimum Lot Width:	70'
Minimum Lot Depth:	120'
Minimum Lot Size:	5,000
Maximum Lot Coverage:	65%
Minimum Open Space %:	20%
Garage Location:	Front-Entry (2-Car)
Setbacks:	
Front:	20'
Side:	5'
Side Street:	20'
Rear:	5'
Accessory Uses:	Those permitted by code
Architectural Design:	Consistent with Section K of the form-based code

Green Building Standards Points Allocation:

• Installation of Energy Star HVAC:	0.50 points
• Orient at least 50% of the residential units within 20° of east-west axis:	1.50 points
• Installation of Paver driveways to create pervious pavement areas:	1.00 points
• Preserve 5 or more trees 20' in height & 24" DBH or greater:	1.00 points

Street Landscaping:

Landscaping shall be consistent with Section H of the form-based code or the City of Apopka LDR

Building Architecture:

Building Architecture shall comply with Section K of the form-based code. Elevations for proposed product types for Neighborhood's A, B and C and Pool Cabana have been included in the plans for reference as to compliance with the requirements of Section K.

Model-Home Park:

The model home park will be provided in the northwest corner along Street A. The model park will consist of 5 lots 2 of each neighborhood type. A model site plan will be provided after the Construction Plan approval for staff to review with the model home permit requests.

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Design Standards Plan

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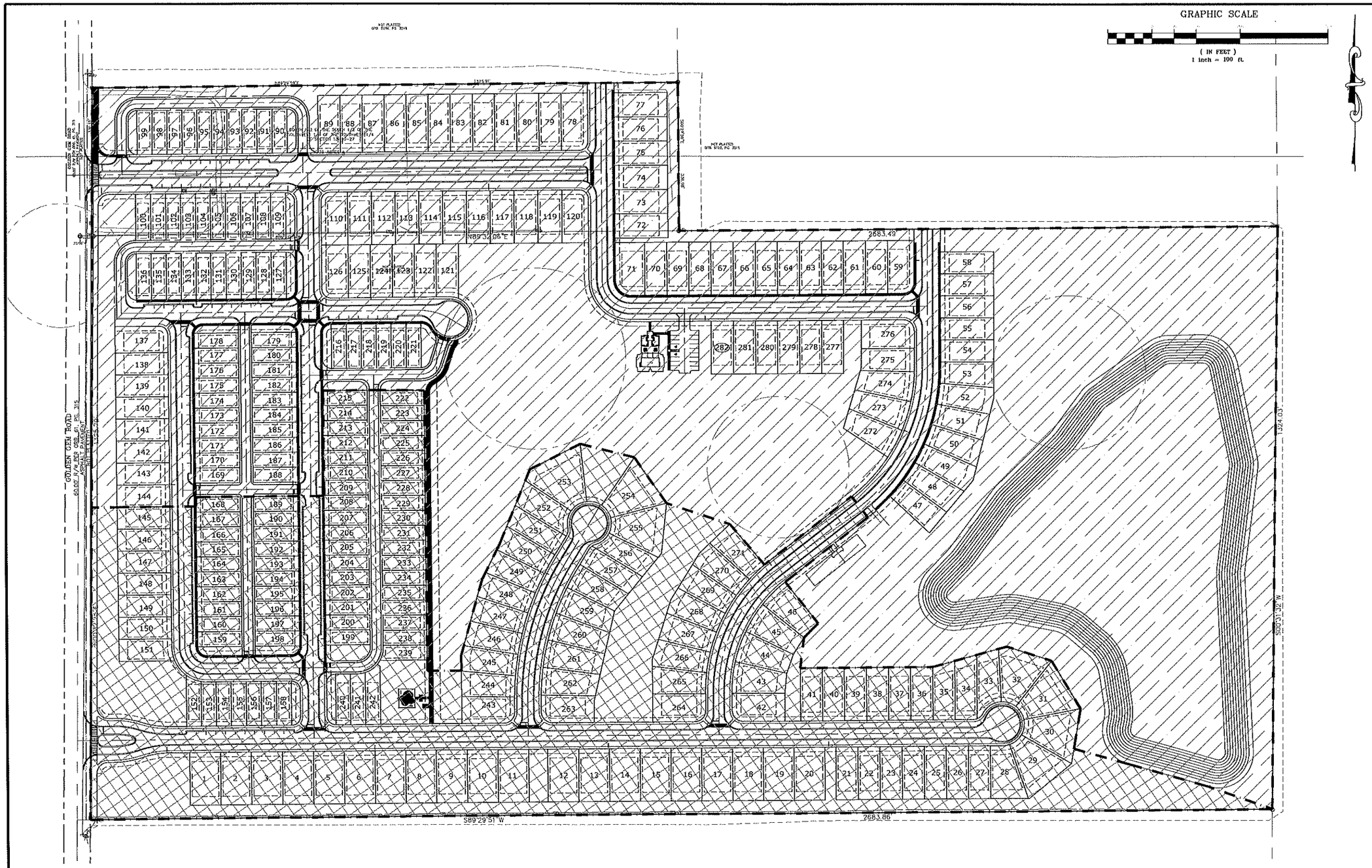

PROJECT PHASING BREAKDOWN:

	PHASE 1	132 LOTS
	PHASE 2	150 LOTS

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Phasing Plan

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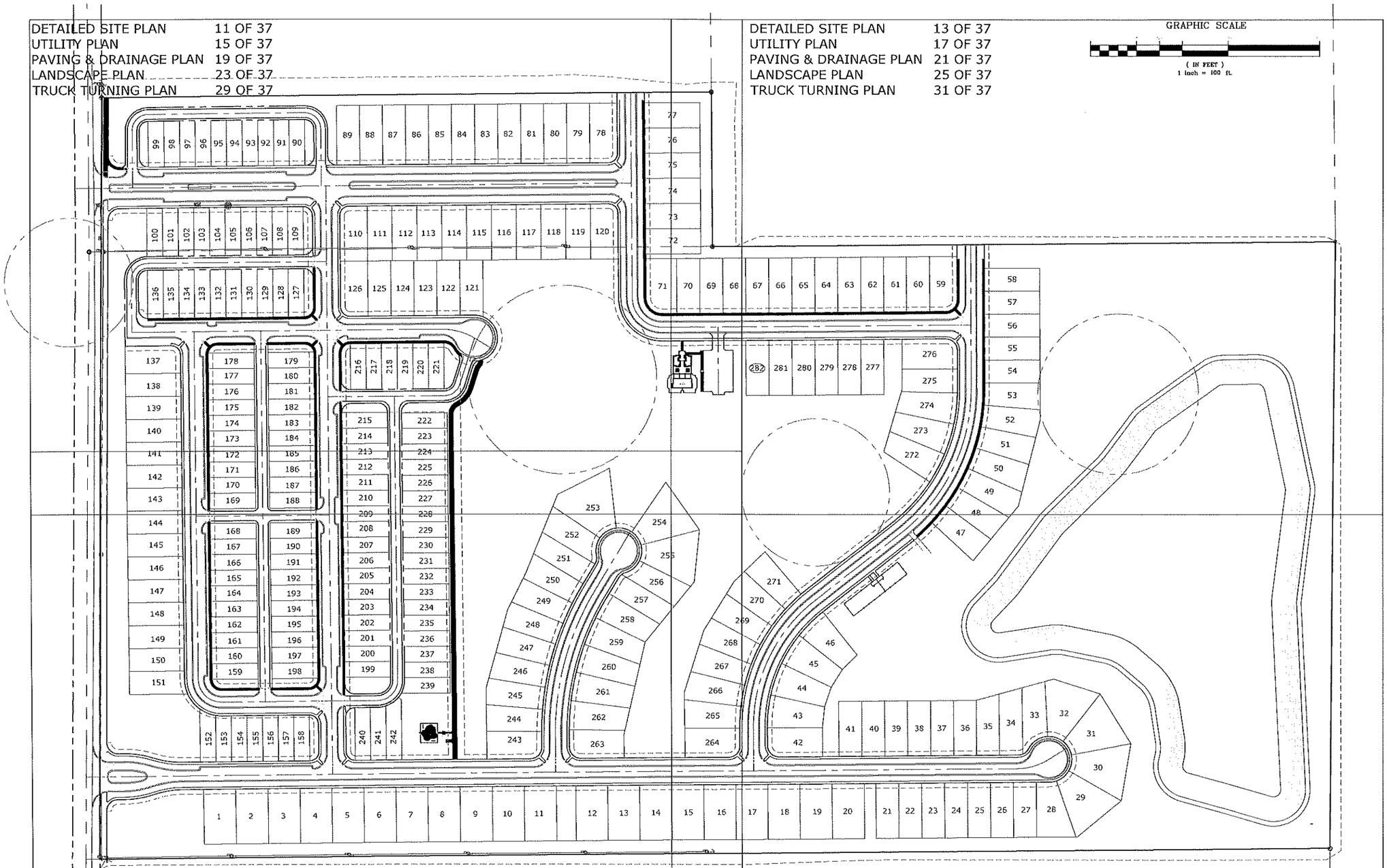
DETAILED SITE PLAN 11 OF 37
UTILITY PLAN 15 OF 37
PAVING & DRAINAGE PLAN 19 OF 37
LANDSCAPE PLAN 23 OF 37
TRUCK TURNING PLAN 29 OF 37

DETAILED SITE PLAN 13 OF 37
UTILITY PLAN 17 OF 37
PAVING & DRAINAGE PLAN 21 OF 37
LANDSCAPE PLAN 25 OF 37
TRUCK TURNING PLAN 31 OF 37

GRAPHIC SCALE
(IN FEET)
1 inch = 100 ft.



DETAILED SITE PLAN 10 OF 37
UTILITY PLAN 14 OF 37
PAVING & DRAINAGE PLAN 18 OF 37
LANDSCAPE PLAN 22 OF 37
TRUCK TURNING 28 OF 37

DETAILED SITE PLAN 12 OF 37
UTILITY PLAN 16 OF 37
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Key Map Plan

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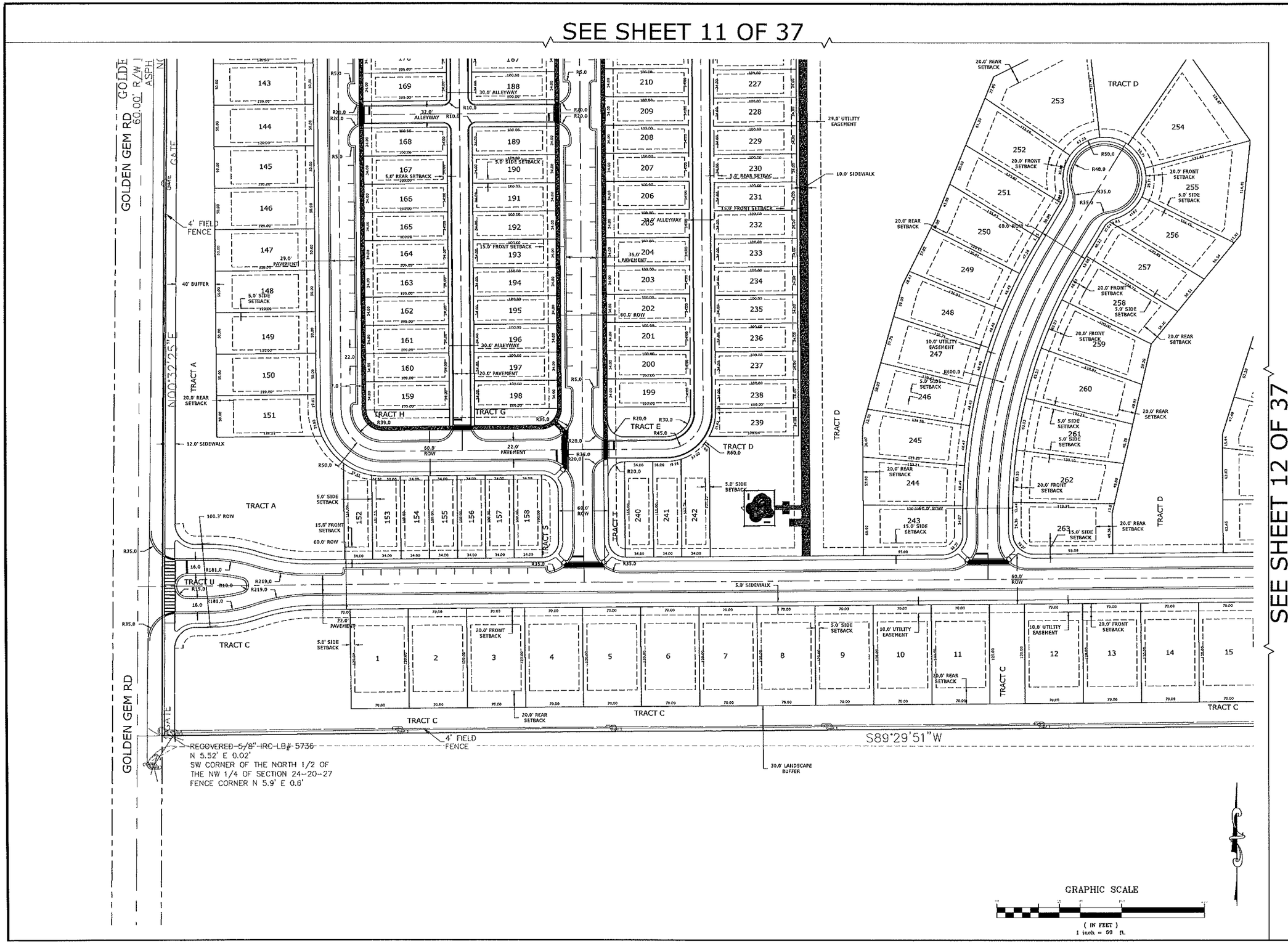

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Site Plan 1

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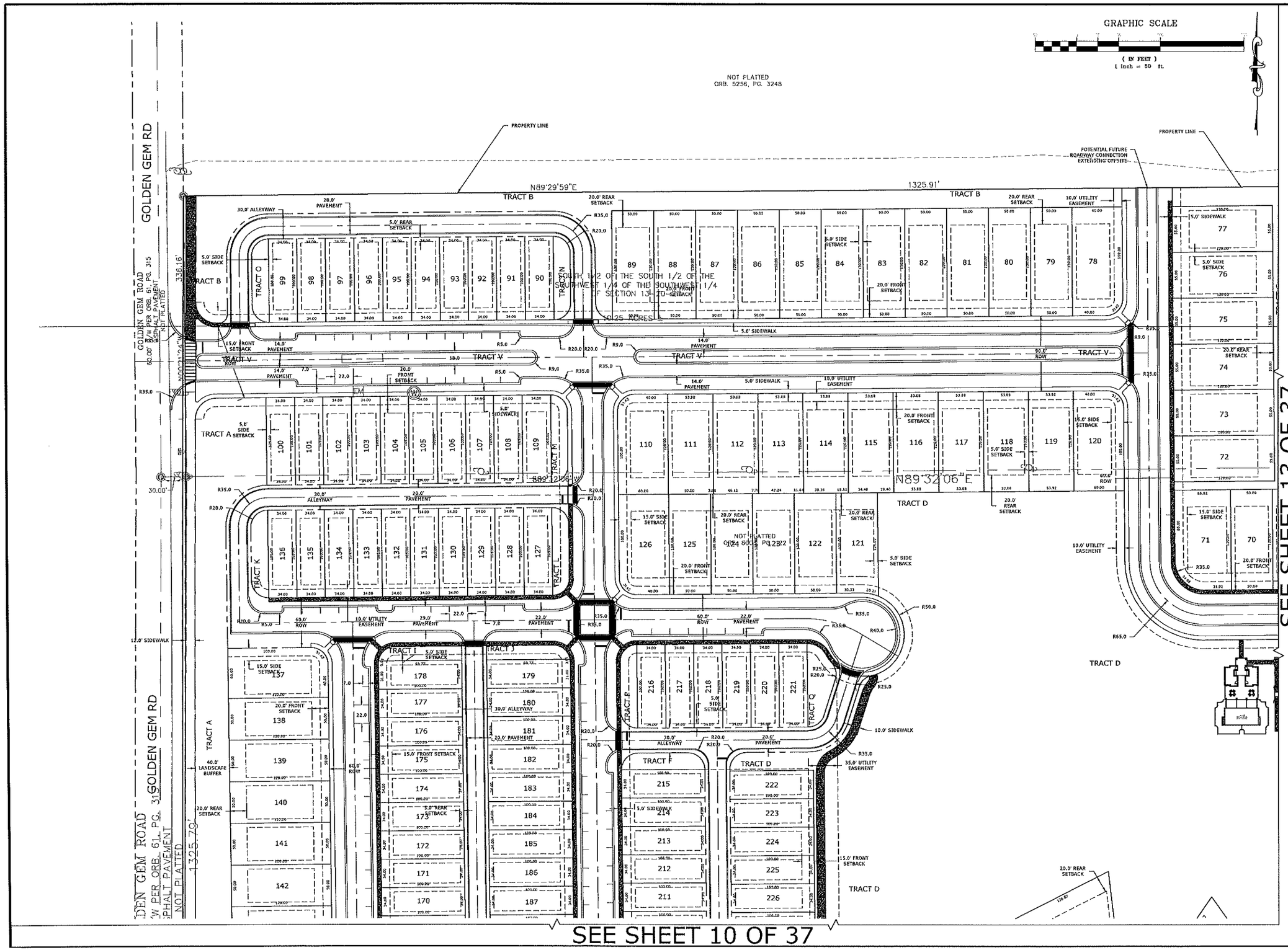

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Site Plan 2

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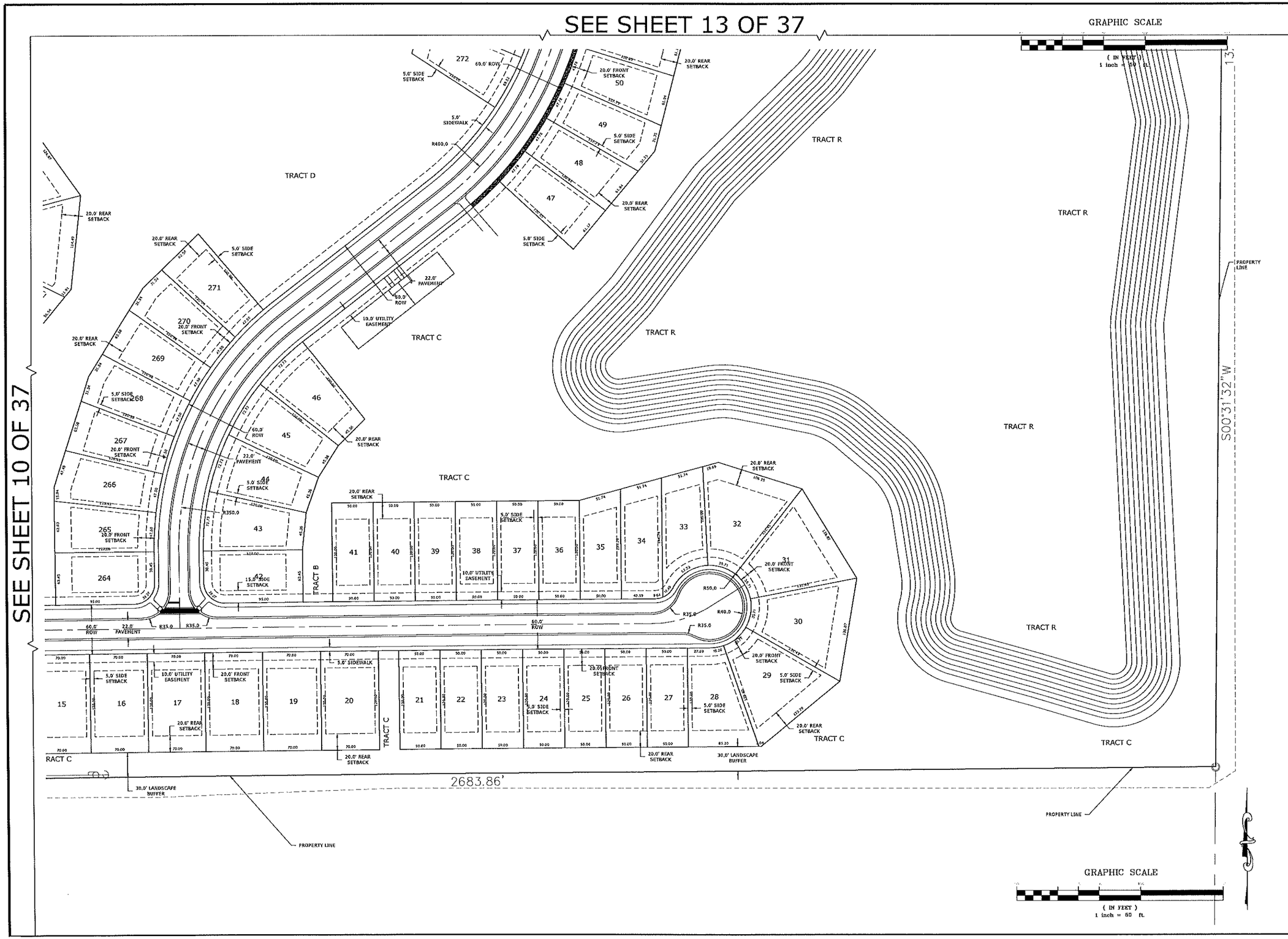

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Site Plan 3

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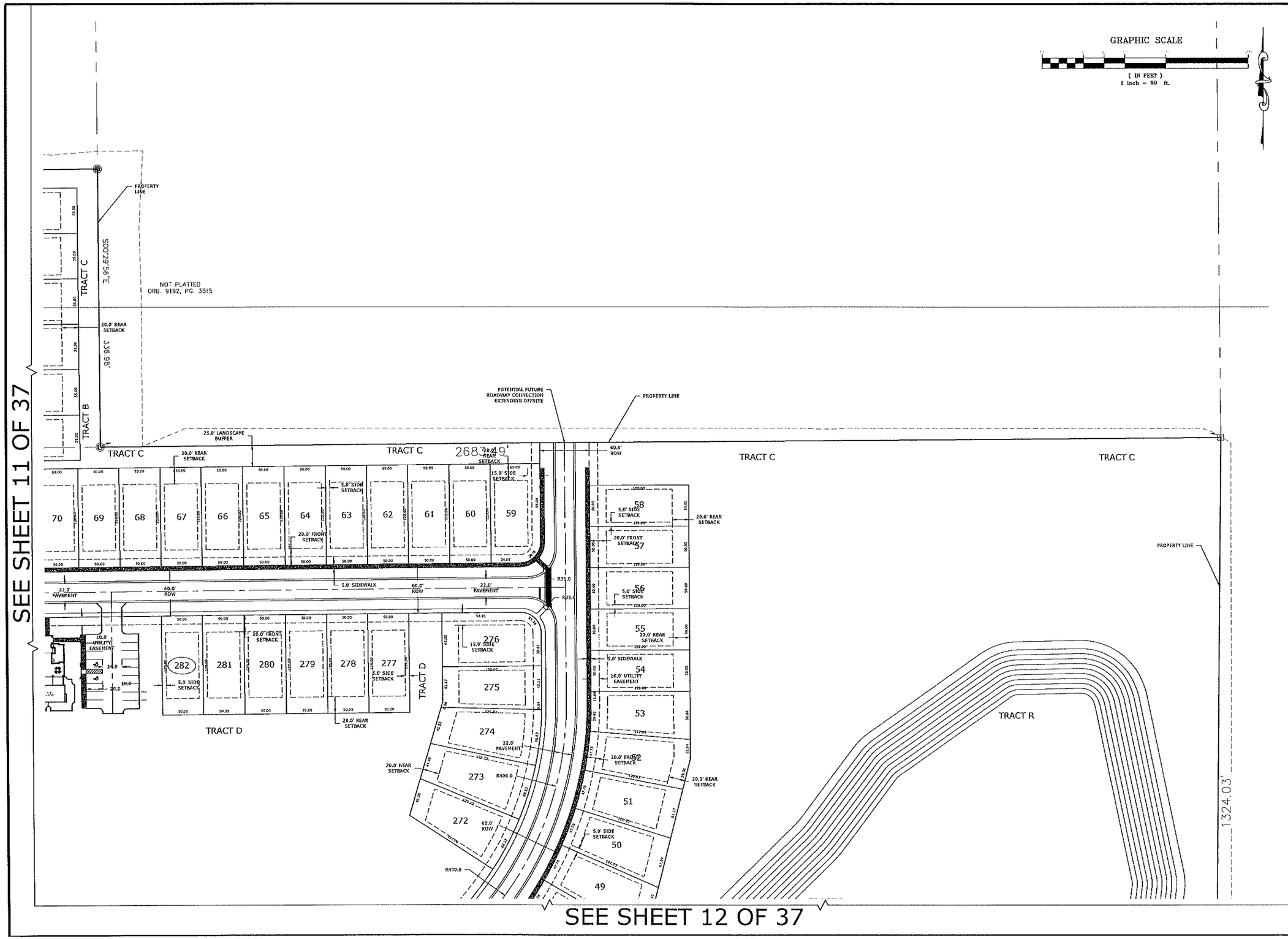

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Site Plan 4

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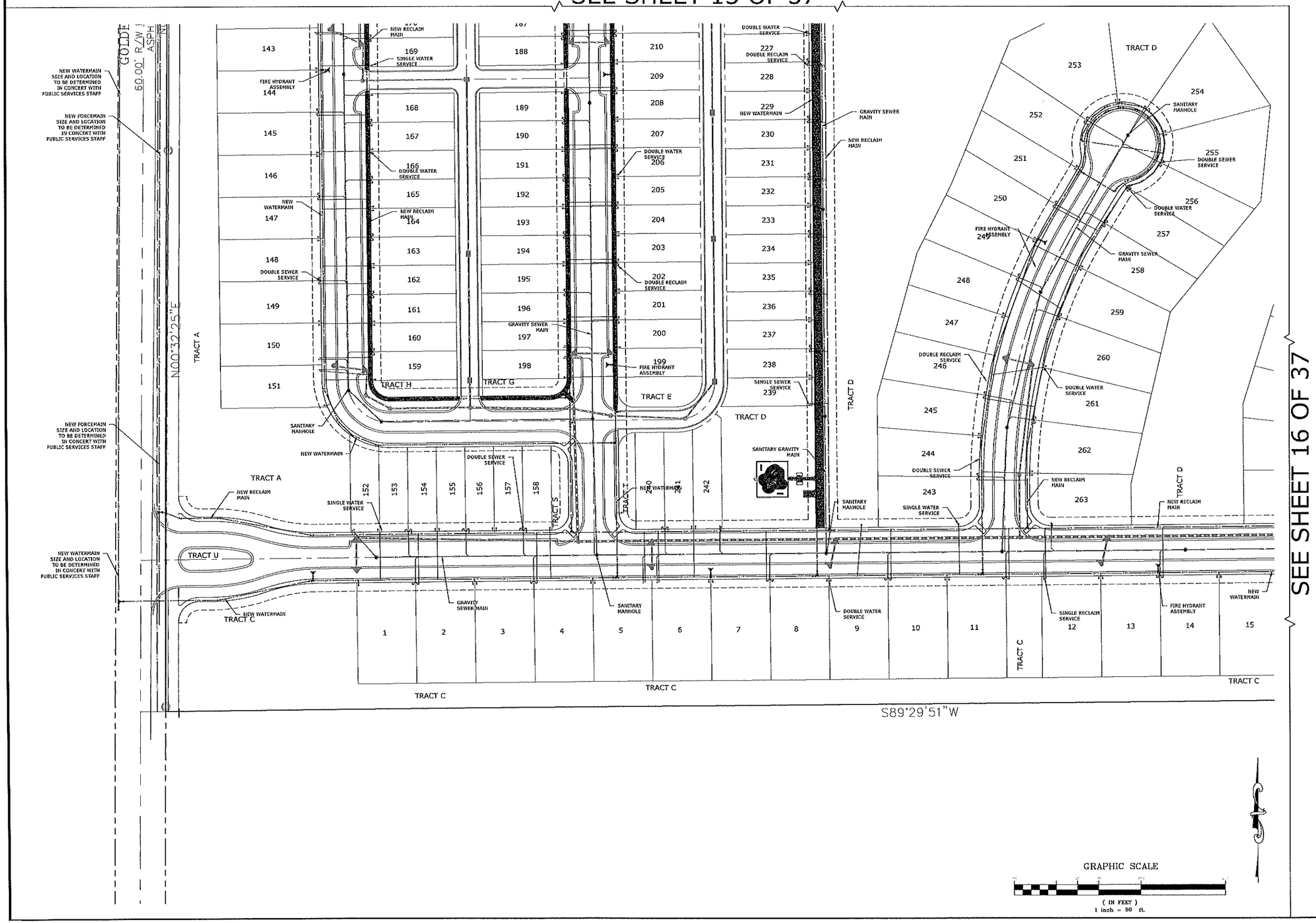

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KPI Master/Major Development Plan

Utility Plan 1

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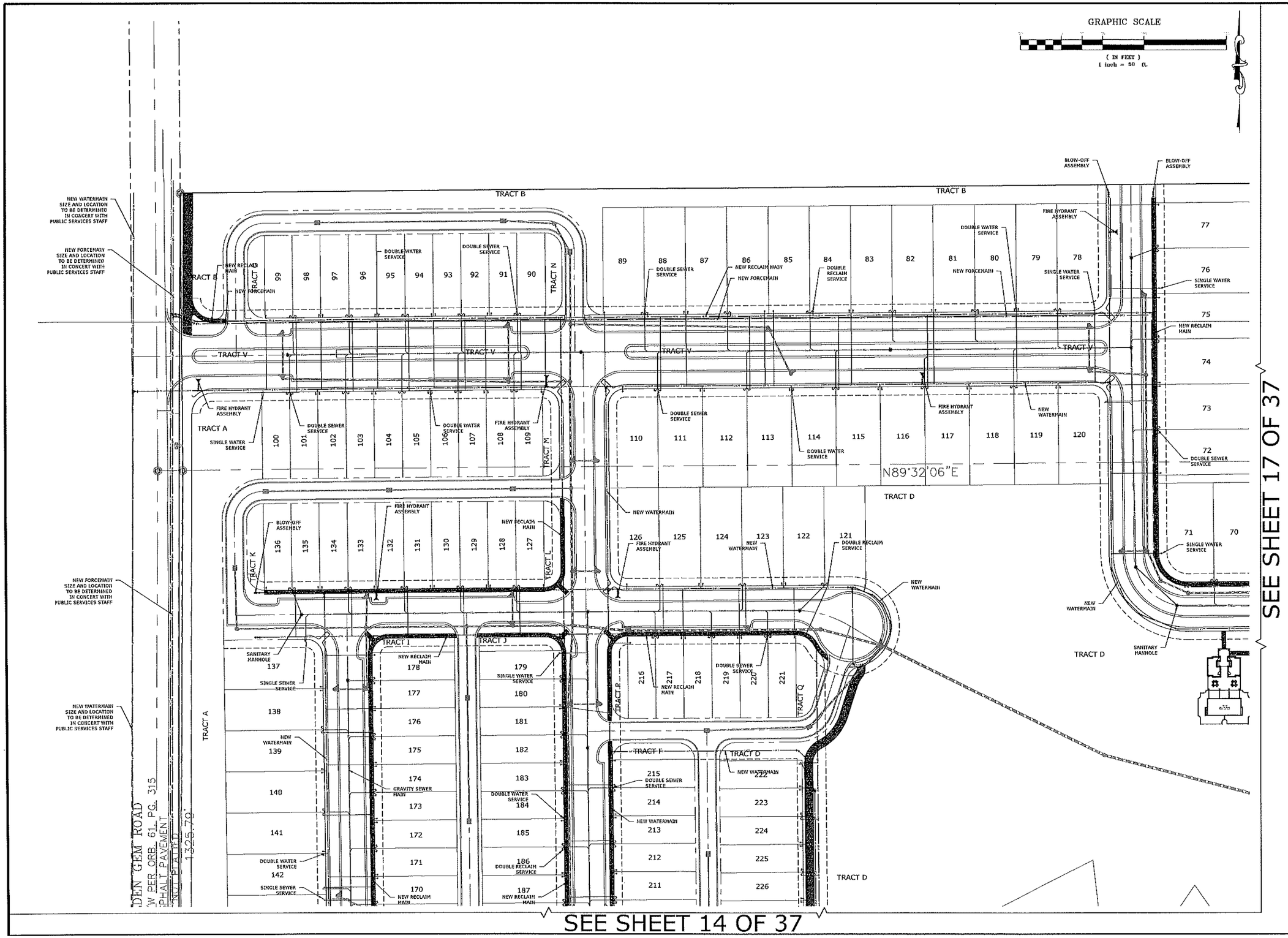

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Utility Plan 2

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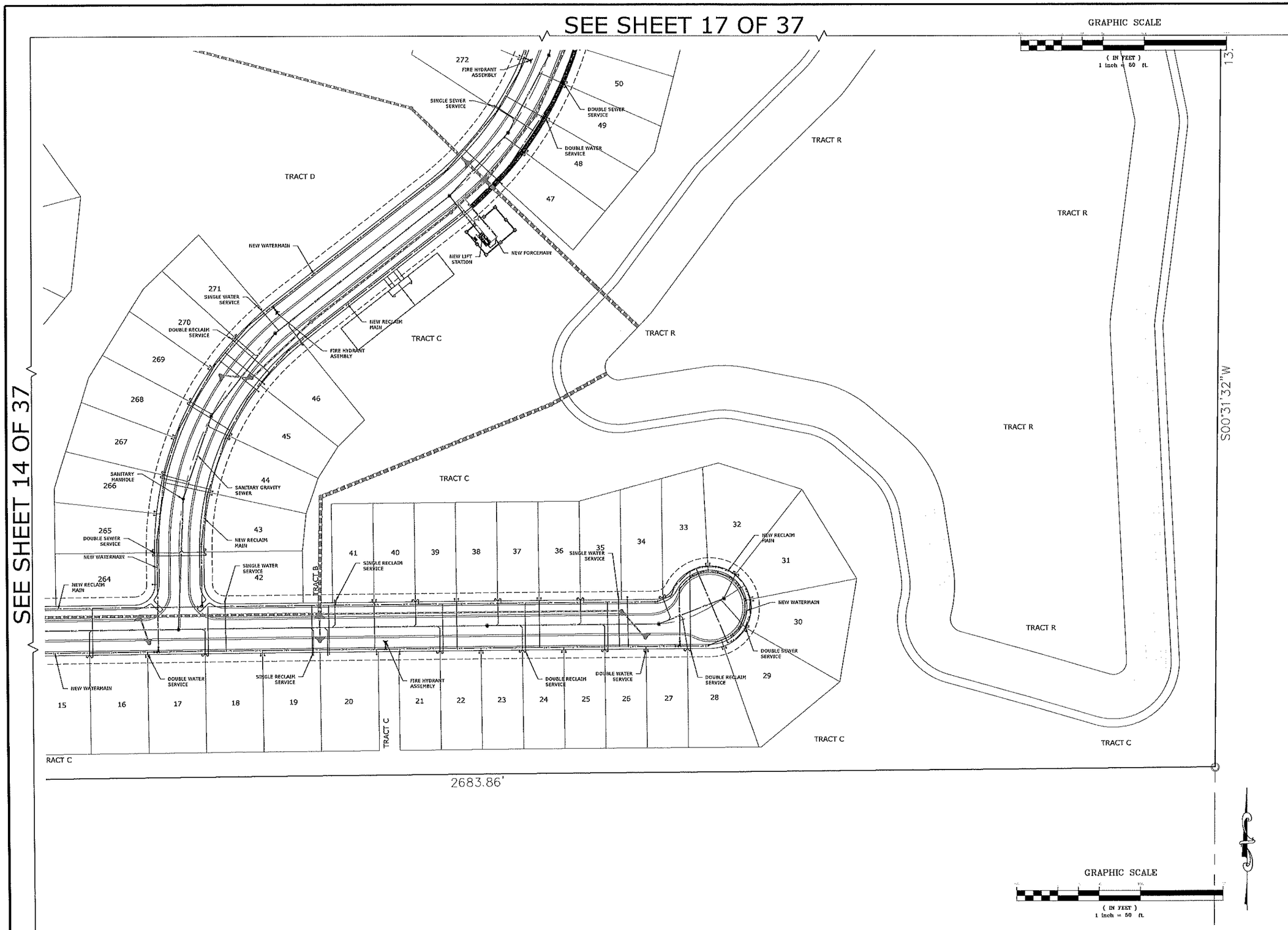

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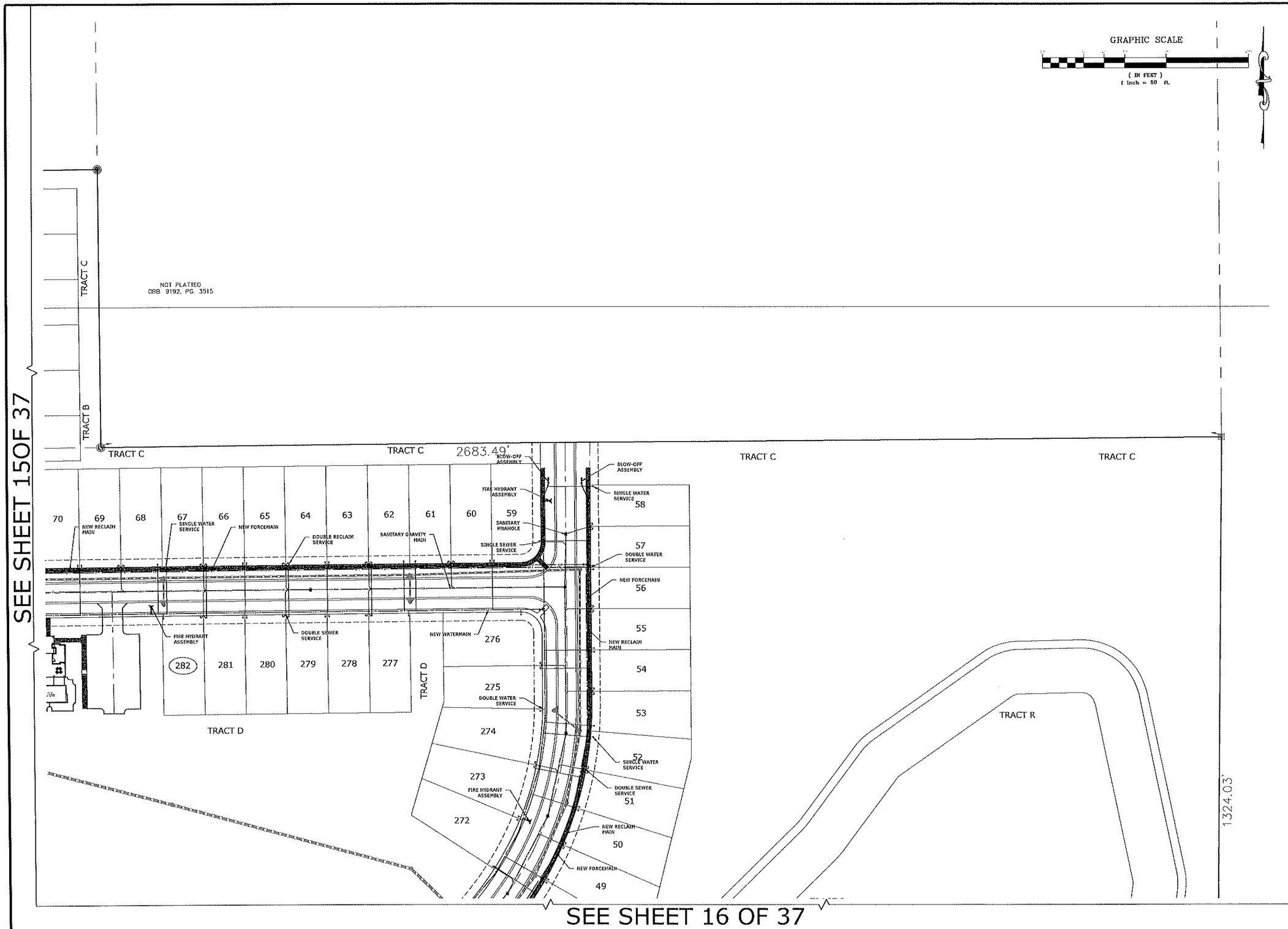

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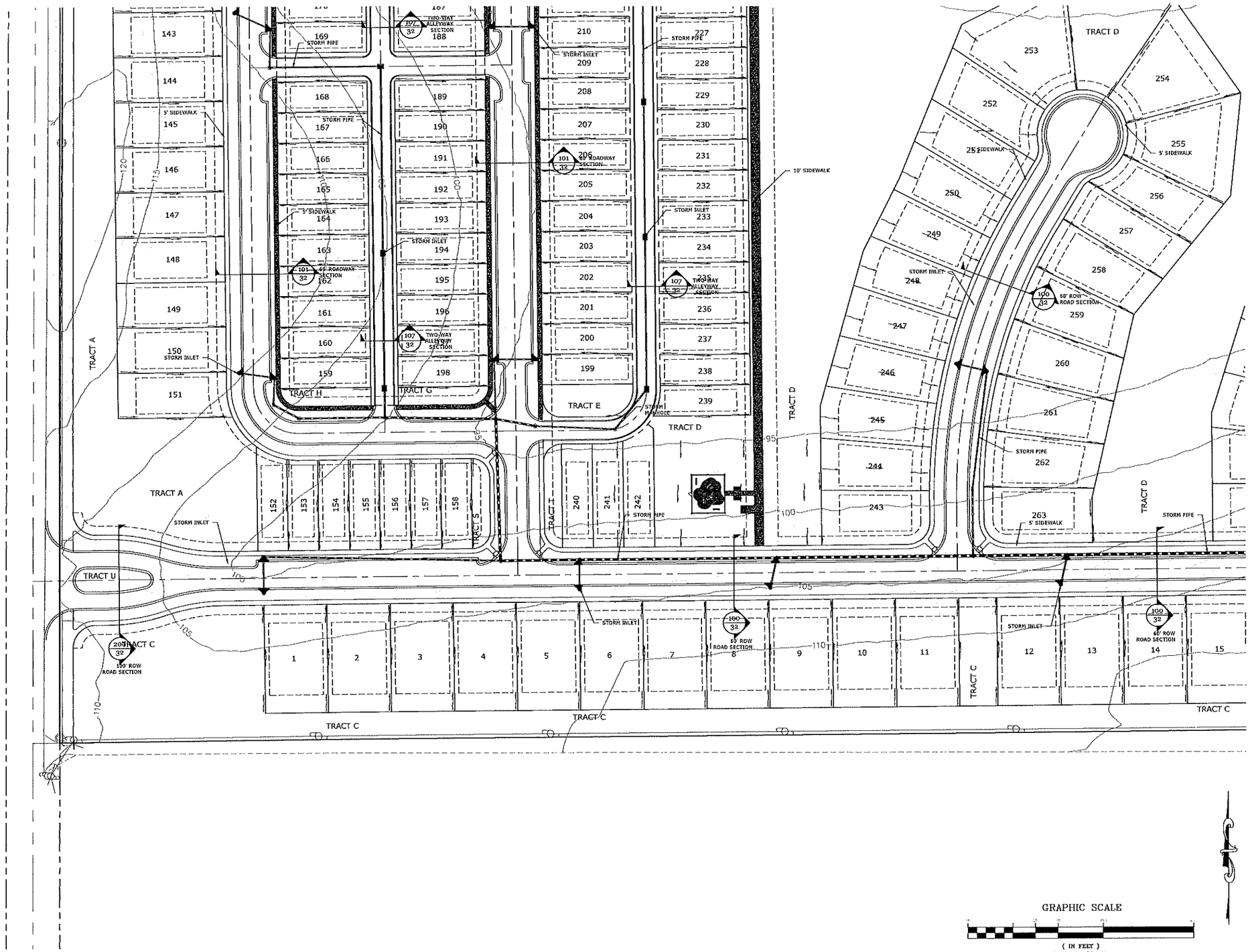

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Paving & Drainage Plan 1

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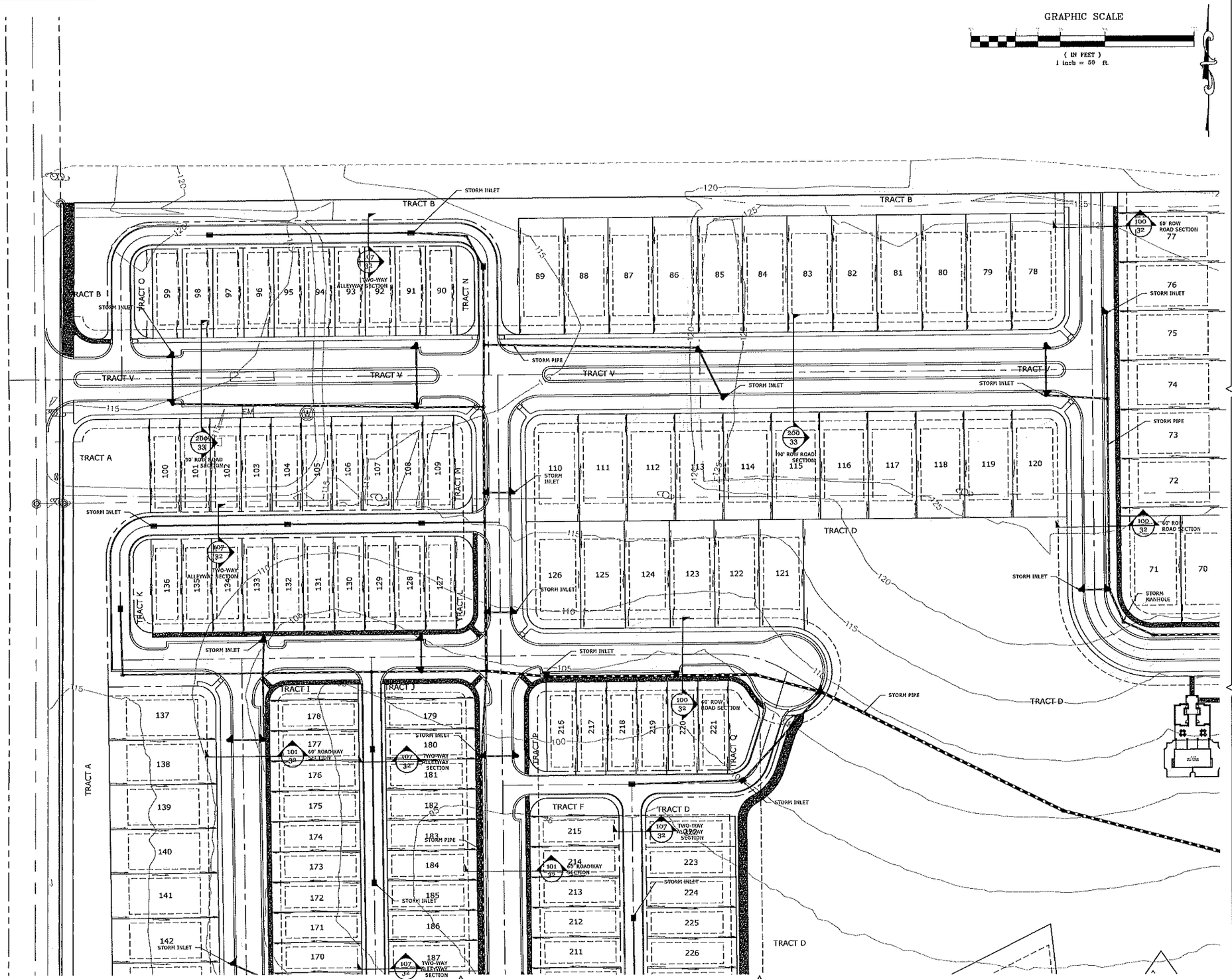

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Paving & Drainage Plan 2

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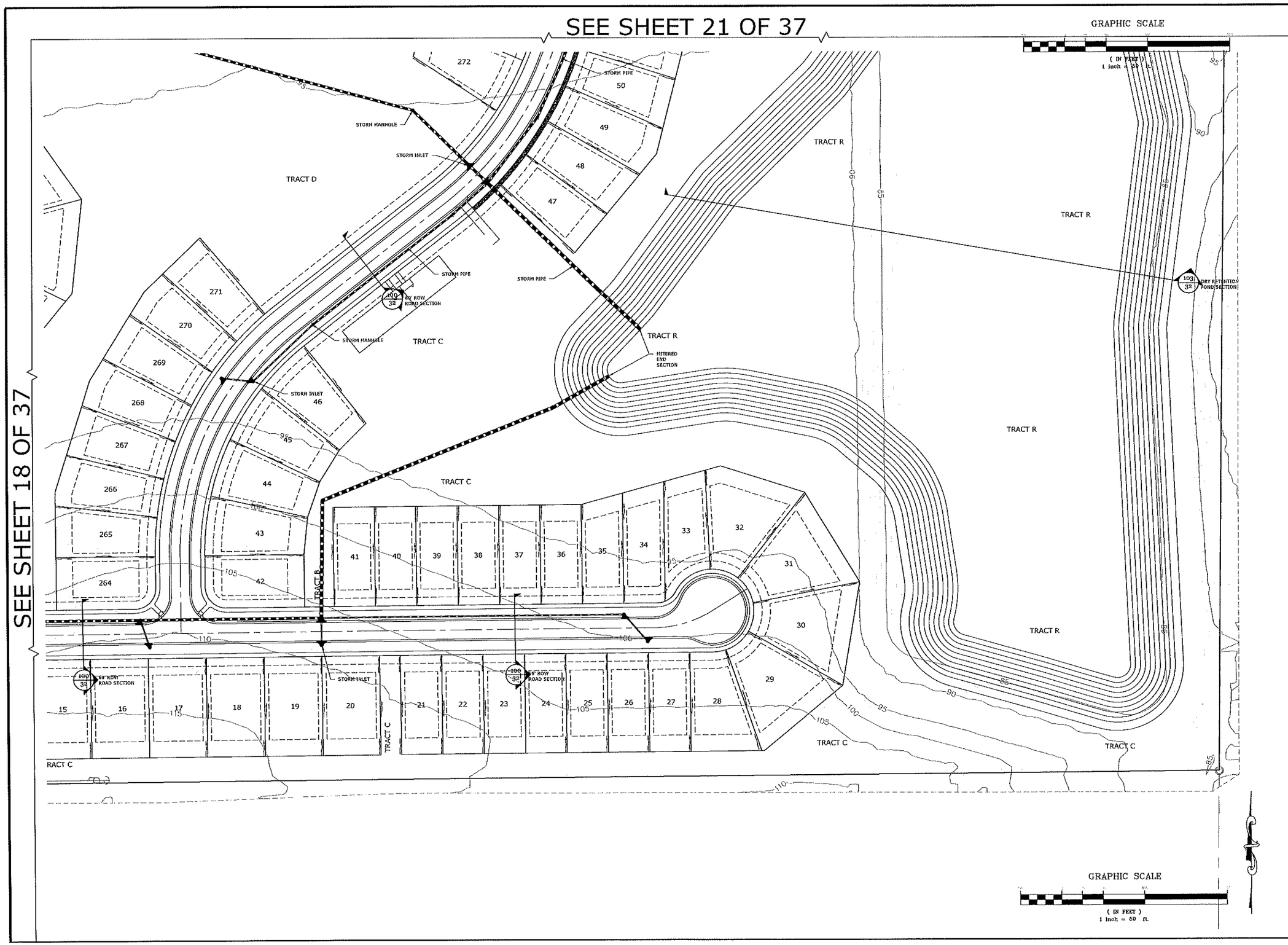

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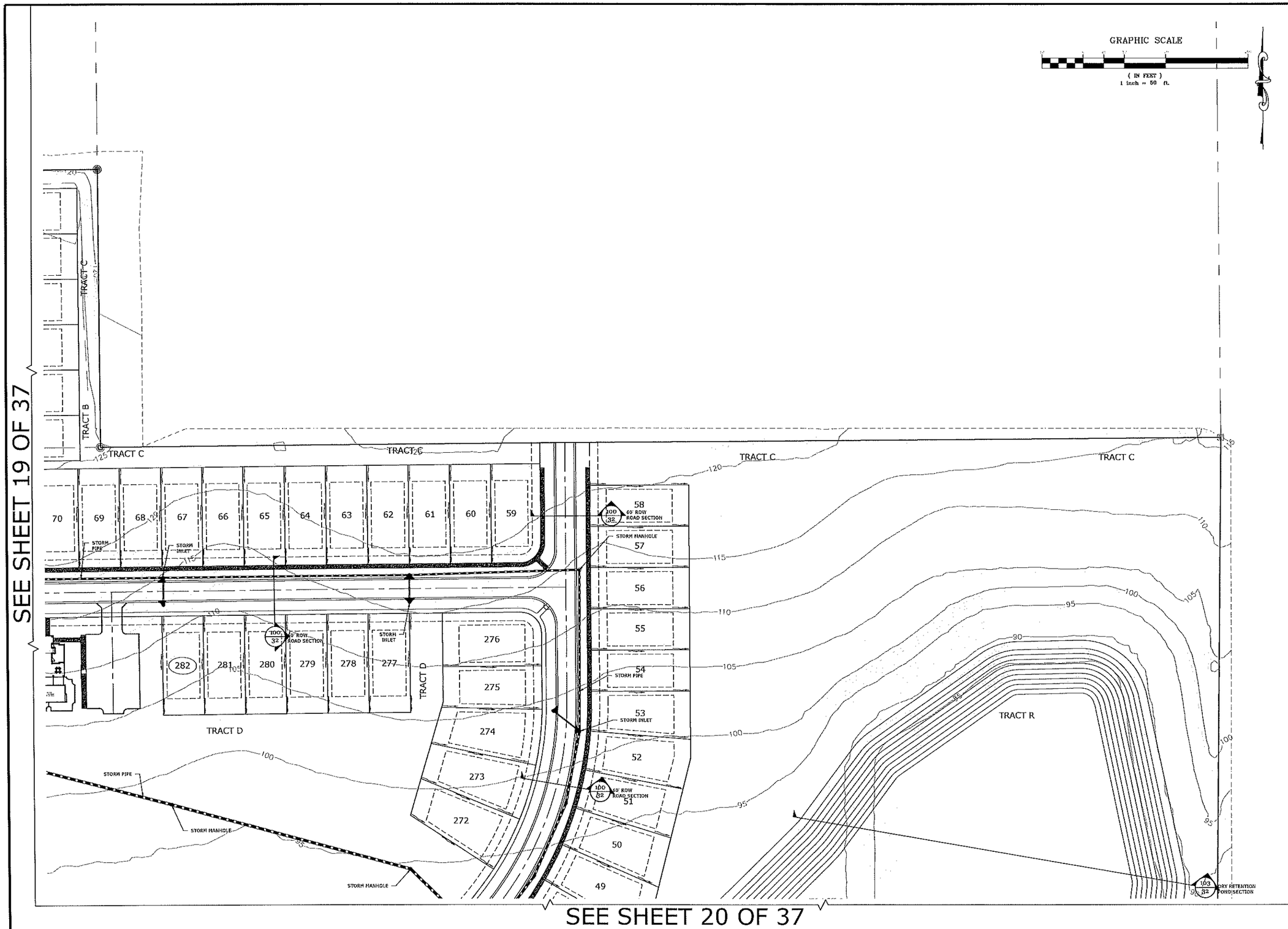

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Paving & Drainage Plan 4

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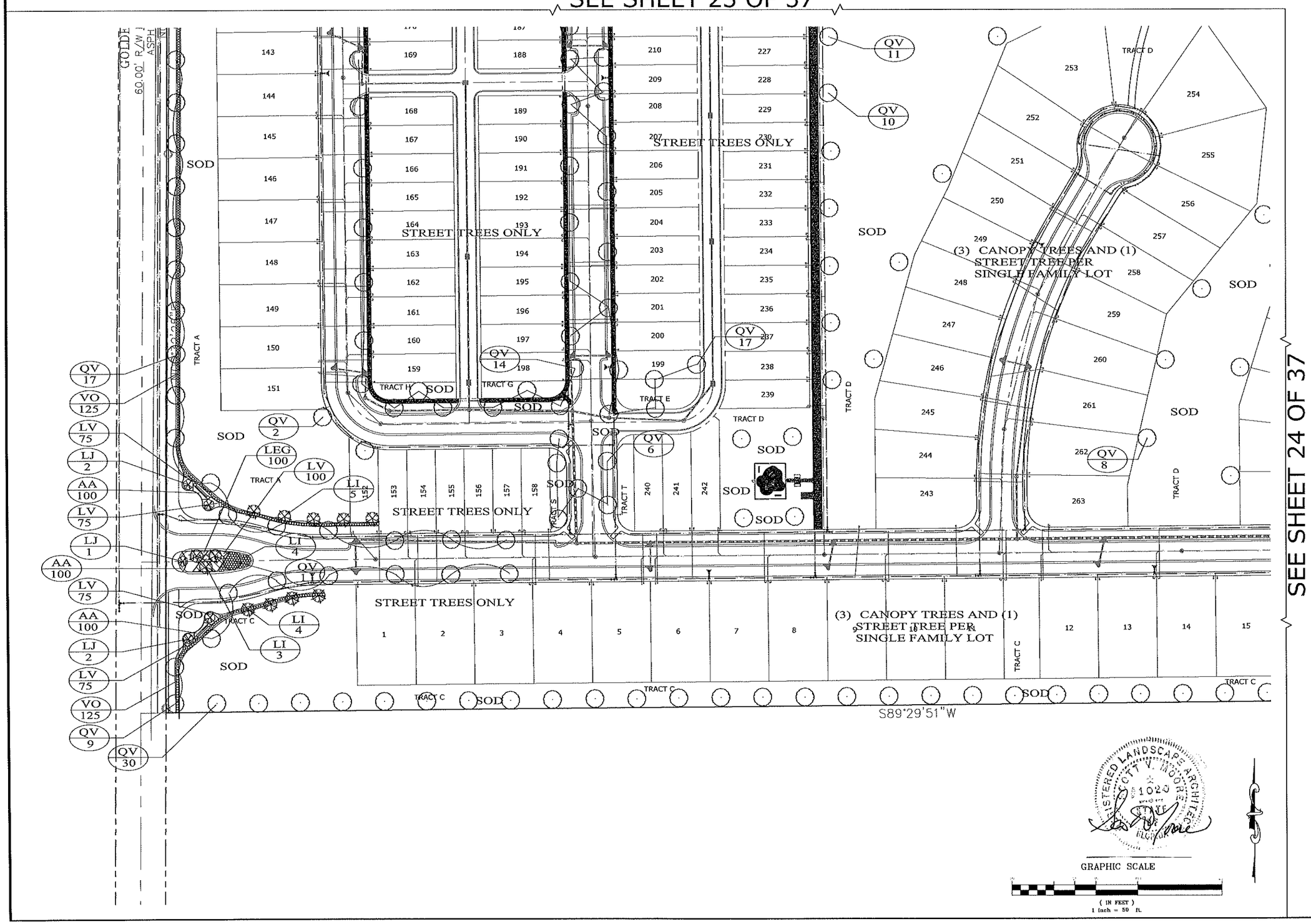

SEE SHEET 24 OF 37

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fax: 407-992-8650
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Winter Garden, FL 34787
407-239-4565
407-239-6011

Park View
Preserve Subdivision
City of Apopka, Florida

KPI Master/Major Development Plan

Landscape Plan 1

Plans not valid unless Signed, Dated and Sealed below.

GEOFFREY L. SUMMITT, P.E.
Date: April 23, 2020
FL Registration #58775
Certificate of Authorization #29665

Revisions

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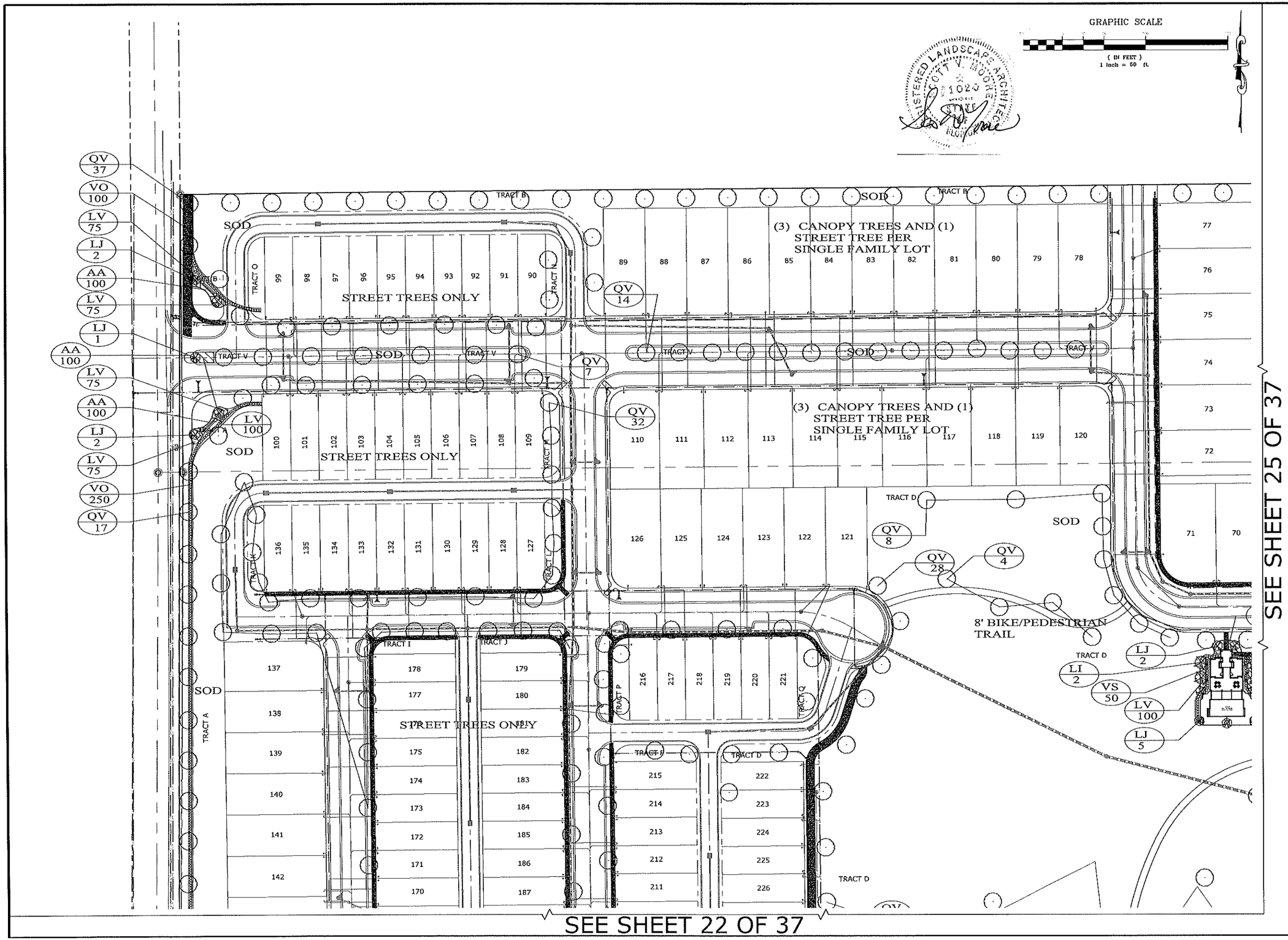

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Landscape Plan 2

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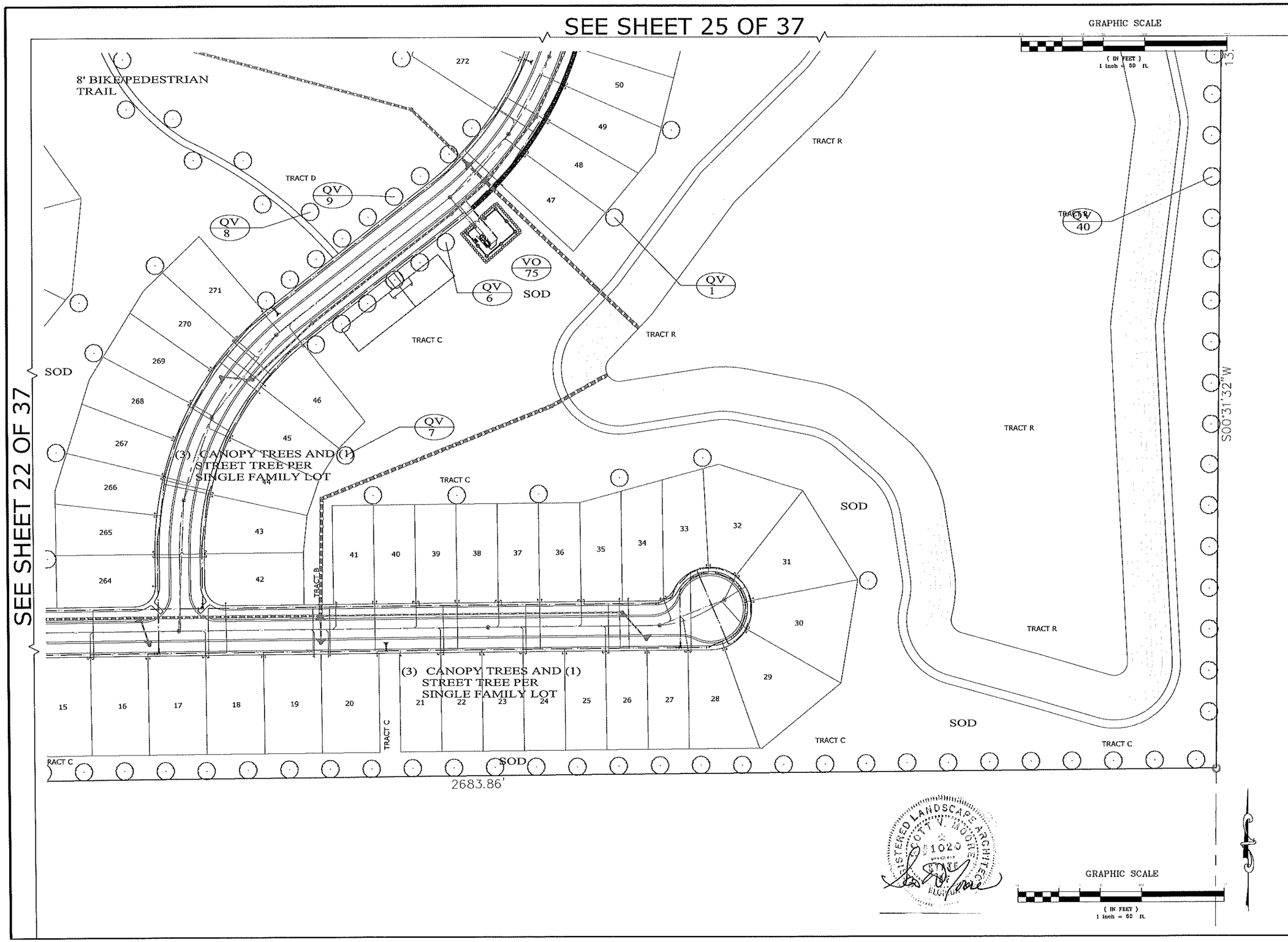

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Landscape Plan 3

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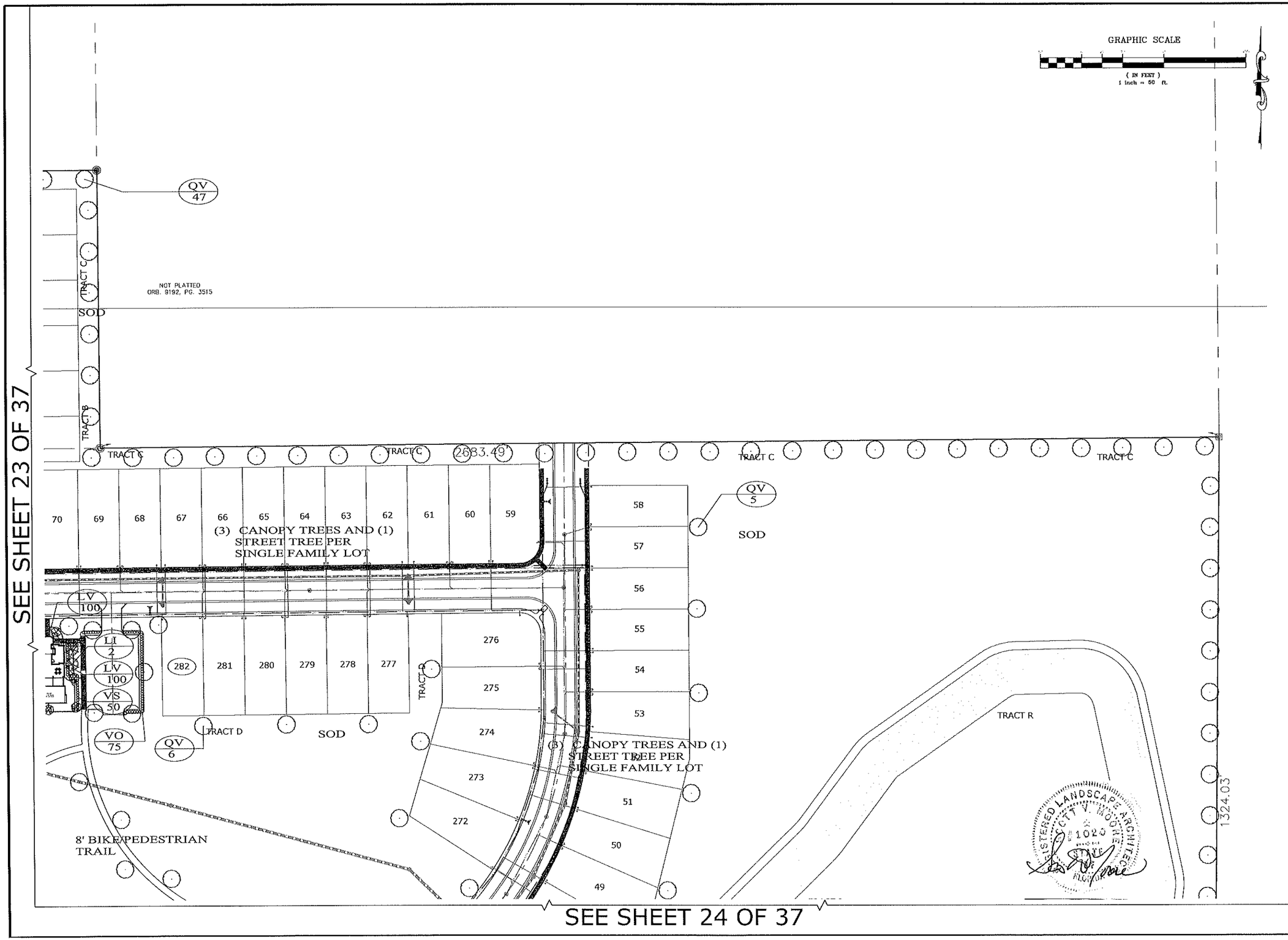

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Landscape Plan
4

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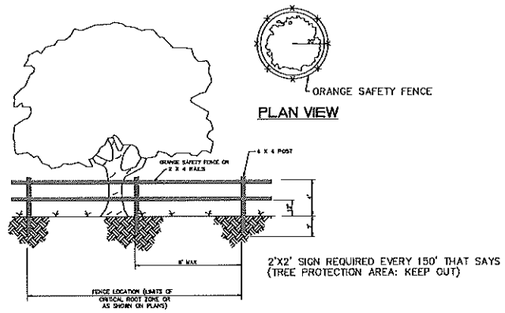
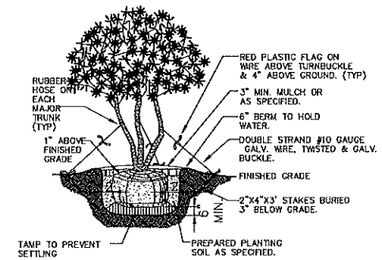
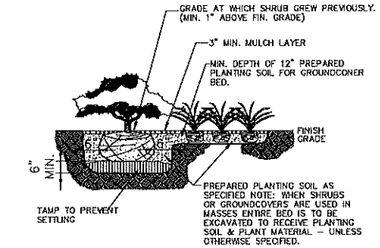


TREE PROTECTION FENCE DETAIL



MULTI-TRUNK DETAIL



SHRUB AND GROUND COVER DETAIL

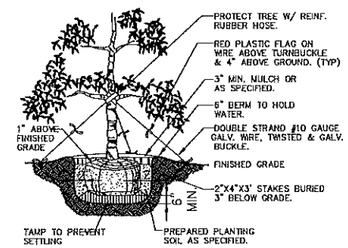
THREE CANOPY TREES REQUIRED PER SINGLE FAMILY LOT
TWO CANOPY TREES PER SINGLE FAMILY LOT ONE STREET TREE
NOT INCLUDED IN PLANT LIST

PLANT LIST

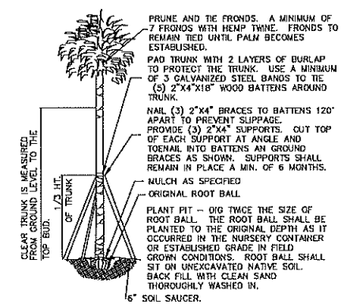
SYMBOL	BOTANICAL NAME (COMMON NAME)	MINIMUM SIZE/SPACING	DROUGHT TOLERANCE	NATIVE FLORIDA	QUANTITY
QV	QUERCUS VIRGINIANA (LIVE OAK)	8' MIN.HT. 2.5" CAL.. 4'-5'MIN.SPREAD.	YES	YES	1073
LJ	LIGUSTRUM JAPONICUM (LIGUSTRUM)	8' MIN.HT. 2.5" CAL.. 4'-5'MIN.SPREAD.	YES	NO	17
LI	LAGERSTROEMIA INDICA (CREPEMYRTLE)	7'-8' MIN.HT. 2" CAL. 3'-4' MIN.SPREAD.	YES	NO	20
VO	VIBURNUM ODORATISSIMUM (SWEET VIBURNUM)	30" MIN.HT. 24" MIN.SPREAD 7 GAL. 30" O.C.	YES	NO	750
VS	VIBURNUM SUSPENSUM (SANDANKWA)	24" MIN.HT. 24" MIN.SPREAD 7 GAL. 30" O.C.	YES	NO	100
LV	LIRIOPE VARIEGATA (AZTEC GRASS)	1 GAL. 24" O.C.	YES	NO	1100
LEG	LIRIOPE EVERGREEN GIANT (BIG BLUE)	1 GAL. 24" O.C.	YES	NO	100
AA	ANNUALS IN SEASON	PER PLANT	NO	NO	600
BAHIA SOD	QUANTITY TO BE CALCULATED BY CONTRACTOR		YES	YES	

PLANT SYMBOL — 00 / XX — PLANT QUANITY

NOTE:
WHERE GALLON REFERENCES MAY CONFLICT WITH HEIGHT/SPREAD AND CALIPER MEASUREMENTS, THE HEIGHT/SPREAD AND CALIPER MEASUREMENTS SHALL GOVERN.



TREE PLANTING DETAIL



PALM PLANTING DETAIL

GENERAL LANDSCAPE NOTES

1. ALL PLANTS TO BE FLORIDA NO. 1, OR BETTER AS OUTLINED UNDER 'GRADES AND STANDARDS FOR NURSERY PLANTS, PART I, 1963 AND PART II, STATE OF FLORIDA DEPARTMENT OF AGRICULTURE, TALLAHASSEE, FLORIDA, AND ANY AMENDMENTS THERETO.
2. ALL TREES AND PLANT MATERIAL SHALL BE PLANTED IN ACCORDANCE WITH THE SPECIFICATIONS DESCRIBED IN THE STATE DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES, DIVISION OF FORESTRY, "TREE PROTECTION MANUAL FOR BUILDERS AND DEVELOPERS", OCTOBER, 1980.
3. THE LANDSCAPE CONTRACTOR (CONTRACTED BY OWNER, N.I.C.) SHALL BE RESPONSIBLE FOR ALL MATERIALS AND ALL WORK AS CALLED FOR ON THE LANDSCAPE PLANS. THE LIST OF PLANT QUANTITIES ACCOMPANYING THE PLANS SHALL BE USED AS A GUIDE ONLY. IF A VARIATION OCCURS BETWEEN THE PLANS AND THE PLANT LIST, THE PLANS SHALL CONTROL.
4. ALL TREES, SHRUBS AND GROUND COVERS SHALL BE PLANTED USING A SOIL MIXTURE PREPARED ACCORDINGLY (2/3 EXISTING SOIL, 1/3 PEAT).
5. THE LANDSCAPE CONTRACTOR SHALL INSURE ADEQUATE VERTICAL DRAINAGE IN ALL PLANT BEDS AND PLANTERS. VERTICAL DRILLING THROUGH ANY COMPACTED FILL TO NATIVE SOIL SHALL BE ACCOMPLISHED TO AID DRAINAGE.
6. ALL PLANT BEDS AND TREE WATERING BASINS SHALL BE TOP DRESSED WITH THREE INCHES (3") OF PINE BARK MULCH
7. NO TREES SHALL BE PLANTED CLOSER THAN FIVE FEET (5') FROM THE EDGE OF PAVEMENT TO ALLOW ADEQUATE TREE TRUNK PROTECTION .
8. LANDSCAPE CONTRACTOR SHALL BE WHOLLY RESPONSIBLE FOR STABILITY AND PLUMB CONDITION OF ALL TREES AND SHALL BE LEGALLY LIABLE FOR ANY DAMAGE CAUSED BY THE INSTABILITY OF ANY PLANT MATERIAL.
9. ALL LAWN AREAS TO RECEIVE SOD SHALL BE DISKED FOUR(4) TO SIX(6) INCHES AND DRAGGED TO ESTABLISH A LEVEL FINISH GRADE. ALL DEBRIS TO BE REMOVED FROM THE SITE.
10. SOD SHALL BE FREE OF WEEDS AND PESTS. IT SHALL BE LAID EVENLY AND ROLLED, WITH TIGHT FITTING JOINTS. THE SOD SHALL CONTAIN MOIST SOIL WHICH DOES NOT FALL APART OR TEAR WHEN LIFTED. ALL AREAS NOT PAVED OR OTHERWISE LANDSCAPED SHALL BE SODDED. SOD SHALL BE ARGENTINE BAHIA OR EQUAL.
11. ALL LANDSCAPE AREAS TO BE IRRIGATED WITH AN AUTOMATIC UNDERGROUND SYSTEM, WITH 100% COVERAGE, BACKFLOW PREVENTOR, & RAIN SENSOR DEVICE. DIRECT SPRAY HEADS AWAY FROM ANY NATURAL AREAS AND PAVED SURFACES.
12. THE TREE CALIPER OF ALL CANOPY TREES SPECIFIED ON THE PLANT LIST SHALL BE AT LEAST THREE (2.5) INCHES IN DIAMETER WHEN MEASURED AT SIX (6) INCHES ABOVE GRADE.
13. LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE OCCURRING ON SITE OR ADJACENT AREAS, INCLUDING BUT NOT LIMITED TO BUILDINGS, PAVING, UTILITIES, ETC., WHICH IS CAUSED BY PREPARING OR INSTALLING ANY AND ALL PLANT MATERIAL.
14. ALL PLANT MATERIAL WILL BE FLORIDA FRIENDLY.

REGISTERED LANDSCAPE ARCHITECT SCOTT V. INGRAM 1020 STATE OF FLORIDA

Ravensdale Planning & Design
Land Planning • Landscape Architecture • Project Management • Expert Witness
5106 South Pointe Drive Inverness, Florida 34450
(407) 847-1213

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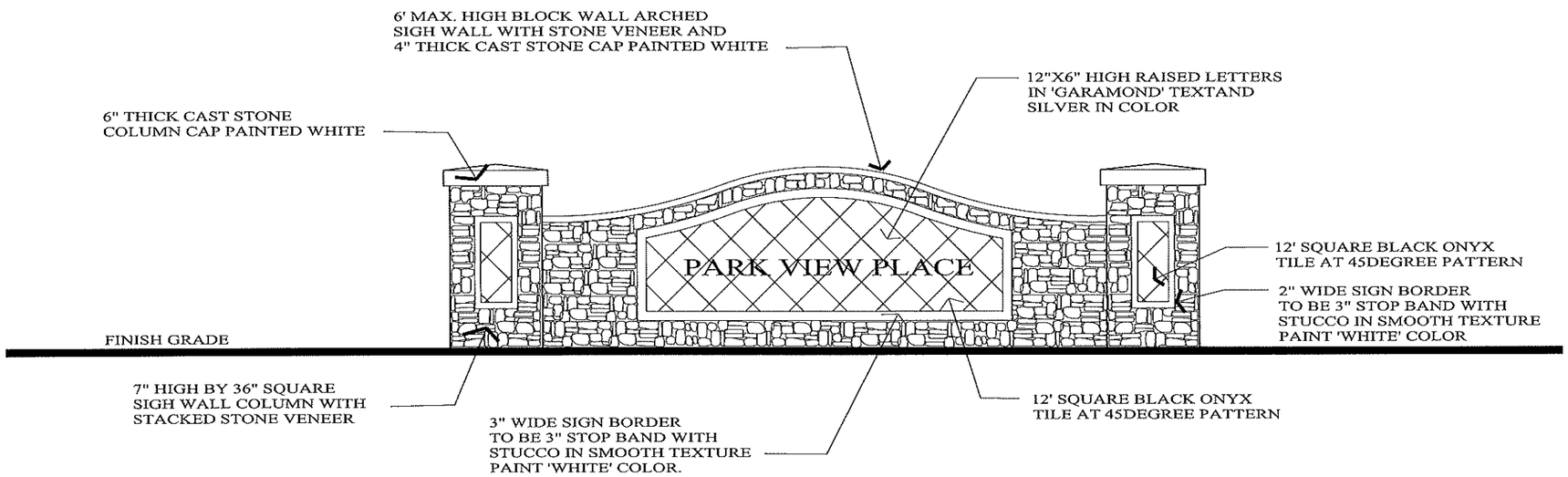

ENTRY SIGN-ELEVATION

SCALE $\frac{1}{2}$"=1'0"

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Landscape Details 2

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REGISTERED LANDSCAPE ARCHITECT
SCOTT V. MOORE
No. 1020
STATE OF FLORIDA

SHEET NUMBER
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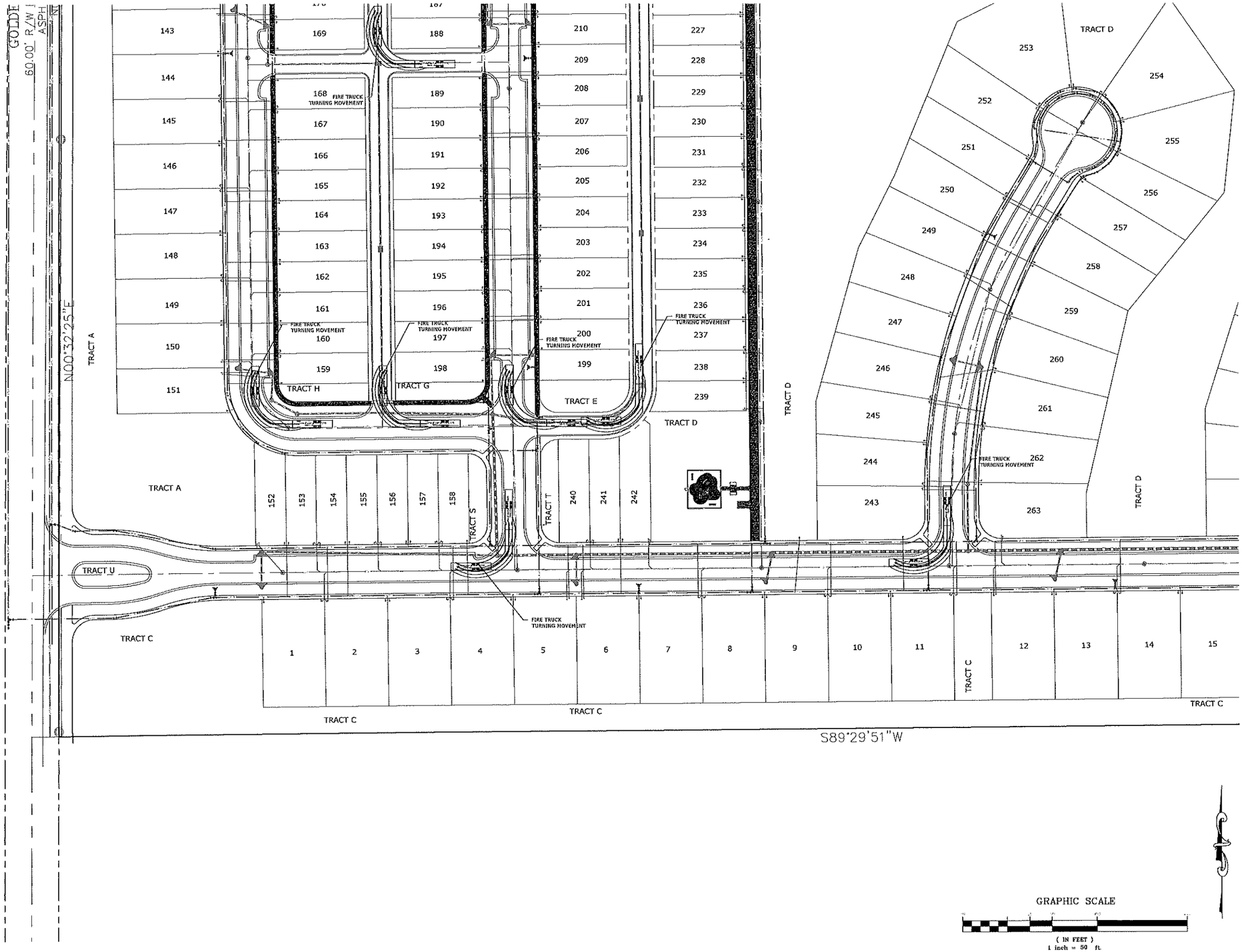

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GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.

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Truck Turning Plan 1

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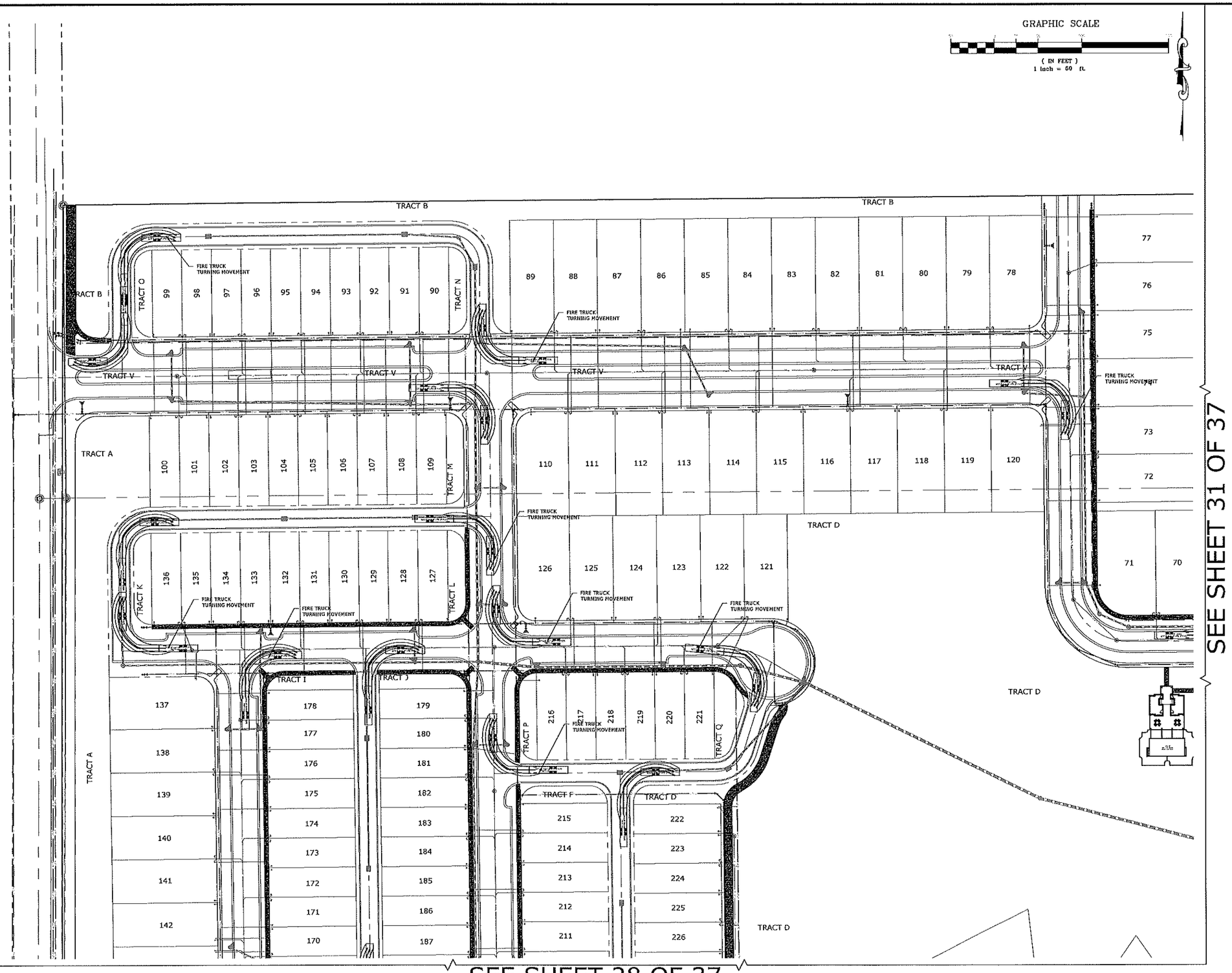

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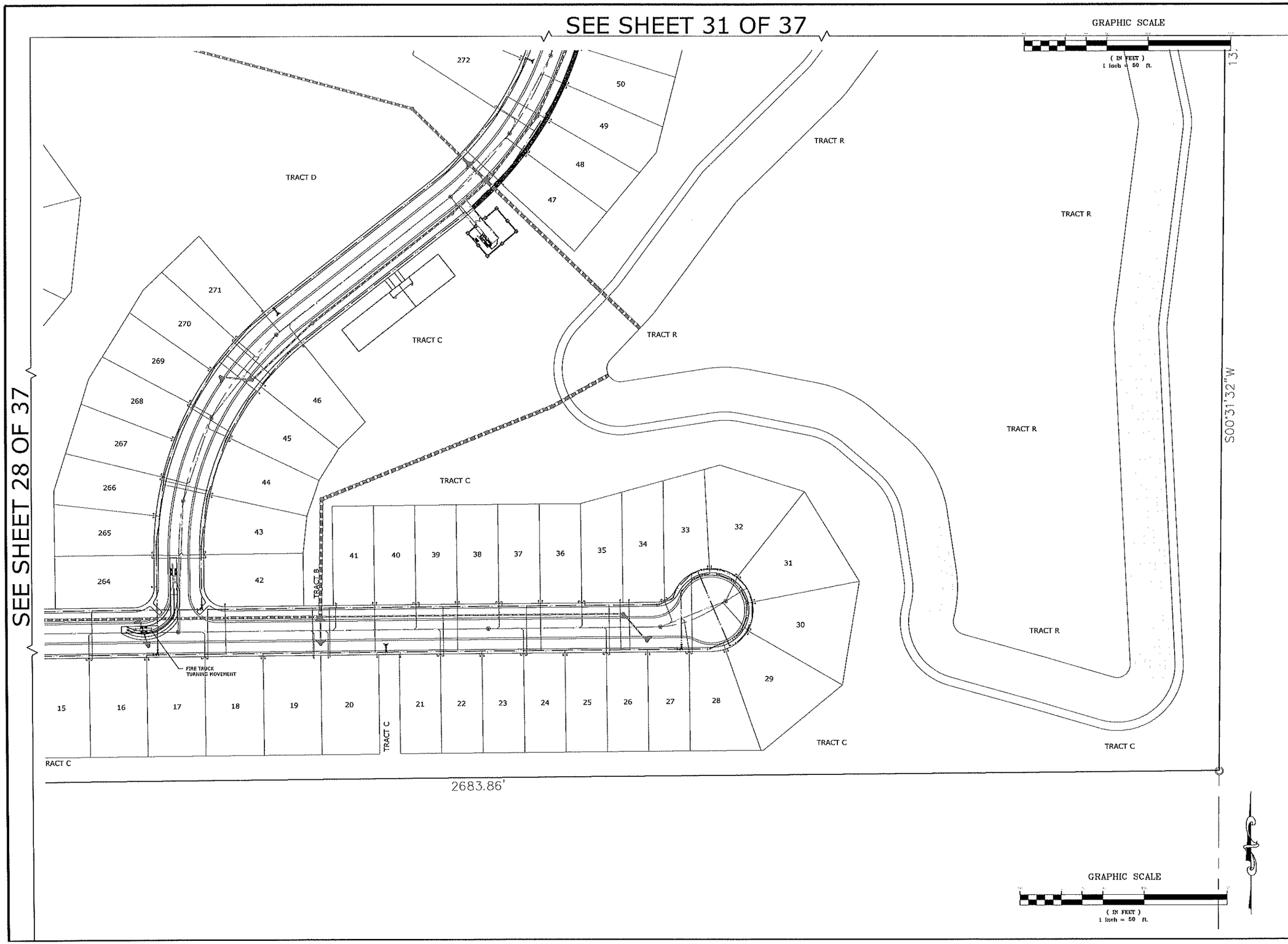

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Truck Turning Plan 3

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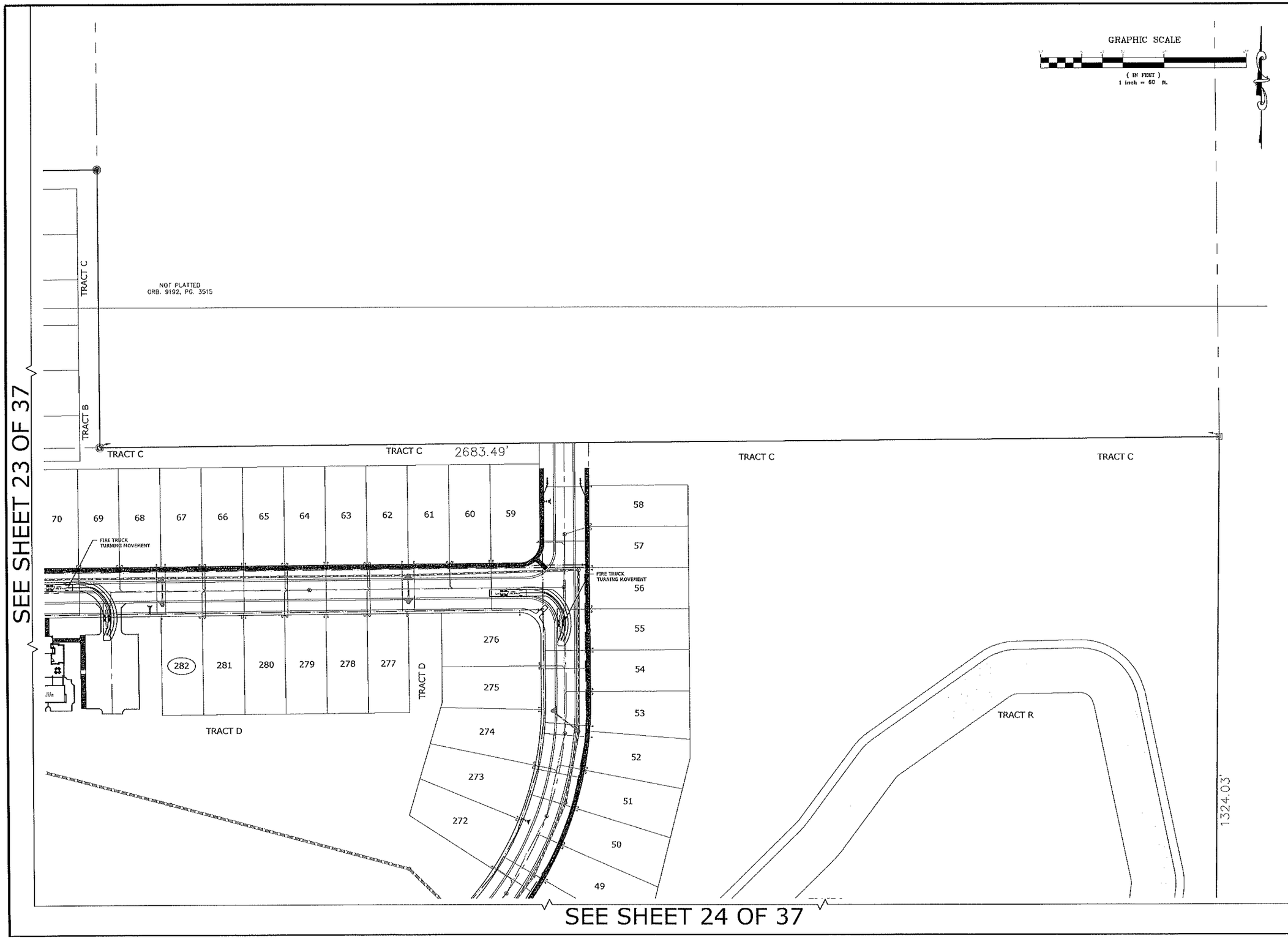

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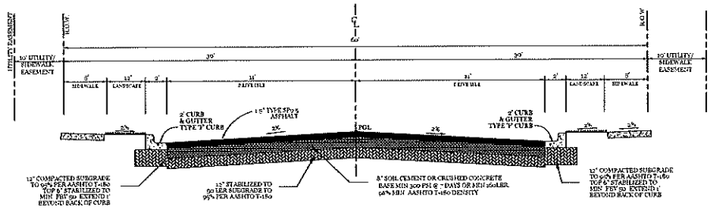
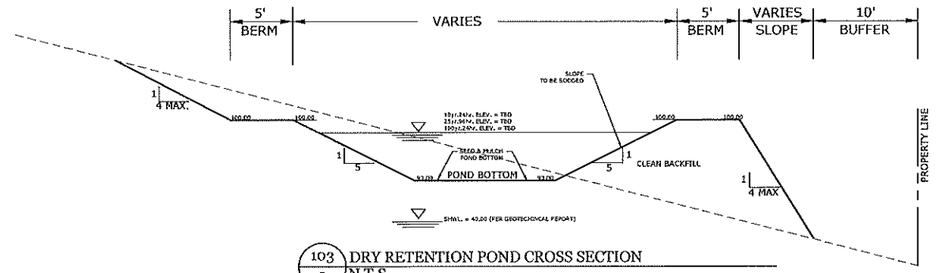


100 / - TYPICAL 60' ROW ROADWAY CROSS SECTION DETAIL
N.T.S.



103 / - DRY RETENTION POND CROSS SECTION
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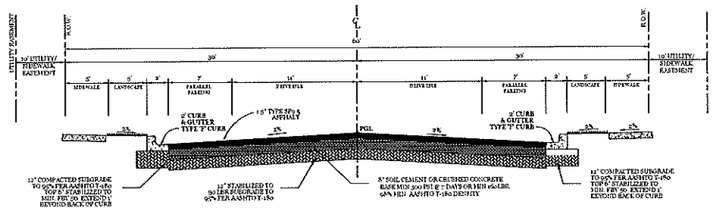

101 / - TYPICAL 60' ROW ON-STREET PARKING CROSS SECTION DETAIL
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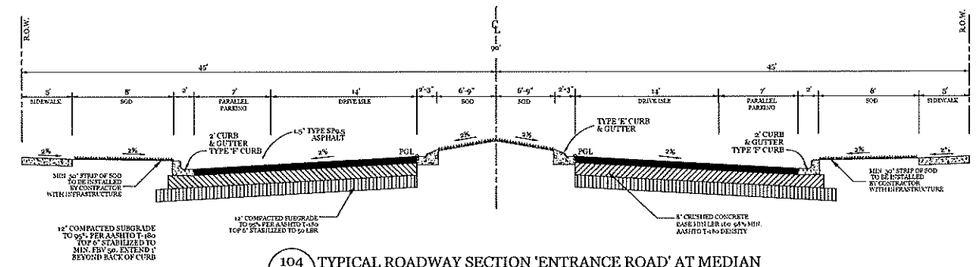

104 / - TYPICAL ROADWAY SECTION 'ENTRANCE ROAD' AT MEDIAN
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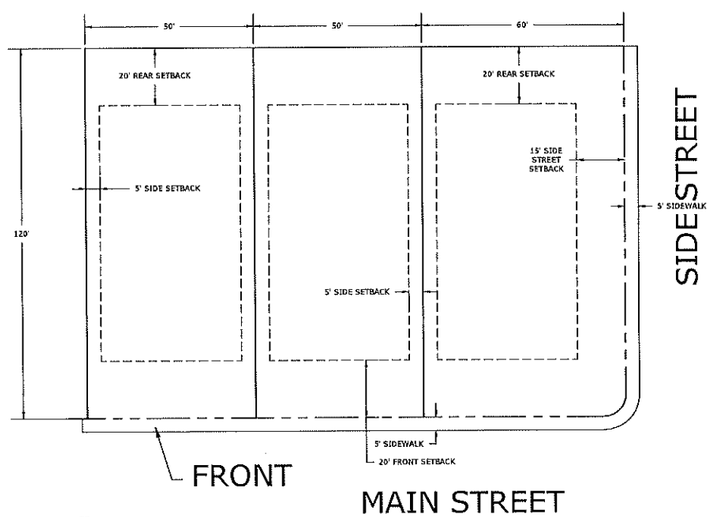
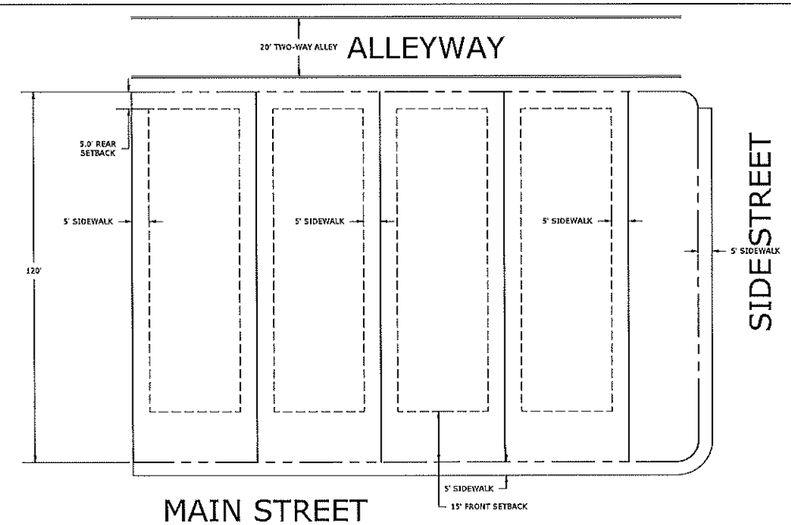
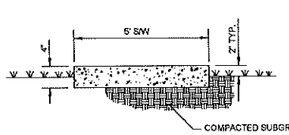


102 / - TYPICAL 50' LOT LAYOUT PLAN
N.T.S.



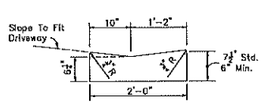
106 / - TYPICAL ALLEYWAY LOT CONFIGURATION
N.T.S.



CONCRETE WALK AT 3,000 PSI
WOOD FLOAT FINISH, SAW CUT
CONTRACTION JOINTS AT 5' O.C. MIN.
EXPANSION JOINT AT 20' O.C. MIN

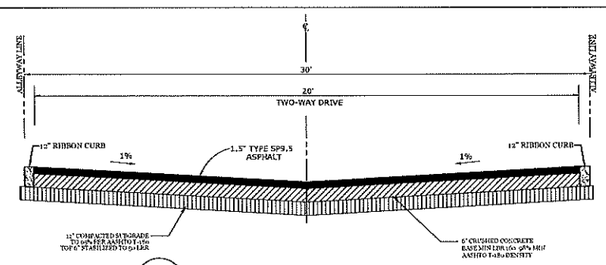
NOTE: ALL SIDEWALK TO BE CONSTRUCTED AS PART OF INFRASTRUCTURE

105 / - STANDARD SIDEWALK DETAIL
N.T.S.



For curb, gutter, curb and gutter and traffic separators provide 2" contraction joints at 10' centers (max.). Contraction joints adjacent to concrete pavement on tangents and flat curves are to match the pavement joints, with intermediate joints not to exceed 10' centers.

300M / - MIAMI CURB
N.T.S.



107 / - TYPICAL TWO-WAY ALLEYWAY SECTION
N.T.S.

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General Detail 1

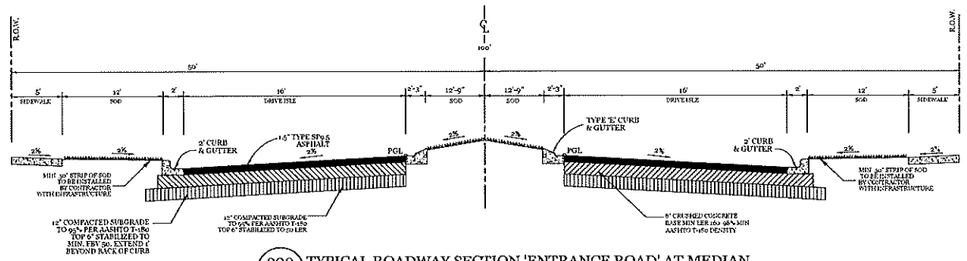
Plans not valid unless Signed, Dated and Sealed below.

GEOFFREY L. SUMMITT, P.E.
Date: April 23, 2020
FL Registration #58775
Certificate of Authorization #29665

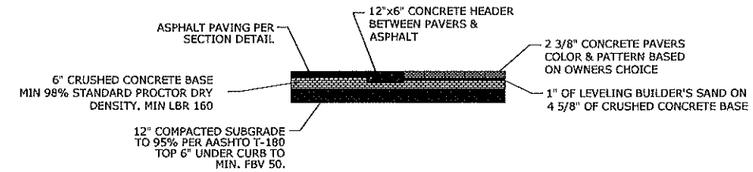
Revisions

NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

SHEET NUMBER
32 OF 37



200 - TYPICAL ROADWAY SECTION 'ENTRANCE ROAD' AT MEDIAN
N.T.S.



202 - CONCRETE PAVER SECTION DETAIL
N.T.S.

Lot Area Table					Lot Area Table					Lot Area Table					Lot Area Table					Lot Area Table				
Lot Number	Gross Area (sqft)	Gross Area (ac.)	Lot Width (ft)	Zoning	Lot Number	Gross Area (sqft)	Gross Area (ac.)	Lot Width (ft)	Zoning	Lot Number	Gross Area (sqft)	Gross Area (ac.)	Lot Width (ft)	Zoning	Lot Number	Gross Area (sqft)	Gross Area (ac.)	Lot Width (ft)	Zoning	Lot Number	Gross Area (sqft)	Gross Area (ac.)	Lot Width (ft)	Zoning
1	3,400.00	0.08	34	KPI-MU	63	7,041.17	0.16	50	KPI-MU	125	6,025.98	0.14	50	KPI-MU	187	3,400.00	0.08	34	KPI-MU	249	6,384.50	0.15	50	KPI-MU
2	3,400.00	0.08	34	KPI-MU	64	6,000.00	0.14	50	KPI-MU	126	6,000.00	0.14	50	KPI-MU	188	3,400.00	0.08	34	KPI-MU	250	9,792.32	0.22	50	KPI-MU
3	3,400.00	0.08	34	KPI-MU	65	6,000.00	0.14	50	KPI-MU	127	6,000.00	0.14	50	KPI-MU	189	3,400.00	0.08	34	KPI-MU	251	9,891.13	0.23	50	KPI-MU
4	3,400.00	0.08	34	KPI-MU	66	6,000.00	0.14	50	KPI-MU	128	6,000.00	0.14	50	KPI-MU	190	3,400.00	0.08	34	KPI-MU	252	9,891.13	0.23	50	KPI-MU
5	3,400.00	0.08	34	KPI-MU	67	6,000.00	0.14	50	KPI-MU	129	6,000.00	0.14	50	KPI-MU	191	3,400.00	0.08	34	KPI-MU	253	9,891.13	0.23	50	KPI-MU
6	3,400.00	0.08	34	KPI-MU	68	6,000.00	0.14	50	KPI-MU	130	7,114.16	0.16	50	KPI-MU	192	3,400.00	0.08	34	KPI-MU	254	9,891.13	0.23	50	KPI-MU
7	3,400.00	0.08	34	KPI-MU	69	6,000.00	0.14	50	KPI-MU	131	3,570.00	0.08	34	KPI-MU	193	3,400.00	0.08	34	KPI-MU	255	9,850.51	0.23	50	KPI-MU
8	3,400.00	0.08	34	KPI-MU	70	6,000.00	0.14	50	KPI-MU	132	3,570.00	0.08	34	KPI-MU	194	3,400.00	0.08	34	KPI-MU	256	6,314.54	0.14	50	KPI-MU
9	8,400.00	0.19	70	KPI-MU	71	6,000.00	0.14	50	KPI-MU	133	3,570.00	0.08	34	KPI-MU	195	3,400.00	0.08	34	KPI-MU	257	6,607.64	0.15	50	KPI-MU
10	8,400.00	0.19	70	KPI-MU	72	6,000.00	0.14	50	KPI-MU	134	3,570.00	0.08	34	KPI-MU	196	3,400.00	0.08	34	KPI-MU	258	6,844.21	0.16	50	KPI-MU
11	8,400.00	0.19	70	KPI-MU	73	6,000.00	0.14	50	KPI-MU	135	3,570.00	0.08	34	KPI-MU	197	3,400.00	0.08	34	KPI-MU	259	7,046.14	0.16	50	KPI-MU
12	8,400.00	0.19	70	KPI-MU	74	6,000.00	0.14	50	KPI-MU	136	3,570.00	0.08	34	KPI-MU	198	3,400.00	0.08	34	KPI-MU	260	7,345.32	0.17	50	KPI-MU
13	8,400.00	0.19	70	KPI-MU	75	7,767.76	0.18	50	KPI-MU	137	3,570.00	0.08	34	KPI-MU	199	3,400.00	0.08	34	KPI-MU	261	7,373.44	0.17	50	KPI-MU
14	8,400.00	0.19	70	KPI-MU	76	6,600.00	0.15	50	KPI-MU	138	3,570.00	0.08	34	KPI-MU	200	3,400.00	0.08	34	KPI-MU	262	7,133.37	0.16	50	KPI-MU
15	8,400.00	0.19	70	KPI-MU	77	6,600.00	0.15	50	KPI-MU	139	3,570.00	0.08	34	KPI-MU	201	3,400.00	0.08	34	KPI-MU	263	7,244.44	0.17	50	KPI-MU
16	8,400.00	0.19	70	KPI-MU	78	6,600.00	0.15	50	KPI-MU	140	3,570.00	0.08	34	KPI-MU	202	3,400.00	0.08	34	KPI-MU	264	7,480.07	0.17	50	KPI-MU
17	8,400.00	0.19	70	KPI-MU	79	6,600.00	0.15	50	KPI-MU	141	7,114.16	0.16	50	KPI-MU	203	3,400.00	0.08	34	KPI-MU	265	6,681.92	0.15	50	KPI-MU
18	8,400.00	0.19	70	KPI-MU	80	6,600.00	0.15	50	KPI-MU	142	6,000.00	0.14	50	KPI-MU	204	3,400.00	0.08	34	KPI-MU	266	6,828.97	0.16	50	KPI-MU
19	8,400.00	0.19	70	KPI-MU	81	6,600.00	0.15	50	KPI-MU	143	6,000.00	0.14	50	KPI-MU	205	3,400.00	0.08	34	KPI-MU	267	6,620.40	0.15	50	KPI-MU
20	8,400.00	0.19	70	KPI-MU	82	7,714.16	0.18	50	KPI-MU	144	6,000.00	0.14	50	KPI-MU	206	3,400.00	0.08	34	KPI-MU	268	6,746.43	0.15	50	KPI-MU
21	8,400.00	0.19	70	KPI-MU	83	6,500.00	0.15	50	KPI-MU	145	6,000.00	0.14	50	KPI-MU	207	3,400.00	0.08	34	KPI-MU	269	6,620.40	0.15	50	KPI-MU
22	8,400.00	0.19	70	KPI-MU	84	6,500.00	0.15	50	KPI-MU	146	6,000.00	0.14	50	KPI-MU	208	3,400.00	0.08	34	KPI-MU	270	6,743.43	0.15	50	KPI-MU
23	8,400.00	0.19	70	KPI-MU	85	6,500.00	0.15	50	KPI-MU	147	6,000.00	0.14	50	KPI-MU	209	3,400.00	0.08	34	KPI-MU	271	6,620.40	0.15	50	KPI-MU
24	8,400.00	0.19	70	KPI-MU	86	6,500.00	0.15	50	KPI-MU	148	6,000.00	0.14	50	KPI-MU	210	3,400.00	0.08	34	KPI-MU	272	7,133.53	0.16	50	KPI-MU
25	6,000.00	0.14	50	KPI-MU	87	6,500.00	0.15	50	KPI-MU	149	6,000.00	0.14	50	KPI-MU	211	3,400.00	0.08	34	KPI-MU	273	7,350.26	0.17	50	KPI-MU
26	6,000.00	0.14	50	KPI-MU	88	6,500.00	0.15	50	KPI-MU	150	6,000.00	0.14	50	KPI-MU	212	3,400.00	0.08	34	KPI-MU	274	7,189.54	0.17	50	KPI-MU
27	6,000.00	0.14	50	KPI-MU	89	6,500.00	0.15	50	KPI-MU	151	6,000.00	0.14	50	KPI-MU	213	3,400.00	0.08	34	KPI-MU	275	6,152.77	0.14	50	KPI-MU
28	6,000.00	0.14	50	KPI-MU	90	6,500.00	0.15	50	KPI-MU	152	6,000.00	0.14	50	KPI-MU	214	3,400.00	0.08	34	KPI-MU	276	7,664.80	0.18	50	KPI-MU
29	6,000.00	0.14	50	KPI-MU	91	6,500.00	0.15	50	KPI-MU	153	6,000.00	0.14	50	KPI-MU	215	3,400.00	0.08	34	KPI-MU	277	6,000.00	0.14	50	KPI-MU
30	6,000.00	0.14	50	KPI-MU	92	6,500.00	0.15	50	KPI-MU	154	6,000.00	0.14	50	KPI-MU	216	3,400.00	0.08	34	KPI-MU	278	6,000.00	0.14	50	KPI-MU
31	6,000.00	0.14	50	KPI-MU	93	6,500.00	0.15	50	KPI-MU	155	6,063.50	0.14	50	KPI-MU	217	3,400.00	0.08	34	KPI-MU	279	6,000.00	0.14	50	KPI-MU
32	7,811.93	0.18	50	KPI-MU	94	3,400.00	0.08	34	KPI-MU	156	3,405.74	0.08	34	KPI-MU	218	3,400.00	0.08	34	KPI-MU	280	6,000.00	0.14	50	KPI-MU
33	9,888.18	0.23	50	KPI-MU	95	3,400.00	0.08	34	KPI-MU	157	3,400.00	0.08	34	KPI-MU	219	3,400.00	0.08	34	KPI-MU	281	6,000.00	0.14	50	KPI-MU
34	9,891.13	0.23	50	KPI-MU	96	3,400.00	0.08	34	KPI-MU	158	3,400.00	0.08	34	KPI-MU	220	3,400.00	0.08	34	KPI-MU	282	6,000.00	0.14	50	KPI-MU
35	9,891.13	0.23	50	KPI-MU	97	3,400.00	0.08	34	KPI-MU	159	3,400.00	0.08	34	KPI-MU	221	3,400.00	0.08	34	KPI-MU					
36	9,781.09	0.22	50	KPI-MU	98	3,400.00	0.08	34	KPI-MU	160	3,400.00	0.08	34	KPI-MU	222	3,400.00	0.08	34	KPI-MU					
37	6,721.53	0.15	50	KPI-MU	99	3,400.00	0.08	34	KPI-MU	161	3,400.00	0.08	34	KPI-MU	223	3,400.00	0.08	34	KPI-MU					
38	6,990.80	0.16	50	KPI-MU	100	3,400.00	0.08	34	KPI-MU	162	3,400.00	0.08	34	KPI-MU	224	3,400.00	0.08	34	KPI-MU					
39	6,332.16	0.15	50	KPI-MU	101	3,400.00	0.08	34	KPI-MU	163	3,400.00	0.08	34	KPI-MU	225	3,400.00	0.08	34	KPI-MU					
40	6,000.00	0.14	50	KPI-MU	102	3,400.00	0.08	34	KPI-MU	164	3,400.00	0.08	34	KPI-MU	226	3,400.00	0.08	34	KPI-MU					
41	6,000.00	0.14	50	KPI-MU	103	3,400.00	0.08	34	KPI-MU	165	3,400.00	0.08	34	KPI-MU	227	3,400.00	0.08	34	KPI-MU					
42	6,000.00	0.14	50	KPI-MU	104	3,570.00	0.08	34	KPI-MU	166	3,400.00	0.08	34	KPI-MU	228	3,400.00	0.08	34	KPI-MU					
43	6,000.00	0.14	50	KPI-MU	105	3,570.00	0.08	34	KPI-MU	167	3,400.00	0.08	34	KPI-MU	229	3,400.00	0.08	34	KPI-MU					
44	6,000.00	0.14	50	KPI-MU	106	3,570.00	0.08	34	KPI-MU	168	3,400.00	0.08	34	KPI-MU	230	3,400.00	0.08	34	KPI-MU					
45	6,000.00	0.14	50	KPI-MU	107	3,570.00	0.08	34	KPI-MU	169	3,400.00	0.08	34	KPI-MU	231	3,400.00	0.08	34	KPI-MU					
46	7,480.07	0.17	50	KPI-MU	108	3,570.00	0.08	34	KPI-MU	170	3,400.00	0.08	34	KPI-MU	232	3,400.00	0.08	34	KPI-MU					
47	7,130.07	0.16	50	KPI-MU	109	3,570.00	0.08	34	KPI-MU	171	3,400.00	0.08	34	KPI-MU	233	3,400.00	0.08	34	KPI-MU					
48	7,130.07	0.16	50	KPI-MU	110	3,570.00	0.08	34	KPI-MU	172	3,400.00	0.08	34	KPI-MU	234	3,400.00	0.08	34	KPI-MU					
49	7,130.07	0.16	50	KPI-MU	111	3,570.00	0.08	34	KPI-MU	173	3,400.00	0.08	34	KPI-MU	235	3,400.00	0.08	34	KPI-MU					
50	7,130.07	0.16	50	KPI-MU	112	3,570.00	0.08	34	KPI-MU	174	3,400.00	0.08	34	KPI-MU	236	3,400.00	0.08	34	KPI-MU					
51	6,550.65	0.15	50	KPI-MU	113	3,570.00	0.08	34	KPI-MU	175	3,400.00	0.08	34	KPI-MU	237	3,400.00	0.08	34	KPI-MU					
52	6,760.71	0.16	50	KPI-MU	114	7,114.16	0.16	50	KPI-MU	176	3,400.00	0.08	34	KPI-MU	238	4,386.13	0.10	34	KPI-MU					
53	7,190.11	0.17	50	KPI-MU	115	6,465.60	0.15	50	KPI-MU	177	3,400.00	0.08	34	KPI-MU	239	9,514.16	0.22	80	KPI-MU					
54	6,760.71	0.16	50	KPI-MU	116	6,465.60	0.15	50	KPI-MU	178	3,400.00	0.08	34	KPI-MU	240	8,400.00	0.19	70	KPI-MU					
55	6,550.65	0.15	50	KPI-MU	117	6,465.60	0.15	50	KPI-MU	179	3,400.00	0.08	34	KPI-MU	241	8,400.00	0.19	70	KPI-MU					
56	6,696.15	0.15	50	KPI-MU	118	6,465.60	0.15	50	KPI-MU	180	3,400.00	0.08	34	KPI-MU	242	8,400.00	0.19	70	KPI-MU					
57	6,440.58	0.15	50	KPI-MU	119	6,465.60	0.15	50	KPI-MU	181	3,400.00	0.08	34	KPI-MU	243	9,847.63	0.23	50	KPI-MU					
58	6,000.00	0.14	50	KPI-MU	120	6,465.60	0.15	50	KPI-MU	182	3,400.00	0.08	34	KPI-MU	244	6,546.21	0.15	50	KPI-MU					
59	6,000.00	0.14	50	KPI-MU	121	6,465.60	0.15	50	KPI-MU	183	3,400.00	0.08	34	KPI-MU	245	6,655.28	0.15	50	KPI-MU					
60	6,000.00	0.14	50	KPI-MU	122	6,465.60	0.15	50	KPI-MU	184	3,400.00	0.08	34	KPI-MU	246	6,412.05	0.15	50	KPI-MU					
61	6,000.00	0.14	50	KPI-MU	123	6,470.19	0.15	50	KPI-MU	185	3,400.00	0.08	34	KPI-MU	247	6,424.38	0.15	50	KPI-MU					
62	6,000.00	0.14	50	KPI-MU	124	7,114.16	0.16	50	KPI-MU	186	3,400.00	0.08	34	KPI-MU	248	6,476.14	0.15	50	KPI-MU					

201 - LOT DIMENSIONS AND AREA TABLE
N.T.S.

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

Cantero Holding, LLC
12601 Avalon Road
Winter Garden, FL 34787
407-239-4565
407-239-6011

Park View
Preserve Subdivision
City of Apopka, Florida

KPI Master/Major Development Plan

General Detail 2

Plans not valid unless Signed, Dated and Sealed below.

GEOFFREY L. SUMMITT, P.E.
Date: April 23, 2020
FL Registration #58775
Certificate of Authorization #29665

Revisions

NO.	DATE	DESCRIPTION
1		
2		
3		
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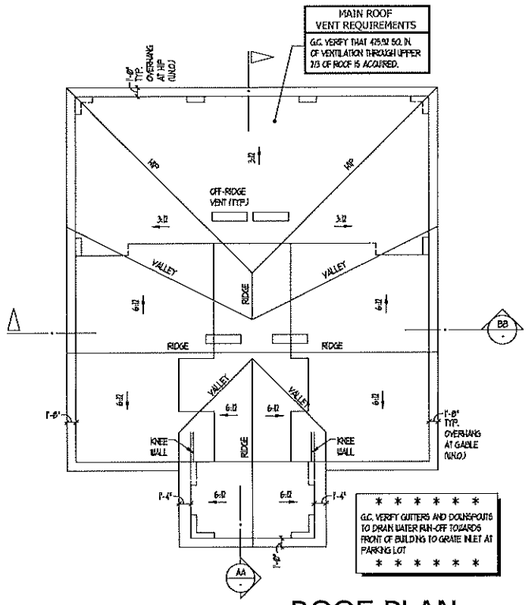
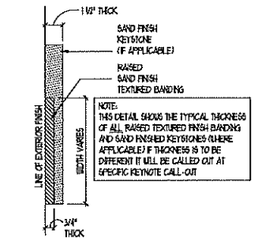
5		
6		
7		
8		
9		
10		

SHEET NUMBER
33 OF 37



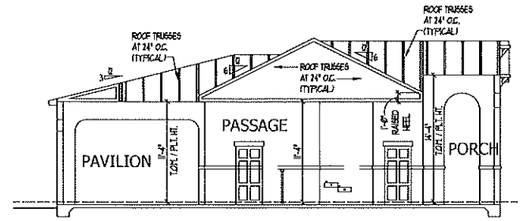
ROOF PLAN

SCALE: 1/8" = 1'-0"



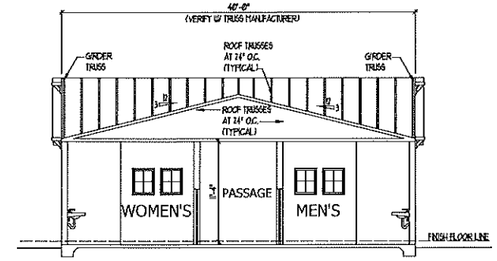
TYP. CROSS-SECTION OF RAISED TEXTURED FINISH BANDING AND / OR SAND FINISH KEYSTONE

SCALE: 3" = 1'-0"



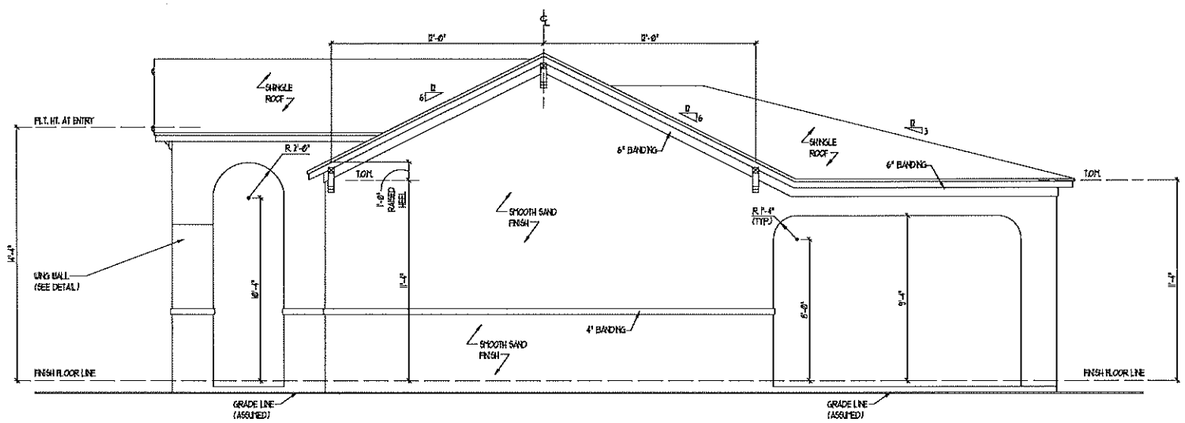
SECTION AA

SCALE: 1/8" = 1'-0"



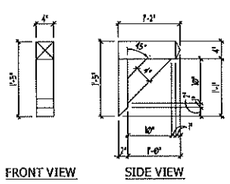
SECTION BB

SCALE: 1/8" = 1'-0"



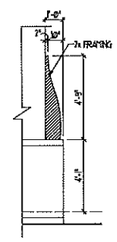
RIGHT ELEVATION

TYP. AT LEFT ELEVATION SCALE: 1/4" = 1'-0"



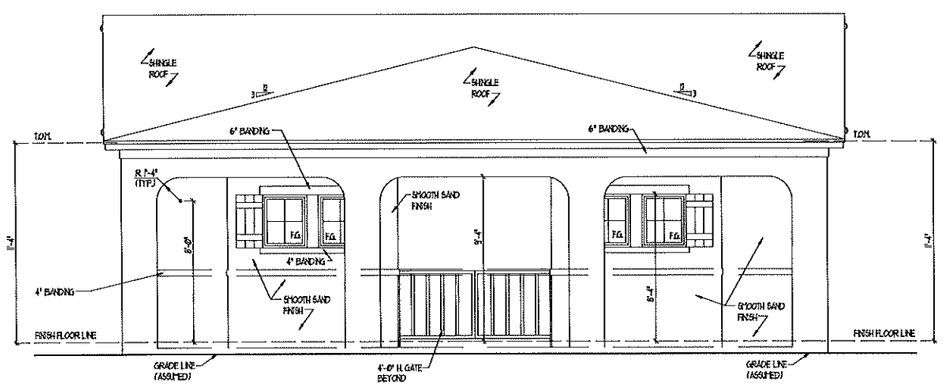
DECORATIVE BRACKET DETAIL "A"

SCALE: 3/4" = 1'-0"



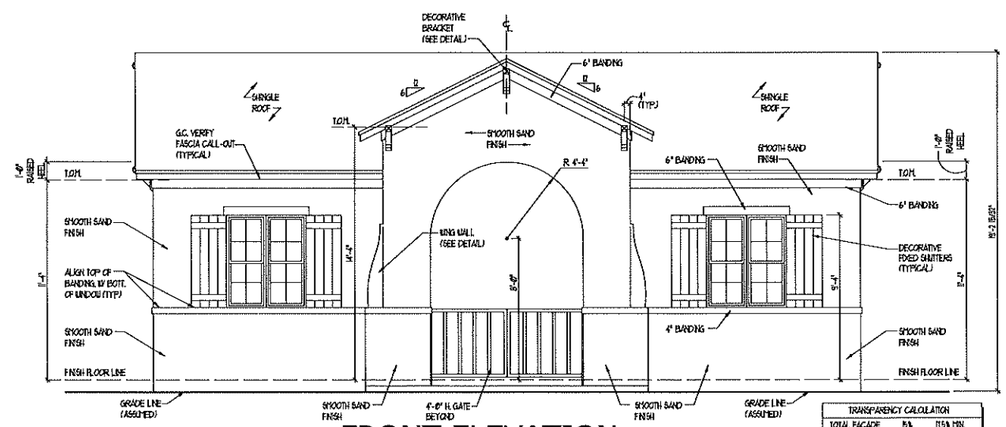
WING WALL DETAIL

SCALE: 1/4" = 1'-0"



REAR ELEVATION

SCALE: 1/4" = 1'-0"



TRANSPARENCY CALCULATION		
TOTAL FACADE SURFACE AREA	8% REQ.	15.6% MIN. PROVIDED
510 S.F.	40 S.F.	56 S.F.

THIS DOES INCLUDE FRENCH DOOR GLASS

FRONT ELEVATION

SCALE: 1/4" = 1'-0"

ELEVATIONS

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

Cantero Holding, LLC
12601 Avalon Road
Winter Garden, FL 34787
407-239-4565
407-239-6011

Park View
Preserve Subdivision
City of Apopka, Florida

KPI Master/Major Development Plan

Architectural Elevations 1

Plans not valid unless Signed, Dated and Sealed below.

GEOFFREY L. SUMMITT, P.E.
Date: April 23, 2020
FL Registration #58775
Certificate of Authorization #29665

Revisions

NO.	DATE	DESCRIPTION
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34 OF 37

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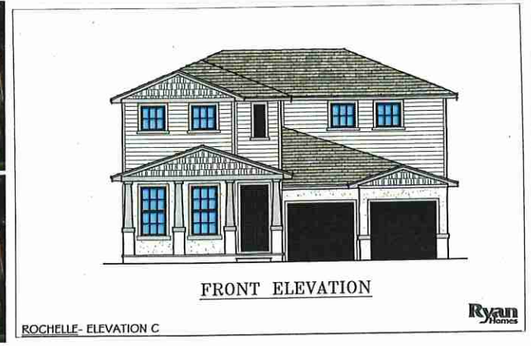

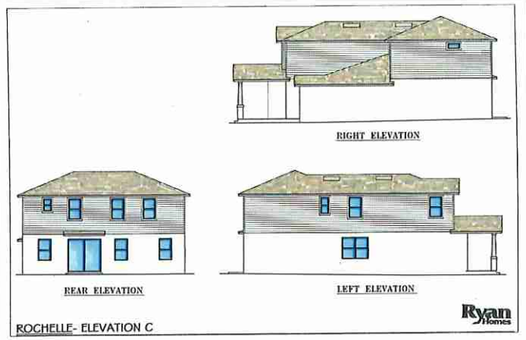

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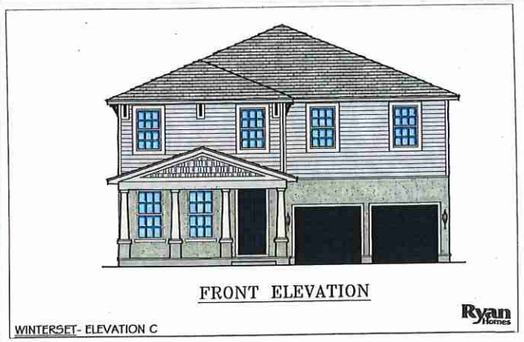

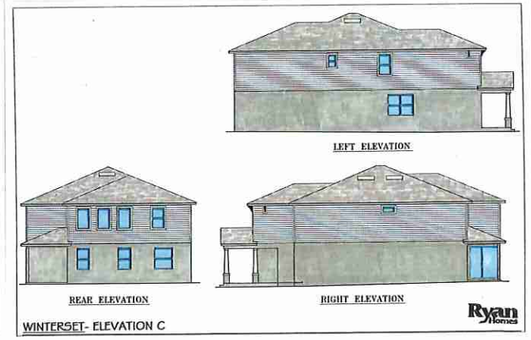

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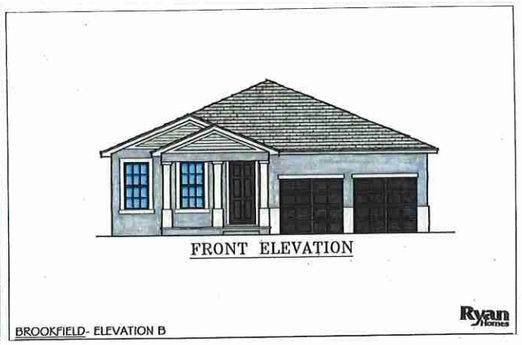

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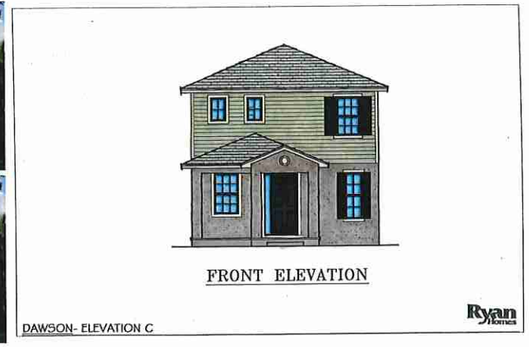

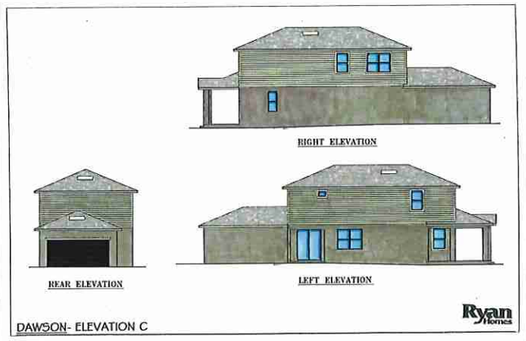

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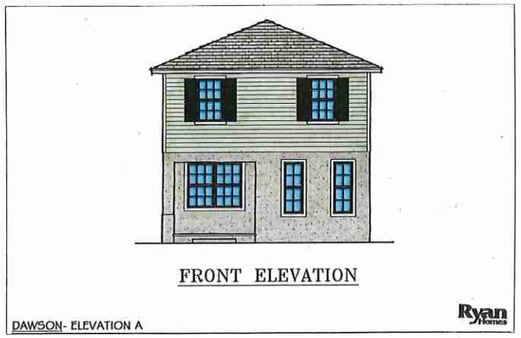

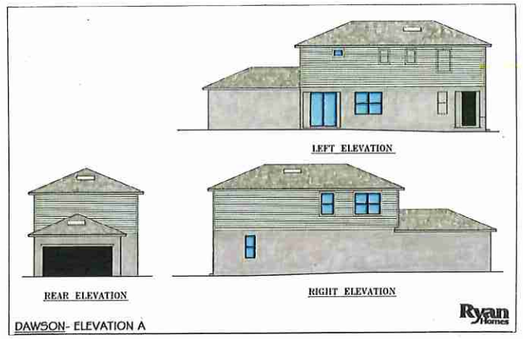

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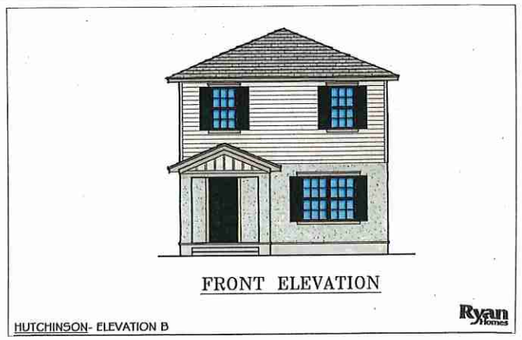

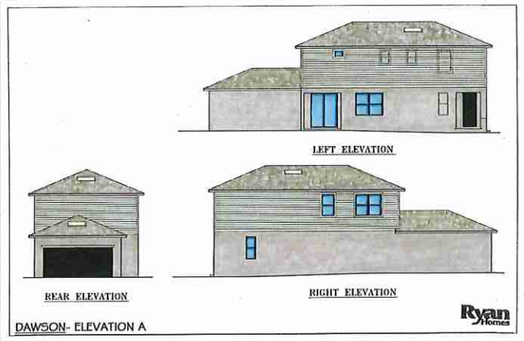

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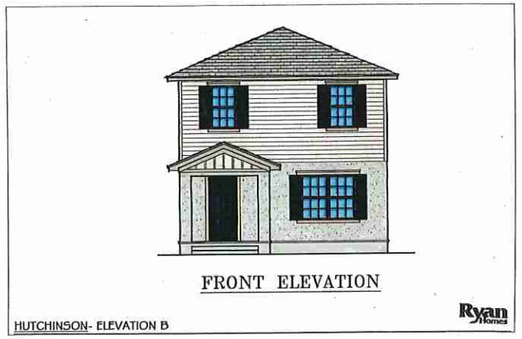

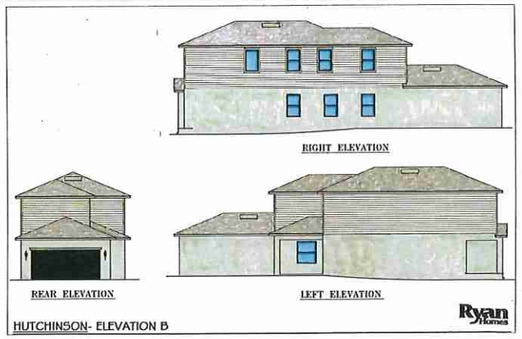

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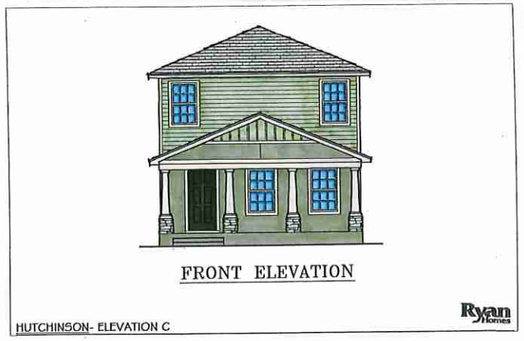

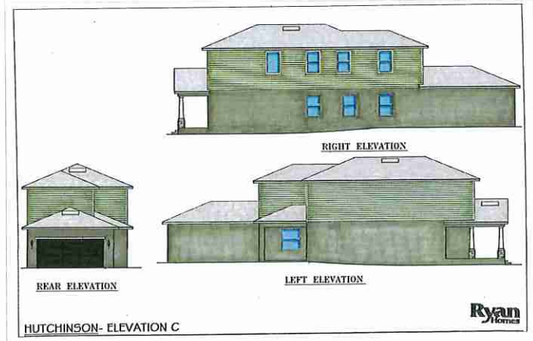

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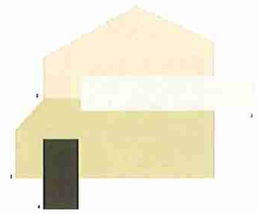
SHERWIN-WILLIAMS HOMESCAPES™ Ryan Homes Exterior

1

Ryan Homes

SHERWIN-WILLIAMS HOMESCAPES™ Ryan Homes Exterior



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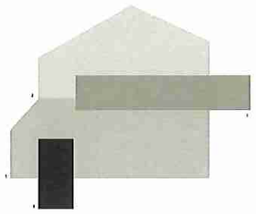

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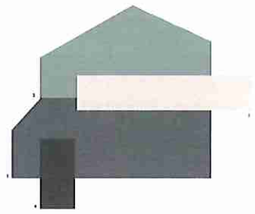

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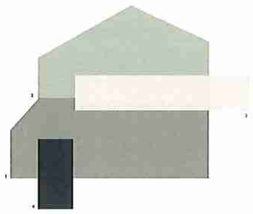

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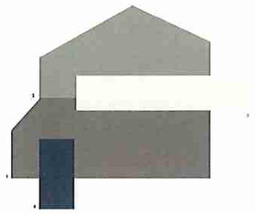

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Ryan Homes

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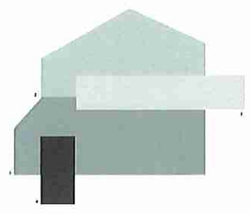

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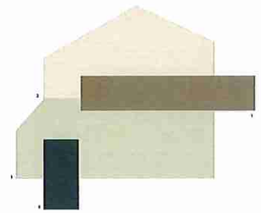

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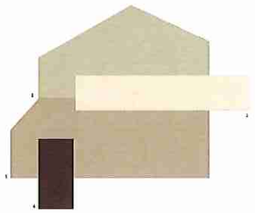

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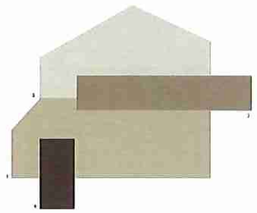

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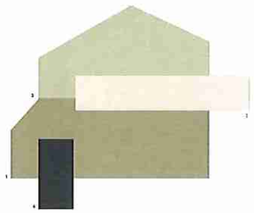

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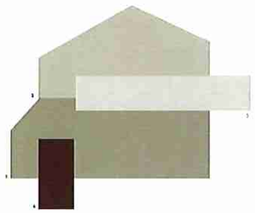

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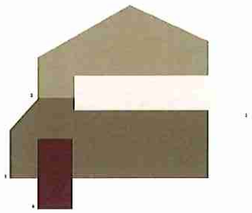

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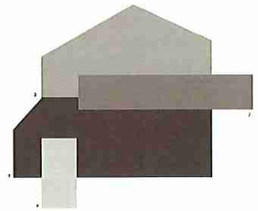

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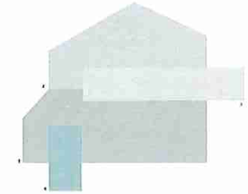

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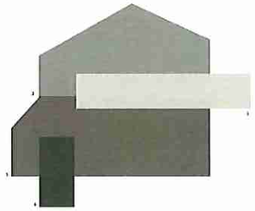

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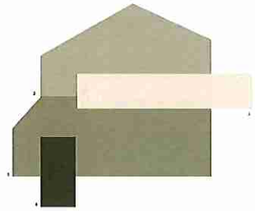

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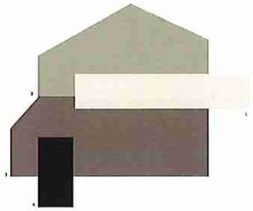

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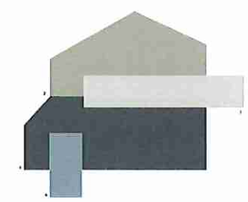

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CITY OF APOPKA
PLANNING COMMISSION

X	PUBLIC HEARING	MEETING OF:	June 9, 2020
	SITE PLAN	FROM:	Community Development
	SPECIAL REPORTS	EXHIBITS:	Land Use Report
	OTHER:		Parcel Table
			Vicinity Map
			Future Land Use Map
			Adjacent Zoning Map
			Adjacent Uses Map
			Property Sketches/Descriptions
			Concept Plan
			Applicant's Supporting Documents

SUBJECT: **COMPREHENSIVE PLAN – LARGE SCALE - FUTURE LAND USE AMENDMENT – FLORIDIAN TOWN CENTER (COMMERCIAL)**

REQUEST: **LARGE SCALE - FUTURE LAND USE AMENDMENT**
FROM: "COUNTY" RURAL
TO: "CITY" COMMERCIAL (MAX. 0.25 FLOOR AREA RATIO)

SUMMARY:

OWNERS:	Collier Benge Joint Venture LLC and Williams Family Trust
APPLICANT:	Andrew McCown, GAI Consultants, Inc.
LOCATION:	North of West Orange Blossom Trail; west of State Route 429
PARCEL ID #(S):	See Parcel Table
EXISTING USE:	See Parcel Table
CURRENT ZONING:	"City" Transitional (T)
PROPOSED ZONING:	Planned Development
MAXIMUM ALLOWABLE DEVELOPMENT:	EXISTING FLU: 2 Dwelling Units (Orange County Rural, 1 DU/10 AC) PROPOSED FLU: 258,419 non-residential sq. ft. +/-
TRACT SIZE:	23.73 +/- acres

DISTRIBUTION

Mayor Nelson	Finance Director	Public Services Director
Commissioners	HR Director	Recreation Director
City Administrator	IT Director	City Clerk
Community Development Director	Police Chief	Fire Chief

ADDITIONAL COMMENTS: The subject properties were annexed into the City on December 19, 2018 via Ordinance Numbers 2692 and 2693. The proposed Large-Scale Future Land Use Amendment is being requested for 11 properties, listed on the "Parcel Table" and also depicted in the "Property Sketches/Descriptions". Pursuant to Florida law, properties ten acres or more are required to undergo review by State planning agencies.

In conjunction with state requirements, staff has analyzed the proposed amendment and determined that adequate public facilities exist to support this land use change (see attached Land Use Report). Based on the findings of the Land Use report, the proposed FLUM amendment is compatible with the surrounding and nearby land uses and the character of the general area.

As depicted in the Concept Plan, the applicant has a desire to develop the subject area as a horizontal, mixed-use development. The Concept Plan depicts multi-family apartments, an assisted living facility, a YMCA, retail areas, and more. This proposed, conceptual development is commonly referred to as "The Floridian Town Center". Additional information supporting the proposed Future Land Use Designation is provided by the applicant and provided in the exhibits.

COMPREHENSIVE PLAN COMPLIANCE: A proposed FLUM Designation of Commercial (Policy 3.1.i, Future Land Use Element) is compatible with the designations assigned to abutting properties. The FLUM application covers approximately 23.73 acres.

Primary uses shall be for business, commerce, and convenience shopping which may be neighborhood or community oriented. The maximum floor area ratio shall be .25 gross floor area. Institutional land uses of less than five acres; and public facilities or utilities of less than five acres.

The expansion of strip commercial areas shall be prohibited except in infill areas.

Special exception uses shall include:

1) Institutional land uses of five acres or more
2) Elementary schools, middle schools and high schools
3) Supporting infrastructure and public facilities of five acres or more

Planned Unit Development uses may include:

1) All primary land uses
2) All special exception uses
3) Multifamily development of up to fifteen dwelling units per acre, when located within a primary use structure
4) Other uses deemed compatible with and complimentary to the other proposed master planned uses and the surrounding neighborhoods.

SCHOOL CAPACITY REPORT: As the proposed Industrial Future Land Use Designation will not create an additional impact on school enrollment, a school capacity enhancement agreement is not required.

ORANGE COUNTY NOTIFICATION: The JPA requires the City to notify the County 30 days before any public hearing or advisory board. The City properly notified Orange County on May 7, 2020.

PUBLIC HEARING SCHEDULE:
June 9, 2020- Planning Commission (5:30 pm)
July 1, 2020- City Council (7:00 pm) – Transmittal

DULY ADVERTISED:
May 29, 2020 – Public Notice and Notification (Apopka Chief)

RECOMMENDATION ACTION:

The **Development Review Committee** finds the proposed amendment consistent with the Comprehensive Plan and compatible with the character of the surrounding area, and recommends transmittal of the change in Future Land Use from "County" Rural to "City" Commercial (Max. FAR 0.25) for the properties owned by Collier Benge Joint Venture LLC and Williams Family Trust.

Recommended Motion: Find the proposed amendment consistent with the Comprehensive Plan and compatible with the character of the surrounding area, and recommend transmittal of the Future Land Use Map designation from "County" Rural to "City" Commercial (Max. FAR 0.25) to the Florida Department of Economic Opportunity.

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.

LAND USE REPORT

I. RELATIONSHIP TO ADJACENT PROPERTIES:

Direction	*Future Land Use*	*Zoning*	*Present Use(s)*
North (City and County)	"County" Rural	"City" T	Single Family Homes, Nursery
East (City and County)	"City" Residential Low Suburban and Commercial and "County" Rural and Low Density Residential	"City" C-N, "City" T and "County" A-1	State Route 429, Woodlands, and Single-Family Homes
South (City & County)	"City" Mixed Use & "County" Rural	"City" MU-ES-GT and "County" A-1	State Route 429 Connector Road and Morrisons Subdivision
West (County)	"County" Rural	"County" A-1	Morrisons Subdivision

II. LAND USE ANALYSIS

North: Abutting the subject properties to the north are single family homes and a nursery. This area is part of a Large Scale Future Land Use Amendment application to Residential High – 15, and the area is part of the proposed, "Floridian Town Center".

West: The Morrisons Subdivision, along with the Shiloh Missionary Baptist Church is west-adjacent of the subject properties.

South: To the south is the State Route 429 Connector Road, which connects W. Orange Blossom Trail and Plymouth Sorrento Road to the State Route 429 Interchange.

East: To the east is the State Route 429. Beyond State Route 429 are woodlands, single family homes, and Plymouth Sorrento Road.

Other Information:

Wekiva River Protection Area: No
Area of Critical State Concern: No
DRI / FQD: No

Wekiva Parkway and Protection Act: The proposed amendment has been evaluated against the adopted Wekiva Study Area Comprehensive Plan policies. While located within the Wekiva River Basin Study Area, the subject property is not located within the Protection Area. The proposed amendment is consistent with the adopted mandates and requirements. The proposed Future Land Use Map (FLUM) amendment has been reviewed against the best available data, with regard to aquifer and groundwater resources. The City of Apopka's adopted Comprehensive Plan addresses aquifer recharge and stormwater run-off through the following policies:

- Future Land Use Element, Policies 4.16, 14.4, 15.1, 16.2 and 18.2
- Infrastructure Element, Policies 1.5.5, 4.2.7, 4.4, 4.4.1, 4.4.2 and 4.4.3
- Conservation Element, Policy 3.18

Karst Features: The Karst Topography Features Map from the Florida Department of Environmental Protection shows that karst features are within the vicinity of this property. At the time of master plan or development plan application, the developer will need to address soils conditions and evaluate the site for presence of karst features.

Analysis of the character of the Property: The subject properties consist of single-family homes and nurseries.

Analysis of the relationship of the amendment to the population projections: The proposed future land use designation for the subject area is Commercial (Max. Floor Area Ratio 0.25). A change to this designation will generate an estimated population increase up to 0 persons and 258,419 non-residential square feet.

CALCULATIONS:

EXISTING: "County" Rural (1 dwelling unit/10 acres, for 23.73 acres) = 2 dwelling units
2 dwelling units x 2.659 persons per household = 5 persons

PROPOSED: "City" Commercial (Max. FAR 0.25, at 23.73 acres) = 258,419 non-residential sq. ft.

Housing Needs: This amendment will not negatively impact the housing needs as projected in the Comprehensive Plan.

Habitat for species listed as endangered, threatened or of special concern: Per policy 4.1 of the Conservation Element, a habitat study is required for developments ten (10) acres or more in size. This site is greater than ten acres. A habitat study will be required at the time of a development plan application.

Transportation: The City of Apopka is a Transportation Concurrency Exception Area. Refer to Chapter 3 of the City of Apopka 2010 Comprehensive Plan.

Potable Water, Reclaimed Water & Sanitary Sewer Analysis: The subject property is located within the City of Apopka service area for potable water, reclaimed water and sanitary service.

Sanitary Sewer Analysis

1. Facilities serving the site; current LOS; and LOS standard: None; 81 GPD/Capita; 81 GPD/Capita, 90 GPD/1,000 sf

If the site is not currently served, please indicate the designated service provider: City of Apopka

2. Projected total demand under existing designation: 405 GPD

3. Projected total demand under proposed designation: 23,258 GPD

4. Capacity available: Yes

5. Projected LOS under existing designation: 81 GPD/Capita

6. Projected LOS under proposed designation: 81 GPD/Capita, 90 GPD/1,000 sf

7. Improvement/expansions already programmed or needed as a result if proposed amendment: TBD

Potable Water Analysis

1. Facilities serving the site; current LOS; and LOS standard: None; 162 GPD/Capita ; 135 GPD/Capita, 200 GPD/1,000 sf

If the site is not currently served, please indicate the designated service provider: City of Apopka

2. Projected total demand under existing designation: 810 GPD

3. Projected total demand under proposed designation: 51,684 GPD

4. Capacity available: Yes

5. Projected LOS under existing designation: 162 GPD/Capita

6. Projected LOS under proposed designation: 135 GPD/Capita, 200 GPD/1,000 sf

7. Improvement/expansions already programmed or needed as a result of the proposed amendment: TBD

8. Parcel located within the reclaimed water service area: Yes

Solid Waste

1. Facilities serving the site: City of Apopka

2. If the site is not currently served, please indicate the designated service provider: City of Apopka

3. Projected LOS under existing designation: 4 lbs/ day /Capita

4. Projected LOS under proposed designation: 4 lbs / day /Capita, 4 lbs / day / 1,000 sf

5. Improvement/expansions already programmed or needed as a result of the proposed amendment: TBD

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

Infrastructure Information

Water treatment plant permit number: CUP No. 3217

Permitting agency: St. John's River Water Management District

Permitted capacity of the water treatment plant(s): 24.141 MGD

Total design capacity of the water treatment plant(s): 33.696 MGD

Availability of distribution lines to serve the property: Yes

Availability of reuse distribution lines available to serve the property: Yes

Drainage Analysis

1. Facilities serving the site:

2. Projected LOS under existing designation:

3. Projected LOS under proposed designation:

4. Improvement/expansion: On site retention / detention ponds

Recreation

1. Facilities serving the site; LOS standard: City of Apopka Parks System ; 3 acre / 1000 capita

2. Projected facility under existing designation: 0.02 acres

3. Projected facility under proposed designation: 0 acres

4. Improvement/expansions already programmed or needed as a result of the proposed amendment: None

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

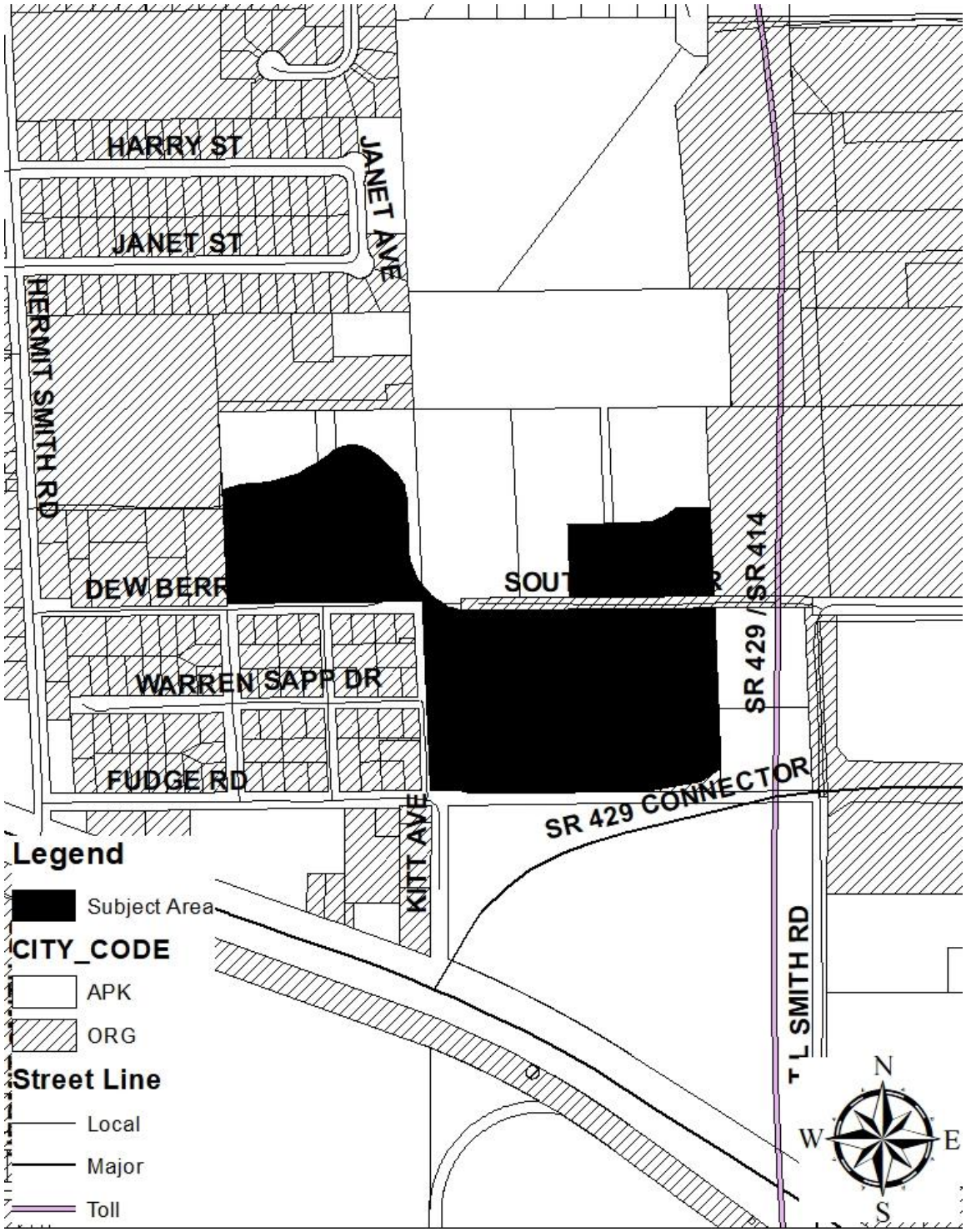
PARCEL OWNERSHIP TABLE

	Parcel ID	Property Owner	Existing Use
1	06-21-28-7172-16-050	Collier Benge Land Joint Venture LLC	Single Family Home
2	06-21-28-7172-16-060	Collier Benge Land Joint Venture LLC	Nursery
3	27-20-36-0000-00-085	Williams Family Trust	Vacant
4	06-21-28-7172-16-070	Collier Benge Land Joint Venture LLC	Nursery
5	27-20-36-0000-00-083	Williams Family Trust	Single Family Home
6	28-21-06-7172-16-020	Collier Benge Land Joint Venture LLC	Single Family Home
7	28-21-06-7172-16-040	Collier Benge Land Joint Venture LLC	Single Family Home and Nursery
8	28-21-06-7172-16-030	Collier Benge Land Joint Venture LLC	Single Family Home
9	27-20-36-0000-00-047	Williams Family Trust	Place of Worship
10	27-20-36-0000-00-052	Collier Benge Land Joint Venture LLC	Manufactured Home
11	06-21-28-7172-16-051	Collier Benge Land Joint Venture LLC	Vacant

N

Floridian Town Center (Commercial)
Proposed Large Scale Future Land Use Amendment:
From: "County" Rural
To: "City" Commercial
Acreage: 23.73 +/-

VICINITY MAP



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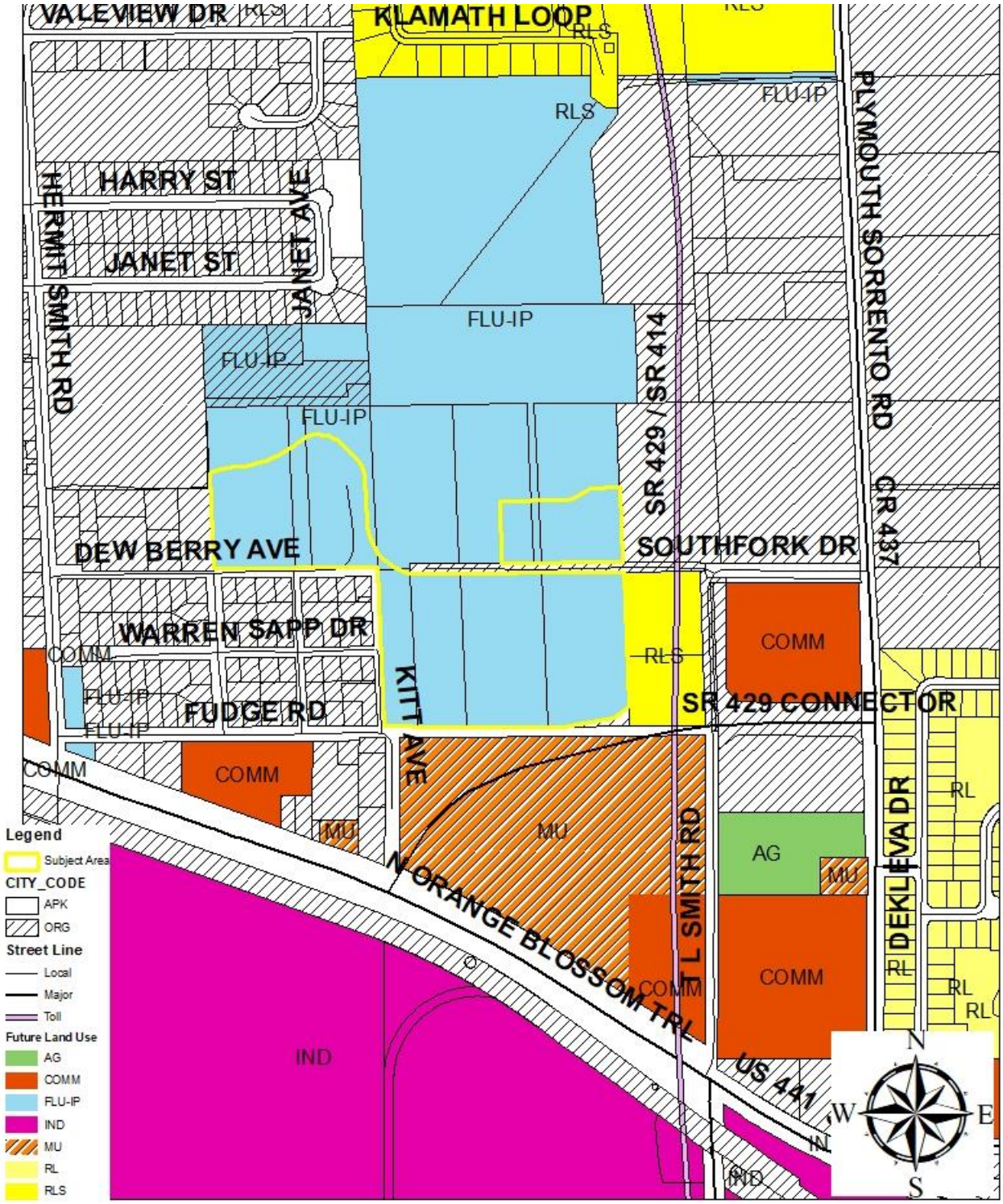
FUTURE LAND USE MAP



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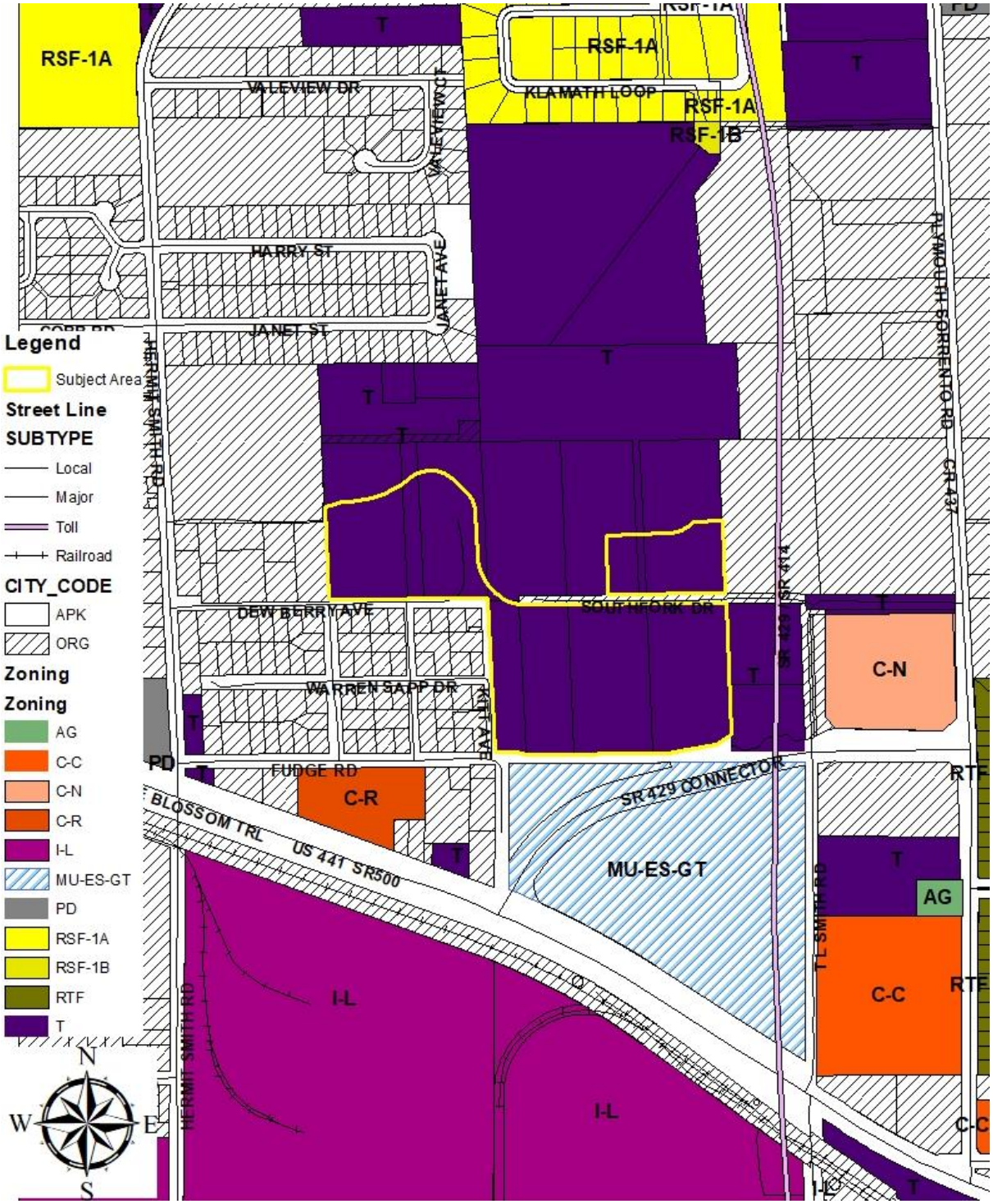
ADJACENT ZONING



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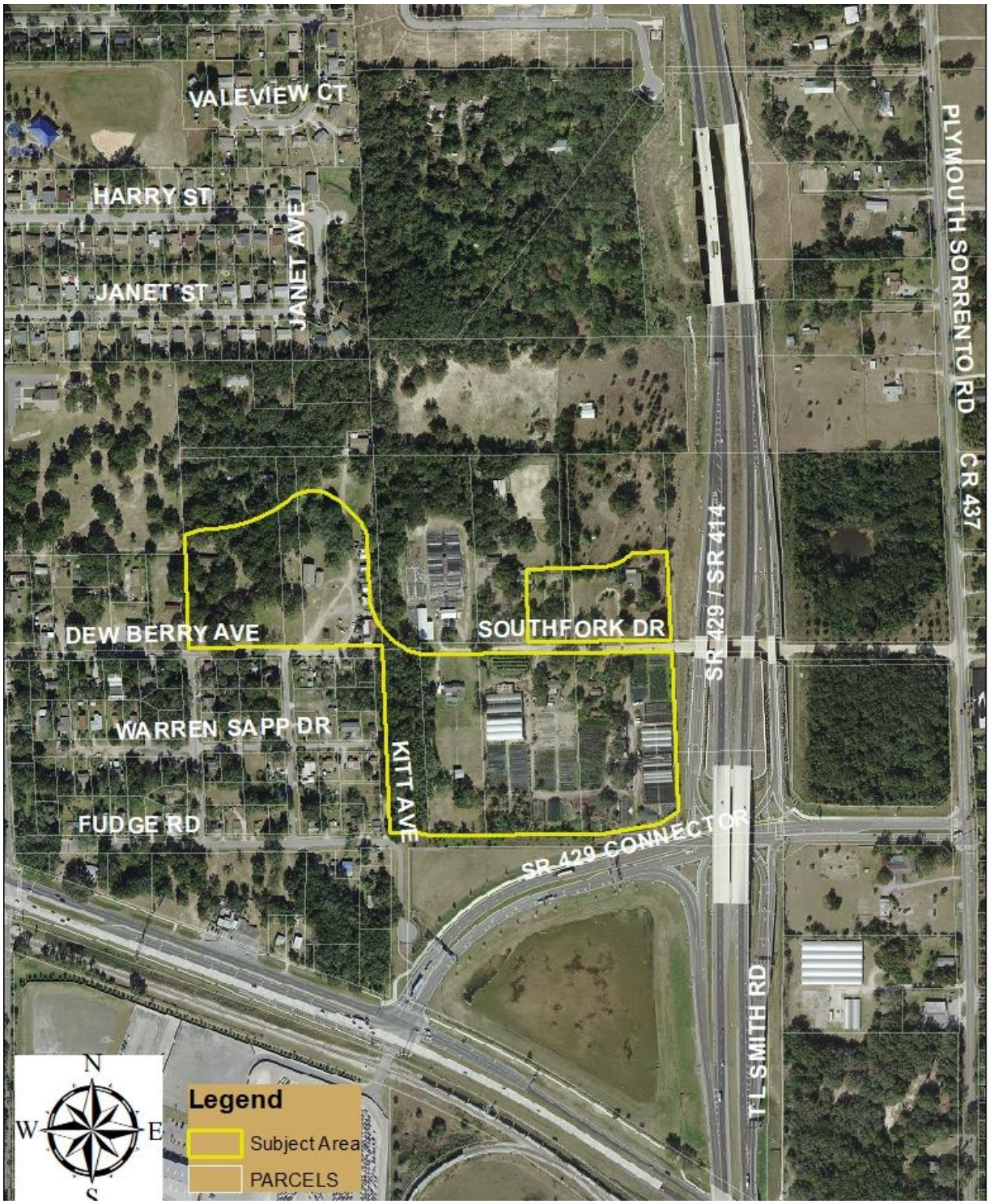
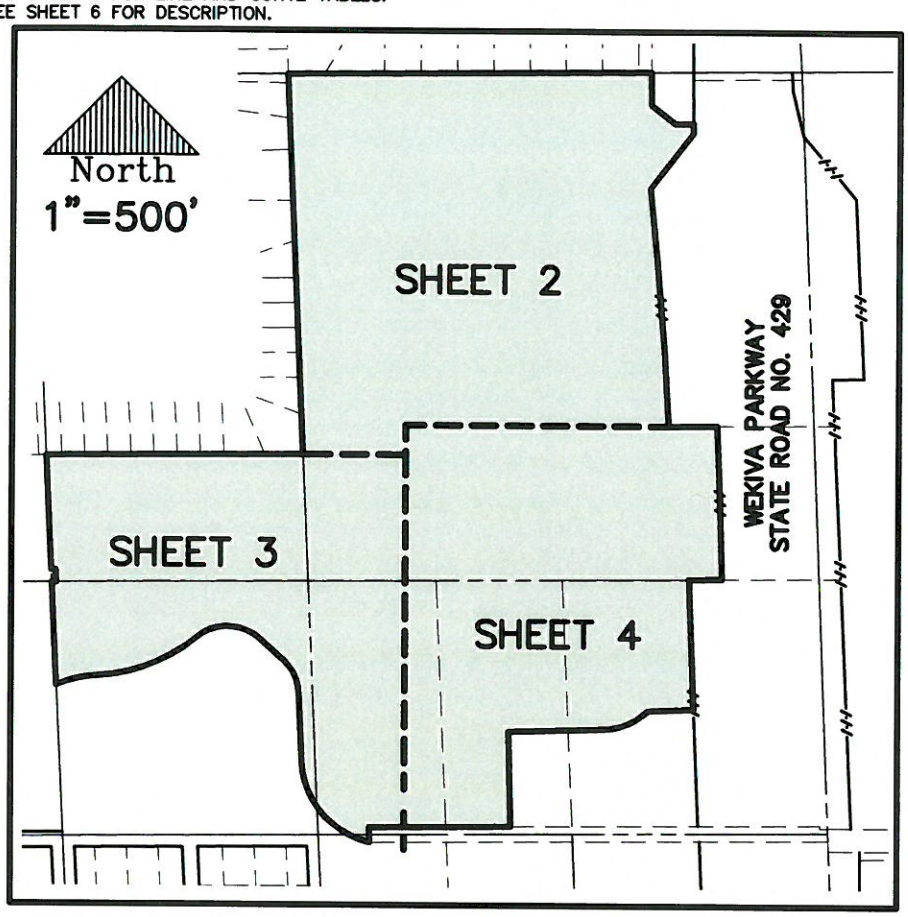
ADJACENT USES



SKETCH OF DESCRIPTION

SEE SHEET 1 FOR NOTES, LEGEND AND KEY MAP.
SEE SHEETS 2–4 FOR SKETCH.
SEE SHEET 5 FOR LINE AND CURVE TABLES.
SEE SHEET 6 FOR DESCRIPTION.



KEY MAP

LEGEND

——— /// ———	LIMITED ACCESS RIGHT-OF-WAY
SEC 36-20-27	SECTION-TOWNSHIP-RANGE
L1	LINE NUMBER (SEE TABLE)
C1	CURVE NUMBER (SEE TABLE)
PC	POINT OF CURVATURE
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
NT	NON-TANGENT
R/W	RIGHT-OF-WAY
ORB	OFFICIAL RECORDS BOOK
PB	PLAT BOOK
PG	PAGE
PGS	PAGES
(P)	PER PLAT
N'LY	NORTHERLY
S'LY	NORTHERLY
S.R.	STATE ROAD
U.S.	UNITED STATES

NOTES:

- This is not a survey.
- Not valid without the original signature and seal of a Florida licensed surveyor and mapper.
- Bearings based on the South line of STANTON RIDGE, as recorded in Plat Book 99, Page 131 through 134, of the Public Records of Orange County, Florida, being S89°28'53"W, relative to the Florida State Plane Coordinate System, Florida East Zone, 1983 North American datum, 2011 adjustment.
- Lands shown hereon were not abstracted for rights-of-way, easements, ownership or other instruments of record by this firm.
- No title opinion or abstract of matters affecting title or boundary to the subject property or those of adjoining land owners have been provided. It is possible there are deeds of record, unrecorded deeds or other instruments which could affect the boundaries or use of the subject property.
- This Sketch of Description does not depict any easements of record that may be within or adjoining the lands described hereon.
- The configuration of this sketch of description is based on information provided by the Client or Client's representative to DWMA.

PREPARED FOR:

COLLIER-BENGE JOINT VENTURE, LLC

THE FLORIDIAN – HIGH DENSITY RESIDENTIAL PARCEL

DATE	BY	DESCRIPTION

REVISIONS

DONALD W. McINTOSH ASSOCIATES, INC.
ENGINEERS PLANNERS SURVEYORS
2200 PARK AVENUE NORTH, WINTER PARK, FLORIDA 32789 (407) 644-4068
CERTIFICATE OF AUTHORIZATION NO. LB68

DONALD W. McINTOSH ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. LB68

Robert "Tyler" Sears March 26, 2020
Florida Registered Surveyor and Mapper
Certificate No. 6950
NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

DRAWN BY: BW	CHECKED BY: TS	JOB NO.	SCALE	SHEET 1
DATE: 3/2020	DATE: 3/2020	18161	1"=500'	OF 6

Printed: Thu 26-Mar-2020 – 09:05AM
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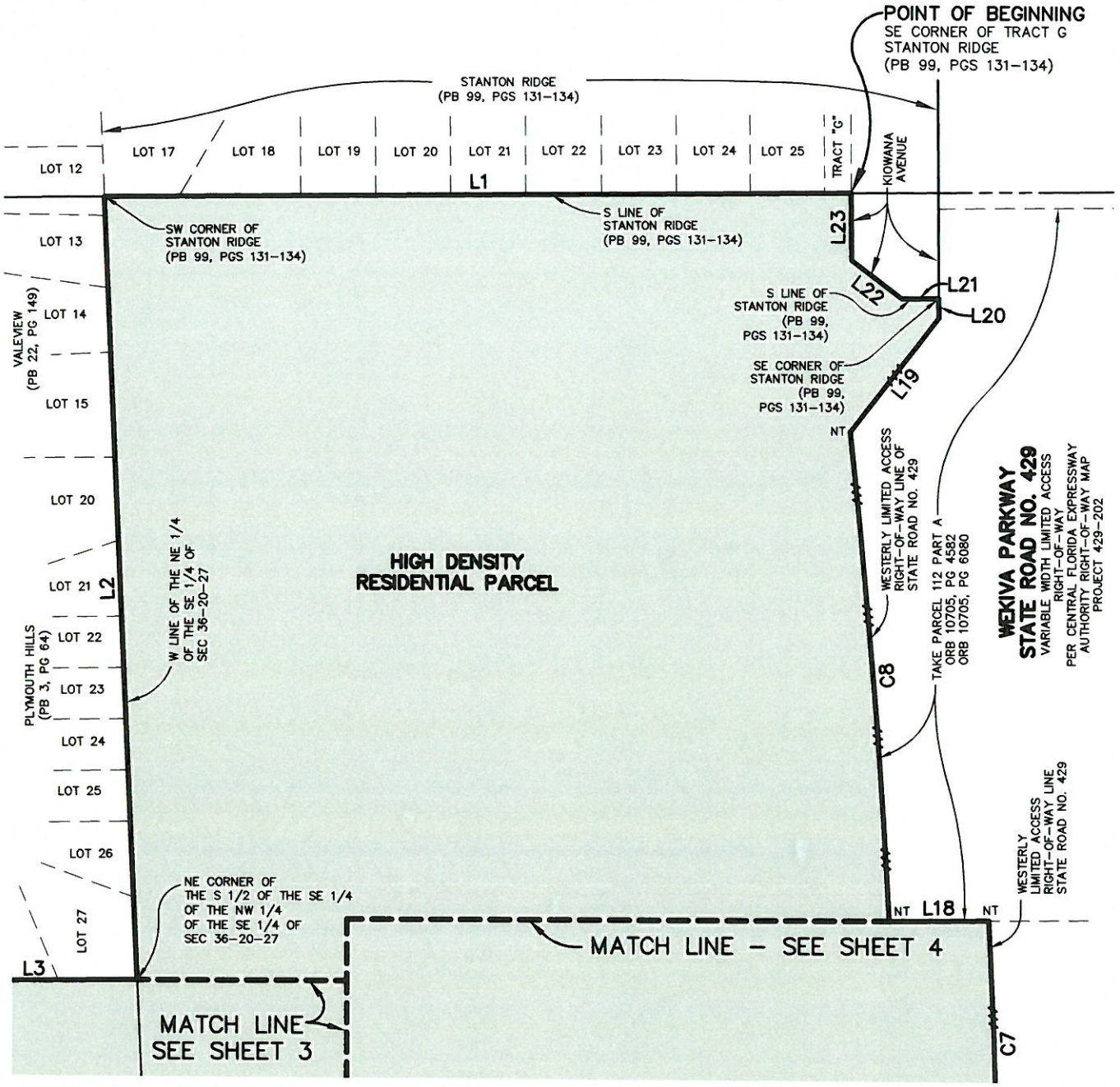
SKETCH OF DESCRIPTION

SEE SHEET 1 FOR NOTES, LEGEND AND KEY MAP.
SEE SHEETS 2–4 FOR SKETCH.
SEE SHEET 5 FOR LINE AND CURVE TABLES.
SEE SHEET 6 FOR DESCRIPTION.

200' 0 200'
SCALE 1"=200'

North



PREPARED FOR:

COLLIER–BENGE JOINT VENTURE, LLC

THE FLORIDIAN – HIGH DENSITY RESIDENTIAL PARCEL

The features and linework shown hereon are relative to Florida State Plane Coordinate System, Florida East zone, 1983 North American Datum, 2011 adjustment average combined scale factor: 0.99997293 (1.00002707073). All dimensions are Grid dimensions in U.S. Survey Feet, based on said Florida State Plane Coordinate System, Florida East zone, 1983 North American Datum, 2011 adjustment.

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DATE: 3/2020	DATE: 3/2020	18161	1"=200'	OF 6

Printed: Thu 26–Mar–2020 – 09:05AM
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SKETCH OF DESCRIPTION

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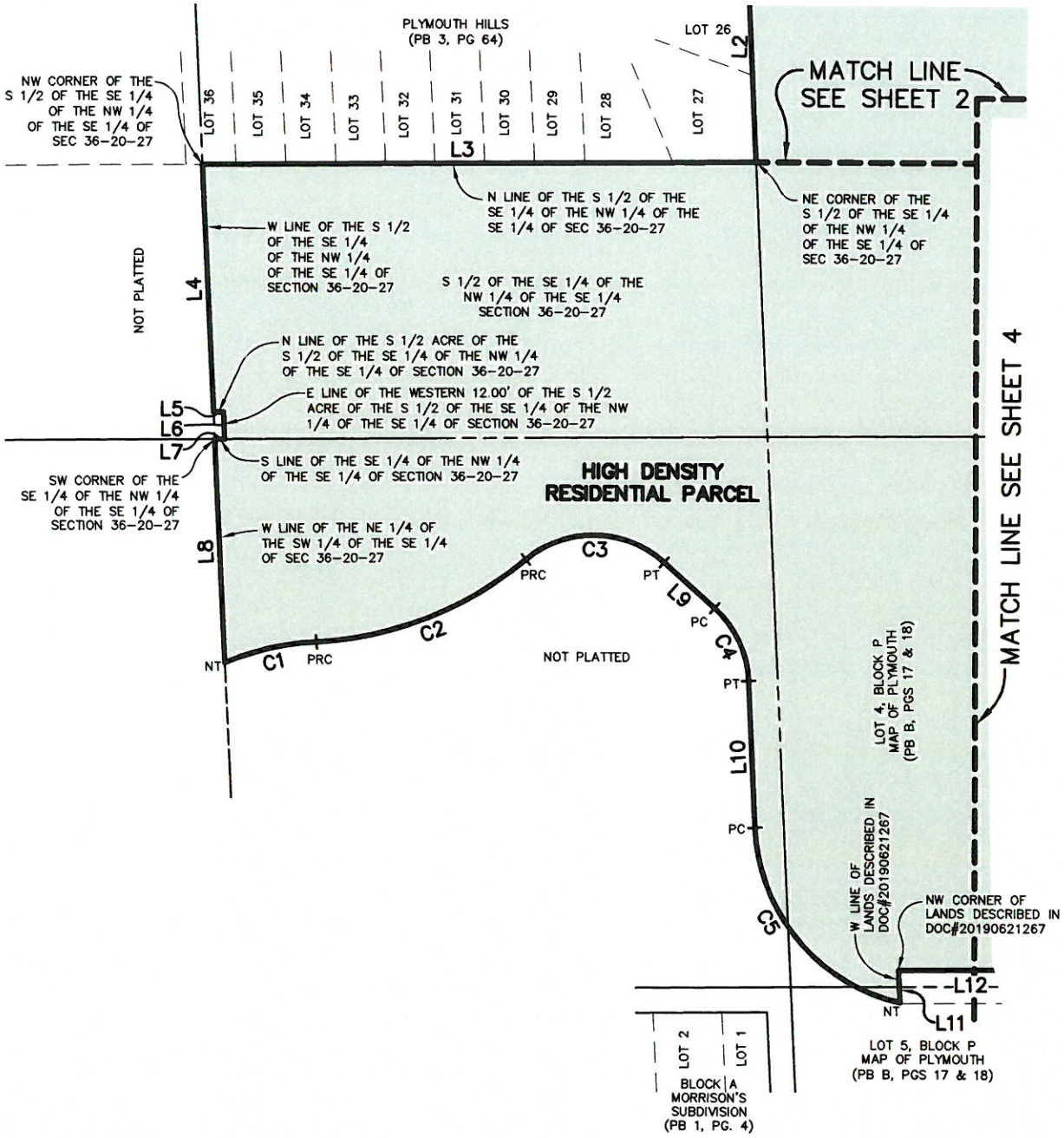
SEE SHEET 5 FOR LINE AND CURVE TABLES.
SEE SHEET 6 FOR DESCRIPTION.

200' 0 200'
SCALE 1"=200'

North



PREPARED FOR:

COLLIER–BENGE JOINT VENTURE, LLC

THE FLORIDIAN – HIGH DENSITY RESIDENTIAL PARCEL

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DRAWN BY: BW	CHECKED BY: TS	JOB NO.	SCALE	SHEET 3
DATE: 3/2020	DATE: 3/2020	18161	1"=200'	OF 6

Printed: Thu 26-Mar-2020 – 09:05AM
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CS# 19-13

SKETCH OF DESCRIPTION

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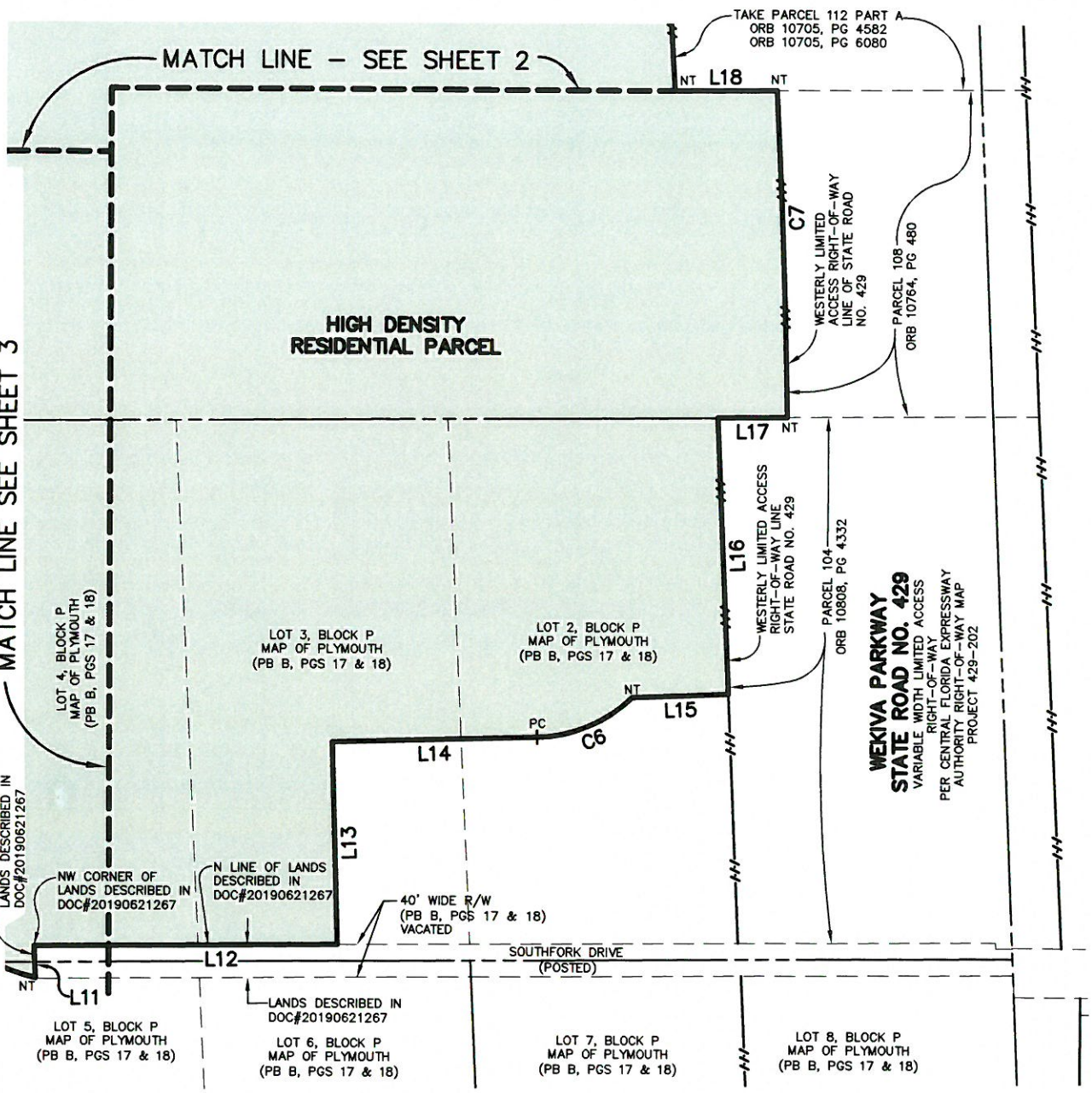
SEE SHEETS 2–4 FOR SKETCH.
SEE SHEET 5 FOR LINE AND CURVE TABLES.
SEE SHEET 6 FOR DESCRIPTION.

200' 0 200'
SCALE 1"=200'
North



PREPARED FOR:

COLLIER–BENGE JOINT VENTURE, LLC

THE FLORIDIAN – HIGH DENSITY RESIDENTIAL PARCEL

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DRAWN BY: BW	CHECKED BY: TS	JOB NO.	SCALE	SHEET 4
DATE: 3/2020	DATE: 3/2020	18161	1"=200'	OF 6

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CS# 19–13

SKETCH OF DESCRIPTION

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SEE SHEETS 2–4 FOR SKETCH.
SEE SHEET 5 FOR LINE AND CURVE TABLES.
SEE SHEET 6 FOR DESCRIPTION.

LINE TABLE		
NUMBER	BEARING	DISTANCE
L1	S89°28'53"W	947.63'
L2	S02°34'31"E	993.64'
L3	S89°29'29"W	665.02'
L4	S02°44'36"E	298.07'
L5	N89°30'13"E	12.01'
L6	S02°44'36"E	32.82'
L7	S89°30'13"W	12.01'
L8	S02°44'36"E	268.72'
L9	S47°53'20"E	81.86'
L10	S02°34'31"E	176.87'
L11	N02°39'46"W	39.14'
L12	N89°31'58"E	369.71'
L13	N01°34'56"W	247.84'
L14	N88°25'04"E	249.18'
L15	N87°39'31"E	118.73'
L16	N02°20'29"W	338.13'
L17	N89°29'17"E	84.79'
L18	S89°29'17"W	125.14'
L19	N37°22'01"E	182.75'
L20	N00°27'45"W	24.71'
L21	S89°31'59"W	46.62'
L22	N52°36'26"W	79.53'
L23	N00°31'22"W	85.34'

CURVE TABLE					
NUMBER	RADIUS	DELTA	LENGTH	CHORD	CHORD BEARING
C1	325.00'	19°59'49"	113.43'	112.85'	N77°02'12"E
C2	425.00'	37°20'00"	276.93'	272.05'	N68°22'07"E
C3	125.00'	82°24'34"	179.79'	164.69'	S89°05'37"E
C4	125.00'	45°18'49"	98.86'	96.30'	S25°13'55"E
C5	225.00'	74°47'42"	293.72'	273.30'	S39°58'22"E
C6	175.00'	42°23'40"	129.49'	126.55'	N67°13'14"E
C7	11294.16'	2°01'48"	400.16'	400.14'	N02°02'26"W
C8	11169.16'	3°11'30"	622.17'	622.09'	N04°40'48"W

PREPARED FOR:

COLLIER–BENGE JOINT VENTURE, LLC

THE FLORIDIAN – HIGH DENSITY RESIDENTIAL PARCEL

DONALD W. McINTOSH ASSOCIATES, INC.
ENGINEERS PLANNERS SURVEYORS
2200 PARK AVENUE NORTH, WINTER PARK, FLORIDA 32789 (407) 644–4068
CERTIFICATE OF AUTHORIZATION NO. LB68

DRAWN BY: BW	CHECKED BY: TS	JOB NO.	SCALE	SHEET 5
DATE: 3/2020	DATE: 3/2020	18161	N/A	OF 6

SKETCH OF DESCRIPTION

SEE SHEET 1 FOR NOTES, LEGEND AND KEY MAP.
SEE SHEETS 2–4 FOR SKETCH.
SEE SHEET 5 FOR LINE AND CURVE TABLES.
SEE SHEET 6 FOR DESCRIPTION.

DESCRIPTION:

That part of MAP OF PLYMOUTH, according to the plat thereof, as recorded in Plat Book B, Pages 17 and 18, of the Public Records of Orange County, Florida and that part of Section 36, Township 20 South, Range 27 East, Orange County, Florida, described as follows:

BEGIN at the Southeast corner of Tract G, according to the plat of STANTON RIDGE, as recorded in Plat Book 99, Pages 131 through 134, of the Public Records of Orange County, Florida; thence S89°28'53"W along the South line of said plat of STANTON RIDGE, for a distance of 947.63 feet to the Southwest corner of said plat of STANTON RIDGE and the West line of the Northeast 1/4 of the Southeast 1/4 of said Section 36; thence S02°34'31"E along said West line, 993.64 feet to the Northeast corner of the South 1/2 of the Southeast 1/4 of the Northwest 1/4 of the Southeast 1/4 of said Section 36; thence S89°29'29"W along the North line of said South 1/2 of the Southeast 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 36, for a distance of 665.02 feet to the Northwest corner of said South 1/2 of the Southeast 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 36, thence S02°44'36"E along the West line of said South 1/2 of the Southeast 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 36, for a distance of 298.07 feet to the North line of the South 1/2 acre of said South 1/2 of the Southeast 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 36; thence departing said West line run N89°30'13"E along said North line, 12.01 feet to the East line of the Western 12.00 feet of said South 1/2 acre of the South 1/2 of the Southeast 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 36; thence departing said North line run S02°44'36"E along said East line, 32.82 feet to the South line of said Southeast 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 36; thence departing said East line run S89°30'13"W along said South line, 12.01 feet to the Southwest corner of said Southeast 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 36; thence S02°44'36"E along the West line of the Northeast 1/4 of the Southwest 1/4 of the Southeast 1/4 of said Section 36, for a distance of 268.72 feet to a non-tangent curve concave Southerly having a radius of 325.00 feet and a chord bearing of N77°02'12"E; thence departing said West line, run Easterly along the arc of said curve through a central angle of 19°59'49" for a distance of 113.43 feet to the point of reverse curvature of a curve concave Northerly having a radius of 425.00 feet and a chord bearing of N68°22'07"E; thence Easterly along the arc of said curve through a central angle of 37°20'00" for a distance of 276.93 feet to the point of reverse curvature of a curve concave Southerly having a radius of 125.00 feet and a chord bearing of S89°05'37"E; thence Easterly along the arc of said curve through a central angle of 82°24'34" for a distance of 179.79 feet to the point of tangency; thence S47°53'20"E, 81.86 feet to the point of curvature of a curve concave Southwesterly having a radius of 125.00 feet and a chord bearing of S25°13'55"E; thence Southeasterly along the arc of said curve through a central angle of 45°18'49" for a distance of 98.86 feet to the point of tangency; thence S02°34'31"E, 176.87 feet to the point of curvature of a curve concave Northeasterly having a radius of 225.00 feet and a chord bearing of S39°58'22"E; thence Southeasterly along the arc of said curve through a central angle of 74°47'42" for a distance of 293.72 feet to a non-tangent line and the West line of lands described in Official Records Document Number 20190621267, of the Public Records of Orange County, Florida; thence N02°39'46"W along said West line, 39.14 feet to the Northwest corner of said lands described in Official Records Document Number 20190621267; thence N89°31'58"E along the North line of said lands described in Official Records Document Number 20190621267, for a distance of 369.71 feet; thence departing said North line, run N01°34'56"W, 247.84 feet; thence N88°25'04"E, 249.18 feet to the point of curvature of a curve concave Northwesterly having a radius of 175.00 feet and a chord bearing of N67°13'14"E; thence Northeasterly along the arc of said curve through a central angle of 42°23'40" for a distance of 129.49 feet to a non-tangent line; thence N87°39'31"E, 118.73 feet to the Westerly limited access right-of-way line of State Road Number 429, as described in Official Records Book 10808, Page 4332, of the Public Records of Orange County, Florida; thence N02°20'29"W along said Westerly limited access right-of-way line, 338.13 feet; thence N89°29'17"E along said Westerly limited access right-of-way line, 84.79 feet to the Westerly limited access right-of-way line of State Road Number 429, as described in Official Records Book 10764, Page 480, of the Public Records of Orange County, Florida and a non-tangent curve concave Westerly having a radius of 11294.16 feet and a chord bearing of N02°02'26"W; thence Northerly along said Westerly limited access right-of-way line and the arc of said curve through a central angle of 02°01'48" for a distance of 400.16 feet to the Westerly limited access right-of-way line of State Road Number 429, as described in Official Records Book 10705, Page 4582, of the Public Records of Orange County, Florida and as described in Official Records Book 10705, Page 6080, of the Public Records of Orange County, Florida and a non-tangent line; thence S89°29'17"W along said Westerly limited access right-of-way line, 125.14 feet to a non-tangent curve concave Westerly having a radius of 11169.16 feet and a chord bearing of N04°40'48"W; thence Northerly along said Westerly limited access right-of-way line and the arc of said curve through a central angle of 03°11'30" for a distance of 622.17 feet to a non-tangent line; thence N37°22'01"E along said Westerly limited access right-of-way line, 182.75 feet; thence N00°27'45"W along said Westerly limited access right-of-way line, 24.71 feet to the Southeast corner of the aforesaid plat of STANTON RIDGE; thence departing said Westerly limited access right-of-way line run the following courses and distances along the aforesaid South line of the plat of STANTON RIDGE: S89°31'59"W, 46.62 feet; N52°36'26"W, 79.53 feet; N00°31'22"W, 85.34 feet to the POINT OF BEGINNING. This description is based on Florida State Plane Coordinate System East Zone, scale factor of 0.99997293, NAD 83 Datum (2011 adjustment) and all distances are grid dimensions.

Containing 50.199 acres more or less when calculated in ground dimensions.

Being subject to any rights-of-way, restrictions, conditions and easements of record.

PREPARED FOR:

COLLIER–BENGE JOINT VENTURE, LLC

THE FLORIDIAN – HIGH DENSITY RESIDENTIAL PARCEL

DONALD W. McINTOSH ASSOCIATES, INC.
ENGINEERS PLANNERS SURVEYORS
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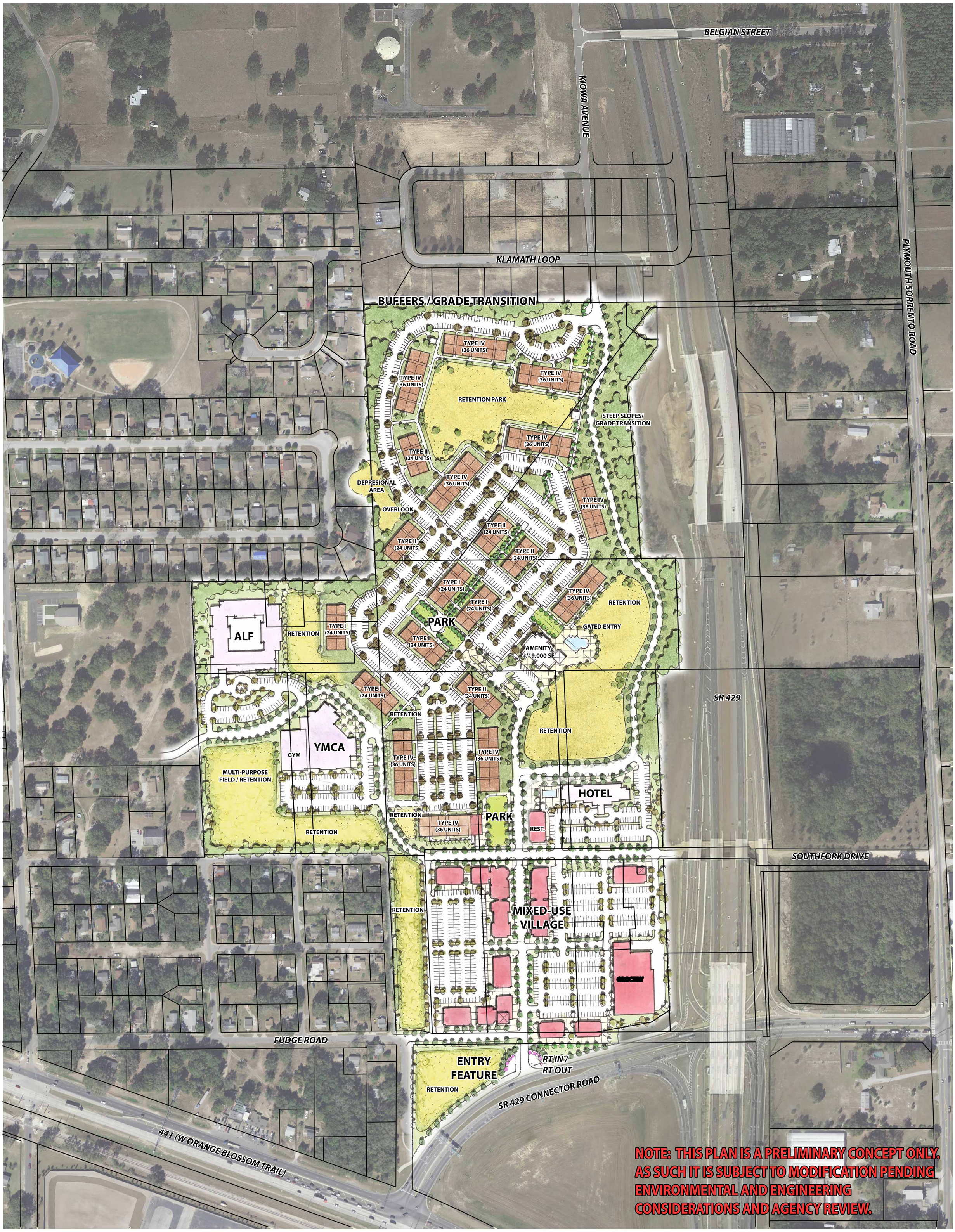

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Development Consulting Brokerage

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CONCEPT PLAN H

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Floridian Town Center

City of Apopka Future Land Use Map Amendment
Apopka, Florida

GAI Project Number: A180675.02

April 13, 2020

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1.0 Narrative

The following narrative describes the proposed development of property in the northwest quadrant of the intersection of SR 429 and US 441 (Orange Blossom Trail) in the City of Apopka, FL. This development will require an amendment to the City's Future Land Use Map (FLUM) and a rezoning to accommodate the proposed uses and program, as outlined by City staff in pre-application meetings held for the project on November 14, 2019 and January 24, 2020. This amendment narrative statement provides information regarding existing conditions on the site and surrounding properties, descriptions of the proposed development, as well as justifications of its consistency with the City's Comprehensive Plan.

A community meeting was held for residents and property owners surrounding the proposed development property on December 23, 2019 at the Frank-Subbs Community Center. The meeting notice mailer was sent out to all property owners within 300 feet of the project boundary. The meeting was attended by approximately 25 people. Documentation of the meeting is provided as an attachment to this application.

1.1 Existing Conditions and Project Description

1.1.1 Subject Property Overview

The subject property is a 73.87-acre site, located on the western edge of the City of Apopka, FL, adjacent to the unincorporated community of Plymouth, as shown in Figure 1. The proposed FLUMA site is comprised of sixteen full parcels and one partial parcel, as outlined in Table 1 and in Figure 3.

For many decades prior to development, the site and the surrounding lands were predominantly citrus groves and pasture. In the 1940's and 50's a small enclave of single-family homes and churches began to coalesce to the west of the site, off of Hermit Smith Road and US 441. Though well outside the incorporated area and not officially named, the neighborhood was loosely associated with the nearby communities of Plymouth and Apopka.

By 1980, several homes were scattered across the subject property, and by 1990, plant nurseries had begun to develop and expand. Also during this period, several single family subdivisions were developed near the property off of Hermit Smith Road and Plymouth Sorrento Road. The area's main connection to the region at this time was US 441, since SR 429 had not yet been constructed.

By 2013, SR 429 had expanded into Apopka and terminated at the Connector Road on the southern boundary of the project. In 2015, construction began on segment 1A of the SR 429 extension, which opened July 27, 2017. This new extension follows the eastern boundary of the project and ultimately leads into Lake County.

Table 1.
Parcel Data

Figure 3 Labels	Parcel ID	Owner	Parcel Acreage	Existing Land Uses	Existing FLU Designation (County)	Existing Zoning (County)
1	362027000000093	Collier Benge Land Joint Venture, LLC	14.18 Ac	SFR	Rural	A-1
2	362027000000075	Collier Benge Land Joint Venture, LLC	6.15 Ac	SFR	Rural	A-1
3	362027000000048	Collier Benge Land Joint Venture, LLC	3.01 Ac	MH	Rural	A-1
4	362027000000074	Collier Benge Land Joint Venture, LLC	0.52 Ac	Vacant	Rural	A-1
5	362027000000068	Collier Benge Land Joint Venture, LLC	0.90 Ac	Vacant	Rural	A-1
6*	362027000000066	Williams, Eugene & Willie D	0.61 Ac	MH	Rural	A-1
7	362027000000052	Collier Benge Land Joint Venture, LLC	10.37 Ac	MH	Rural	A-1
8	362027000000083	Williams Fam. Tr.	4.94 Ac	MH	Rural	A-1
9	362027000000085	Williams Fam. Tr.	0.99 Ac	Shed	Rural	A-1
10	362027000000047	William Fam. Tr.	3.99 Ac	4 SFR/Church	Rural	A-1
11	362027000016040	Collier Benge Land Joint Venture, LLC	4.93 Ac	SFR/Nursery	Rural	A-1
12	362027000016030	Collier Benge Land Joint Venture, LLC	4.43 Ac	SFR	Rural	A-1
13	362027000016020	Collier Benge Land Joint Venture, LLC	4.87 Ac	SFR	Rural	A-1
14	062128717216051	Collier Benge Land Joint Venture, LLC	1.90 Ac	Vacant	Rural	A-1
15	062128717216050	Collier Benge Land Joint Venture, LLC	2.84 Ac	SFR	Rural	A-1
16	062128717216060	Collier Benge Land Joint Venture, LLC	4.70 Ac	Comm/Nursery	Rural	A-1
17	062128717216070	Collier Benge Land Joint Venture, LLC	4.54 Ac	SFR/Nursery	Rural	A-1

*Note: This parcel contains a 12-foot gap in the legal description along the western boundary which is of uncertain title/ownership. Though this 12-foot gap is part of the tax parcel, it has been excluded from the FLUMA description and is not part of this application.

1.1.2 Relation to the PUD Rezoning

As a companion to this Future Land Use Amendment (FLUMA) application, we are proposing a rezoning of the entire project to Planned Unit Development (PUD), however, the PUD rezoning will follow under a separate submittal.

1.1.3 Annexation

Approximately 4.14 acres of the project remain in unincorporated Orange County:

- 362027000000048 (Parcel 3)
- 362027000000074 (Parcel 4)
- 362027000000066 (Parcel 6)

The first two parcels are already subject to a proposed annexation, which is currently in the approval process with the City of Apopka (Case Number ANX 20-3). The final unincorporated parcel is being submitted for annexation concurrent with this application.

1.1.4 Proposed Development

The extension of SR 429 through west Apopka and the interchange at US 441 have greatly enhanced the area's regional accessibility and the subject property is now well situated to provide much needed housing options and retail services for this historically underserved part of the county.

As the concept plan in Figure 11 shows the project will feature a new retail town center with opportunities for a grocery store anchor, restaurants, retail stores, and hotel. The retail program will feature a multi-family apartment development with approximately 600 units and an assisted living facility (ALF). Though still in negotiations, the project seeks to also accommodate a location for a YMCA or similar recreational facility.

Table 2 below outlines the proposed development while Tables 3 and 5 on the following pages calculate the maximum development potential on the site according to the City and County's Future Land Use designations. Within the proposed PUD Master Plan, each tract will specify the allowed uses, maximum densities/intensities, and unit types, thus limiting the development accordingly.

Table 2.
Proposed Development Program

Use	Program
Multi-Family	600 units
Assisted Living	180 units
Hotel	~50,000 sq ft 120 rooms
Commercial	~200,000 sq ft

1.1.5 Site Access

The "front door" to the project will be located at the SR 429 Connector Road. At a minimum, the entrance will have a right-in-right-out, and the possibility of an east-bound left-in access is currently being evaluated by traffic engineers.

From the main entrance, a new north-south collector road will be built through the project, connecting the SR 429 Connector to Klamath Loop Road. The project will also connect Plymouth Sorrento Road to Hermit Smith Road via an extension of Southfork Drive. The project will connect Fudge Road to the new north-south connector but will *not* connect to the adjacent Dew Berry Avenue or Barret Drive.

Please see the attached Transportation Analysis for the more complete discussion and documentation of traffic and access.

1.1.6 Adjacent Property

The subject property is largely surrounded by lands owned by Central Florida Expressway Authority (CFX) with SR 429 and its related right-of-way effectively functioning as the eastern boundary of the subject property. The properties located adjacent to the northern and southern boundaries of the subject property are comprised of vacant lands owned by CFX containing stormwater retention, access ramps, etc. Note that the ownership of the 429 Connector Road and pond on the southern boundary is transitioning to the City of Apopka and is expected to be completed prior to adoption of this FLUMA. The properties located to the west of the subject property are the only adjacent properties that are not owned by CFX. The adjacent properties located to the west of the subject property are comprised of single-family neighborhoods, church/religious facilities, and rural homesites. See Section 1.3 for a more detailed Consistency Analysis regarding surrounding uses.

Major adjacent roadways include:

- SR 429 (Wekiva Parkway)
- SR 429 Connector Road
- US 441 (Orange Blossom Trail)

Minor roadways within existing adjacent neighborhoods include:

- Hermit Smith Road
- Dew Berry Avenue
- Southfork Drive

1.1.7 Environmental Conditions

Please see the attached Environmental Assessment Report for a more in-depth discussion of the environmental aspects of the project site.

Floodplain

The site contains no land within the 100-year floodplain, according to the FEMA Flood Map.

Wetlands

The site contains no land currently identified as wetlands.

Topography

The topography of the site generally slopes from the northwest to the southeast, with the highest and lowest elevations being 164' and 110' respectively. A slight ridge runs east-west through the northern section and portions of three small depressional areas are located within the site.

Soils

The site is comprised of soils that fall under the "excessively well drained" and "moderately well drained" hydrologic groups. Please see the Environmental Assessment Report for more detailed information on the site soils.

Listed Species

Documentation of the field review for occurrences of protected flora and fauna is included in the Environmental Assessment Report.

1.2 Future Land Use Amendment Description and Data

As shown in Figure 7, the entire property is currently designated Rural (Orange County). This amendment seeks to change the site FLU designation to Apopka High Density Residential and Commercial, as illustrated in Figure 8. The HDR designation will correspond with the multi-family development and ALF site and the Commercial designation will correspond with the town center/hotel site. Legal descriptions of each proposed FLU

The calculations in Tables 3 and 5 show the development potential of the current and proposed FLU designations of the amendment properties based on maximum densities and intensities allowed by the Future Land Use designation. Note that these numbers do not reflect the actual proposed development program for the site, which is described in Table 2.

Table 3.
Maximum Development Potential

FLUMA Acreage	Current FLU (County)	Max Density/ Intensity	Max Dev. Potential	Proposed FLU (City)	Max Density/ Intensity	Max Dev. Potential	Dev. Potential Difference
50.161	Rural – Orange Co.	1 du/10 acres	5 Units	High Density Residential - HDR	15 du/acre	752 Units	747 Units
2.997	Rural – Orange Co.	1 du/10 acres	2 Units	Commercial - COMM	0.25 FAR	37,163 SF	N/A
20.726	Rural – Orange Co.	1 du/10 acres	20 Units	Commercial - COMM	0.25 FAR	258,343 SF	N/A
			27 Units			**752 Units**	**747 Units**
			0 SF			**295,506 SF**	

Notes: Maximum densities and intensities for each Future Land Use designation are per the City and County Comprehensive Plans.
Maximum intensity under Apopka's HDR FLU includes the allocation of 50 sq ft/du of commercial use per the City Comprehensive Plan.

1.2.1 Level of Service Analysis

The City of Apopka's Comprehensive Plan includes level of service (LOS) standards – minimum standards for public facilities and services required to adequately serve the projected population. Transportation, potable water, sanitary sewer, stormwater, parks and recreation and solid waste are the public facilities and services evaluated by city staff to ensure adequate capacity exists to support the future land use change and whereby the applicant can obtain city concurrency approval during the final development order stage.

A traffic study has been prepared by Traffic & Mobility Consultants and submitted with this application to address roadway LOS standards. Issuance of final site plan approval will confirm consistency with the LOS standards for stormwater management. The remaining city facilities and services are addressed in Table 4.

Table 4 on the following page shows the Existing and Proposed FLU Maximum Development Potential in density/intensity for uses within the amendment area and identifies the net increase in maximum development potential when the amendment is approved. Table 4 also identifies the current and proposed LOS demand for public facilities and services including potable water, sanitary sewer, parks and recreation and solid waste. Please note that Table 4 does not reflect the actual proposed development program for the site. The proposed development program is described in Table 2.

1.2.2 Schools

We have submitted a formal capacity determination application to the Orange County School Board (OCPS) and will be conducting the negotiations for capacity enhancement concurrent with the processing of this FLUMA. OCPS will evaluate school capacity based on their adopted LOS standards and the results of their findings will be provided to the City upon receipt. We

anticipate that the CEA (or other arrangement) will be in place prior to final adoption of the FLUMA and PUD rezoning.

Table 4.
Level of Service Evaluation

Public Facilities	Max FLU Potential (Current)	LOS Standard[2]	Capacity Requirement	Max FLU Potential (Proposed)	LOS Standard[2]	Capacity Requirement	Capacity Difference (Additional Demand)
Potable Water	27 units 72 persons[1]	177 gpd/capita	12,744 gal/day	752 units 2,000 persons[1]	177 gpd/capita 200 gpd/ksf	354,000 gal/day 59,101 gal/day	400,357 gal/day
Sanitary Sewer		81 gpd/capita	5,832 gal/day	295,506 SF of Com.	81 gpd/capita 150 gpd/ksf	162,000 gal/day 44,326 gal/day	200,494 gal/day
Solid Waste		4 lbs/day/capita	288 lbs/day		4 lbs/day/capita 2 lbs/day/ksf	8,000 lbs/day 591 lbs/day	7,712 lbs/day
Recreation		3 acres/1,000 population	0.22 acre		3 acres/1,000 population	6.00 acres	5.78 acres

1. Based on City of Apopka standard of 2.659 persons per household.
2. LOS standards per the City of Apopka Comprehensive Plan.

Table 5 below describes the parcel specific details behind the proposed FLUMA and rezoning actions previously described.

Table 5.
Detailed Future Land Use and Zoning Data

Tract	Parcel Number	Acres	Current FLU (County)[2]	Max Den/ Intensity[2]	Max Development Potential	Proposed FLU	Max Den/ Intensity[2]	Max Development Potential	Development Potential (Difference)	Current Zoning (Co.)	Proposed Zoning (City)
A	362027000000093 362027000000075 362027000000048 362027000000074 362027000000068 362027000000066 362027000000052 362027000000083 362027000000085 362027000000047 362027000016040	50.161	Rural	1 du/10 acres	5 Units	High Density Residential - HDR	15 du/acre	752 Units	747 Units	A-1	PUD
B	362027000016020 362027000016030	2.997	Rural	1 du/10 acres	2 Units	Commercial - COMM	.25 FAR	37,163 SF	N/A	A-1	PUD
C	062128717216051 062128717216050 062128717216060 062128717216070	20.726	Rural	1 du/10 acres	20 Units	Commercial - COMM	.25 FAR	258,343 SF	N/A	A-1	PUD
					27 Units			**752 Units** **295,506 SF**	**747 Units**		

1. Maximum densities and intensities for each Future Land Use designation are per the City of Apopka and Orange County Comprehensive Policy Plan.

2. Maximum intensity under the proposed HDR FLU includes the allocation of 50 sq ft/du of commercial use per the City Comprehensive Plan.

1.3 Consistency Analysis

The property which is the subject of the proposed FLUMA and PUD zoning is comprised of approximately 73.87 acres generally located in the northwest portion of the intersection of SR 429 and US 441, with SR 429 abutting the subject property's entire eastern boundary. The subject property as defined, includes seventeen parcels which contain a total of nine single family dwellings, two mobile homes, five small "villa" homes, one church, and a variety of agricultural and equestrian structures. The development program proposed for the subject property includes a mixture of residential and commercial uses consisting of multi-family dwelling units with amenity center, assisted living, hotel, restaurant, retail, office and recreation/fitness center (YMCA). The current mixture of uses adjacent to and abutting the subject property is comprised of single-family residential, church/religious facility, and vacant lands. The analysis below shows how the proposed project is consistent and compatible with both the City's Comprehensive Plan and the surrounding context.

Table 6.

Project Adjacencies

	FLU	Zoning	Existing Uses
Subject Property	Orange County: *Rural*	Orange County: *A-1*	Manufactured Home: acreage; Single Family: acreage; Plant nursery Vacant: Non-Ag acreage

Adjacent Properties	FLU	Zoning	Existing Uses
North	Apopka: *Res. Low Suburban*	Apopka: *RSF-1A*	Vacant (CFX)
South	Apopka: *Mixed Use*	Apopka: *MU-ES*	Connector Road Stormwater Retention (CFX)
East	Orange County: *Rural*	Orange County: *A-1*	SR 429; Vacant (CFX)
West	Orange County: *Rural; Institutional*	Orange County: *R-1; A-1*	Vacant; Church/Religious; Manufactured Home: acreage; Single Family: 52-131 ft wide lots

There are no compatibility issues to the north, east, or south of the site. As detailed in the table above, the properties located adjacent to the northern, southern, and eastern boundaries of the property are owned by the Central Florida Expressway Authority (CFX). The vacant lands to the north are comprised of the partially improved Stanton Ridge subdivision which was acquired for the construction of the SR 429 extension. These lots will not be developed as single-family. The property located south of the site is comprised of stormwater retention and on/off ramps to SR 429. As noted previously, SR 429 itself and its related right-of-way function as the eastern boundary of the subject property.

The properties located to the west of the subject property are the only lands adjacent to the subject property that are not owned by CFX. There are 31 residential lots that are adjacent to or directly abutting the western boundary of the property. Note that while these 31 residential lots are identified as Rural on Orange County's Future Land Use Map, the individual lots and the neighborhoods within which they are located are not consistent with the Rural Future Land Use category of the Orange County Comprehensive Plan. With an average lot width of 69 ft. these 31 adjacent or abutting residential lots range in width from 52 ft. to 131 ft. with roughly half of the adjacent or abutting lots being 60 ft. wide or less. In addition, the built densities of these neighborhoods average 3.75 dwelling units per acre, which is significantly greater than the maximum density of 1 dwelling unit per 10 acres permitted within the Rural Future Land Use category.

While the development program proposed for the subject property features multi-family residential densities that are greater than those of surrounding single-family neighborhoods, the development program proposed calls for greater amounts of open space and recreational amenities. Unlike the adjacent and surrounding properties, the proposed development program and plan will be established and solidified through the application of Planned Unit Development zoning. Planned Unit Development zoning is appropriate for the proposed development program based on Policy 3.1 of the Future Land Use Element of the City's Comprehensive Plan, which states, in part, that Planned Unit Development zoning is designed to provide an alternative method of land development not available within the framework of other zoning districts to special projects which merit such treatment; allow the development of sites that would normally be difficult to develop due to topography, soils, or other site specific features; allow a variety of housing types; accommodate mixed uses; and offer a maximum amount of open space and recreational amenities.

The concept plan and corresponding FLUMA were developed to make effective use of the site and the surrounding transportation investments, but also to reduce potential impacts to adjacent neighborhoods.

- The multi-family apartments and ALF will abut 15 single family parcels in unincorporated Orange County. These properties will be appropriately buffered according to City Land Development Code and the conditions of the future PUD. The buildings will be limited to three stories.
- The potential YMCA site abuts 9 single family parcels in unincorporated Orange County but can be separated by the placement of retention and perimeter buffers.
- The retail center concentrates the more intense commercial uses including hotel, restaurants, retail, and office in the southern portion of the property closest to the Connector Road and SR 429. The access for these uses will be from the main spine road and from Southfork Drive. Fudge Road will connect through and provide access for the adjacent neighbors but will not be a significant source of cut-through traffic due to the configuration of the intersection of Fudge Road at Hermit Smith Road. Retention and buffers can also be used to help separate the commercial uses from the five single family parcels to the west. Except for the hotel, the retail buildings are expected to be one story. Should any other buildings need to exceed one story, they will be situated away from the residential area.

END NARRATIVE

429 WEST
Project № 18131.1
January 2020

TRANSPORTATION FACILITIES ANALYSIS
CITY OF APOPKA
FLORIDA

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EXECUTIVE SUMMARY

Project Information

Name: 429 West

Location: SR 429 Connector Road, northwest corner of SR 441 and SR 429, in the City of Apopka, Florida

Description: Change Future Land Use from Rural Estates to Planned Development (PD)

Maximum Allowable Development on 73.274-acres:

Current = 7 single family residential units

Proposed = 743 multi-family residential units

295,506 square feet retail use

Trip Generation

Proposed amendment will result in the following additional traffic:

Daily: 12,248 Daily trips

PM Peak: 1,119 PM peak hour trips

Findings

- All study segments currently operate at adequate level of service (LOS).
- In the year 2024 the existing transportation network is projected to continue to be adequate.
- In the year 2030, the planned transportation network is projected to be adequate, except US 441 from Ponkan Road to SR 429 Connector Road which will be deficient due to background traffic growth.
- The proposed amendment does not cause any deficiencies on the transportation network.

Recommendations

- The proposed development will undergo further traffic analysis as the project undergoes review through the City's Concurrency System during subsequent development approvals. Any impacts to the offsite network by the development will be addressed through the City's process.

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1.0 INTRODUCTION

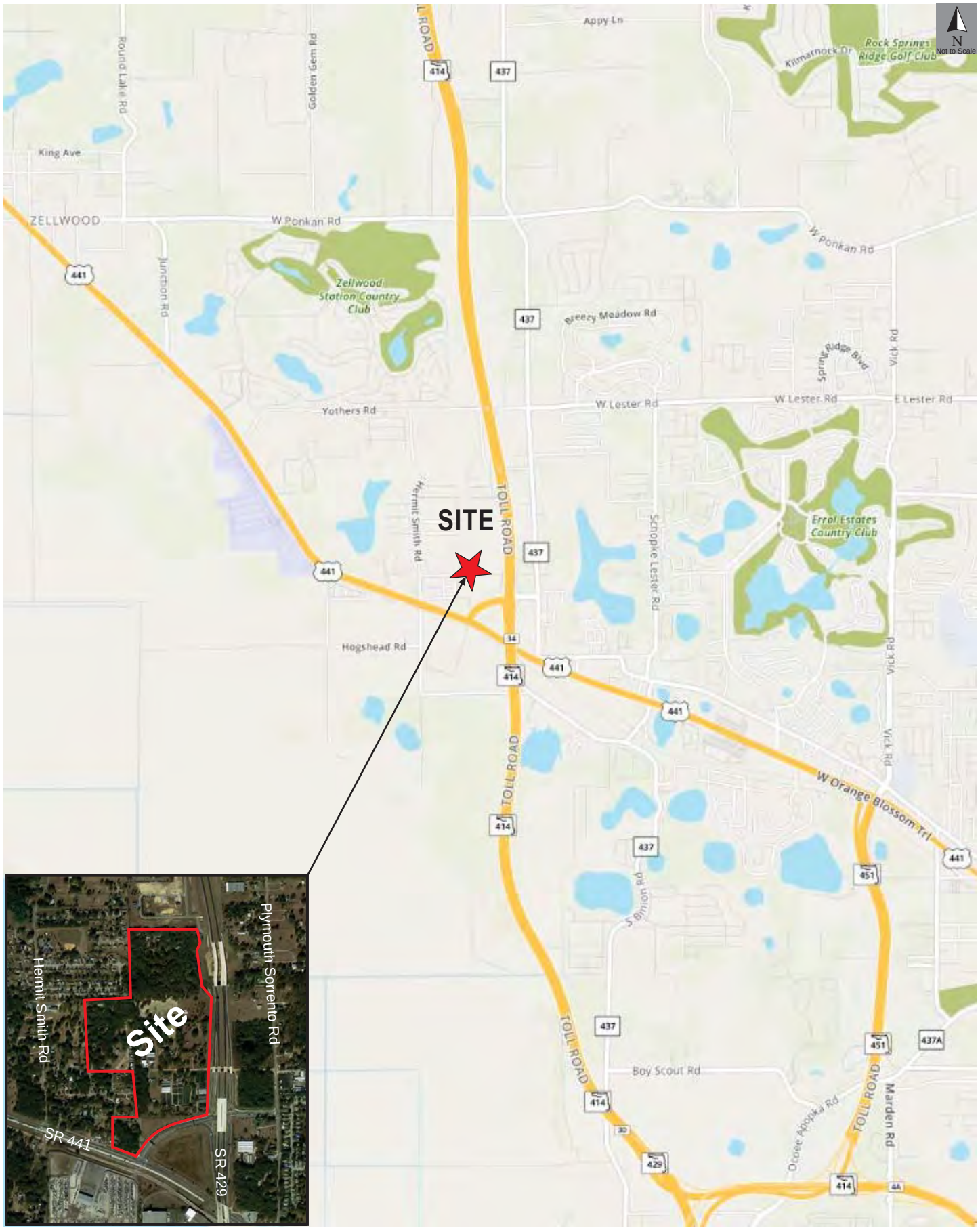
This analysis was prepared in support of the application to amend the City of Apopka Comprehensive Plan's (CP) Future Land Use (FLU) for the properties located at SR 429, west of Hermit Smith Road, in The City of Apopka. **Figure 1** depicts the site location and the 2-mile preliminary impact area. A view of the property assemblage is provided in **Appendix A**.

The overall area that is the subject to this amendment is 73.274 acres. The overall property is currently within Orange County has a FLU of Planned Development-Rural. The proposed amendment is to change the FLU designation for the overall property to City of Apopka Planned Development (PD).

Table 1 summarizes the land uses, area, densities and maximum allowable development yields for the site as currently adopted, and with the requested Comprehensive Plan Amendment (CPA).

Table 1
Future Land Use Designations

Land Use Designation	Jurisdiction	Units
Current FLU		
Rural	Orange	7 DU
Maximum FLU		
HDR	Apopka	743 DU
Retail		295.506 KSF



Site Location Map

429 West

18131.1

Figure 1

2.0 EXISTING TRAFFIC CONDITIONS

The existing traffic conditions were evaluated within the project's primary influence area. This included the area's major roadways which were analyzed for Daily and PM peak hour capacity conditions.

The existing conditions on the roadway network were analyzed by comparing the latest available traffic volumes on each of the roadway segments to the adopted capacity thresholds. The existing conditions analysis was based on information obtained from the latest City of Apopka Traffic Counts posted on the City's website. Existing volumes were adjusted to the year (2019) using the annual growth rate of 2% calculated for this area from historical volumes. The traffic count information and growth rate calculations are provided in **Appendix B**.

Table 2 summarizes the existing conditions capacity analysis in the area. This analysis reveals that currently all roadway segments within the study area operate at adequate Level of Service (LOS).

Table 2
Existing Conditions Capacity Analysis

Roadway	Segment	# Lns	LOS Std	Daily Conditions Capacity	Daily Conditions Traffic	Daily Conditions LOS	PM Peak Conditions Capacity	PM Peak Conditions Traffic	PM Peak Conditions Dir	PM Peak Conditions LOS
US 441	Ponkan Rd to Yothers Rd	4	D	49,500	48,103	B	2,480	2,084	SB	A
US 441	Yothers Rd to SR 429 Connector Rd	4	D	49,500	48,103	B	2,480	2,084	SB	A
US 441	SR 429 Connector Rd to Plymouth Sorrento Rd	4	D	49,500	28,977	A	2,480	1,244	SB	A
US 441	Plymouth Sorrento Rd to Boy Scout Blvd	4	D	49,500	29,471	A	2,480	1,253	SB	A
US 441	Boy Scout Blvd to Errol Parkway	4	D	55,400	33,262	A	2,600	1,315	NB	A
US 441	Errol Parkway to SR 451	4	D	55,400	33,262	A	2,600	1,315	NB	A
Hermit Smith Rd	US 441 to Yother Rd	2	D	14,000	1,338	C	680	169	NB	C
Plymouth Sorrento Rd	Ponkon Rd to Lester Rd/Yothers Rd	2	E	17,700	10,721	C	880	507	NB	C
Plymouth Sorrento Rd	Lester Rd/Yothers Rd to SR 429 Connector Rd	2	E	19,000	11,286	C	950	629	NB	C
Plymouth Sorrento Rd	SR 429 Connector Rd to US 441	2	E	17,700	6,819	C	880	356	NB	C
SR 429 Connector	Plymouth Sorrento Rd to US 441	4	E	39,800	15,954	C	2,000	824	EB	C
SR 429 North	SR 414 to West US 441	6	E	108,800	12,532	B	5,380	1,143	NB	B
SR 429 South	West US 441 to Kelly Park Rd	4	E	72,600	12,811	B	3,590	995	SB	B
Binion Rd (CR 437)	Boy Scout Blvd to Lakeview Dr	2	E	17,700	6,315	C	880	381	NB	C
Binion Rd (CR 437)	Lakeview Dr to US 441	2	E	17,700	4,780	C	880	306	SB	C
Lester Rd	Rock Springs Rd to Vick Rd	2	E	14,000	5,072	C	720	252	EB	C
Lester Rd	Vick Rd to Schopke Lester Rd	2	E	14,000	5,072	C	720	252	EB	C
Lester Rd	Schopke Lester Rd to Plymouth Sorrento Rd	2	E	14,000	11,310	D	720	226	EB	C
Old Dixie Highway	Plymouth Sorrento Rd to Boy Scout Blvd	2	E	14,000	2,756	C	720	181	SB	C
Old Dixie Highway	Boy Scout Blvd to Errol Pkwy	2	E	14,000	4,785	C	720	274	SB	C
Old Dixie Highway	Errol Parkway to Vick Rd	2	E	14,000	9,116	D	720	502	SB	D
Ponkon Rd	Round Lake Rd to Plymouth Rd	2	E	14,000	5,550	C	720	245	EB	C
Ponkon Rd	Plymouth Sorrento Rd to Vick Rd	2	E	15,900	5,193	C	790	274	EB	C
Schopke Lester Rd	Lester Rd to Old Dixie Hwy	2	E	14,000	3,586	C	720	203	NB	C
Yothers Rd	US 441 to Plymouth Sorrento Rd	2	E	14,000	1,392	C	720	71	WB	C

3.0 PLANNED AND PROGRAMMED IMPROVEMENTS

The Metroplan Orlando Transportation Improvement Plan (TIP), as well as Orange County's Capital Improvement Program (CIP) and the Long-Range Transportation Plan (LRTP) were reviewed to identify any planned or programmed improvements to the transportation facilities in this area, which revealed that there are no major improvements planned in the immediate vicinity of the proposed development.

4.0 PROJECT TRIPS

4.1 Trip Generation

The trip generation for the existing and proposed land use densities was calculated using trip generation information published by the Institute of Transportation Engineers (ITE) in *Trip Generation, 10th Edition.* Trip generation rates and calculations are summarized in **Table 3**, which shows the daily and PM peak hour trips for the current and proposed future land uses. Detailed information sheets and supporting information are included in **Appendix C**.

Table 3
Trip Generation Calculation

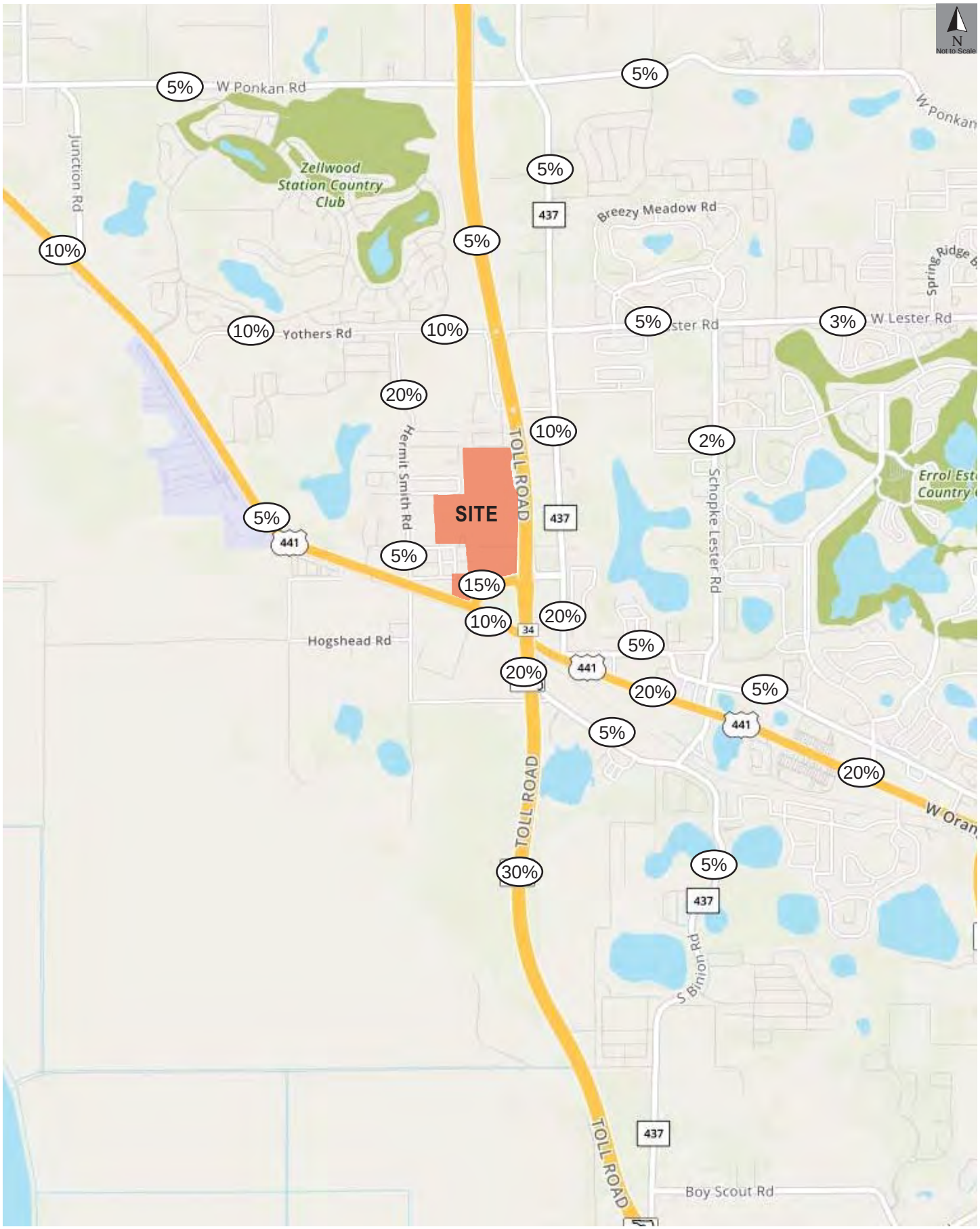
ITE			Daily		PM Peak Hour			
Code	Land Use	Size	Rate	Trips	Rate	Total	Enter	Exit
Existing - Rural								
210	Single Family Residential	7 DU	12.86	90	1.13	8	5	3
Proposed - PD								
221	Multi-Family Residential	743 DU	5.45	4,049	0.44	327	199	128
820	Retail	295.506 KSF	42.50	12,559	4.10	1,212	582	630
		Total Trip Generation		***16,608***		***1,539***	***781***	***758***
		Pass-by Retail (34%)		*4,270*		*412*	*198*	*214*
		Net New Trip Generation		***12,338***		***1,127***	***583***	***544***
		Net Change in Trips w/Proposed Amendment		**12,248**		**1,119**	**578**	**541**

Trip generation analysis based on ITE Trip Generation Manual, 10th Edition
Pass-By rate based on ITE Trip Generation Manual, 3rd Edition

The proposed amendment will result in net increase of 12,248 daily trips and 1,119 PM peak hour trips on the roadway network.

4.2 Trip Distribution

A project specific trip distribution pattern was developed using the Orlando Urban Area Transportation Study (OUATS) model. The adopted model was slightly adjusted to include the proposed development and prevailing traffic patterns in the area. The proposed trip distribution is illustrated in **Figure 2.** Project trips were assigned to the study roadways based on this distribution. The OUATS model output is included in **Appendix D**.



Project Trip Distribution

429 West

18131.1

Figure

5.0 PROJECTED CONDITIONS ANALYSIS

Projected conditions were assessed to evaluate the impact of the proposed amendment on the roadway network. The projected conditions analysis was performed for the Interim Year (2024) and the Horizon Year (2030). The analyses were conducted for the base condition (without the amendment) and for the proposed condition (with the amendment).

5.1 Background Traffic Volumes and Transportation Network

Projected background traffic volumes for the 2030 analysis were calculated based on historical and projected growth rates on the study segments. Based on growth profile for the area, an average annual growth of 2% was applied, which reflects historical growth.

The transportation network applied in the Interim Year analysis is the existing and committed transportation network. The Horizon Year analysis was performed with the planned transportation network.

5.2 Interim Year 2024 Conditions

The 2024 Interim Year analysis was conducted comparing projected traffic volumes to the roadway network capacity and service volumes. **Table 4** summarizes the results of the analysis, which reveals that in the year 2024, US 441 is projected to be deficient within the daily capacity, but not in the PM peak hour, due to background traffic growth. The analysis in **Table 5** indicates that the proposed amendment will not cause any roadway segments to become deficient.

5.3 Horizon Year 2030 Conditions

The Horizon Year analysis was conducted for projected background traffic volumes in the year 2030. **Table 6** summarizes the base conditions analysis, which shows that the roadway segment of US 441from Ponkan Road to SR 429 Connector will continue to deteriorate absent further planned improvements in the year 2030. Analysis of projected conditions with the additional traffic resulting from the amendment, summarized in **Table 7,** shows that the proposed amendment will not cause any other roadway segments to become deficient in the planning horizon.

Table 4
Interim Year 2024 Base Conditions Analysis

Roadway	Segment	# Lns	LOS Std	2024 Daily Trips Capacity	2024 Daily Trips Traffic	2024 Daily Trips LOS	2024 PM Peak Trips Capacity	2024 PM Peak Trips Traffic	2024 PM Peak Trips Dir	2024 PM Peak Trips LOS
US 441	Ponkan Rd to Yothers Rd	4	D	49,500	52,913	F	2,480	2,292	SB	A
US 441	Yothers Rd to SR 429 Connector Rd	4	D	49,500	52,913	F	2,480	2,292	SB	A
US 441	SR 429 Connector Rd to Plymouth Sorrento Rd	4	D	49,500	31,875	A	2,480	1,368	SB	A
US 441	Plymouth Sorrento Rd to Boy Scout Blvd	4	D	49,500	32,418	A	2,480	1,378	SB	A
US 441	Boy Scout Blvd to Errol Parkway	4	D	55,400	36,588	A	2,600	1,447	NB	A
US 441	Errol Parkway to SR 451	4	D	55,400	36,588	A	2,600	1,447	NB	A
Hermit Smith Rd	US 441 to Yother Rd	2	D	13,300	1,472	C	680	186	NB	C
Plymouth Sorrento Rd	Ponkon Rd to Lester Rd/Yothers Rd	2	E	17,700	11,793	C	880	558	NB	C
Plymouth Sorrento Rd	Lester Rd/Yothers Rd to SR 429 Connector Rd	2	E	19,000	12,415	C	950	692	NB	C
Plymouth Sorrento Rd	SR 429 Connector Rd to US 441	2	E	17,700	7,501	C	880	392	NB	C
SR 429 Connector	Plymouth Sorrento Rd to US 441	4	E	39,800	17,549	C	2,000	906	EB	C
SR 429 North	SR 414 to West US 441	6	E	108,800	13,785	B	5,380	1,257	NB	B
SR 429 South	West US 441 to Kelly Park Rd	4	E	72,600	14,092	B	3,590	1,095	SB	B
Binion Rd (CR 437)	Boy Scout Blvd to Lakeview Dr	2	E	17,700	6,947	C	880	419	NB	C
Binion Rd (CR 437)	Lakeview Dr to US 441	2	E	17,700	5,258	C	880	337	SB	C
Lester Rd	Rock Springs Rd to Vick Rd	2	E	14,000	5,579	C	720	277	EB	C
Lester Rd	Vick Rd to Schopke Lester Rd	2	E	14,000	5,579	C	720	277	EB	C
Lester Rd	Schopke Lester Rd to Plymouth Sorrento Rd	2	E	14,000	12,441	D	720	249	EB	C
Old Dixie Highway	Plymouth Sorrento Rd to Boy Scout Blvd	2	E	14,000	3,032	C	720	199	SB	C
Old Dixie Highway	Boy Scout Blvd to Errol Pkwy	2	E	14,000	5,264	C	720	301	SB	C
Old Dixie Highway	Errol Parkway to Vick Rd	2	E	14,000	10,028	D	720	552	SB	D
Ponkon Rd	Round Lake Rd to Plymouth Rd	2	E	14,000	6,105	C	720	270	EB	C
Ponkon Rd	Plymouth Sorrento Rd to Vick Rd	2	E	15,900	5,712	C	790	301	EB	C
Schopke Lester Rd	Lester Rd to Old Dixie Hwy	2	E	14,000	3,945	C	720	223	NB	C
Yothers Rd	US 441 to Plymouth Sorrento Rd	2	E	14,000	1,531	C	720	78	WB	C

Table 5
Interim Year 2024 Projected Conditions Analysis

Roadway	Segment	# Lns	LOS Std	2024 Daily Trips						2024 PM Peak Trips					
				Capacity	Backg'd	Distr	Project	Total	LOS	Capacity	Backg'd	Dir	Project	Total	LOS
US 441	Ponkan Rd to Yothers Rd	4	D	49,500	52,913	10%	1,225	52,913	F	2,480	2,292	SB	58	2,292	A
US 441	Yothers Rd to SR 429 Connector Rd	4	D	49,500	52,913	10%	1,225	52,913	F	2,480	2,292	SB	58	2,292	A
US 441	SR 429 Connector Rd to Plymouth Sorrento Rd	4	D	49,500	31,875	10%	1,225	31,875	A	2,480	1,368	SB	54	1,368	A
US 441	Plymouth Sorrento Rd to Boy Scout Blvd	4	D	49,500	32,418	20%	2,450	32,418	A	2,480	1,378	SB	108	1,378	A
US 441	Boy Scout Blvd to Errol Parkway	4	D	55,400	36,588	20%	2,450	36,588	A	2,600	1,447	NB	116	1,447	A
US 441	Errol Parkway to SR 451	4	D	55,400	36,588	20%	2,450	36,588	A	2,600	1,447	NB	116	1,447	A
Hermit Smith Rd	US 441 to Yother Rd	2	D	13,300	1,472	20%	2,450	1,472	C	680	186	NB	116	186	C
Plymouth Sorrento Rd	Ponkon Rd to Lester Rd/Yothers Rd	2	E	17,700	11,793	5%	612	11,793	C	880	558	NB	27	558	C
Plymouth Sorrento Rd	Lester Rd/Yothers Rd to SR 429 Connector Rd	2	E	19,000	12,415	10%	1,225	12,415	C	950	692	NB	58	692	C
Plymouth Sorrento Rd	SR 429 Connector Rd to US 441	2	E	17,700	7,501	20%	2,450	7,501	C	880	392	NB	116	392	C
SR 429 Connector	Plymouth Sorrento Rd to US 441	4	E	39,800	17,549	5%	612	17,549	C	2,000	906	EB	27	906	C
SR 429 North	SR 414 to West US 441	6	E	108,800	13,785	30%	3,674	13,785	B	5,380	1,257	NB	173	1,257	B
SR 429 South	West US 441 to Kelly Park Rd	4	E	72,600	14,092	5%	612	14,092	B	3,590	1,095	SB	27	1,095	B
Binion Rd (CR 437)	Boy Scout Blvd to Lakeview Dr	2	E	17,700	6,947	5%	612	6,947	C	880	419	NB	29	419	C
Binion Rd (CR 437)	Lakeview Dr to US 441	2	E	17,700	5,258	5%	612	5,258	C	880	337	SB	27	337	C
Lester Rd	Rock Springs Rd to Vick Rd	2	E	14,000	5,579	0%	0	5,579	C	720	277	EB	0	277	C
Lester Rd	Vick Rd to Schopke Lester Rd	2	E	14,000	5,579	3%	367	5,579	C	720	277	EB	16	277	C
Lester Rd	Schopke Lester Rd to Plymouth Sorrento Rd	2	E	14,000	12,441	5%	612	12,441	D	720	249	EB	27	249	C
Old Dixie Highway	Plymouth Sorrento Rd to Boy Scout Blvd	2	E	14,000	3,032	5%	612	3,032	C	720	199	SB	27	199	C
Old Dixie Highway	Boy Scout Blvd to Errol Pkwy	2	E	14,000	5,264	5%	612	5,264	C	720	301	SB	27	301	C
Old Dixie Highway	Errol Parkway to Vick Rd	2	E	14,000	10,028	5%	612	10,028	D	720	552	SB	27	552	D
Ponkon Rd	Round Lake Rd to Plymouth Rd	2	E	14,000	6,105	5%	612	6,105	C	720	270	EB	29	270	C
Ponkon Rd	Plymouth Sorrento Rd to Vick Rd	2	E	15,900	5,712	5%	612	5,712	C	790	301	EB	27	301	C
Schopke Lester Rd	Lester Rd to Old Dixie Hwy	2	E	14,000	3,945	2%	245	3,945	C	720	223	NB	11	223	C
Yothers Rd	US 441 to Plymouth Sorrento Rd	2	E	14,000	1,531	10%	1,225	1,531	C	720	78	WB	54	78	C

Table 6
Horizon Year 2030 Base Conditions Analysis

Roadway	Segment	# Lns	LOS Std	2030 Daily Trips Capacity	2030 Daily Trips Traffic	2030 Daily Trips LOS	2030 PM Peak Trips Capacity	2030 PM Peak Trips Traffic	2030 PM Peak Trips Dir	2030 PM Peak Trips LOS
US 441	Ponkan Rd to Yothers Rd	4	D	49,500	58,686	F	2,480	2,542	SB	F
US 441	Yothers Rd to SR 429 Connector Rd	4	D	49,500	58,686	F	2,480	2,542	SB	F
US 441	SR 429 Connector Rd to Plymouth Sorrento Rd	4	D	49,500	35,352	A	2,480	1,518	SB	A
US 441	Plymouth Sorrento Rd to Boy Scout Blvd	4	D	49,500	35,955	A	2,480	1,529	SB	A
US 441	Boy Scout Blvd to Errol Parkway	4	D	55,400	40,580	A	2,600	1,604	NB	A
US 441	Errol Parkway to SR 451	4	D	55,400	40,580	A	2,600	1,604	NB	A
Hermit Smith Rd	US 441 to Yother Rd	2	D	13,300	1,632	C	680	206	NB	B
Plymouth Sorrento Rd	Ponkon Rd to Lester Rd/Yothers Rd	2	E	17,700	13,080	C	880	619	NB	C
Plymouth Sorrento Rd	Lester Rd/Yothers Rd to SR 429 Connector Rd	2	E	19,000	13,769	C	950	767	NB	C
Plymouth Sorrento Rd	SR 429 Connector Rd to US 441	2	E	17,700	8,319	C	880	434	NB	C
SR 429 Connector	Plymouth Sorrento Rd to US 441	4	E	39,800	19,464	C	2,000	1,005	EB	C
SR 429 North	SR 414 to West US 441	6	E	108,800	15,289	B	5,380	1,394	NB	B
SR 429 South	West US 441 to Kelly Park Rd	4	E	72,600	15,629	B	3,590	1,214	SB	B
Binion Rd (CR 437)	Boy Scout Blvd to Lakeview Dr	2	E	17,700	7,704	C	880	465	NB	C
Binion Rd (CR 437)	Lakeview Dr to US 441	2	E	17,700	5,832	C	880	373	SB	C
Lester Rd	Rock Springs Rd to Vick Rd	2	E	14,000	6,188	C	720	307	EB	C
Lester Rd	Vick Rd to Schopke Lester Rd	2	E	14,000	6,188	C	720	307	EB	C
Lester Rd	Schopke Lester Rd to Plymouth Sorrento Rd	2	E	14,000	13,798	E	720	276	EB	C
Old Dixie Highway	Plymouth Sorrento Rd to Boy Scout Blvd	2	E	14,000	3,362	C	720	221	SB	C
Old Dixie Highway	Boy Scout Blvd to Errol Pkwy	2	E	14,000	5,838	C	720	334	SB	D
Old Dixie Highway	Errol Parkway to Vick Rd	2	E	14,000	11,122	D	720	612	SB	D
Ponkon Rd	Round Lake Rd to Plymouth Rd	2	E	14,000	6,771	D	720	299	EB	C
Ponkon Rd	Plymouth Sorrento Rd to Vick Rd	2	E	15,900	6,335	C	790	334	EB	C
Schopke Lester Rd	Lester Rd to Old Dixie Hwy	2	E	14,000	4,375	C	720	248	NB	C
Yothers Rd	US 441 to Plymouth Sorrento Rd	2	E	14,000	1,698	C	720	87	WB	C

Table 7
Horizon Year 2030 Projected Conditions Analysis

Roadway	Segment	# Lns	LOS Std	2030 Daily Trips						2030 PM Peak Trips					
				Capacity	Backg'd	Distr	Project	Total	LOS	Capacity	Backg'd	Dir	Project	Total	LOS
US 441	Ponkan Rd to Yothers Rd	4	D	49,500	58,686	10%	1,225	59,911	F	2,480	2,542	SB	58	2,600	F
US 441	Yothers Rd to SR 429 Connector Rd	4	D	49,500	58,686	10%	1,225	59,911	F	2,480	2,542	SB	58	2,600	F
US 441	SR 429 Connector Rd to Plymouth Sorrento Rd	4	D	49,500	35,352	10%	1,225	36,577	A	2,480	1,518	SB	54	1,572	A
US 441	Plymouth Sorrento Rd to Boy Scout Blvd	4	D	49,500	35,955	20%	2,450	38,405	A	2,480	1,529	SB	108	1,637	A
US 441	Boy Scout Blvd to Errol Parkway	4	D	55,400	40,580	20%	2,450	43,030	A	2,600	1,604	NB	116	1,720	A
US 441	Errol Parkway to SR 451	4	D	55,400	40,580	20%	2,450	43,030	A	2,600	1,604	NB	116	1,720	A
Hermit Smith Rd	US 441 to Yother Rd	2	D	13,300	1,632	20%	2,450	4,082	C	680	206	NB	116	322	C
Plymouth Sorrento Rd	Ponkon Rd to Lester Rd/Yothers Rd	2	E	17,700	13,080	5%	612	13,692	C	880	619	NB	27	646	C
Plymouth Sorrento Rd	Lester Rd/Yothers Rd to SR 429 Connector Rd	2	E	19,000	13,769	10%	1,225	14,994	C	950	767	NB	58	825	C
Plymouth Sorrento Rd	SR 429 Connector Rd to US 441	2	E	17,700	8,319	20%	2,450	10,769	C	880	434	NB	116	550	C
SR 429 Connector	Plymouth Sorrento Rd to US 441	4	E	39,800	19,464	5%	612	20,076	C	2,000	1,005	EB	27	1,032	C
SR 429 North	SR 414 to West US 441	6	E	108,800	15,289	30%	3,674	18,963	B	5,380	1,394	NB	162	1,556	B
SR 429 South	West US 441 to Kelly Park Rd	4	E	72,600	15,629	5%	612	16,241	B	3,590	1,214	SB	29	1,243	B
Binion Rd (CR 437)	Boy Scout Blvd to Lakeview Dr	2	E	17,700	7,704	5%	612	8,316	C	880	465	NB	29	494	C
Binion Rd (CR 437)	Lakeview Dr to US 441	2	E	17,700	5,832	5%	612	6,444	C	880	373	SB	27	400	C
Lester Rd	Rock Springs Rd to Vick Rd	2	E	14,000	6,188	0%	0	6,188	C	720	307	EB	0	307	C
Lester Rd	Vick Rd to Schopke Lester Rd	2	E	14,000	6,188	3%	367	6,555	C	720	307	EB	16	323	C
Lester Rd	Schopke Lester Rd to Plymouth Sorrento Rd	2	E	14,000	13,798	5%	612	14,410	F	720	276	EB	27	303	C
Old Dixie Highway	Plymouth Sorrento Rd to Boy Scout Blvd	2	E	14,000	3,362	5%	612	3,974	C	720	221	SB	27	248	C
Old Dixie Highway	Boy Scout Blvd to Errol Pkwy	2	E	14,000	5,838	5%	612	6,450	C	720	334	SB	27	361	D
Old Dixie Highway	Errol Parkway to Vick Rd	2	E	14,000	11,122	5%	612	11,734	D	720	612	SB	27	639	D
Ponkon Rd	Round Lake Rd to Plymouth Rd	2	E	14,000	6,771	5%	612	7,383	D	720	299	EB	29	328	C
Ponkon Rd	Plymouth Sorrento Rd to Vick Rd	2	E	15,900	6,335	5%	612	6,947	C	790	334	EB	27	361	C
Schopke Lester Rd	Lester Rd to Old Dixie Hwy	2	E	14,000	4,375	2%	245	4,620	C	720	248	NB	11	259	C
Yothers Rd	US 441 to Plymouth Sorrento Rd	2	E	14,000	1,698	10%	1,225	2,923	C	720	87	WB	54	141	C

6.0 STUDY CONCLUSIONS

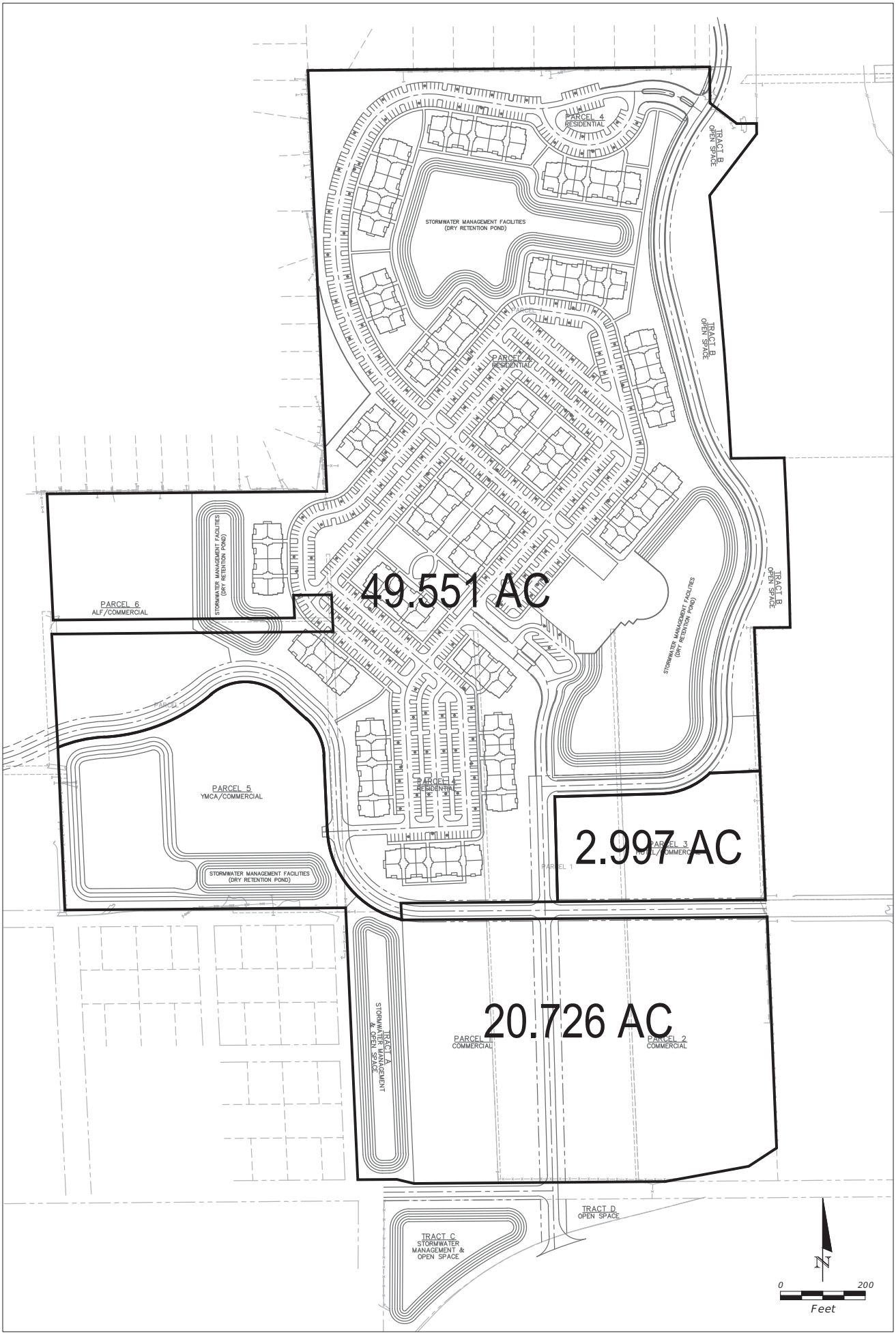
This study was conducted in support of a proposed Comprehensive Plan Amendment application for the 73.274 acre 429 West properties, located on SR 429 west of Hermit Smith Road, in the City of Apopka, Florida.

The requested amendment is to modify the existing FLU designation of the site. The current future land use designation allows the development up to 7 single family dwelling units on the property. With the proposed amendment, the allowable development on the property would increase to 743 multi-family dwelling units, and 295,506 square feet retail use. The requested amendment is to modify the existing future land use of the site from Orange County Rural to City of Apopka PD. The findings of this analysis are as follows:

- The requested amendment would result in an increase 12,248 daily trips, of which 1,119 trips would occur in the PM peak hour.
- An analysis of existing conditions indicates that the roadway network within the study area currently operates at satisfactory LOS.
- Analysis of Interim Year (2024) reveals that that US 441 from Ponkan Road to SR 429 Connector Road is projected to become deficient due to growth in background traffic. The segment will be adequate in the PM peak.
- Analysis of Horizon Year (2030) conditions indicates that US 441 from Ponkan Road to SR 429 Connector Road will continue to be deficient in 2030. The proposed amendment will not cause any roadway segments to become deficient in the Interim Year.
- The proposed development of the site will undergo additional traffic analysis review through the development process, where roadway capacity, traffic operations, access, and intersection capacity will be further evaluated in accordance with the requirements of the City of Apopka's development approvals process. The proposed development will be required to address off-site impacts through the City's Concurrency Management System.

APPENDICES

Appendix A
Preliminary Site Plan



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Apopka 429 Entitlements - Acreage Calculations

Date: 2020.01.03

Appendix B

Existing Traffic Volumes & Growth Calculations

City of Apopka CMS
2017 Daily and PM Peak Hour/Peak Direction (PH/PD) Encumbered Traffic Allocation Worksheets
FINAL REPORT

Base Traffic Volume: 2017 **Revision Date: 2/28/2018**

Roadway Section	# of Lanes	Adopted Standard LOS	Adopted Standard Roadway Capacity Daily	Adopted Standard Roadway Capacity PHPD	Applicant Inventory	Encumbered Trips Daily	Encumbered Trips PM PH/PD	Daily Traffic (1) Base Volume	Daily Traffic (1) Available Capacity	PM PH/PD Traffic (1) Base Volume	PM PH/PD Traffic (1) Available Capacity	PM PH/PD Traffic (1) Peak Direction
Major Arterials												
SR 436 (Semoran Avenue)												
US 441 to Sheeler Rd	8LD	D	80,100	4,040				24,540	55,426	938	3,097	NB/EB
					Farrish Enterprises	134	5		69.20%		76.66%	
					Applicant Inventory Total	134	5					
Sheeler Rd to Thompson Rd	8LD	D	80,100	4,040				34,334	45,632	1,521	2,514	SB/WB
					Farrish Enterprises	134	5		56.97%		62.23%	
					Applicant Inventory Total	134	5					
Thompson Rd to Roger Williams Rd	8LD	D	80,100	4,040				39,920	39,102	1,748	2,157	SB/WB
					Apopka Gateway Center	170	7		48.82%		53.39%	
					Farrish Enterprises	179	8					
					North Park (FF Rests)	729	120					
					Applicant Inventory Total	1,078	135					
Roger Williams Rd to Piedmont-Wekiwa Rd	8LD	D	80,100	4,040				45,651	33,058	1,871	2,021	SB/WB
					Apopka Gateway Center	259	11		41.27%		50.02%	
					Farrish Enterprises	403	17					
					North Park (FF Rests)	729	120					
					Applicant Inventory Total	1,391	148					
Piedmont Wekiwa Rd to Seminole County Line	6LD	D	59,900	3,020				57,425	1,494	2,415	563	SB/WB
					Apopka Gateway Center	578	25		2.49%		18.64%	
					Farrish Enterprises	403	17					
					Applicant Inventory Total	981	42					
US 441 (Orange Blossom Trail)												
Yothers Rd to SR 429 Connector Rd	4LD	D	49,500	2,480				42,949	1,536	1,861	197	SB/WB
					Avion Point	1,361	64		3.10%		7.94%	
					Avion Point West	1,782	252					
					Carillon (fka Wilkens Farm)	1,519	74					
					Chandler Estates	100	11					
					Hogshead Road Industrial	216	17					
					Orlando Country Airport	37	4					
					Applicant Inventory Total	5,015	422					
SR 429 Connector Rd to Plymouth Sorrento Rd	4LD	D	49,500	2,480				25,872	16,772	1,111	839	SB/WB
					Apopka Expressway Commerce	156	11		33.88%		33.83%	
					Avion Point	2,643	124					
					Avion Point West	1,782	252					
					Carillon (fka Wilkens Farm)	1,321	64					
					Chandler Estates	134	14					
					Clearlake Landing	117	9					
					Hogshead Road Industrial	668	53					
					Orlando Country Airport	35	3					
					Applicant Inventory Total	6,856	530					
Plymouth Sorrento Rd to Boy Scout Blvd	4LD	D	49,500	2,480				26,313	21,313	1,119	1,108	SB/WB
					Apopka Expressway Commerce	104	8		43.06%		44.68%	
					Avion Point West	1,692	239					
					Clearlake Landing	78	6					
					Applicant Inventory Total	1,874	253					
Boy Scout Blvd to Errol Parkway	4LD	D	55,400	2,600				29,698	25,301	1,174	1,390	NB/EB
					Clearlake Landing	194	15		45.67%		53.46%	
					Poe Reserve	207	21					
					Applicant Inventory Total	401	36					
Errol Parkway to SR 451	4LD	D	5,009 (2)	230 (2)				N/A	4,100	N/A	141	SB/WB
					Lake Marshall	286	28		81.85%		61.30%	
					Poe Reserve	456	46					
					Self Help Credit Union	167	15					
					Applicant Inventory Total	909	89					

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Minor Arterials (Continued)												
CR 437A (Ocoee-Apopka Road/Michael Gladden Boulevard/Central Avenue) (Continued)												
Bradshaw Rd to Central Ave	2L	E	15,600	800				6,037	7,038	284	303	NB/EB
					Cooper Oak (fka Bradshaw Commerce Park)	20	4		45.12%		37.88%	
					Cooper Palms	47	7					
					Dollar General	122	8					
					Emerson North Townhomes (fka Emerson North Apartments)	233	16					
					Emerson Point Apartments	852	53					
					Johns Road Commerce Center	43	4					
					Lake Marshall	430	42					
					Magnolia Commerce Center	7	1					
					Marden Ridge Apartments	175	32					
					Oakmont Industrial Facility	596	46					
					Applicant Inventory Total	2,525	213					
Michael Gladden Blvd to US 441	2L	E	15,600	800				4,073	11,487	196	600	SB/WB
					Johns Corner	40	4		73.63%		75.00%	
					Applicant Inventory Total	40	4					
Lakeville Road												
Apopka Blvd to Wildwood St	2L	E	17,700	880				5,651	12,049	299	581	NB/EB
					Development Name	0	0		68.07%		66.02%	
					Applicant Inventory Total	0	0					
Plymouth-Sorrento Road (CR 437)												
County Line to Kelly Park Rd	2L	E	31,500	1,640				7,647	22,379	405	1,105	NB/EB
					Kelly Park Commercial (Publix)	1,340	122		71.04%		67.38%	
					Orchid Estates (fka J.B. Nurseries)	134	8					
					Applicant Inventory Total	1,474	130					
Kelly Park Rd to Ponkan Rd	2L	E	17,700	880				10,542	4,132	694	-80	NB/EB
					Kelly Park Commercial (Publix)	2,680	244		23.34%		-9.09%	
					Oak Ridge Subdivision	117	7					
					Orchid Estates (fka J.B. Nurseries)	229	15					
					Applicant Inventory Total	3,026	266					
Ponkan Rd to Lester Rd/Yothers Rd	2L	E	17,700	880				9,572	7,955	453	411	NB/EB
					Chandler Estates	17	2		44.94%		46.70%	
					Oak Ridge Subdivision	50	3					
					Schopke Road Subdivision	106	11					
					Applicant Inventory Total	173	16					
Lester Rd/Yothers Rd to SR 429 Connector Rd	2L	E	19,000	950				10,077	8,536	562	336	NB/EB
					Chandler Estates	33	4		44.93%		35.37%	
					Oak Ridge Subdivision	50	3					
					Stanton Ridge	110	24					
					Schopke Road Subdivision	194	21					
					Applicant Inventory Total	387	52					
SR 429 Connector Rd to US 441	2L	E	17,700	880				6,088	11,209	318	508	NB/EB
					Chandler Estates	33	4		63.33%		57.73%	
					Oak Ridge Subdivision	50	3					
					Stanton Ridge	126	26					
					Schopke Road Subdivision	194	21					
					Applicant Inventory Total	403	54					
Sheeler Road												
SR 436 to US 441	3L	E	32,100	1,620				10,677	21,423	607	1,013	NB/EB
					Development Name	0	0		66.74%		62.53%	
					Applicant Inventory Total	0	0					
US 441 to Apopka Blvd	2L	E	17,700	880				9,650	8,005	420	458	NB/EB
					Farrish Enterprises	45	2		45.23%		52.05%	
					Applicant Inventory Total	45	2					

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Minor Arterials (Continued)												
Sheeler Road (Continued)												
Apopka Blvd to Cleveland St	2L	E	17,700	880				9,683	7,417	436	324	SB/WB
					Silver Oaks	600	120		41.90%		36.82%	
					Applicant Inventory Total	600	120					
Cleveland St to Keene Rd	2L	E	17,700	880				6,941	10,570	385	455	NB/EB
					Silver Oaks	189	40		59.72%		51.70%	
					Applicant Inventory Total	189	40					
SR 429 Connector												
Plymouth Sorrento to US 441	4LD	E	39,800	2,000				14,245	7,417	736	324	NB/EB
					Stanton Ridge	76	16		41.90%		36.82%	
					Applicant Inventory Total	76	16					
Wekiva Springs Road/Piedmont-Wekiwa Road/Hiawassee Road												
Votaw Rd to SR 436	5L	E	39,800	2,000				24,702	14,967	1,335	659	NB/EB
					Apopka Gateway Center	50	2		37.61%		32.95%	
					North Park (FF Rests)	81	4					
					Applicant Inventory Total	131	6					
SR 436 to Piedmont Lakes Blvd	5L	E	39,800	2,000				30,428	8,812	1,558	407	NB/EB
					Apopka Gateway Center	269	12		22.14%		20.35%	
					North Park (FF Rests)	291	23					
					Applicant Inventory Total	560	35					
Piedmont Lakes Blvd to US 441	5L	E	39,800	2,000				32,128	7,381	1,591	386	NB/EB
					North Park (FF Rests)	291	23		18.55%		19.30%	
					Applicant Inventory Total	291	23					
US 441 to CR 424 (Apopka Blvd)	4LD	E	39,800	2,000				21,969	17,831	1,084	916	NB/EB
					Development Name	0	0		44.80%		45.80%	
					Applicant Inventory Total	0	0					
CR 424 (Apopka Blvd) to SR 414	4LD	E	39,800	2,000				20,675	19,125	873	1,127	NB/EB
					Development Name	0	0		48.05%		56.35%	
					Applicant Inventory Total	0	0					
SR 414 to Beggs Rd	4LD	E	39,800	2,000				22,573	17,227	1,012	988	NB/EB
					Development Name	0	0		43.28%		49.40%	
					Applicant Inventory Total	0	0					
Welch Road												
Vick Rd to Rock Springs Rd (CR 435)	2L	E	16,400	840				11,047	4,881	557	246	NB/EB
					Meadow View Apartments	96	7		29.76%		29.29%	
					Sanctuary Golf Estates (fka Apopka Golf Residence)	139	15					
					San Sabastian	237	15					
					Applicant Inventory Total	472	37					
Rock Springs Rd (CR 435) to Ustler Rd	3L	E	35,000	1,720				17,690	17,251	753	963	SB/WB
					San Sabastian	59	4		49.29%		55.99%	
					Applicant Inventory Total	59	4					
Ustler Rd to Thompson Rd	2L	E	33,300	1,640				17,587	15,713	747	893	SB/WB
					Development Name	0	0		47.19%		54.45%	
					Applicant Inventory Total	0	0					
Minor Collectors												
2th Street												
Central Ave to Park Ave	2L	D	9,600	490				1,061	8,539	61	429	SB/WB
					Development Name	0	0		76.99%		64.29%	
					Applicant Inventory Total	0	0					
6th Street												
Park Ave to Alabama Ave	2L	D	9,600	490				2,209	7,391	175	315	SB/WB
					Development Name	0	0		76.99%		64.29%	
					Applicant Inventory Total	0	0					
9th Street												
Central Ave to Park Ave (CR 435)	2L	D	9,600	490				3,954	7,391	180	315	NB/EB
					Dollar General	195	14		76.99%		64.29%	
					Applicant Inventory Total	195	14					

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Minor Collectors (Continued)												
Binion Road (CR 437)/Orange Avenue (CR 437)												
Ocoee-Apopka Rd to Harmon Rd	2L	E	17,700	880				4,171	11,842	239	508	SB/WB
					Apopka Woods	34	2		66.90%		57.73%	
					Avian Pointe	734	45					
					Binion Reserve	105	8					
					Clearlake Landing	155	12					
					Clear Lake Reserve	21	2					
					Magnolia Park Estates (fka Park Place)	87	8					
					Old Palm Center PUD (fka, Thompson Hills Estates)	341	34					
					Vistas at Waters Edge	210	22					
					Applicant Inventory Total	1,687	133					
Harmon Rd to Boy Scout Rd	2L	E	17,700	880				4,585	11,147	281	436	NB/EB
					Apopka Woods	34	2		62.98%		49.55%	
					Avian Pointe	734	45					
					Binion Reserve	105	8					
					Clearlake Landing	155	12					
					Clear Lake Reserve	21	2					
					Magnolia Park Estates (fka Park Place)	87	8					
					Old Palm Center PUD (fka, Thompson Hills Estates)	341	34					
					Vistas at Waters Edge	491	52					
					Applicant Inventory Total	1,968	163					
Boy Scout Rd to Lakeview Dr	2L	E	17,700	880				5,638	8,753	340	317	NB/EB
					Apopka Expressway Commerce	130	10		49.45%		36.02%	
					Avian Pointe	2,200	135					
					Binion Reserve	231	18					
					Chandler Estates	33	4					
					Clearlake Landing	466	35					
					Clear Lake Reserve	43	5					
					Oakmont Industrial Facility	206	16					
					Applicant Inventory Total	3,309	223					
Lakeview Dr to US 441	2L	E	17,700	880				4,268	10,804	273	388	SB/WB
					Apopka Expressway Commerce	312	23		61.04%		44.09%	
					Avian Pointe	1,504	92					
					Avion Point West	624	88					
					Chandler Estates	33	4					
					Clearlake Landing	155	12					
					Applicant Inventory Total	2,628	219					
Boy Scout Road												
Binion Rd to Ocoee-Apopka Rd	2L	E	15,900	790				1,286	12,560	76	575	SB/WB
					Avian Pointe	1,466	90		78.99%		72.78%	
					Binion Reserve	84	7					
					Clearlake Landing	155	12					
					Lake Marshall	143	14					
					Oakmont Industrial Facility	206	16					
					Applicant Inventory Total	2,054	139					
Bradshaw Road												
US 441 to Johns Rd	2L	E	15,900	790				4,579	7,485	230	162	NB/EB
					Cooper Oak (fka Bradshaw Commerce Park)	117	22		47.08%		20.51%	
					Cooper Palms	284	41					
					Emerson North Townhomes (fka Emerson North Apartments)	154	11					
					Emerson Point Apartments	306	17					
					Faircloth Lakes	290	29					
					Johns Road Commerce Center	259	25					
					Lake Gem Commerce Center	312	43					
					Lake Marshall	1,864	182					
					Magnolia Commerce Center	70	14					
					Oakmont Industrial Facility	180	14					
					Applicant Inventory Total	3,836	398					

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Minor Collectors (Continued)												
Lake Avenue												
Martin St to Orange St	2L	D	13,300	680				2,338	10,962	145	535	NB/EB
					Development Name	0	0		82.42%		78.68%	
					Applicant Inventory Total	0	0					
Orange St to US 441	2L	D	13,300	680				1,279	12,021	72	608	SB/WB
					Development Name	0	0		90.38%		89.41%	
					Applicant Inventory Total	0	0					
Lake Doe Boulevard												
US 441 to Dunn Cove Dr	2L	D	13,300	680				3,550	11,233	195	406	SB/WB
					Poe Reserve	788	79		84.46%		59.71%	
					Applicant Inventory Total	788	79					
Lake Francis Drive												
Schopke Lester Rd to Errol Pkwy	2L	D	13,300	680				807	12,130	37	600	NB/EB
					Errol Clubhouse Villas	363	43		91.20%		88.24%	
					Applicant Inventory Total	363	43					
Errol Pkwy to Vick Rd	2L	D	13,300	680				3,374	9,717	167	488	SB/WB
					Errol Clubhouse Villas	209	25		73.06%		71.76%	
					Applicant Inventory Total	209	25					
Lester Road												
Rock Springs Rd to Vick Rd	2L	E	14,000	720				4,529	10,098	225	479	NB/EB
					Carriage Hills	287	26		72.13%		66.53%	
					Meadow View Apartments	19	1					
					Rock Springs Estates	65	7					
					San Sabastian	119	8					
					Applicant Inventory Total	490	42					
Vick Rd to Schopke Lester Rd	2L	E	14,000	720				4,529	8,929	225	447	NB/EB
					Carriage Hills	452	41		63.78%		62.08%	
					Meadow View Apartments	58	4					
					Rock Springs Estates	32	3					
					Applicant Inventory Total	542	48					
Schopke Lester Rd to Plymouth Sorrento Rd	2L	E	14,000	720				3,502	10,098	202	479	NB/EB
					Carriage Hills	369	33		72.13%		66.53%	
					Stanton Ridge	31	6					
					Applicant Inventory Total	400	39					
Lust Street												
SR 429 to Ocoee Apopka Rd	2L	E	14,000	720				62	11,727	3	582	SB/WB
					Avian Pointe	2,211	135		83.76%		80.83%	
					Applicant Inventory Total	2,211	135					
Marden Road												
Ocoee Apopka Rd to Entrance	2L	E	14,000	720				1,668	9,559	105	317	NB/EB
					Emerson North Townhomes (fka Emerson North Apartments)	428	30		68.28%		44.03%	
					Emerson Point Apartments	1,292	72					
					Marden Ridge Apartments	1,053	196					
					Applicant Inventory Total	2,773	298					
Marden Road												
Entrance to Keene Rd	2L	E	14,000	720				1,668	9,559	105	317	NB/EB
					Emerson North Townhomes (fka Emerson North Apartments)	428	30		68.28%		44.03%	
					Emerson Point Apartments	1,292	72					
					Marden Ridge Apartments	702	130					
					Applicant Inventory Total	2,422	232					
Martin Street												
Park Ave to Lake Ave	2L	E	14,000	720				3,811	10,149	183	535	SB/WB
					Center of Faith	40	2		72.49%		74.31%	
					Applicant Inventory Total	40	2					

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Minor Collectors (Continued)												
McCormick Road												
Ocoee-Apopka Rd to Clarcona Rd (CR 435)	2L	E	15,900	790				4,668	9,583	196	436	SB/WB
					Apopka Woods	221	15		60.27%		55.19%	
					Old Palm Center PUD (fka, Thompson Hills Estates)	1,428	143					
					Applicant Inventory Total	1,649	158					
Monroe Avenue												
Park Ave to Alabama Ave	2L	D	13,300	680				4,227	9,073	363	317	SB/WB
					Development Name	0	0		68.22%		46.62%	
					Applicant Inventory Total	0	0					
Alabama Ave to Sheeler Rd	2L	D	13,300	680				4,811	8,489	292	388	SB/WB
					Development Name	0	0		63.83%		57.06%	
					Applicant Inventory Total	0	0					
Mt. Plymouth Road												
Kelly Park Rd to Haas Rd	2L	D	15,900	790				9,196	6,704	587	203	NB/EB
					Development Name	0	0		42.16%		25.70%	
					Applicant Inventory Total	0	0					
Haas Rd to Lake County Line	2L	D	15,900	790				8,825	7,075	554	236	NB/EB
					Development Name	0	0		44.50%		29.87%	
					Applicant Inventory Total	0	0					
North Maine Avenue												
Martin St to Old Dixie Hwy	2L	D	13,300	680				3,591	9,709	164	516	NB/EB
					Development Name	0	0		73.00%		75.88%	
					Applicant Inventory Total	0	0					
Old Dixie Highway/West Highland Avenue/Orange Street												
Plymouth Sorrento Rd to Boy Scout Blvd	2L	E	14,000	720				2,461	11,539	162	558	SB/WB
					Development Name	0	0		82.42%		77.50%	
					Applicant Inventory Total	0	0					
Boy Scout Blvd to Errol Pkwy	2L	E	14,000	720				4,272	9,402	245	458	SB/WB
					Canterwood Manor (Dixie Manor @ Errol)	326	17		67.16%		63.61%	
					Applicant Inventory Total	326	17					
Errol Pkwy to Vick Rd	2L	E	14,000	720	.			8,139	5,382	448	237	SB/WB
					Canterwood Manor (Dixie Manor @ Errol)	217	11		38.44%		32.92%	
					Self Help Credit Union	262	24					
					Applicant Inventory Total	479	35					
Vick Rd to Bradshaw Rd	2L	E	14,000	720				9,428	4,524	461	255	NB/EB
					Self Help Credit Union	48	4		32.31%		35.42%	
					Applicant Inventory Total	48	4					
Bradshaw Rd to Hawthorne Ave	2L	E	14,000	720				5,450	8,550	310	410	SB/WB
					Development Name	0	0		61.07%		56.94%	
					Applicant Inventory Total	0	0					
Hawthorne Ave to Park Ave	2L	E	14,000	720				2,670	11,315	129	590	NB/EB
					Park Ave Professional Center	15	1		80.82%		81.94%	
					Applicant Inventory Total	15	1					
Ponkan Road												
Round Lake Rd to Plymouth-Sorrento Rd	2L	E	14,000	720				4,955	9,045	219	501	NB/EB
					Development Name	0	0		64.61%		69.58%	
					Applicant Inventory Total	0	0					
Plymouth-Sorrento Rd to Vick Rd	2L	E	15,900	790				4,637	10,392	245	479	NB/EB
					Appy Lane Subdivision	46	5		65.36%		60.63%	
					Chandler Estates	26	3					
					Hillside at Wekiva (fka Ponkan Reserve - North)	110	12					
					Oak Ridge Subdivision	50	3					
					Orchid Estates (fka J.B. Nurseries)	560	35					
					Ponkan Reserve - South	79	8					
					Applicant Inventory Total	871	66					

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Minor Collectors (Continued)												
Ponkan Road (Continued)												
Vick Rd to Rock Springs Rd	2L	E	15,900	790				4,930	9,880	232	462	NB/EB
					Appy Lane Subdivision	115	12		62.14%		58.48%	
					Chandler Estates	63	7					
					Hillside at Wekiva (fka Ponkan Reserve - North)	264	28					
					Orchid Estates (fka J.B. Nurseries)	458	29					
					Ponkan Reserve - South	190	20					
					Applicant Inventory Total	1,090	96					
Rogers Road												
North of Lester Rd	2L	E	14,000	720				1,500	13,579	80	636	NB/EB
					Carriage Hills	821	74		68.36%		60.76%	
					Applicant Inventory Total	821	74					
Sandpiper Road												
Park Ave to Ustler Rd	2L	E	15,900	790				4,868	10,870	299	480	SB/WB
					Sandpiper Road Subdivision	162	11		68.36%		60.76%	
					Applicant Inventory Total	162	11					
Ustler Rd to Thompson Rd	2L	E	15,900	790				5,880	9,643	364	401	SB/WB
					Sandpiper Road Subdivision	377	25		60.65%		50.76%	
					Applicant Inventory Total	377	25					
Schopke-Lester Road												
Lester Rd to Old Dixie Hwy	2L	E	14,000	720				3,202	10,798	182	538	NB/EB
					Development Name	0	0		77.13%		74.72%	
					Applicant Inventory Total	0	0					
Thompson Road												
Welch Rd to Votaw Rd	2L	E	15,900	790				9,956	5,944	487	303	NB/EB
					Development Name	0	0		37.38%		38.35%	
					Applicant Inventory Total	0	0					
Votaw Rd to SR 436	2L	E	14,000	720				9,123	4,743	279	436	SB/WB
					Farrish Enterprises	134	5		33.88%		60.56%	
					Applicant Inventory Total	134	5					
Ustler Road												
Sandpiper Rd to Welch Rd	2L	E	14,000	720				794	13,206	42	678	SB/WB
					Development Name	0	0		94.33%		94.17%	
					Applicant Inventory Total	0	0					
Vick Road												
US 441 to Old Dixie Hwy	2L	E	33,800	1,700				16,843	-4	964	-57	NB/EB
					Center of Faith	40	2		-0.02%		-6.79%	
					Lake Marshall	192	13					
					Meadow View Apartments	19	1					
					Self Help Credit Union	119	11					
					Zarabrooke	76	8					
					Applicant Inventory Total	446	35					
Old Dixie Hwy to Martin St	2L	E	16,400	840				15,958	-4	862	-57	NB/EB
					Center of Faith	40	2		-0.02%		-6.79%	
					Lake Marshall	192	13					
					Meadow View Apartments	19	1					
					Self Help Credit Union	119	11					
					Zarabrooke	76	8					
					Applicant Inventory Total	446	35					
Martin St to Welch Rd	2L	E	16,400	840				14,246	1,633	751	43	NB/EB
					Center of Faith	20	1		9.96%		5.12%	
					Meadow View Apartments	192	13					
					Sanctuary Golf Estates (fka Apopka Golf Residence)	170	18					
					Self Help Credit Union	72	7					
					Zarabrooke	67	7					
					Applicant Inventory Total	521	46					

City of Apopka CMS
2017 Daily and PM Peak Hour/Peak Direction (PH/PD) Encumbered Traffic Allocation Worksheets
FINAL REPORT

Base Traffic Volume: 2017 **Revision Date: 2/28/2018**

Roadway Section	# of Lanes	Adopted Standard Roadway Capacity LOS	Daily	PHPD	Applicant Inventory	Encumbered Trips Daily	PM PH/PD	Daily Traffic (1) Base Volume	Available Capacity	PM PH/PD Traffic (1) Base Volume	Available Capacity	Peak Direction
Minor Collectors (Continued)												
Vick Road (Continued)												
Welch Rd to Lake Francis Dr	2L	E	14,000	720				11,359	2,323	591	106	NB/EB
					Meadow View Apartments	288	20		29.76%		29.29%	
					Sanctuary Golf Estates (fka Apopka Golf Residence)	30	3					
					Applicant Inventory Total	318	23					
Lake Francis Dr to Lester Rd	2L	E	14,000	720				8,054	5,818	449	261	NB/EB
					Meadow View Apartments	96	7		29.76%		29.29%	
					Rock Springs Estates	32	3					
					Applicant Inventory Total	128	10					
Lester Rd to Ponkan Rd	2L	E	14,000	720				6,392	7,557	429	287	NB/EB
					Meadow View Apartments	19	1		29.76%		29.29%	
					Rock Springs Estates	32	3					
					Applicant Inventory Total	51	4					
Votaw Road												
Park Ave to Christiana Ave	2L	E	15,900	790				7,418	8,467	493	296	SB/WB
					Park Ave Professional Center	15	1		53.25%		37.47%	
					Applicant Inventory Total	15	1					
Christiana Ave to Thompson Rd	2L	E	15,900	790				7,892	8,008	406	384	NB/EB
					Development Name	0	0		50.36%		48.61%	
					Applicant Inventory Total	0	0					
Yothers Road/Church Drive												
US 441 to Plymouth Sorrento Rd	2L	E	14,000	720				1,243	12,312	63	610	SB/WB
					Carillon (fka Wilkens Farm)	132	6		87.94%		84.72%	
					Chandler Estates	234	25					
					Stanton Ridge	79	16					
					Applicant Inventory Total	445	47					

Notes:
1 Base Volume from Existing Traffic Volume Tables, Available Capacity is Adopted Capacity minus (Base Volume plus Encumbered Traffic), and percentage shown represents amount of Available Capacity remaining.
2 Allowable 15% Degradation Thresholds Capacity, see attached Transportation Consulting Group's 12/29/92 letter.
Source: 2017 Traffic Counts from ***Luke Transportation Engineering Consultants, Inc.***

TABLE 7

Generalized **Peak Hour Directional** Volumes for Florida's **Urbanized Areas**[1]

12/18/12

INTERRUPTED FLOW FACILITIES

STATE SIGNALIZED ARTERIALS

Class I (40 mph or higher posted speed limit)

Lanes	Median	B	C	D	E
1	Undivided	*	830	880	**
2	Divided	*	1,910	2,000	**
3	Divided	*	2,940	3,020	**
4	Divided	*	3,970	4,040	**

Class II (35 mph or slower posted speed limit)

Lanes	Median	B	C	D	E
1	Undivided	*	370	750	800
2	Divided	*	730	1,630	1,700
3	Divided	*	1,170	2,520	2,560
4	Divided	*	1,610	3,390	3,420

Non-State Signalized Roadway Adjustments

(Alter corresponding state volumes by the indicated percent.)

Non-State Signalized Roadways - 10%

Median & Turn Lane Adjustments

Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors
1	Divided	Yes	No	+5%
1	Undivided	No	No	-20%
Multi	Undivided	Yes	No	-5%
Multi	Undivided	No	No	-25%
–	–	–	Yes	+ 5%

One-Way Facility Adjustment

Multiply the corresponding directional volumes in this table by 1.2

UNINTERRUPTED FLOW FACILITIES

FREEWAYS

Lanes	B	C	D	E
2	2,260	3,020	3,660	3,940
3	3,360	4,580	5,500	6,080
4	4,500	6,080	7,320	8,220
5	5,660	7,680	9,220	10,360
6	7,900	10,320	12,060	12,500

Freeway Adjustments

Auxiliary Lane	Ramp Metering
+ 1,000	+ 5%

UNINTERRUPTED FLOW HIGHWAYS

Lanes	Median	B	C	D	E
1	Undivided	420	840	1,190	1,640
2	Divided	1,810	2,560	3,240	3,590
3	Divided	2,720	3,840	4,860	5,380

Uninterrupted Flow Highway Adjustments

Lanes	Median	Exclusive left lanes	Adjustment factors
1	Divided	Yes	+5%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

BICYCLE MODE[2]

(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Paved Shoulder/Bicycle Lane Coverage	B	C	D	E
0-49%	*	150	390	1,000
50-84%	110	340	1,000	>1,000
85-100%	470	1,000	>1,000	**

PEDESTRIAN MODE[2]

(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Sidewalk Coverage	B	C	D	E
0-49%	*	*	140	480
50-84%	*	80	440	800
85-100%	200	540	880	>1,000

BUS MODE (Scheduled Fixed Route)[3]

(Buses in peak hour in peak direction)

Sidewalk Coverage	B	C	D	E
0-84%	> 5	≥ 4	≥ 3	≥ 2
85-100%	> 4	≥ 3	≥ 2	≥ 1

[1] Values shown are presented as peak hour directional volumes for levels of service and are for the automobile/truck modes unless specifically stated. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the Highway Capacity Manual and the Transit Capacity and Quality of Service Manual.

[2] Level of service for the bicycle and pedestrian modes in this table is based on number of motorized vehicles, not number of bicyclists or pedestrians using the facility.

[3] Buses per hour shown are only for the peak hour in the single direction of the higher traffic flow.

* Cannot be achieved using table input value defaults.

** Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached. For the bicycle mode, the level of service letter grade (including F) is not achievable because there is no maximum vehicle volume threshold using table input value defaults.

Source:
Florida Department of Transportation
Systems Planning Office
www.dot.state.fl.us/planning/systems/sm/los/default.shtm

TABLE 1

Generalized **Annual Average Daily** Volumes for Florida's **Urbanized Areas**

12/18/12

INTERRUPTED FLOW FACILITIES

STATE SIGNALIZED ARTERIALS

Class I (40 mph or higher posted speed limit)

Lanes	Median	B	C	D	E
2	Undivided	*	16,800	17,700	**
4	Divided	*	37,900	39,800	**
6	Divided	*	58,400	59,900	**
8	Divided	*	78,800	80,100	**

Class II (35 mph or slower posted speed limit)

Lanes	Median	B	C	D	E
2	Undivided	*	7,300	14,800	15,600
4	Divided	*	14,500	32,400	33,800
6	Divided	*	23,300	50,000	50,900
8	Divided	*	32,000	67,300	68,100

Non-State Signalized Roadway Adjustments

(Alter corresponding state volumes by the indicated percent.)

Non-State Signalized Roadways - 10%

Median & Turn Lane Adjustments

Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors
2	Divided	Yes	No	+5%
2	Undivided	No	No	-20%
Multi	Undivided	Yes	No	-5%
Multi	Undivided	No	No	-25%
–	–	–	Yes	+ 5%

One-Way Facility Adjustment

Multiply the corresponding two-directional volumes in this table by 0.6

BICYCLE MODE[2]

(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Paved Shoulder/Bicycle Lane Coverage	B	C	D	E
0-49%	*	2,900	7,600	19,700
50-84%	2,100	6,700	19,700	>19,700
85-100%	9,300	19,700	>19,700	**

PEDESTRIAN MODE[2]

(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Sidewalk Coverage	B	C	D	E
0-49%	*	*	2,800	9,500
50-84%	*	1,600	8,700	15,800
85-100%	3,800	10,700	17,400	>19,700

BUS MODE (Scheduled Fixed Route)[3]

(Buses in peak hour in peak direction)

Sidewalk Coverage	B	C	D	E
0-84%	> 5	≥ 4	≥ 3	≥ 2
85-100%	> 4	≥ 3	≥ 2	≥ 1

UNINTERRUPTED FLOW FACILITIES

FREEWAYS

Core Urbanized

Lanes	B	C	D	E
4	47,400	64,000	77,900	84,600
6	69,900	95,200	116,600	130,600
8	92,500	126,400	154,300	176,600
10	115,100	159,700	194,500	222,700
12	162,400	216,700	256,600	268,900

Urbanized

Lanes	B	C	D	E
4	45,800	61,500	74,400	79,900
6	68,100	93,000	111,800	123,300
8	91,500	123,500	148,700	166,800
10	114,800	156,000	187,100	210,300

Freeway Adjustments

Auxiliary Lanes Present in Both Directions	Ramp Metering
+ 20,000	+ 5%

UNINTERRUPTED FLOW HIGHWAYS

Lanes	Median	B	C	D	E
2	Undivided	8,600	17,000	24,200	33,300
4	Divided	36,700	51,800	65,600	72,600
6	Divided	55,000	77,700	98,300	108,800

Uninterrupted Flow Highway Adjustments

Lanes	Median	Exclusive left lanes	Adjustment factors
2	Divided	Yes	+5%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

[1]Values shown are presented as two-way annual average daily volumes for levels of service and are for the automobile/truck modes unless specifically stated. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the Highway Capacity Manual and the Transit Capacity and Quality of Service Manual.

[2] Level of service for the bicycle and pedestrian modes in this table is based on number of motorized vehicles, not number of bicyclists or pedestrians using the facility.

[3] Buses per hour shown are only for the peak hour in the single direction of the higher traffic flow.

* Cannot be achieved using table input value defaults.

** Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached. For the bicycle mode, the level of service letter grade (including F) is not achievable because there is no maximum vehicle volume threshold using table input value defaults.

Source:
Florida Department of Transportation
Systems Planning Office
www.dot.state.fl.us/planning/systems/sm/los/default.shtm

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2018 HISTORICAL AADT REPORT

COUNTY: 75 - ORANGE

SITE: 8003 - PLYMOUTH/SORRENTO RD, N OF US 441/SR 500/OBT - OFF SYSTEM

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2018	7400 F	N 3600	S 3800	9.00	53.20	4.30
2017	7200 C	N 3500	S 3700	9.00	52.60	3.90
2016	9800 V	0	0	9.00	52.50	5.70
2015	9600 R	0	0	9.00	53.20	4.40
2014	9400 T			9.00	53.20	3.80
2013	9300 S	0	0	9.00	53.30	4.10
2012	9200 F	0	0	9.00	52.90	3.60
2011	9200 C	N 0	S 0	9.00	52.70	3.50

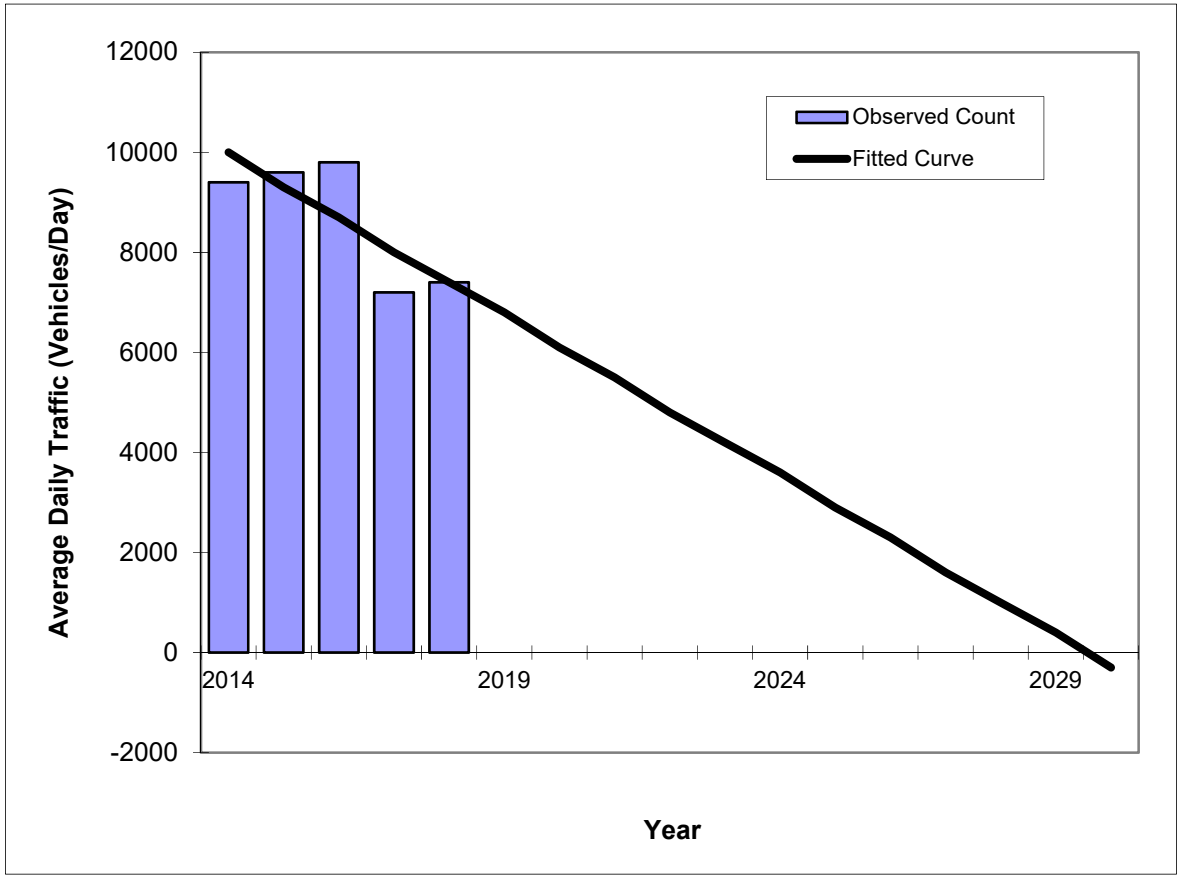
AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Traffic Trends - V2.0

PLYMOUTH-SORRENTO RD --

PIN#	973215-1
Location	1

County:	Orange (75)
Station #:	0
Highway:	PLYMOUTH-SORRENTO RD



Year	Traffic (ADT/AADT) Count*	Trend**
2014	9400	10000
2015	9600	9300
2016	9800	8700
2017	7200	8000
2018	7400	7400
2020 Opening Year Trend		
2020	N/A	6100
2023 Mid-Year Trend		
2023	N/A	4200
2030 Design Year Trend		
2030	N/A	-300
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

** Annual Trend Increase:	-640
Trend R-squared:	63.52%
Trend Annual Historic Growth Rate:	-6.50%
Trend Growth Rate (2018 to Design Year):	-8.67%
Printed:	22-Oct-19

Straight Line Growth Option

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2018 HISTORICAL AADT REPORT

COUNTY: 75 - ORANGE

SITE: 8335 - CR-437/BINION RD, 900 FT S OF LAKEVIEW DR - OFF SYSTEM

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2018	5200 S	N 2600	S 2600	9.00	53.20	5.80
2017	5200 F	N 2600	S 2600	9.00	52.60	6.20
2016	5000 C	N 2500	S 2500	9.00	52.50	6.00
2015	5900 T	0	0	9.00	53.20	7.20
2014	5800 S			9.00	53.20	5.70
2013	5700 F	0	0	9.00	53.30	5.40
2012	5700 C	N 0	S 0	9.00	52.90	5.20

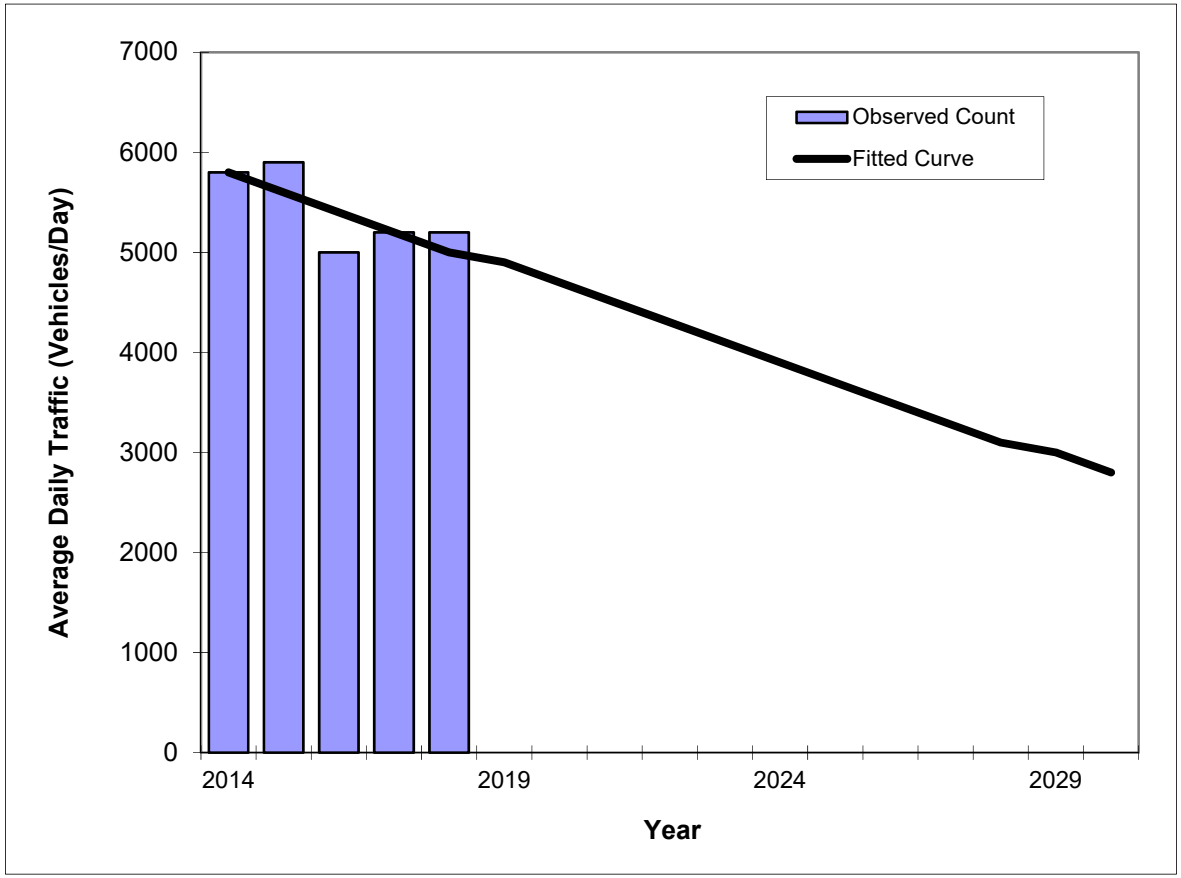
AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Traffic Trends - V2.0

BINION RAOD --

PIN#	973215-1
Location	1

County:	Orange (75)
Station #:	0
Highway:	BINION RAOD



Year	Traffic (ADT/AADT) Count*	Trend**
2014	5800	5800
2015	5900	5600
2016	5000	5400
2017	5200	5200
2018	5200	5000
2020 Opening Year Trend		
2020	N/A	4700
2023 Mid-Year Trend		
2023	N/A	4100
2030 Design Year Trend		
2030	N/A	2800
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

** Annual Trend Increase:	-190
Trend R-squared:	55.71%
Trend Annual Historic Growth Rate:	-3.45%
Trend Growth Rate (2018 to Design Year):	-3.67%
Printed:	22-Oct-19

Straight Line Growth Option

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2018 HISTORICAL AADT REPORT

COUNTY: 75 - ORANGE

SITE: 0002 - ON US-441, 0.151 MI. NW OF CR-437 (UVL)

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2018	24000 C	N 12000	S 12000	9.00	53.20	3.80
2017	25000 C	N 12500	S 12500	9.00	52.60	3.90
2016	24000 C	N 12000	S 12000	9.00	52.50	6.20
2015	23500 C	N 11500	S 12000	9.00	53.20	5.80
2014	23000 C	N 11500	S 11500	9.00	53.20	6.00
2013	32500 C	N 17000	S 15500	9.00	53.30	5.80
2012	30500 C	N 16000	S 14500	9.00	52.90	9.00
2011	32500 C	N 17000	S 15500	9.00	52.70	8.10
2010	33500 C	N 17000	S 16500	8.87	52.83	7.90
2009	32500 C	N 17000	S 15500	8.79	53.70	7.50
2008	34500 C	N 17500	S 17000	8.80	53.99	9.90
2007	34500 C	N 17000	S 17500	8.63	54.08	9.80
2006	33000 C	N 18000	S 15000	8.59	53.01	9.80
2005	32000 C	N 17500	S 14500	8.60	54.10	4.80
2004	32500 C	N 17000	S 15500	8.70	52.80	10.40
2003	34500 C	N 17500	S 17000	8.60	54.20	9.30

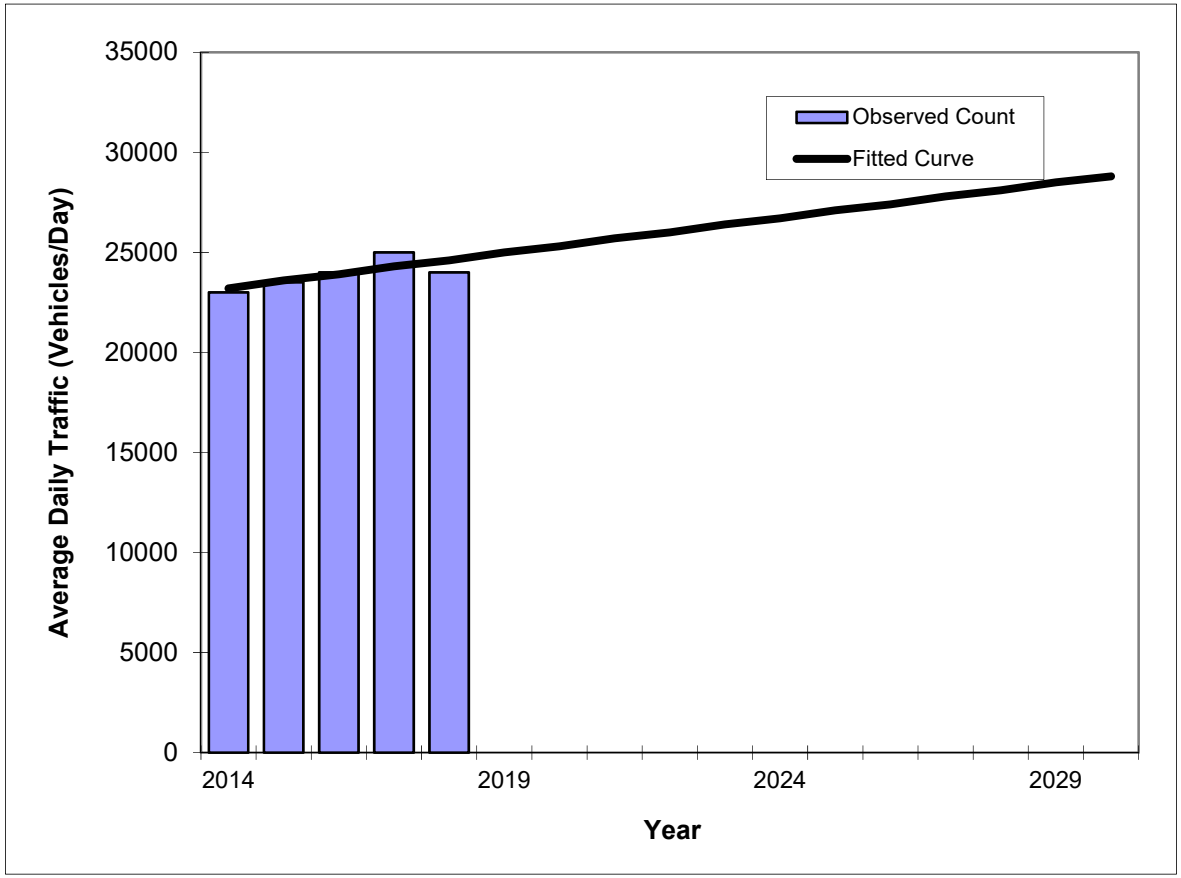
AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Traffic Trends - V2.0

ORANGE BLOSSOM TRAIL --

PIN#	973215-1
Location	1

County:	Orange (75)
Station #:	0
Highway:	ORANGE BLOSSOM TRAIL



Year	Traffic (ADT/AADT) Count*	Trend**
2014	23000	23200
2015	23500	23600
2016	24000	23900
2017	25000	24300
2018	24000	24600
2020 Opening Year Trend		
2020	N/A	25300
2023 Mid-Year Trend		
2023	N/A	26400
2030 Design Year Trend		
2030	N/A	28800
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	350
Trend R-squared:	55.68%
Trend Annual Historic Growth Rate:	1.51%
Trend Growth Rate (2018 to Design Year):	1.42%
Printed:	22-Oct-19

Straight Line Growth Option

*Axle-Adjusted

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2018 HISTORICAL AADT REPORT

COUNTY: 75 - ORANGE

SITE: 0082 - ON US-441, 1.031 MI. SE OF CR-437 (UCLP)

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2018	27000 F	N 14000	S 13000	9.00	53.20	3.60
2017	27000 C	N 14000	S 13000	9.00	52.60	3.60
2016	28500 C	N 14000	S 14500	9.00	52.50	3.60
2015	27500 C	N 14000	S 13500	9.00	53.20	4.00
2014	27500 C	N 14000	S 13500	9.00	53.20	3.60
2013	38000 C	N 20500	S 17500	9.00	53.30	4.00
2012	37000 C	N 18000	S 19000	9.00	52.90	12.00
2011	38000 C	N 19000	S 19000	9.00	52.70	8.80
2010	40000 C	N 20000	S 20000	8.87	52.83	8.50
2009	40000 C	N 20000	S 20000	8.79	53.70	9.40
2008	41000 C	N 20500	S 20500	8.80	53.99	9.70
2007	40500 C	N 19500	S 21000	8.63	54.08	9.30
2006	41500 C	N 20500	S 21000	8.59	53.01	10.40
2005	38000 C	N 20000	S 18000	8.60	54.10	4.80
2004	36500 F	N 18500	S 18000	8.70	52.80	10.40
2003	36500 C	N 18500	S 18000	8.60	54.20	9.30

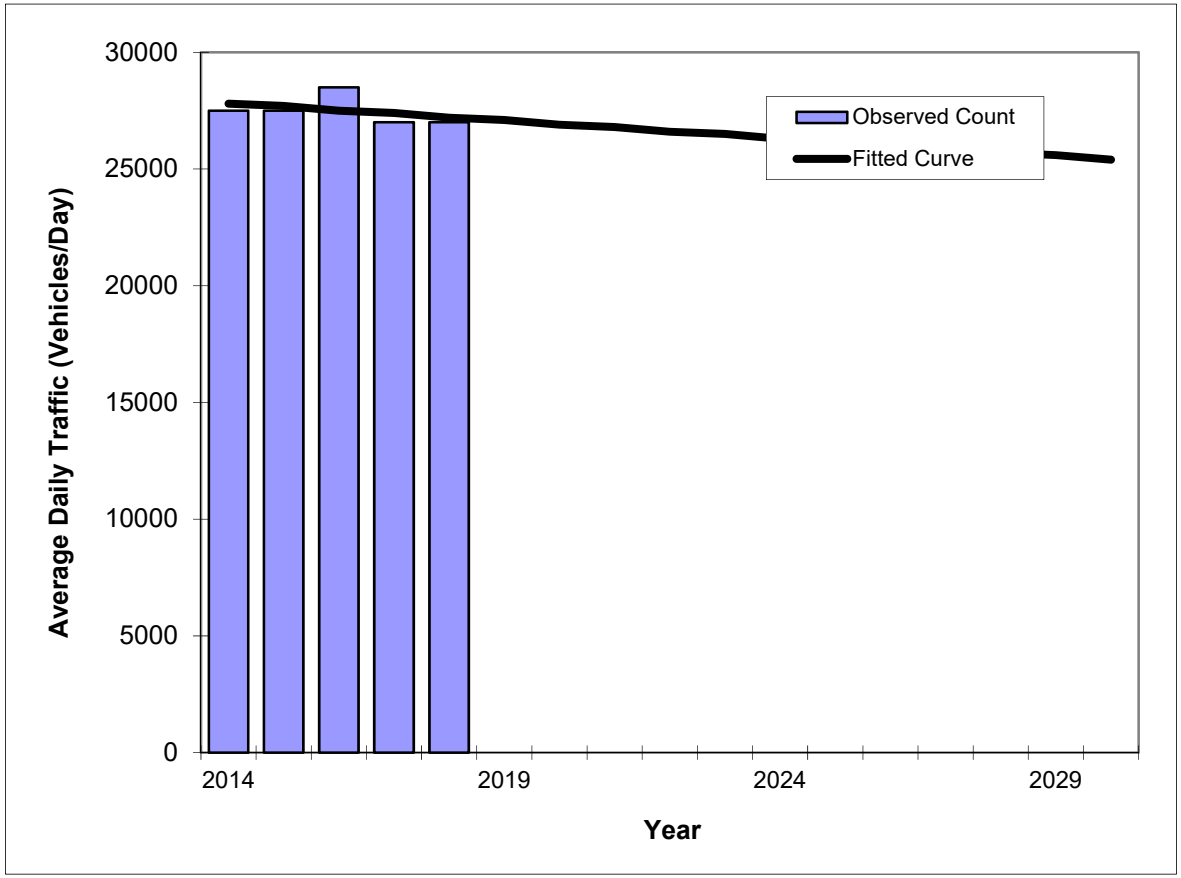
AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Traffic Trends - V2.0

ORANGE BLOSSOM TRAIL --

PIN#	973215-1
Location	1

County:	Orange (75)
Station #:	0
Highway:	ORANGE BLOSSOM TRAIL



Year	Traffic (ADT/AADT) Count*	Trend**
2014	27500	27800
2015	27500	27700
2016	28500	27500
2017	27000	27400
2018	27000	27200
2020 Opening Year Trend		
2020	N/A	26900
2023 Mid-Year Trend		
2023	N/A	26500
2030 Design Year Trend		
2030	N/A	25400
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

** Annual Trend Increase:	-150
Trend R-squared:	15.00%
Trend Annual Historic Growth Rate:	-0.54%
Trend Growth Rate (2018 to Design Year):	-0.55%
Printed:	22-Oct-19

Straight Line Growth Option

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2018 HISTORICAL AADT REPORT

COUNTY: 75 - ORANGE

SITE: 8103 - PONKAN ROAD, E OF US-441/SR-500/ORANGE BLOSSOM TRAIL - OFF SYSTEM

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2018	2600 F	E 1200	W 1400	9.00	53.20	4.30
2017	2600 C	E 1200	W 1400	9.00	52.60	3.90
2016	2000 V	0	0	9.00	52.50	5.70
2015	2000 R	0	0	9.00	53.20	4.40
2014	2000 T			9.00	53.20	3.80
2013	2000 S	0	0	9.00	53.30	4.10
2012	2000 F	0	0	9.00	52.90	3.60
2011	2000 C	E 0	W 0	9.00	52.70	3.50

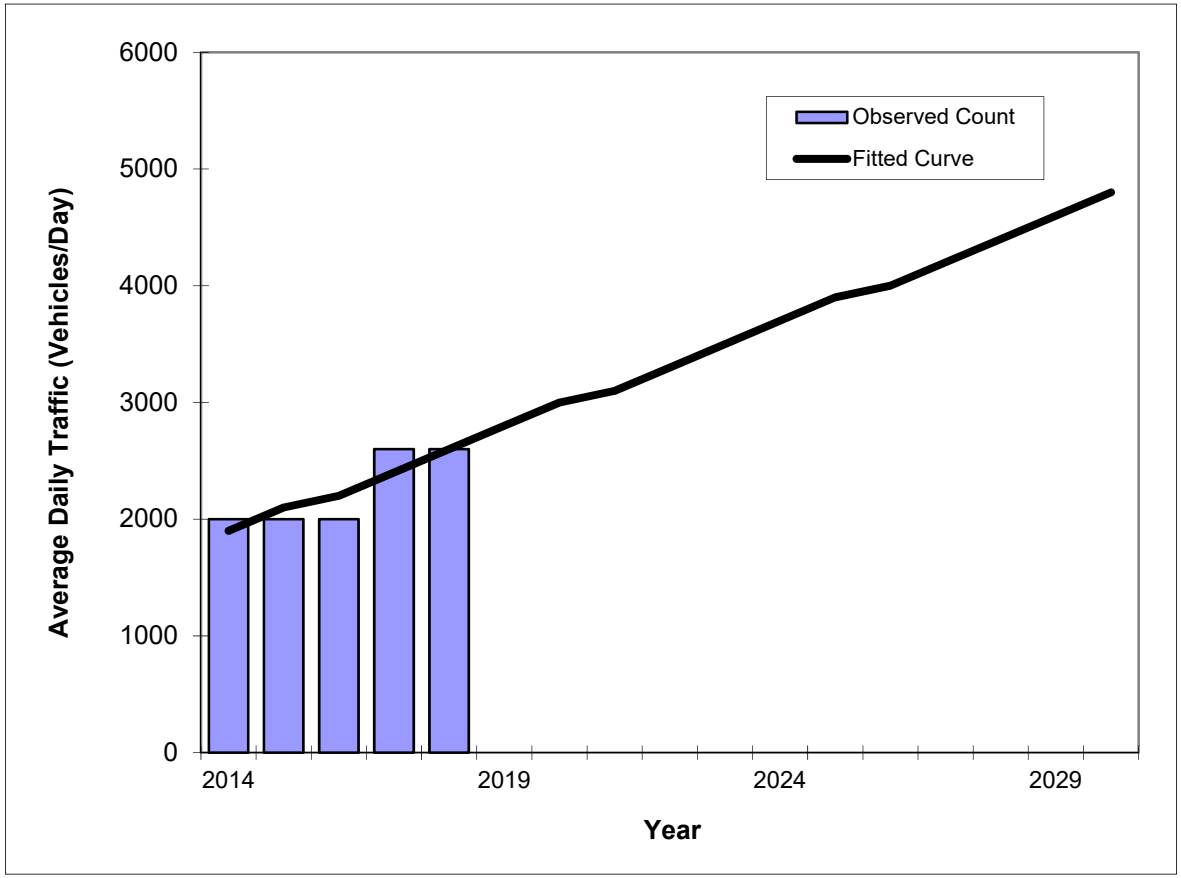
AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Traffic Trends - V2.0

PONKAN RD --

PIN#	973215-1
Location	1

County:	Orange (75)
Station #:	0
Highway:	PONKAN RD



Year	Traffic (ADT/AADT) Count*	Trend**
2014	2000	1900
2015	2000	2100
2016	2000	2200
2017	2600	2400
2018	2600	2600
2020 Opening Year Trend		
2020	N/A	3000
2023 Mid-Year Trend		
2023	N/A	3500
2030 Design Year Trend		
2030	N/A	4800
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

** Annual Trend Increase:	180
Trend R-squared:	75.00%
Trend Annual Historic Growth Rate:	9.21%
Trend Growth Rate (2018 to Design Year):	7.05%
Printed:	22-Oct-19

Straight Line Growth Option

ADT TRAFFIC SERVICES
4807 FISKE CIR
ORLANDO, FL 32826
(407)310-5264

Hermit Smith Rd-24hr Volume Counts-1
Site Code: 000000000001
Station ID: Hermit Smith Rd
.30 Miles north of US 441

Start Time	1/9/2019 Wed	S.B Morning	S.B Afternoon	Hour Totals Morning	Hour Totals Afternoon	N.B Morning	N.B Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		2	16			3	7				
12:15		1	7			4	9				
12:30		1	7			0	13				
12:45		1	10	5	40	1	10	8	39	13	79
01:00		1	11			2	13				
01:15		1	10			1	13				
01:30		0	8			2	11				
01:45		1	14	3	43	3	11	8	48	11	91
02:00		1	13			3	18				
02:15		1	15			0	14				
02:30		0	18			1	24				
02:45		0	21	2	67	0	20	4	76	6	143
03:00		0	13			1	16				
03:15		0	12			0	20				
03:30		1	10			0	15				
03:45		1	10	2	45	0	22	1	73	3	118
04:00		0	11			0	20				
04:15		2	11			0	13				
04:30		1	10			1	20				
04:45		6	16	9	48	0	30	1	83	10	131
05:00		4	12			3	27				
05:15		5	8			1	28				
05:30		11	23			0	21				
05:45		5	17	25	60	1	15	5	91	30	151
06:00		9	11			5	23				
06:15		18	26			2	23				
06:30		22	16			6	28				
06:45		18	12	67	65	7	11	20	85	87	150
07:00		22	14			3	27				
07:15		17	14			7	14				
07:30		23	11			14	16				
07:45		19	10	81	49	9	17	33	74	114	123
08:00		19	10			12	13				
08:15		12	4			5	10				
08:30		12	4			7	10				
08:45		11	7	54	25	10	18	34	51	88	76
09:00		6	9			6	8				
09:15		12	7			5	12				
09:30		11	12			9	11				
09:45		9	7	38	35	3	9	23	40	61	75
10:00		9	3			10	5				
10:15		15	3			10	7				
10:30		10	2			7	7				
10:45		9	5	43	13	13	5	40	24	83	37
11:00		7	1			11	4				
11:15		8	2			6	5				
11:30		7	2			11	1				
11:45		11	2	33	7	10	4	38	14	71	21
Total		362	497			215	698			577	1195
Percent		42.1%	57.9%			23.5%	76.5%			32.6%	67.4%
Grand Total		362	497			215	698			577	1195
Percent		42.1%	57.9%			23.5%	76.5%			32.6%	67.4%
ADT		ADT 1,788		AADT 1,788							

Appendix C

Trip Generation Information Sheets

Single-Family Detached Housing
(210)

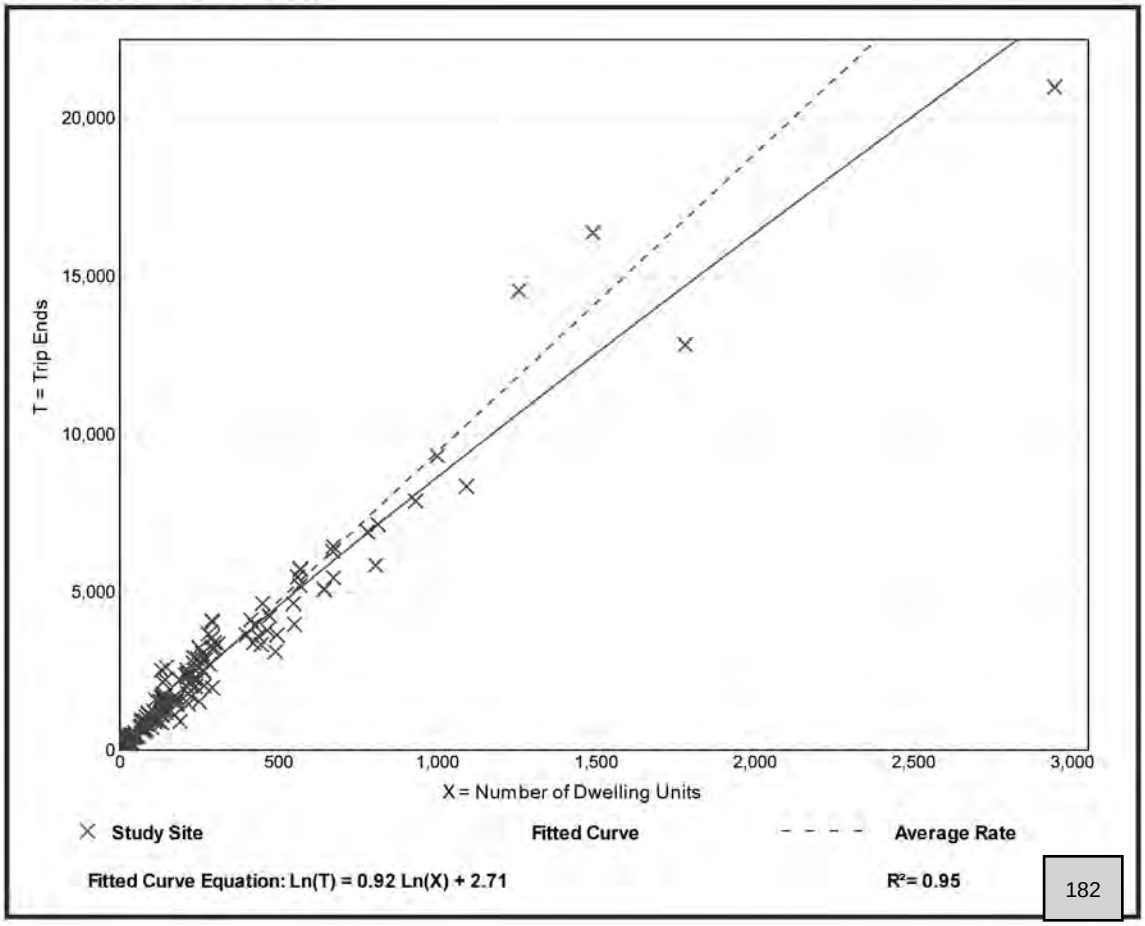
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 159
Avg. Num. of Dwelling Units: 264
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.44	4.81 - 19.39	2.10

Data Plot and Equation



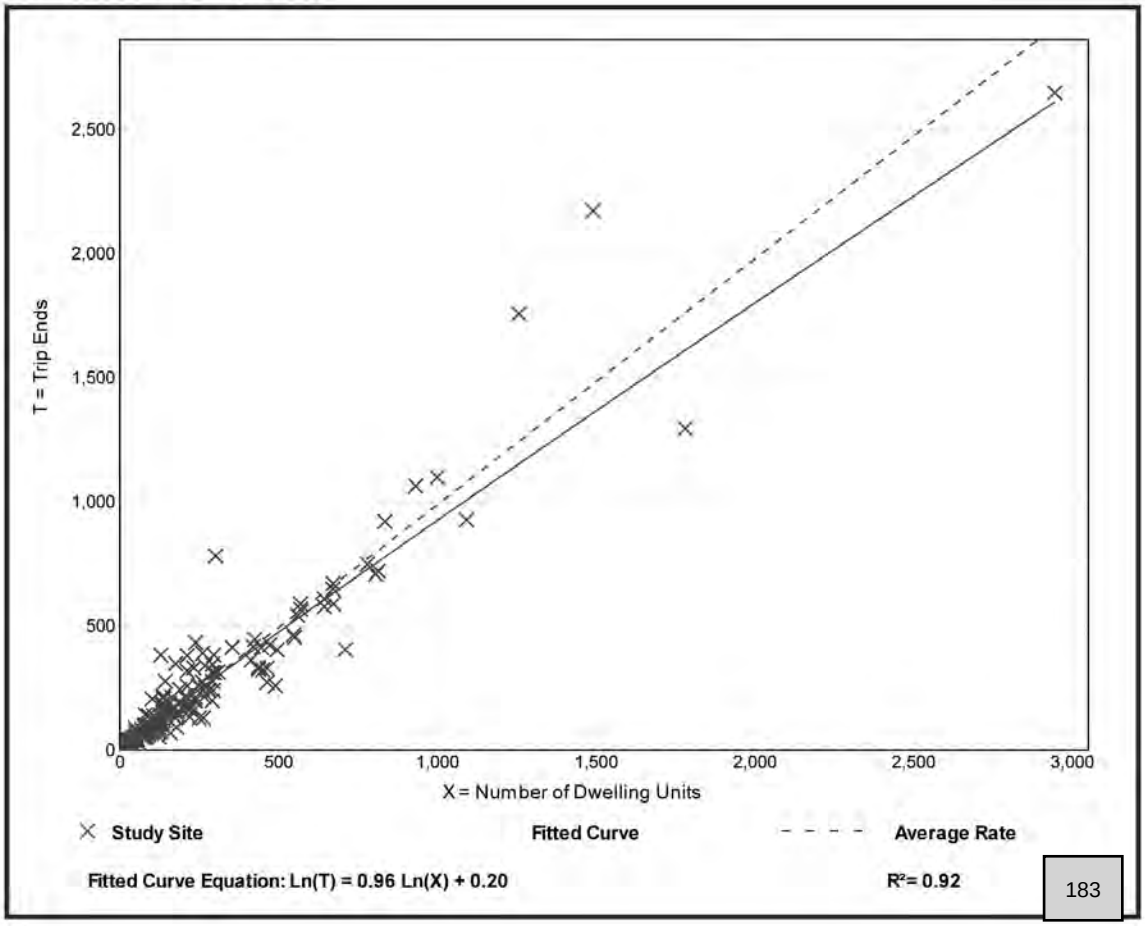
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	190
Avg. Num. of Dwelling Units:	242
Directional Distribution:	63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.99	0.44 - 2.98	0.31

Data Plot and Equation



Multifamily Housing (Mid-Rise)
(221)

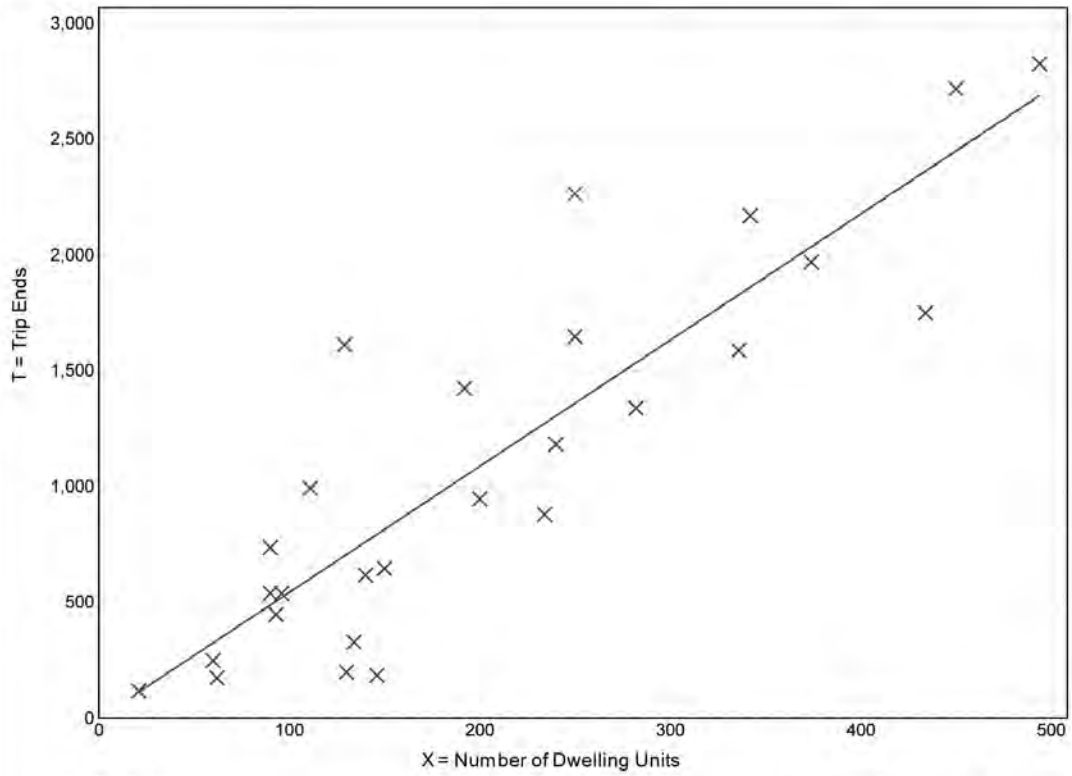
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 27
Avg. Num. of Dwelling Units: 205
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
5.44	1.27 - 12.50	2.03

Data Plot and Equation



× **Study Site** **Fitted Curve** - - - - **Average Rate**

Fitted Curve Equation: T = 5.45(X) - 1.75 **R^2= 0.77**

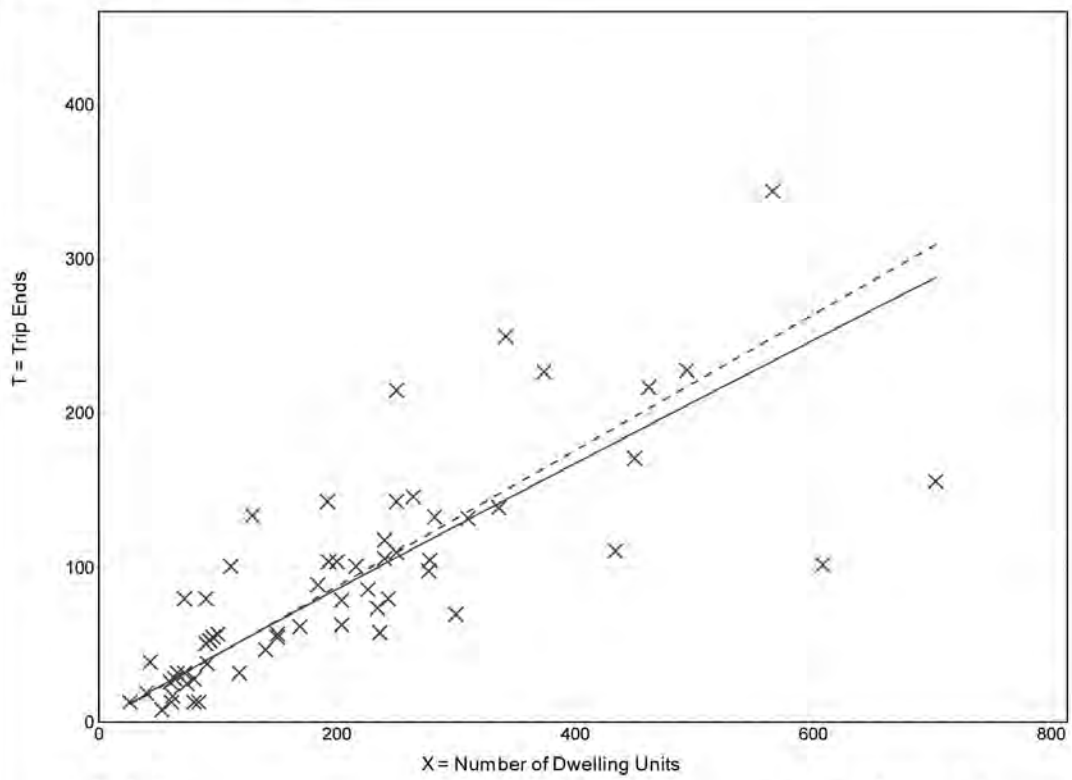
Multifamily Housing (Mid-Rise)
(221)

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:	60
Avg. Num. of Dwelling Units:	208
Directional Distribution:	61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.44	0.15 - 1.11	0.19

Data Plot and Equation



Fitted Curve Equation: Ln(T) = 0.96 Ln(X) - 0.63 **R^2= 0.72**

Shopping Center
(820)

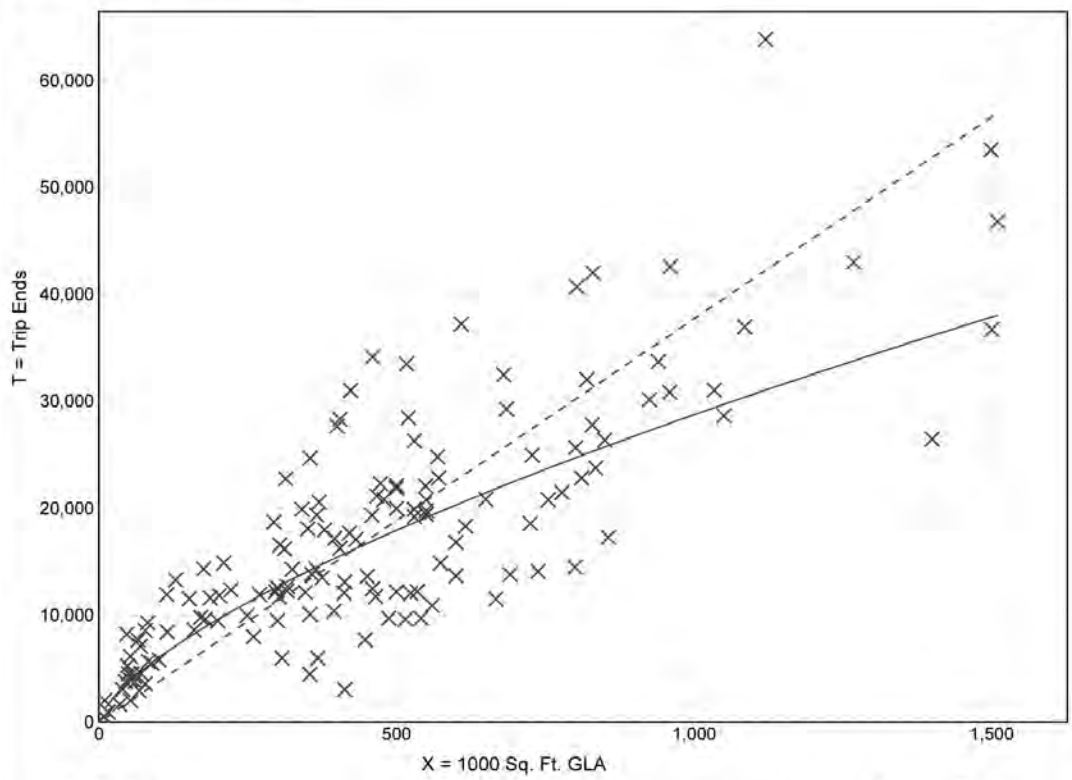
Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 147
1000 Sq. Ft. GLA: 453
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
37.75	7.42 - 207.98	16.41

Data Plot and Equation



× **Study Site** **Fitted Curve** - - - - **Average Rate**

Fitted Curve Equation: Ln(T) = 0.68 Ln(X) + 5.57 **R^2= 0.76**

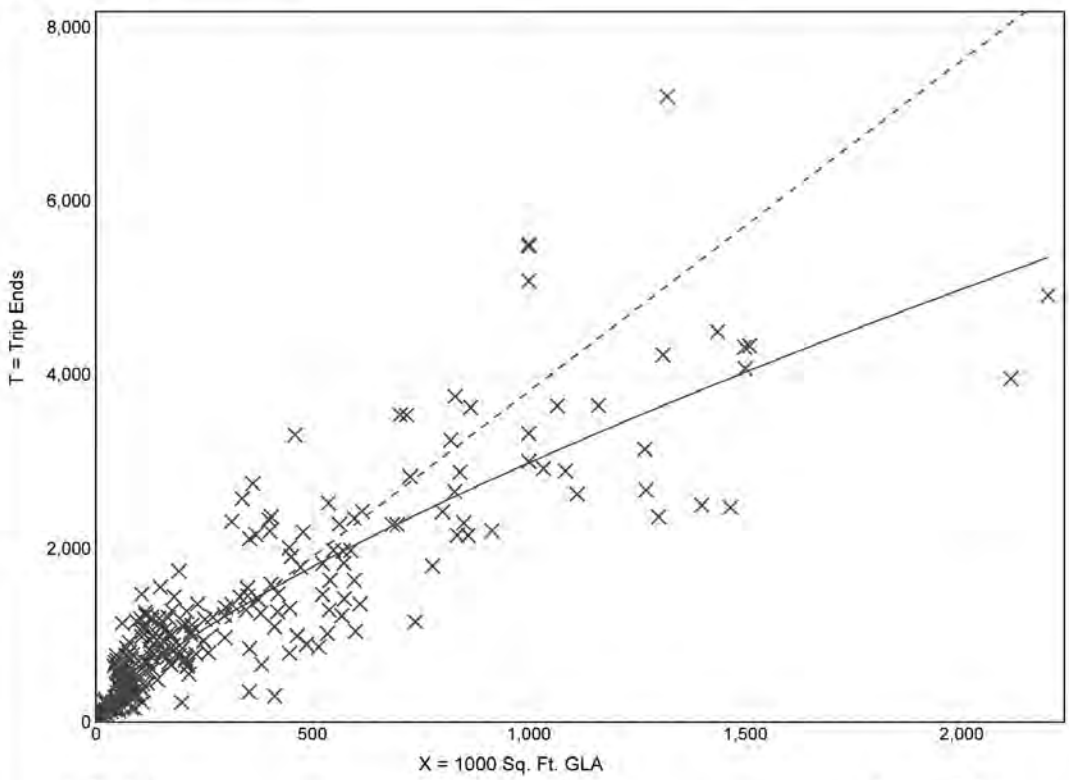
Shopping Center
(820)

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:	261
1000 Sq. Ft. GLA:	327
Directional Distribution:	48% entering, 52% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
3.81	0.74 - 18.69	2.04

Data Plot and Equation



× **Study Site** **Fitted Curve** - - - - **Average Rate**

Fitted Curve Equation: Ln(T) = 0.74 Ln(X) + 2.89 **R^2= 0.82**

Table E.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

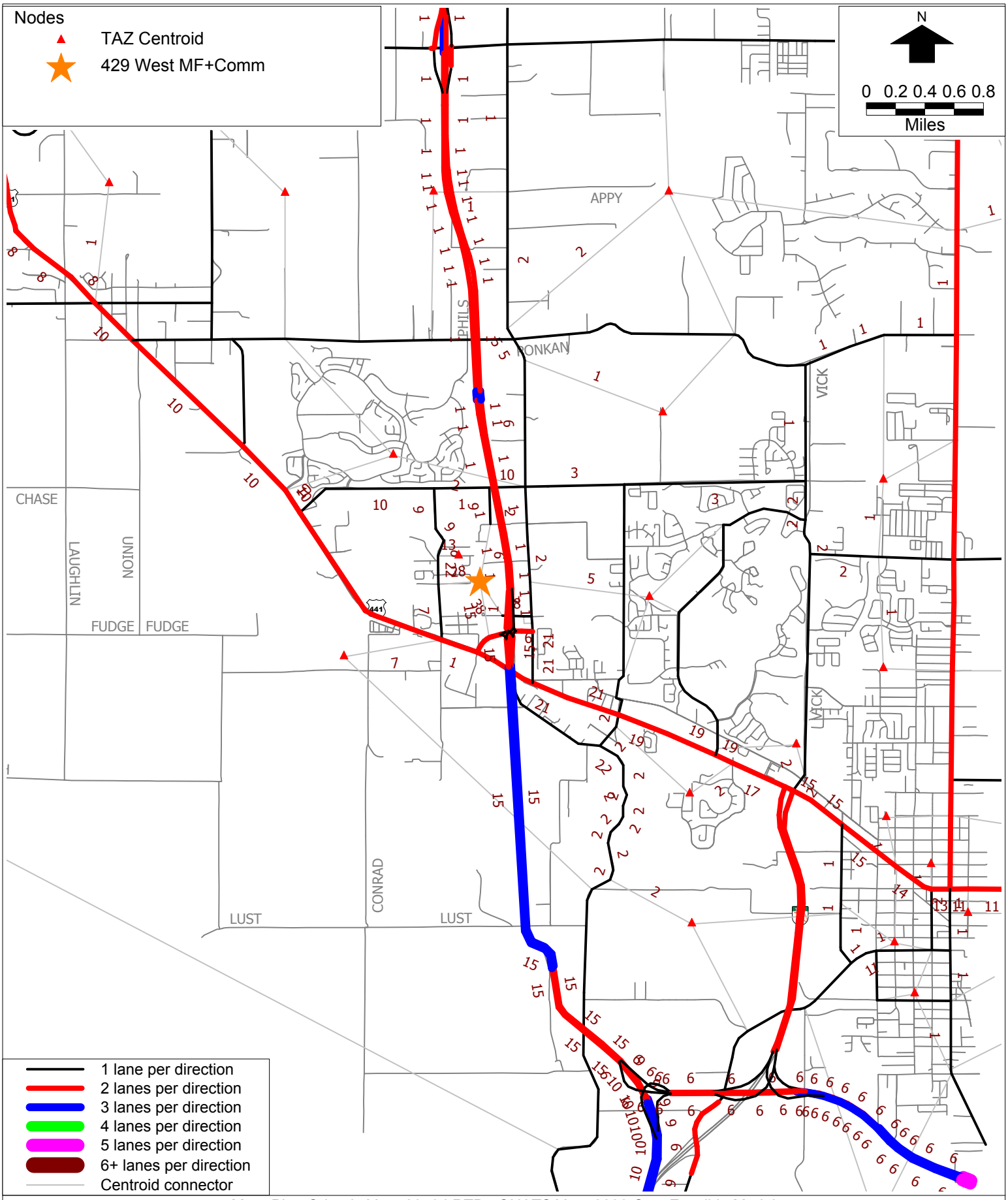
Table E.9 (Cont'd) Pass-By and Non-Pass-By Trips Weekday, PM Peak Period Land Use Code 820—Shopping Center

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	—	69,347	Raymond Keyes Assoc.
549	Natick, MA	Feb. 1989	—	4:45–5:45 p.m.	33	26	41	67	—	48,782	Raymond Keyes

Average Pass-By Trip Percentage: 34

"—" means no data were provided

Appendix D
OUATS Model



MetroPlan Orlando Year 2040 LRTP - OUATS Year 2030 Cost Feasible Model
Project Distribution - 429 West CPA - P18131.1
C:\FSUTMS\D5\OUATS.2040\Base\CF2030\P18131\Output\HRLDXY_C30.NET 10/10/2019

cube (Licensed to Traffic and Mobility Consultants)

Bio-Tech Consulting Inc.
Environmental and Permitting Services

info@bio-techconsulting.com
www.bio-techconsulting.com

March 31, 2020

Tony Benge
Benge Development
1157 Tom Gurney Drive
Winter Park, Florida 32789

Proj: Apopka 429 West Site, Orange County, Florida
Sections 1 & 36, Townships 20 & 21 South, Range 27 East
(BTC File #303-17)
Re: Environmental Assessment Report

Dear Mr. Benge:

In March of 2020, Bio-Tech Consulting, Inc. (BTC) conducted an environmental assessment of the approximately 73.8-acre Apopka 429 West Site. This site is located within the City of Apopka, west of State Road 429, north of US 441, and east of Dew Berry Avenue; within Sections 1 and 36, Townships 20 and 21 South, Range 27 East, Orange County, Florida (Figures 1, 2, and 3). This environmental assessment included the following elements:

- review of soil types mapped within the property boundaries;
- evaluation of land use types/vegetative communities present;
- field review for occurrence of protected flora and fauna; and,
- an overview of all potential permitting constraints.

SOILS

According to the Soil Survey of Orange County, Florida, prepared by the U.S. Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS), five (5) soil types exist within the site boundary (Figure 4). These soil types include the following.

Orlando: Main Office
3025 East South Street
Orlando, FL 32803

Vero Beach Office
4445 N A1A
Suite 221
Vero Beach, FL 32963

Jacksonville Office
1157 Beach Boulevard
Jacksonville Beach, FL 32250

Tampa Office
6011 Benjamin Road
Suite 101 B
Tampa, FL 33634

Key West Office
1107 Key Plaza
Suite 259
Key West, FL 33040

Aquatic & Land
Management Operations
3825 Rouse Road
Orlando, FL 32817

407.894.5969
877.894.5969
407.894.5970 fax

- **Candler fine sand, 0 to 5 percent slopes (#4)**
- **Candler fine sand, 5 to 12 percent slopes (#5)**
- **Candler-Urban land complex, 0 to 5 percent slopes (#7)**
- **Tavares fine sand, 0 to 5 percent slopes (#46)**
- **Tavares - Millhopper fine sands, 0 to 5 percent slopes (#47)**

The following presents a brief description of the soil types mapped for the site:

Candler fine sand, 0 to 5 percent slopes (#4) is a nearly level to gently sloping, excessively drained soil found on the uplands. The surface layer of this soil type generally consists of very dark grayish brown fine sand about 5 inches thick. The seasonal high-water table for this soil type is at a depth of more than 80 inches. Permeability of this soil type is rapid in the surface and subsurface layers and is rapid to moderately rapid in the subsoil.

Candler fine sand, 5 to 12 percent slopes (#5) is a sloping to strongly sloping, excessively drained soil found on the uplands. The surface layer of this soil type generally consists of dark grayish brown fine sand about 4 inches thick. The seasonal high-water table for this soil type is at a depth of more than 80 inches. Permeability of this soil type is rapid in the surface and subsurface layers and is rapid to moderately rapid in the subsoil.

Candler-Urban land complex, 0 to 5 percent slopes (#7) is a nearly level to gently sloping and excessively drained soil complex found in the uplands. Typically, the surface layer of Chandler soil is very dark grayish brown find sand about 4 inches thick. The subsurface layer, to a depth of about 67 inches, is very pale brown fine sand. A seasonal high water table is at a depth of more than 80 inches. The permeability of Chandler soils is rapid in the surface and subsurface layers and rapid to moderately rapid in the subsoil.

Tavares fine sand, 0 to 5 percent slopes (#46) is a nearly level to gently sloping, moderately well drained soil found on low ridges and knolls on the uplands. The surface layer of this soil type generally consists of very dark gray fine sand about 6 inches thick. The seasonal high water table for this soil type is at a depth of 40 to 80 inches for more than 6 months, and recedes to a depth of more than 80 inches during extended dry periods. Permeability of this soil type is very rapid throughout.

Tavares - Millhopper fine sands, 0 to 5 percent slopes (#47) are nearly level to gently sloping, moderately well drained soils found on low ridges and knolls on the uplands and on the flatwoods. Typically the surface layer of Tavares and Millhopper soils is dark grayish brown fine sand about 6 inches thick. The seasonal high water table for Tavares soil is at a depth of 40 to 72 inches for more than 6 months, and recedes to a depth of more than 80 inches during extended dry periods. The seasonal high water table for Millhopper soil is at a depth of 40 to 60 inches for 1 to 4 months, and recedes to a depth of 60 to 72 inches for 2 to 4 months. Permeability of Tavares soil is very rapid. Permeability of Millhopper soil is rapid in the surface and subsurface layers and is moderately rapid or moderate in the subsoil.

Pursuant to the Hydric Soils of Florida Handbook, Fourth Edition, March 2007, the Florida Association of Environmental Soil Scientists (FAESS) does not consider the main components or inclusions in either of the soil types associated with the site to be hydric.

LAND USE TYPES/VEGETATIVE COMMUNITIES

The Apopka 429 West Site currently supports seven (7) land use types/vegetative communities. These land use types/vegetative communities were identified utilizing the Florida Land Use, Cover and Forms Classification System, Level III (FLUCFCS, FDOT, January 2004) (Figure 5). The on-site upland land use types/vegetative communities are classified as Residential, Low Density (110), Religious (172), Open Land (190), Unimproved Pastures (212), Nurseries and Vineyards (240), Horse Farms (251), and Upland Hardwood Forests (420). No wetland/surface water land use types/vegetative communities exist within the limits of the site. The following provides a brief description of these on-site land use types/vegetative communities.

Uplands:

110 – Residential, Low Density

The project site contains multiple areas of occupied and abandoned single-family homes that are most consistent with the Residential, Low Density (110) FLUCFCS classification. Homesites differ across the site from 1950's wooden-built houses and mobile home units to block construction homes with associated barns, sheds, and driveways. Vegetative species observed within this land use type include laurel oak (*Quercus laurifolia*), live oak (*Quercus virginana*), chinaberry tree (*Melia azedarach*), slash pine (*Pinus elliottii*), common ragweed (*Ambrosia artemisiifolia*), caesarweed (*Urena lobata*), American beautyberry (*Callicarpa americana*), camphor tree (*Cinnamomum camphora*), lantana (*Lantana camara*), beggar ticks (*Bidens alba*), and Virginia creeper (*Parthenocissus quinquefolia*).

172 – Religious

The western portion of the site contains the Prince of Peace Church and surrounding mowed grass parking which is most consistent with the Religious (172) FLUCFCS classification. Vegetative species observed within this land use type include laurel oak (*Quercus laurifolia*), live oak (*Quercus virginana*), chinaberry tree (*Melia azedarach*), slash pine (*Pinus elliottii*), common ragweed (*Ambrosia artemisiifolia*), bahiagrass (*Paspalum notatum*), rose natalgrass (*Melinis repens*), field sandspur (*Cenchrus incertus*), roadgrass (*Eleocharis baldwinii*), and caesarweed (*Urena lobata*).

190 – Open Land

The southern extent of the site contains an open area adjacent to the SR 429 access road which is most consistent with the Open Land (190) FLUCFCS classification. This area is well maintained and consists predominately of bahiagrass (*Paspalum notatum*) and bermudagrass (*Cynodon dactylon*).

212 – Unimproved Pastures

A large central area within the subject site consist of previously grazed pastures and is most consistent with the Unimproved Pastures (212) FLUCFCS classification. These pastures were likely grazed by horses from the neighboring Horse Farm. Vegetative species observed within this land use type include laurel oak (*Quercus laurifolia*), live oak (*Quercus virginana*), chinaberry tree (*Melia azedarach*), earpod tree (*Enterolobium cyclocarpum*), slash pine (*Pinus elliottii*), winged sumac (*Rhus copallinum*), hercules club (*Zanthoxylum americanum*), saltbush (*Baccharis halimifolia*), American beautyberry (*Callicarpa americana*), common ragweed (*Ambrosia artemisiifolia*), bahiagrass (*Paspalum notatum*), rose natalgrass (*Melinis repens*), field sandspur (*Cenchrus incertus*), Virginia pepperweed (*Lepidium virginicum*), bracken fern (*Pteridium aquilinum* var. *pseudocaudatum*), pricklypear cactus (*Opuntia humifusa*), flattop goldenrod (*Euthamia graminifolia*), blue mistflower (*Conoclinium coelestinum*), bahiagrass (*Paspalum notatum*), bermudagrass (*Cynodon dactylon*), broomsedge (*Andropogon virginicus*), caesarweed (*Urena lobata*), purple passionflower (*Passiflora incarnata*), and muscadine grapevine (*Vitis rotundifolia*).

240 – Nurseries and Vineyards

Two areas within the subject site are most consistent with the Nurseries and Vineyards (240) FLUCFCS classification. Both areas are abandoned nurseries with remaining irrigation piping, pumps, and multiple plant growing plots. Vegetative species observed within this land use type include common ragweed (*Ambrosia artemisiifolia*), bahiagrass (*Paspalum notatum*), rose natalgrass (*Melinis repens*), field sandspur (*Cenchrus incertus*), Virginia pepperweed (*Lepidium virginicum*), bahiagrass (*Paspalum notatum*), bermudagrass (*Cynodon dactylon*), and muscadine grapevine (*Vitis rotundifolia*) with some scattered laurel oak (*Quercus laurifolia*), live oak (*Quercus virginana*), and slash pine (*Pinus elliottii*).

251 – Horse Farm

A central portion of the site contains an abandoned equestrian operation most consistent with the Horse Farm (251) FLUCFCS classification. This area contains a large stable with areas of fencing and corals. This central area connects through a gate to the Unimproved Pasture land uses. Vegetative species observed within this land use type include laurel oak (*Quercus laurifolia*), live oak (*Quercus virginana*), chinaberry tree (*Melia azedarach*), slash pine (*Pinus elliottii*), common ragweed (*Ambrosia artemisiifolia*), bahiagrass (*Paspalum notatum*), rose natalgrass (*Melinis repens*), Brazilian pepper (*Schinus terebinthifolia*), Virginia creeper (*Parthenocissus quinquefolia*), and muscadine grapevine (*Vitis rotundifolia*).

420 – Upland Hardwood Forests

The northern portion of the site contains a native community with scattered areas of disturbance from the historic agricultural land work. This area most consistent with the Upland Hardwood Forests (420) FLUCFCS classification. Vegetative species observed within this community type included laurel oak (*Quercus laurifolia*), live oak (*Quercus virginana*), turkey oak (*Quercus laevis*), longleaf pine (*Pinus palustris*), slash pine (*Pinus elliottii*), hercules club (*Zanthoxylum americanum*), common persimmon (*Diospyros virginiana*), winged sumac (*Rhus copallinum*), saw palmetto (*Serenoa repens*), gallberry (*Ilex glabra*), Adam's needle (*Yucca filamentosa*), common ragweed (*Ambrosia artemisiifolia*), narrowleaf silkgrass (*Pityopsis graminifolia*), pricklypear cactus (*Opuntia humifusa*), rose natalgrass (*Melinis repens*), American beautyberry (*Callicarpa americana*), broomsedge (*Andropogon virginicus*), lantana (*Lantana camara*), beggar ticks (*Bidens alba*), Virginia creeper (*Parthenocissus quinquefolia*), greenbriar (*Smilax* spp.), and muscadine grapevine (*Vitis* spp.).

WILDLIFE AND PROTECTED SPECIES

Using methodologies outlined in the Florida's Fragile Wildlife (Wood, 2001); Measuring and Monitoring Biological Diversity Standard Methods for Mammals (Wilson, et al., 1996); and Florida Fish and Wildlife Conservation Commission's (FFWCC's) Gopher Tortoise Permitting Guidelines (April 2008 - revised May 2017); an assessment for "listed" floral and faunal species was conducted at the site on March 17, 2020. This assessment included both direct observations and indirect evidence, such as tracks, burrows, tree markings, and vocalizations that indicated the presence of species observed. The assessment focused on species that are "listed" by the FFWCC's Official Lists - Florida's Endangered Species, Threatened Species and Species of Special Concern (December 2018) that have the potential to occur in Orange County (Table 1).

Reptiles and Amphibians:
brown anole (*Norops sagrei*)
eastern black racer (*Coluber constrictor*)
gopher tortoise (*Gopherus polyphemus*)
green anole (*Anolis carolinensis*)
six-lined racerunner (*Cnemidophorus sexlineatus sexlineatus*)

Birds:
Black Vulture (*Coragyps atratus*)
Blue Jay (*Cyanocitta cristata*)
Mourning Dove (*Zenaida macroura*)
Northern Cardinal (*Cardinalis cardinalis*)
Northern Mockingbird (*Mimus polyglottos*)
Pine Warbler (*Dendroica pinus*)
Red-shouldered Hawk (*Buteo lineatus*)

Mammals:
coyote (*Canis latrans*)
eastern gray squirrel (*Sciurus carolinensis*)
nine-banded armadillo (*Dasypus novemcinctus*)
northern raccoon (*Procyon lotor*)
southeastern pocket gopher (*Geomys pinetis*)
Virginia opossum (*Didelphis virginiana*)

One (1) of the above species, the gopher tortoise (*Gopherus polyphemus*), is listed in the FFWCC's Official Lists - Florida's Endangered Species, Threatened Species, and Species of Special Concern (December 2018). The following provides a brief description of particular wildlife species as they relate to the development of the site.

Gopher Tortoise (*Gopherus polyphemus*)
State Listed as "Threatened" by FFWCC

Currently the gopher tortoise (*Gopherus polyphemus*) is classified as a "Category 2 Candidate Species" by the U.S. Fish and Wildlife Service (USFWS), and as of September 2007 is classified as "Threatened" by FFWCC, and as "Threatened" by FCREPA. The basis of the "Threatened" classification by the FFWCC for the gopher tortoise is due to habitat loss and destruction of burrows. Gopher tortoises are commonly found in areas with well-drained soils associated with the pine flatwoods, pastures and abandoned orange groves. Several other protected species known to occur in Orange County have a possibility of occurring in this area, as they are gopher tortoise commensal species. These species include the eastern indigo snake (*Drymarchon corais couperi*), Florida mouse (*Podomys floridanus*), and the gopher frog (*Rana capito*). However, none of these species were observed during the survey conducted.

The FFWCC provides three (3) options for developers that have gopher tortoises on their property. These options include: 1) avoidance (i.e., 25-foot buffer around burrow), 2) preservation of habitat, and 3) off-site relocation. As such, resolution of the gopher tortoise issue will need to be permitted through the FFWCC prior to any on-site development activities.

Bald Eagle (*Haliaeetus leucocephalus*)
State protected by F.A.C. 68A-16.002 and federally protected by both the Migratory Bird Treaty Act (1918) and the Bald and Golden Eagle Protection Act (1940)

In August of 2007, the US Fish and Wildlife Service (USFWS) removed the Bald Eagle from the list of federally endangered and threatened species. Additionally, the Bald Eagle was removed from FFWCC's imperiled species list in April of 2008. Although the Bald Eagle is no longer protected under the Endangered Species Act, it is still protected under the Bald and Golden Eagle Protection Act, the Migratory Bird Treaty Act, and FFWCC's Bald Eagle rule (Florida Administrative Code 68A-16.002 Bald Eagle (*Haliaeetus Leuchocephalus*).

In May of 2007, the USFWS issued the National Bald Eagle Management Guidelines. In April of 2008, the FFWCC adopted a new Bald Eagle Management Plan that was written to closely follow the federal guidelines. In November of 2017, the FFWCC issued "A Species Action Plan for the Bald Eagle" in response to the sunset of the 2008 Bald Eagle Management Plan. Under the USFWS's management plans, buffer zones are recommended based on the nature and magnitude of the project or activity. The recommended protective buffer zone is 660 feet or less from the nest tree, depending on what activities or structures are already near the nest. As provided within the above referenced Species Action Plan, the USFWS is the regulating body responsible for issuing permits for Bald Eagles. In 2017, the need to obtain a State permit (FFWCC) for the take of Bald Eagles or their nests in Florida was eliminated following revisions to Rule 68A-16.002, F.A.C.. A USFWS Bald Eagle "Non-Purposeful Take Permit" is not needed for any activity occurring outside of the 660-foot buffer zone. No activities are permitted within 330 feet of a nest without a USFWS permit.

In addition to the on-site evaluation for listed species, BTC conducted a review of FFWCC's database and Audubon's Eagle Watch program database for recorded Bald Eagle nests within the surrounding 660 feet of the site. This review revealed that there are no Bald Eagle nests through the 2017-2018 nesting season, within 660 feet of the project site's boundaries. Thus, no developmental constraints are expected with respect to Bald Eagle nests.

CITY OF APOPKA HABITAT EVALUATION

The City of Apopka requires within its Land Development Code a series of environmental evaluation criteria. The attached tables review the rankings and evaluation criteria for the on-site land use types. The evaluation scores for each of the seven (7) land use types/vegetative communities identified for the site each ranked below a total individual value of 169 (see attached). When a site contains a listed species and the ranking for the site's land use type/vegetative community is less than 169, the applicant will address this listed species via coordination with the FFWCC prior to construction activities. It should be noted that the gopher tortoise (*Gopherus Polyphemus*), a FFWCC listed wildlife species, was identified within the limits of the Apopka 429 West Site during the wildlife assessments conducted by BTC.

As stated in the Apopka Land Development Code 5.02.04, when a site containing listed species receives a score of 169 or higher, the city shall require preservation through an easement of an area which will sustain a viable population. If the site ranks below 169, the City of Apopka shall allow relocation and/or mitigation measures of the identified species on a case by case basis. We trust the above assessment and attached tables address the City of Apopka's concerns regarding the environmental issues associated with the Apopka 429 West Site. Although the FFWCC listed gopher tortoise was observed within the limits of the property, this field assessment and wildlife

survey does not preclude other wildlife species from moving into the area or making use of the habitat in the future.

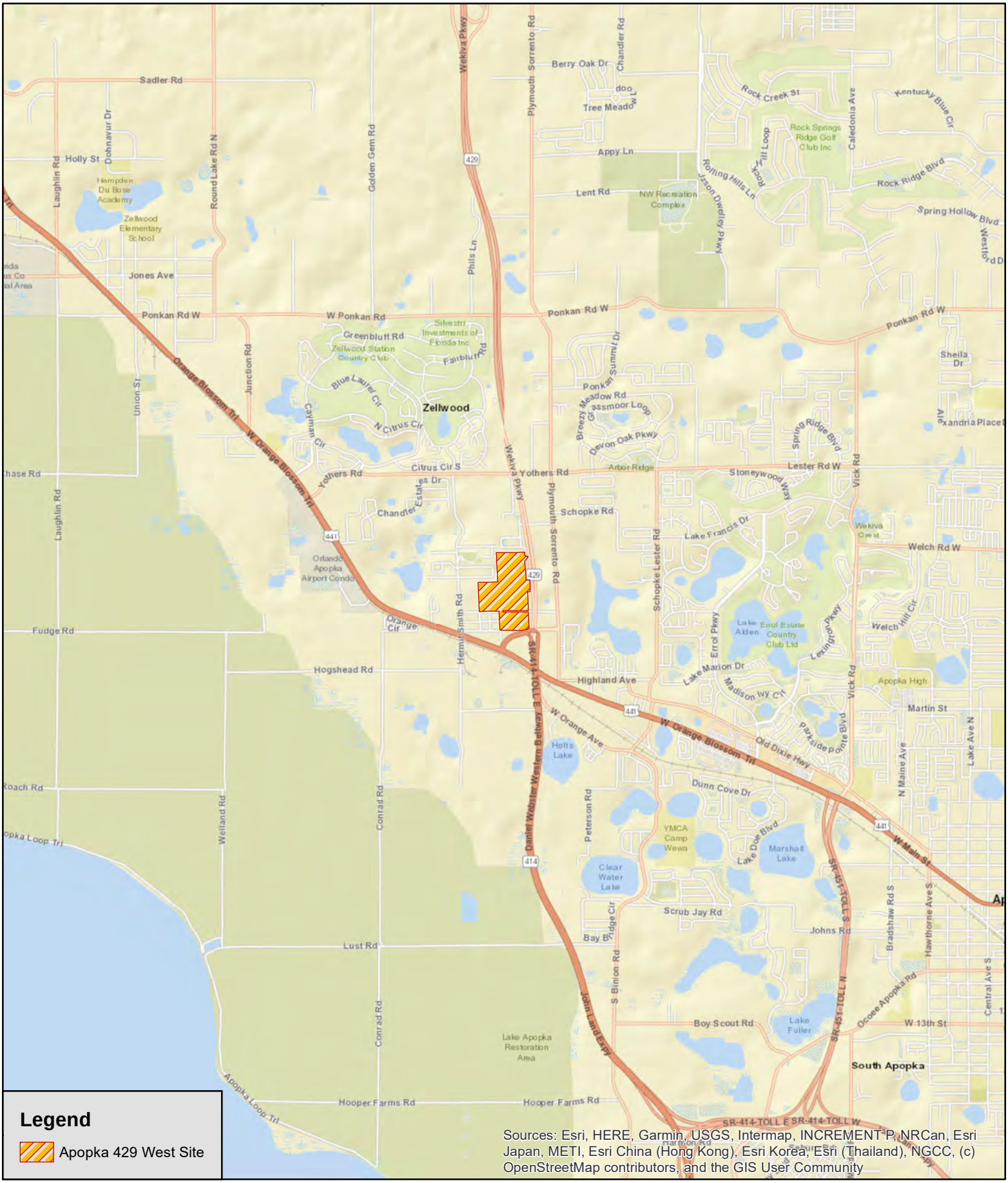
The environmental limitations described in this document are based on observations and technical information available on the date of the on-site evaluation. This report is for general planning purposes only. The limits of any on-site wetlands/surface waters can only be determined and verified through field delineation and/or on-site review by the pertinent regulatory agencies. The wildlife surveys conducted within the subject property boundaries do not preclude the potential for any listed species, as noted on Table 1 (attached), currently or in the future. Should you have any questions or require any additional information, please do not hesitate to contact our office at (407) 894-5969. Thank you.

Regards,

Spencer Clark
Field Biologist

John Miklos
President

attachments



Bio-Tech Consulting Inc.
Environmental and Permitting Services
3025 E. South Street Orlando, FL 32803
Ph: 407-894-5969 Fax: 407-894-5970
www.bio-techconsulting.com

Apopka 429 West Site
Orange County, Florida
Figure 1
Location Map

N
W E
S

6,000 Feet

Project #: 303-17
Produced B[illegible]C
Date: 3/31/2020

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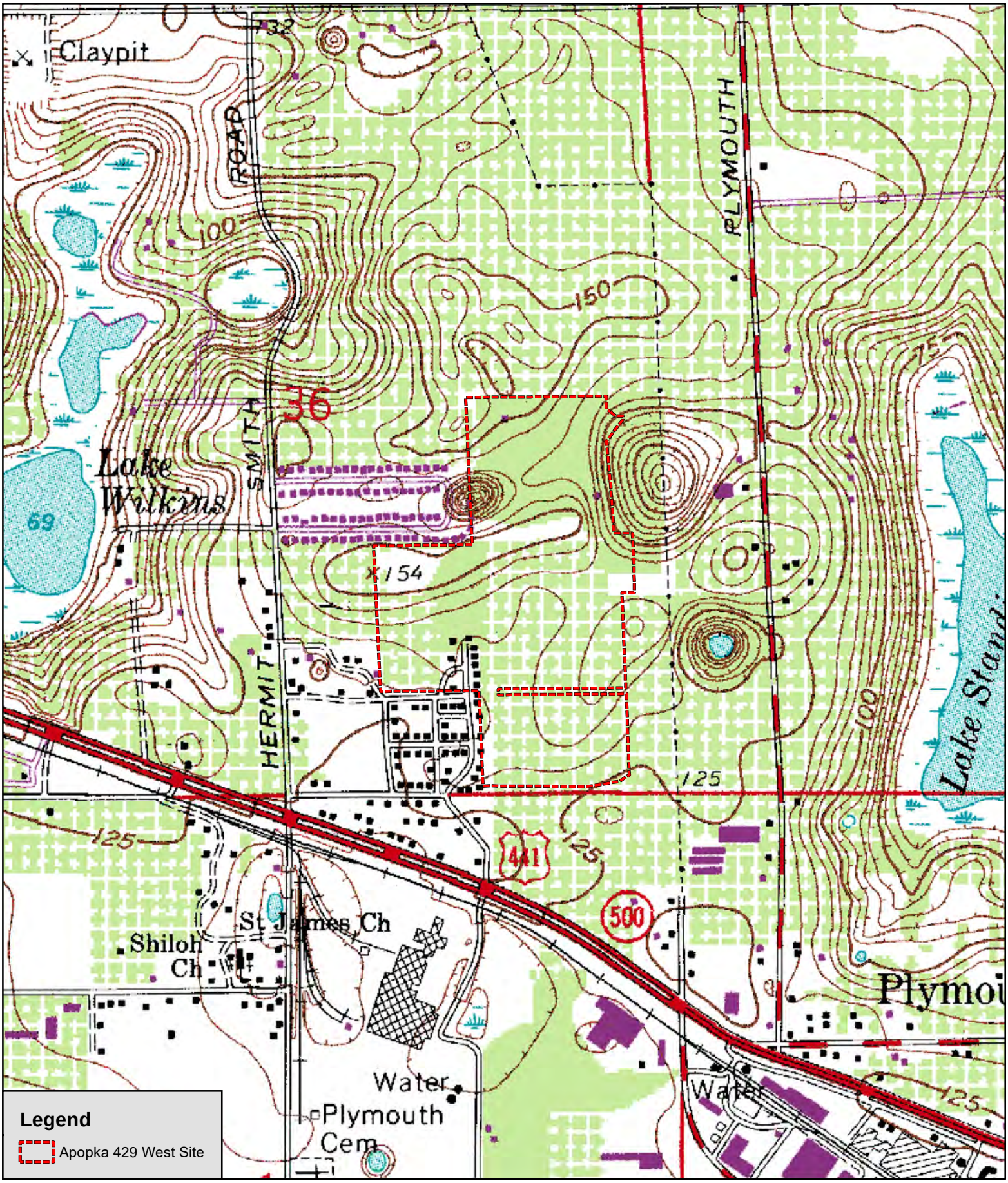
Apopka 429 West Site
Orange County, Florida
Figure 2
2019 Aerial Photograph Map

N
W E
S

480 Feet

Project #: 303-17
Produced B[illegible]C
Date: 3/31/2020



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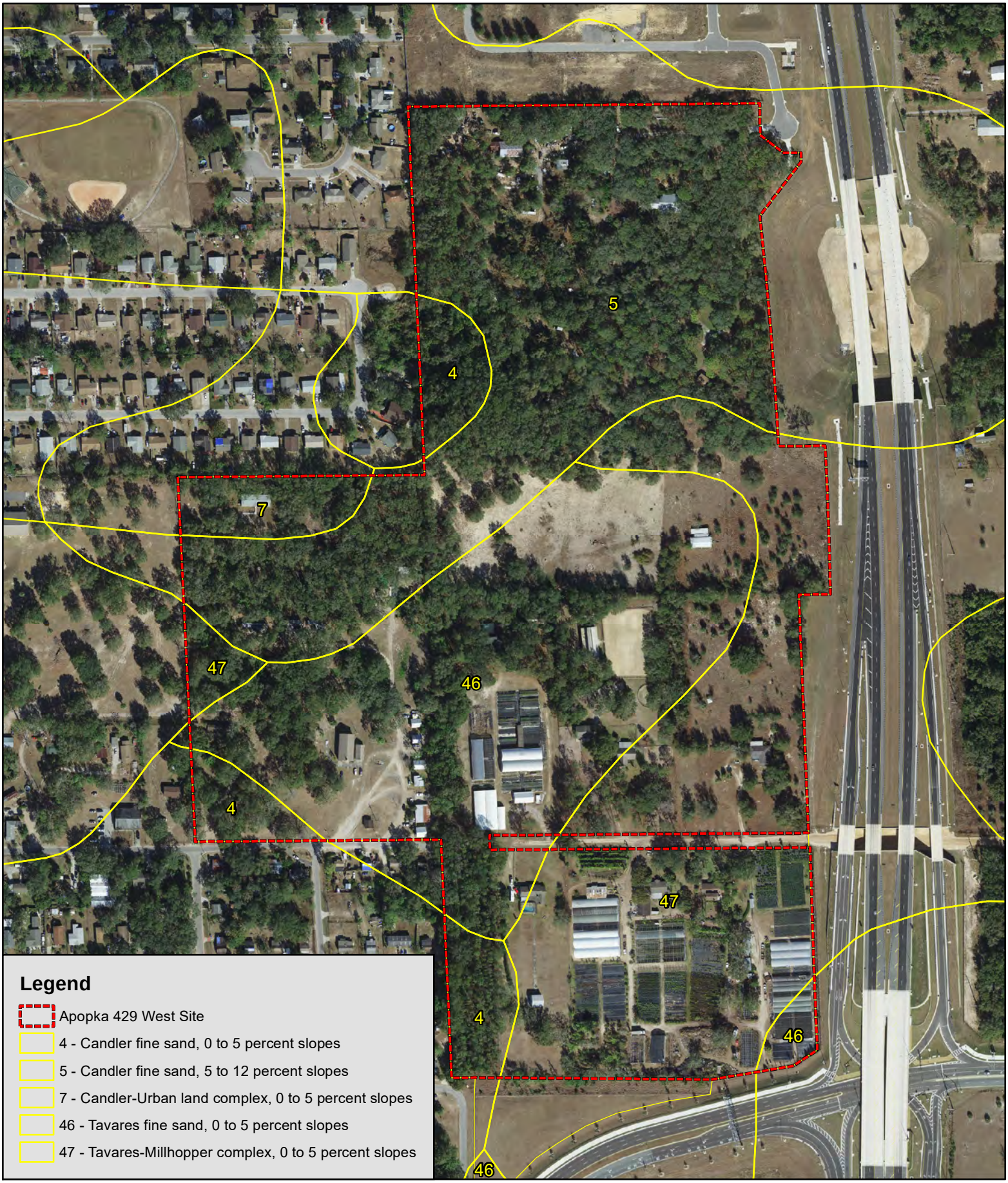
Apopka 429 West Site
Orange County, Florida
Figure 3
USGS Topographic Map

N
W E
S

1,200 Feet

Project #: 303-17
Produced B[illegible]C
Date: 3/31/2020



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Apopka 429 West Site
Orange County, Florida
Figure 4
USDA-NRCS Soils Map

N
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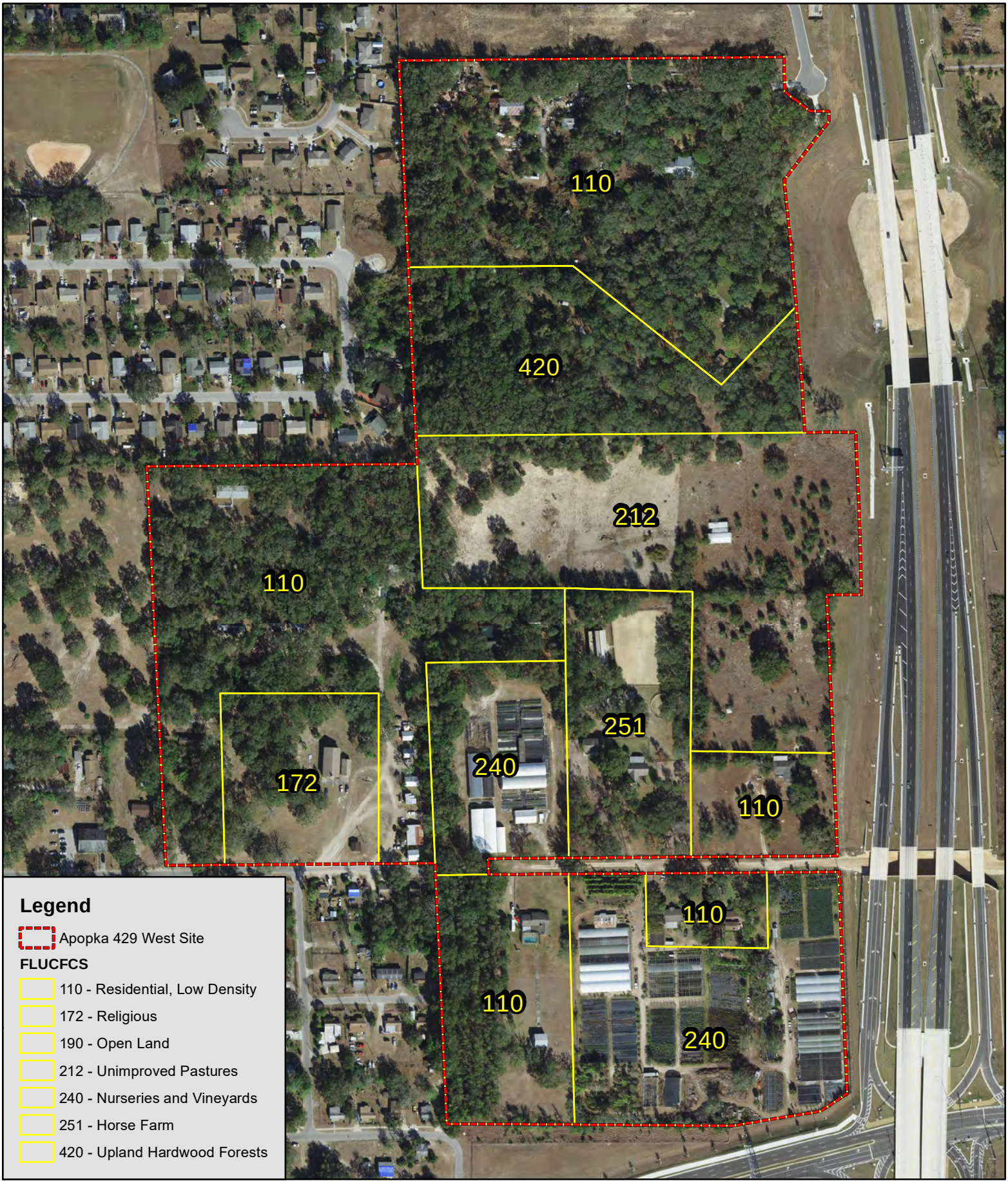
480 Feet

Project #: 303-17
Produced B[illegible]'C
Date: 3/31/2020



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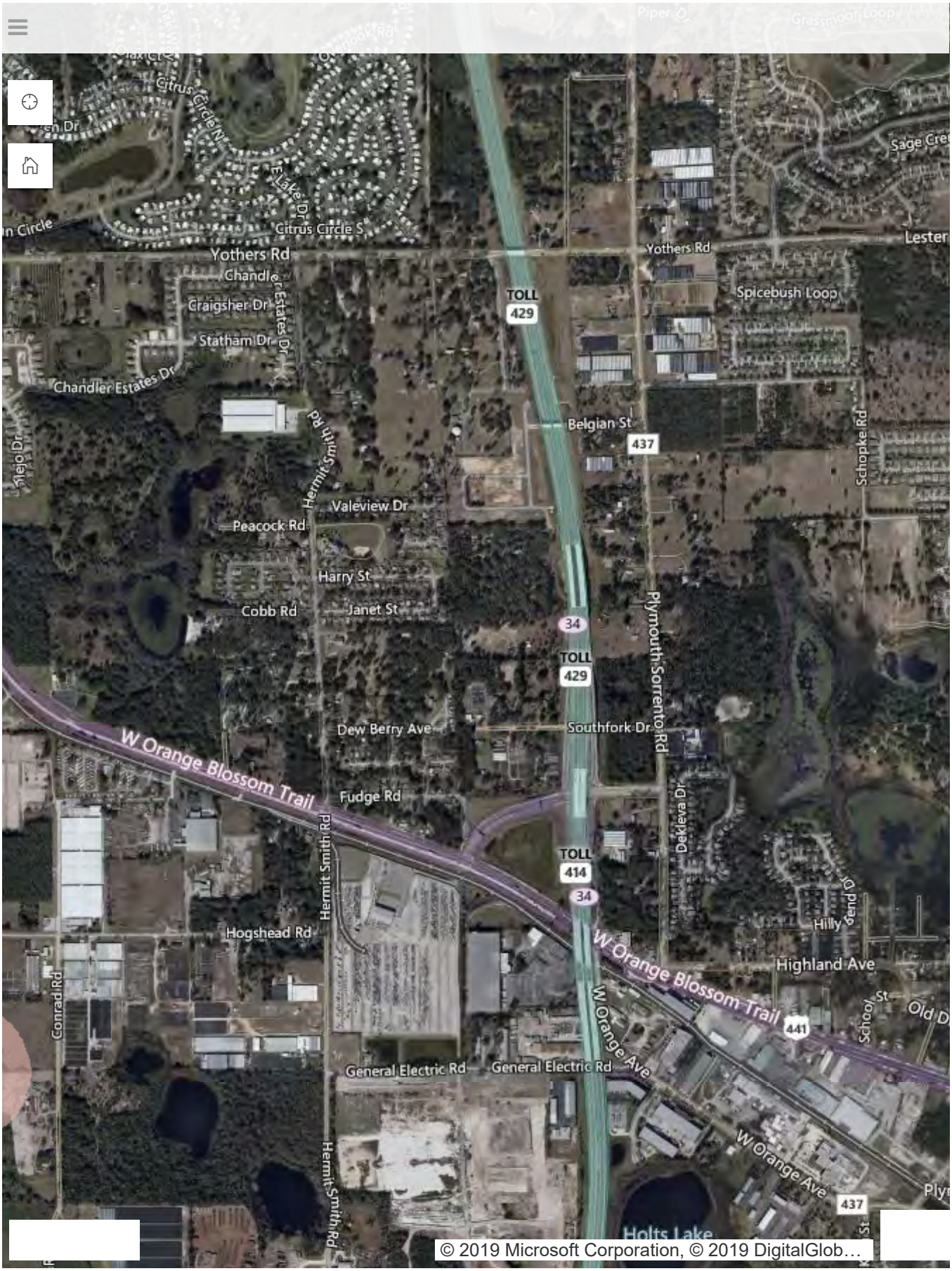
Apopka 429 West Site
Orange County, Florida
Figure 5
FLUCFCS Map

N
W E
S

440 Feet

Project #: 303-17
Produced B[illegible]C
Date: 3/31/2020


Citrus Circle N
Citrus Circle S
E Lake Dr
Yothers Rd
Chandler Estates Dr
Craigsher Dr
Statham Dr
Chandler Estates Dr
Hermit Smith Rd
Valeview Dr
Peacock Rd
Harry St
Cobb Rd
Janet St
TOLL 429
Yothers Rd
Spicebush Loop
Belgian St
437
Schopke Rd
34
TOLL 429
Plymouth Sorrento Rd
Dew Berry Ave
Southfork Dr
W Orange Blossom Trail
Fudge Rd
Dekleva Dr
TOLL 414
34
Hillyard Dr
Hogshead Rd
Highland Ave
W Orange Blossom Trail
441
School St
Conrad Rd
W Orange Ave
General Electric Rd
General Electric Rd
W Orange Ave
437
Holts Lake
© 2019 Microsoft Corporation, © 2019 DigitalGlob…

Apopka 429 West Site, Orange County, Florida
City of Apopka - Listed Species Habitat Evaluation

Community:	**Residential, Low Density (110)**		
Unit Value	**Rank**	**Residential, Low Density (110) Cover Type**	**Explanation**
15	1	Vegetative Community/ Land Use Type	Community not rare, sensitive, threatened, or endangered and not containing or likely to contain threatened or endangered species
60	3	Animal Species	Habitat contains or is likely to contain listed species the gopher tortoise
6	1	Manageability Feasibility/Potential	Site would have minimal management constraints
16	1	Ecological Viability	Low potential for viability of featured attribute(s)
0	0	Adjacency to Existing Publicly Owned Conservation Lands	Site non-adjacent
0	0	Historical/Archaeological Value	Site contains no historic, archaeological sites
60	2	Aquifer Recharge Potential	Aquifer recharge potential; high (soils excessively well drained)
8	1	Degree of Disturbance	Site highly disturbed
0	0	Wildlife Corridor Potential	Site not within or adjacent to wildlife corridor
165		**TOTAL**	

Apopka 429 West Site, Orange County, Florida
City of Apopka - Listed Species Habitat Evaluation

Community:	**Religious (172)**		
Unit Value	**Rank**	**Residential, Low Density (110) Cover Type**	**Explanation**
15	1	Vegetative Community/ Land Use Type	Community not rare, sensitive, threatened, or endangered and not containing or likely to contain threatened or endangered species
20	1	Animal Species	Habitat contains or is likely to contain no listed species
6	1	Manageability Feasibility/Potential	Moderate management constraints would exist
16	1	Ecological Viability	Low potential for viability of featured attribute(s)
0	0	Adjacency to Existing Publicly Owned Conservation Lands	Site non-adjacent
0	0	Historical/Archaeological Value	Site contains no historic, archaeological sites
60	2	Aquifer Recharge Potential	Aquifer recharge potential; high (soils excessively well drained)
8	1	Degree of Disturbance	Site highly disturbed
0	0	Wildlife Corridor Potential	Site not within or adjacent to wildlife corridor
125		**TOTAL**	

Apopka 429 West Site, Orange County, Florida
City of Apopka - Listed Species Habitat Evaluation

Community:	**Open Land (190)**		
Unit Value	**Rank**	**Residential, Low Density (110) Cover Type**	**Explanation**
15	1	Vegetative Community/ Land Use Type	Community not rare, sensitive, threatened, or endangered and not containing or likely to contain threatened or endangered species
20	1	Animal Species	Habitat contains or is likely to contain no listed species
6	1	Manageability Feasibility/Potential	Moderate management constraints would exist
16	1	Ecological Viability	Low potential for viability of featured attribute(s)
0	0	Adjacency to Existing Publicly Owned Conservation Lands	Site non-adjacent
0	0	Historical/Archaeological Value	Site contains no historic, archaeological sites
60	2	Aquifer Recharge Potential	Aquifer recharge potential; high (soils excessively well drained)
8	1	Degree of Disturbance	Site highly disturbed
0	0	Wildlife Corridor Potential	Site not within or adjacent to wildlife corridor
125		**TOTAL**	

Apopka 429 West Site, Orange County, Florida
City of Apopka - Listed Species Habitat Evaluation

Community:	**Unimproved Pastures (212)**		
Unit Value	**Rank**	**Residential, Low Density (110) Cover Type**	**Explanation**
15	1	Vegetative Community/ Land Use Type	Community not rare, sensitive, threatened, or endangered and not containing or likely to contain threatened or endangered species
60	3	Animal Species	Habitat contains or is likely to contain listed species the gopher tortoise
6	1	Manageability Feasibility/Potential	Moderate management constraints would exist
16	1	Ecological Viability	Low potential for viability of featured attribute(s)
0	0	Adjacency to Existing Publicly Owned Conservation Lands	Site non-adjacent
0	0	Historical/Archaeological Value	Site contains no historic, archaeological sites
60	2	Aquifer Recharge Potential	Aquifer recharge potential; high (soils excessively well drained)
8	1	Degree of Disturbance	Site highly disturbed
0	0	Wildlife Corridor Potential	Site not within or adjacent to wildlife corridor
165		**TOTAL**	

Apopka 429 West Site, Orange County, Florida
City of Apopka - Listed Species Habitat Evaluation

Community:	**Nurseries and Vineyards (240)**		
Unit Value	**Rank**	**Residential, Low Density (110) Cover Type**	**Explanation**
15	1	Vegetative Community/ Land Use Type	Community not rare, sensitive, threatened, or endangered and not containing or likely to contain threatened or endangered species
20	1	Animal Species	Habitat contains or is likely to contain no listed species
6	1	Manageability Feasibility/Potential	Moderate management constraints would exist
16	1	Ecological Viability	Low potential for viability of featured attribute(s)
0	0	Adjacency to Existing Publicly Owned Conservation Lands	Site non-adjacent
0	0	Historical/Archaeological Value	Site contains no historic, archaeological sites
60	2	Aquifer Recharge Potential	Aquifer recharge potential; high (soils excessively well drained)
8	1	Degree of Disturbance	Site highly disturbed
0	0	Wildlife Corridor Potential	Site not within or adjacent to wildlife corridor
125		**TOTAL**	

Apopka 429 West Site, Orange County, Florida
City of Apopka - Listed Species Habitat Evaluation

Community:	**Horse Farm (251)**		
Unit Value	**Rank**	**Residential, Low Density (110) Cover Type**	**Explanation**
15	1	Vegetative Community/ Land Use Type	Community not rare, sensitive, threatened, or endangered and not containing or likely to contain threatened or endangered species
60	3	Animal Species	Habitat contains or is likely to contain listed species the gopher tortoise
6	1	Manageability Feasibility/Potential	Moderate management constraints would exist
16	1	Ecological Viability	Low potential for viability of featured attribute(s)
0	0	Adjacency to Existing Publicly Owned Conservation Lands	Site non-adjacent
0	0	Historical/Archaeological Value	Site contains no historic, archaeological sites
60	2	Aquifer Recharge Potential	Aquifer recharge potential; high (soils excessively well drained)
8	1	Degree of Disturbance	Site highly disturbed
0	0	Wildlife Corridor Potential	Site not within or adjacent to wildlife corridor
165		**TOTAL**	

Apopka 429 West Site, Orange County, Florida
City of Apopka - Listed Species Habitat Evaluation

Community:	**Upland Hardwood Forests (420)**		
Unit Value	**Rank**	**Residential, Low Density (110) Cover Type**	**Explanation**
15	1	Vegetative Community/ Land Use Type	Community not rare, sensitive, threatened, or endangered and not containing or likely to contain threatened or endangered species
60	3	Animal Species	Habitat contains or is likely to contain listed species the gopher tortoise
6	1	Manageability Feasibility/Potential	Moderate management constraints would exist
16	1	Ecological Viability	Low potential for viability of featured attribute(s)
0	0	Adjacency to Existing Publicly Owned Conservation Lands	Site non-adjacent
0	0	Historical/Archaeological Value	Site contains no historic, archaeological sites
60	2	Aquifer Recharge Potential	Aquifer recharge potential; high (soils excessively well drained)
8	1	Degree of Disturbance	Site highly disturbed
0	0	Wildlife Corridor Potential	Site not within or adjacent to wildlife corridor
165		**TOTAL**	

CITY OF APOPKA
PLANNING COMMISSION

X	PUBLIC HEARING	MEETING OF:	June 9, 2020
___	SITE PLAN	FROM:	Community Development
___	SPECIAL REPORTS	EXHIBITS:	Land Use Report
___	OTHER:		Parcel Table
			Vicinity Map
			Future Land Use Map
			Adjacent Zoning Map
			Adjacent Uses Map
			Property Sketches/Descriptions
			Concept Plan
			Applicant's Supporting Documents

SUBJECT: **COMPREHENSIVE PLAN – LARGE SCALE - FUTURE LAND USE AMENDMENT – FLORIDIAN TOWN CENTER (RESIDENTIAL)**

REQUEST: **LARGE SCALE - FUTURE LAND USE AMENDMENT**
FROM: "COUNTY" RURAL
TO: "CITY" HIGH DENSITY RESIDENTIAL - 15 (0-15 DU/AC)

SUMMARY:

OWNERS:	Collier Benge Joint Venture LLC, Williams Family Trust, Eugene and Willie Williams
APPLICANT:	Andrew McCown, GAI Consultants, Inc.
LOCATION:	North of West Orange Blossom Trail; west of State Route 429
PARCEL ID #(S):	See Parcel Table
EXISTING USE:	See Parcel Table
CURRENT ZONING:	"City" Transitional (T)
PROPOSED ZONING:	Planned Development
MAXIMUM ALLOWABLE DEVELOPMENT:	EXISTING FLU: 5 Dwelling Units (Orange County Rural, 1 DU/10 AC) PROPOSED FLU: 753 Dwelling Units (Residential High, 0-15 DU/AC)
TRACT SIZE:	50.2 +/- acres

DISTRIBUTION

Mayor Nelson	Finance Director	Public Services Director
Commissioners	HR Director	Recreation Director
City Administrator	IT Director	City Clerk
Community Development Director	Police Chief	Fire Chief

ADDITIONAL COMMENTS: The subject properties were annexed into the City on December 19, 2018 via Ordinance Numbers 2692, 2693, and 2694. The proposed Large-Scale Future Land Use Amendment is being requested for 14 properties, listed on the "Parcel Table" and also depicted in the "Property Sketches/Descriptions". Pursuant to Florida law, properties ten acres or more are required to undergo review by State planning agencies.

In conjunction with state requirements, staff has analyzed the proposed amendment and determined that adequate public facilities exist to support this land use change (see attached Land Use Report). Based on the findings of the Land Use report, the proposed FLUM amendment is compatible with the surrounding and nearby land uses and the character of the general area.

As depicted in the Concept Plan, the applicant has a desire to develop the subject area as a horizontal, mixed-use development. The Concept Plan depicts multi-family apartments, an assisted living facility, a YMCA, retail areas, and more. This proposed, conceptual development is commonly referred to as "The Floridian Town Center". Additional information supporting the proposed Future Land Use Designation is provided by the applicant and provided in the exhibits.

COMPREHENSIVE PLAN COMPLIANCE: A proposed FLUM Designation of High Density Residential – 15 (Policy 3.1.h, Future Land Use Element) is compatible with the designations assigned to abutting properties. The FLUM application covers approximately 50.2 acres.

The primary use shall be residential dwelling units up to 15 dwelling units per acre; elementary schools; middle schools, high schools; supporting infrastructure of less than five acres.

Special exception uses shall include:

(1) Institutional uses of ten acres or less;

(2) Supporting infrastructure and public facilities of five acres or more;

(3) Horticultural nurseries as a primary use;

Planned Development uses may include:

(1) All primary uses

(2) All special exception uses

(3) Retail commercial uses at a rate not in excess of 50 square feet of gross floor area per residential unit in the PUD. Commercial uses must be completely internalized within the PUD.

(4) Other uses deemed compatible with and complementary to the other proposed master planned uses and the surrounding neighborhoods

SCHOOL CAPACITY REPORT: An executed capacity enhancement agreement or a letter of capacity determination with Orange County Public Schools will be required prior to adoption of the future land use amendment.

ORANGE COUNTY NOTIFICATION: The JPA requires the City to notify the County 30 days before any public hearing or advisory board. The City properly notified Orange County on May 7, 2020.

PUBLIC HEARING SCHEDULE:
June 9, 2020- Planning Commission (5:30 pm)
July 1, 2020- City Council (7:00 pm) – Transmittal

DULY ADVERTISED:
May 29, 2020 – Public Notice and Notification (Apopka Chief), letters, poster

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RECOMMENDATION ACTION:

The **Development Review Committee** finds the proposed amendment consistent with the Comprehensive Plan and compatible with the character of the surrounding area, and recommends transmittal of the change in Future Land Use from "County" Rural to "City" High Density Residential - 15 (0-15 du/ac) for the properties owned by Collier Benge Joint Venture LLC, Williams Family Trust, Eugene and Willie Williams.

Recommended Motion: Find the proposed amendment consistent with the Comprehensive Plan and compatible with the character of the surrounding area, and recommend transmittal of the Future Land Use Map designation from "County" Rural to High Density Residential - 15 (0-15 du/ac) to the Florida Department of Economic Opportunity.

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.

LAND USE REPORT

I. RELATIONSHIP TO ADJACENT PROPERTIES:

Direction	***Future Land Use***	***Zoning***	***Present Use(s)***
North (City and County)	"City" Residential Low Suburban and "County" Rural	"City" RSF-1A and "County" R-1	Stanton Ridge (undeveloped) and Plymouth Hills Subdivisions
East (City and County)	"City" Residential Low Suburban and Commercial and "County" Rural and Low Density Residential	"City" C-N and "County" A-1	State Route 429, Woodlands, and Single-Family Homes
South (City & County)	"City" Mixed Use & "County" Rural	"City" MU-ES-GT and "County" A-1	State Route 429 Connector Road and Morrisons Subdivision
West (County)	"County" Rural	"County" A-1	Plymouth Hills and Morrisons Subdivision, Place of Worship

II. LAND USE ANALYSIS

North: Abutting the subject properties to the north is the Stanton Ridge Subdivision, which was purchased by Central Florida Expressway Authority. The Stanton Ridge subdivision is undeveloped. Also to the north is the un-incorporated, Plymouth Hills subdivision.

West: The Morrisons and Plymouth Hills Subdivisions, along with the Shiloh Missionary Baptist Church are west-adjacent of the subject properties.

South: To the south is the State Route 429 Connector Road, which connects W. Orange Blossom Trail and Plymouth Sorrento Road to the State Route 429 Interchange.

East: To the east is the State Route 429. Beyond State Route 429 are woodlands, single family homes, and Plymouth Sorrento Road.

The subject area, 50.2 acres, is eligible for the "High Density Residential – 25" Future Land Use designation, in accordance with Ordinance No. 2747, approved on May 6, 2020. This designation allows up to 25 dwelling units per acre, however, the applicant opted to apply for the "High Density Residential – 15" Future Land Use. This designation permits up to 15 dwelling units per acre.

Other Information:

Wekiva River Protection Area: No
Area of Critical State Concern: No
DRI / FQD: No

Wekiva Parkway and Protection Act: The proposed amendment has been evaluated against the adopted Wekiva Study Area Comprehensive Plan policies. While located within the Wekiva River Basin Study Area, the subject property is not located within the Protection Area. The proposed amendment is consistent with the adopted mandates and requirements. The proposed Future Land Use Map (FLUM) amendment has been reviewed against the best available data, with regard to aquifer and groundwater resources. The City of Apopka's adopted Comprehensive Plan addresses aquifer recharge and stormwater run-off through the following policies:

- Future Land Use Element, Policies 4.16, 14.4, 15.1, 16.2 and 18.2
- Infrastructure Element, Policies 1.5.5, 4.2.7, 4.4, 4.4.1, 4.4.2 and 4.4.3
- Conservation Element, Policy 3.18

Karst Features: The Karst Topography Features Map from the Florida Department of Environmental Protection shows that karst features are within the vicinity of this property. At the time of master plan or development plan application, the developer will need to address soils conditions and evaluate the site for presence of karst features.

Analysis of the character of the Property: The subject properties consist of woodlands, single-family homes, a place of worship and nurseries.

Analysis of the relationship of the amendment to the population projections: The proposed future land use designation for the subject area is High Density Residential - 15 (0 – 15 du/ac). A change to this designation will generate an estimated population increase up to 2,002 persons.

CALCULATIONS:

EXISTING: "County" Rural (1 dwelling unit/10 acres, for 50.2 acres) = 5 dwelling units
5 dwelling units x 2.659 persons per household = 13 persons

PROPOSED: "City" High Density Residential – 15 (15 dwelling units per acre, at 50.2 acres) = 753 dwelling units
753 dwelling units x 2.659 persons per household = 2,002 persons

Housing Needs: This amendment will not negatively impact the housing needs as projected in the Comprehensive Plan.

Habitat for species listed as endangered, threatened or of special concern: Per policy 4.1 of the Conservation Element, a habitat study is required for developments ten (10) acres or more in size. This site is greater than ten acres. A habitat study will be required at the time of a development plan application.

Transportation: The City of Apopka is a Transportation Concurrency Exception Area. Refer to Chapter 3 of the City of Apopka 2010 Comprehensive Plan.

Potable Water, Reclaimed Water & Sanitary Sewer Analysis: The subject property is located within the City of Apopka service area for potable water, reclaimed water and sanitary service.

Sanitary Sewer Analysis

1. Facilities serving the site; current LOS; and LOS standard: None; 81 GPD/Capita; 81 GPD/Capita, 90 GPD/1,000 sf

If the site is not currently served, please indicate the designated service provider: City of Apopka

2. Projected total demand under existing designation: 1,053 GPD

3. Projected total demand under proposed designation: 162,162 GPD

4. Capacity available: Yes

5. Projected LOS under existing designation: 81 GPD/Capita

6. Projected LOS under proposed designation: 81 GPD/Capita, 90 GPD/1,000 sf

7. Improvement/expansions already programmed or needed as a result if proposed amendment: TBD

Potable Water Analysis

1. Facilities serving the site; current LOS; and LOS standard: None; 162 GPD/Capita ; 135 GPD/Capita, 200 GPD/1,000 sf

If the site is not currently served, please indicate the designated service provider: City of Apopka

2. Projected total demand under existing designation: 2,106 GPD

3. Projected total demand under proposed designation: 27,027 GPD

4. Capacity available: Yes

5. Projected LOS under existing designation: 162 GPD/Capita

6. Projected LOS under proposed designation: 135 GPD/Capita, 200 GPD/1,000 sf

7. Improvement/expansions already programmed or needed as a result of the proposed amendment: TBD

8. Parcel located within the reclaimed water service area: Yes

Solid Waste

1. Facilities serving the site: City of Apopka

2. If the site is not currently served, please indicate the designated service provider: City of Apopka

3. Projected LOS under existing designation: 4 lbs/ day /Capita

4. Projected LOS under proposed designation: 4 lbs / day /Capita, 4 lbs / day / 1,000 sf

5. Improvement/expansions already programmed or needed as a result of the proposed amendment: TBD

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

Infrastructure Information

Water treatment plant permit number: CUP No. 3217

Permitting agency: St. John's River Water Management District

Permitted capacity of the water treatment plant(s): 24.141 MGD

Total design capacity of the water treatment plant(s): 33.696 MGD

Availability of distribution lines to serve the property: Yes

Availability of reuse distribution lines available to serve the property: Yes

Drainage Analysis

1. Facilities serving the site:

2. Projected LOS under existing designation:

3. Projected LOS under proposed designation:

4. Improvement/expansion: On site retention / detention ponds

Recreation

1. Facilities serving the site; LOS standard: City of Apopka Parks System ; 3 acre / 1000 capita

2. Projected facility under existing designation: 0.04 acres

3. Projected facility under proposed designation: 6 acres

4. Improvement/expansions already programmed or needed as a result of the proposed amendment: None

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

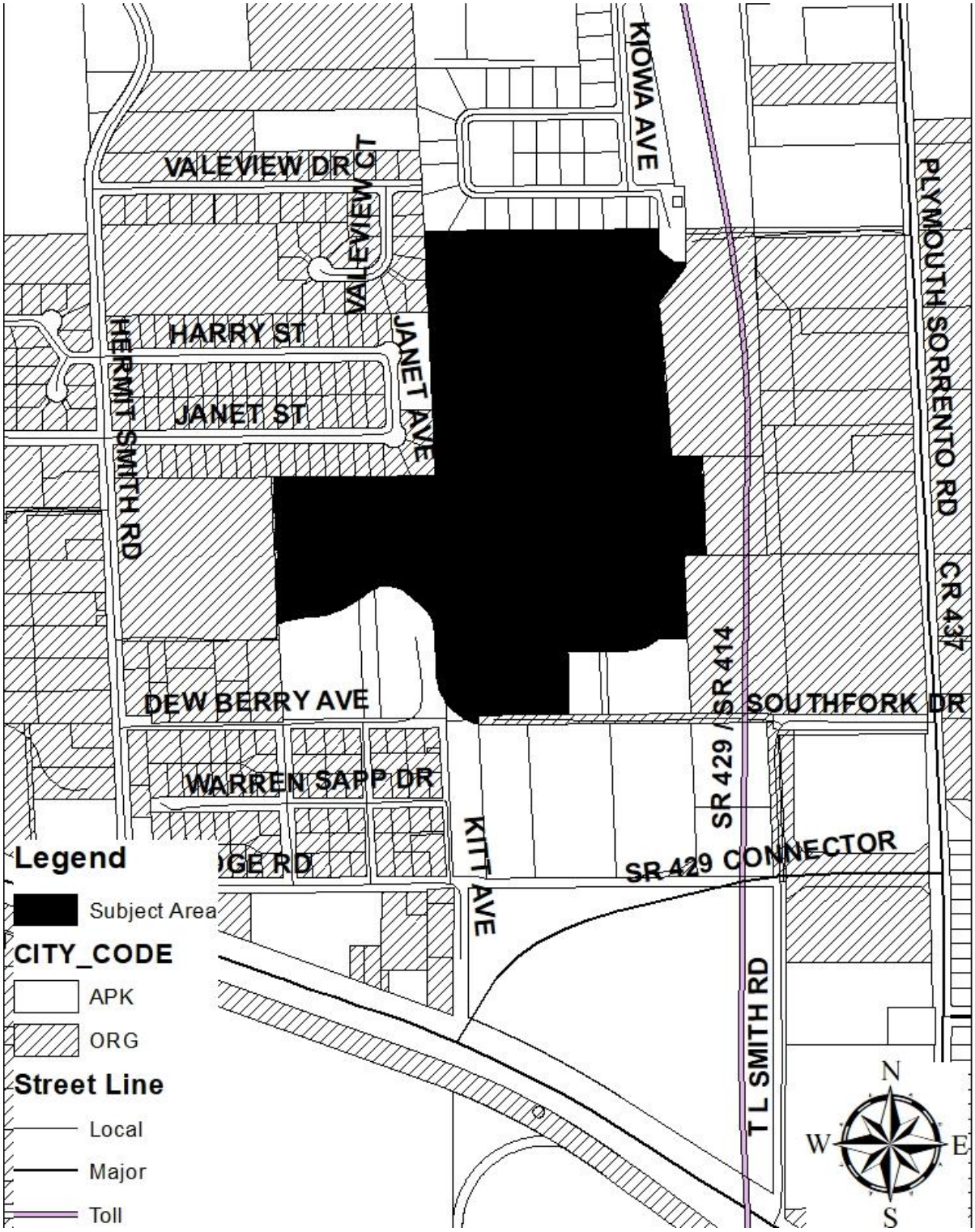
PARCEL OWNERSHIP TABLE

	Parcel ID	Property Owner	Existing Use
1	27-20-36-0000-00-074	Collier Benge Land Joint Venture LLC	Vacant
2	27-20-36-0000-00-048	Collier Benge Land Joint Venture LLC	Manufactured Home
3	27-20-36-0000-00-085	Williams Family Trust	Vacant
4	27-20-36-0000-00-066	Eugene and Willie Williams	Manufactured Home
5	27-20-36-0000-00-083	Williams Family Trust	Single Family Home
6	27-20-36-0000-00-068	Collier Benge Land Joint Venture LLC	Vacant
7	28-21-06-7172-16-020	Collier Benge Land Joint Venture LLC	Single Family Home
8	28-21-06-7172-16-040	Collier Benge Land Joint Venture LLC	Single Family Home and Nursery
9	28-21-06-7172-16-030	Collier Benge Land Joint Venture LLC	Single Family Home
10	27-20-36-0000-00-047	Williams Family Trust	Place of Worship
11	27-20-36-0000-00-052	Collier Benge Land Joint Venture LLC	Manufactured Home
12	36-20-27-0000-00-093	Collier Benge Land Joint Venture LLC	Single Family Home
13	36-20-27-0000-00-075	Collier Benge Land Joint Venture LLC	Single Family Home
14	06-21-28-7172-16-051	Collier Benge Land Joint Venture LLC	Vacant

N

Floridian Town Center (Residential)
Proposed Large Scale Future Land Use Amendment:
From: "County" Rural
To: "City" High Density Residential – 15
Acreage: 50.2 +/-

VICINITY MAP



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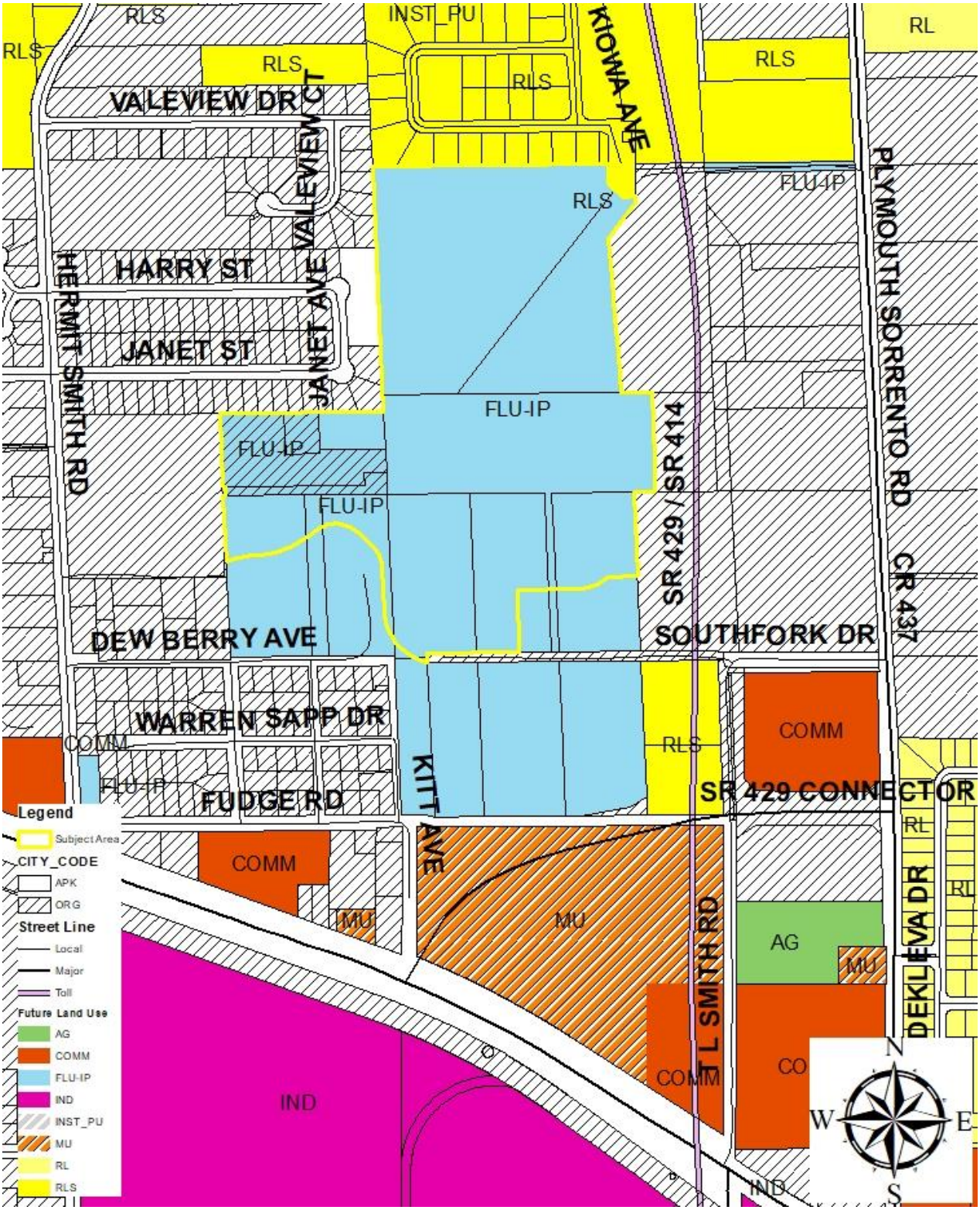
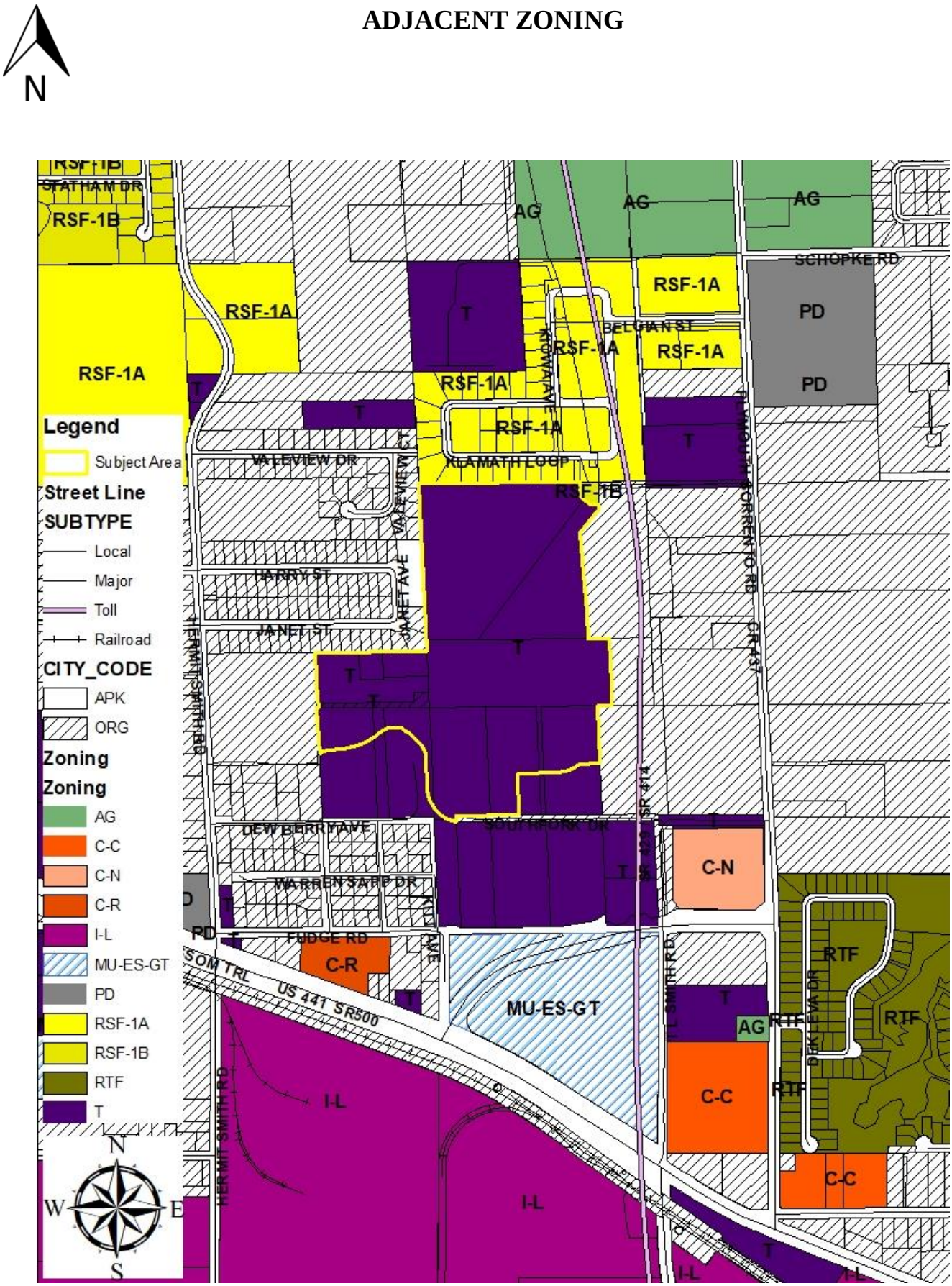
FUTURE LAND USE MAP



ADJACENT ZONING



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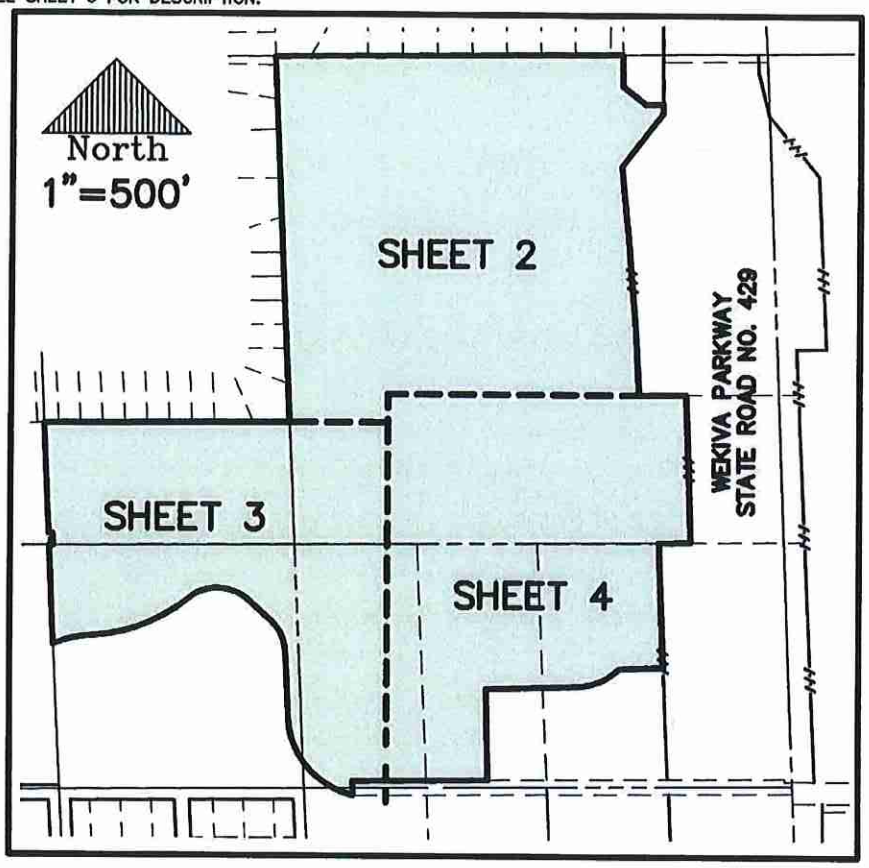
ADJACENT USES

SKETCH OF DESCRIPTION

SEE SHEET 1 FOR NOTES, LEGEND AND KEY MAP.
SEE SHEETS 2–4 FOR SKETCH.
SEE SHEET 5 FOR LINE AND CURVE TABLES.
SEE SHEET 6 FOR DESCRIPTION.



KEY MAP

LEGEND

——//——	LIMITED ACCESS RIGHT-OF-WAY
SEC 36-20-27	SECTION-TOWNSHIP-RANGE
L1	LINE NUMBER (SEE TABLE)
C1	CURVE NUMBER (SEE TABLE)
PC	POINT OF CURVATURE
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
NT	NON-TANGENT
R/W	RIGHT-OF-WAY
ORB	OFFICIAL RECORDS BOOK
PB	PLAT BOOK
PG	PAGE
PGS	PAGES
(P)	PER PLAT
N'LY	NORTHERLY
S'LY	NORTHERLY
S.R.	STATE ROAD
U.S.	UNITED STATES

NOTES:

- This is not a survey.
- Not valid without the original signature and seal of a Florida licensed surveyor and mapper.
- Bearings based on the South line of STANTON RIDGE, as recorded in Plat Book 99, Page 131 through 134, of the Public Records of Orange County, Florida, being S89°28'53"W, relative to the Florida State Plane Coordinate System, Florida East Zone, 1983 North American datum, 2011 adjustment.
- Lands shown hereon were not abstracted for rights-of-way, easements, ownership or other instruments of record by this firm.
- No title opinion or abstract of matters affecting title or boundary to the subject property or those of adjoining land owners have been provided. It is possible there are deeds of record, unrecorded deeds or other instruments which could affect the boundaries or use of the subject property.
- This Sketch of Description does not depict any easements of record that may be within or adjoining the lands described hereon.
- The configuration of this sketch of description is based on information provided by the Client or Client's representative to DWMA.

PREPARED FOR:

COLLIER–BENGE JOINT VENTURE, LLC

THE FLORIDIAN – HIGH DENSITY RESIDENTIAL PARCEL

DATE	BY	DESCRIPTION

REVISIONS

DONALD W. McINTOSH ASSOCIATES, INC.
ENGINEERS PLANNERS SURVEYORS
2200 PARK AVENUE NORTH, WINTER PARK, FLORIDA 32789 (407) 644-4068
CERTIFICATE OF AUTHORIZATION NO. LB68

DONALD W. McINTOSH ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. LB68

Robert "Tyler" Sears March 26, 2020
Florida Registered Surveyor and Mapper
Certificate No. 6950
NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

DRAWN BY: BW	CHECKED BY: TS	JOB NO.	SCALE	SHEET 1
DATE: 3/2020	DATE: 3/2020	18161	1"=500'	OF 6

Printed: Thu 26-Mar-2020 – 09:05AM
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CS# 19-133(1

SKETCH OF DESCRIPTION

SEE SHEET 1 FOR NOTES, LEGEND AND KEY MAP.
SEE SHEETS 2–4 FOR SKETCH.
SEE SHEET 5 FOR LINE AND CURVE TABLES.
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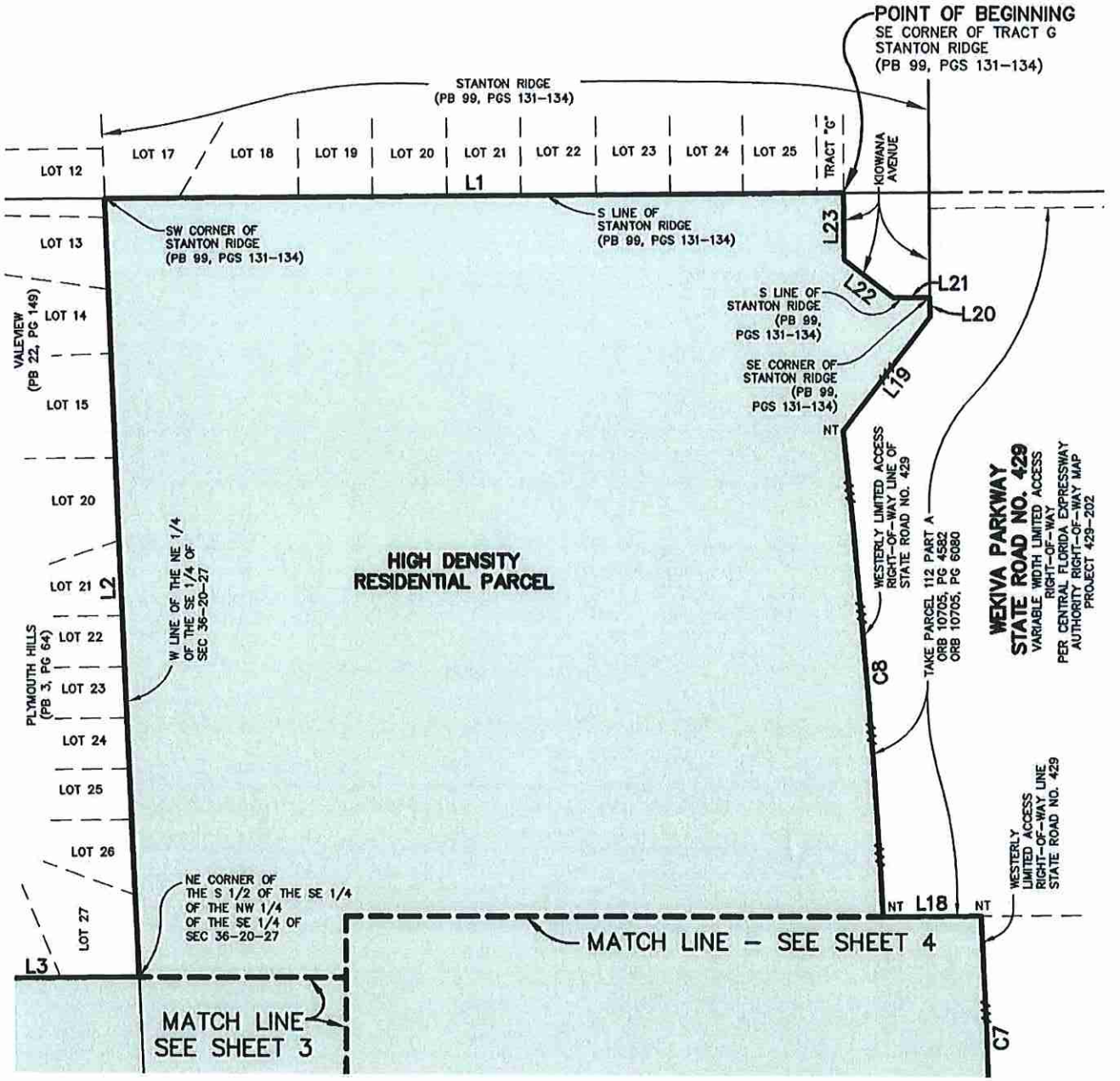
200' 0 200'
SCALE 1"=200'

North



PREPARED FOR:

COLLIER–BENGE JOINT VENTURE, LLC

THE FLORIDIAN – HIGH DENSITY RESIDENTIAL PARCEL

The features and linework shown hereon are relative to Florida State Plane Coordinate System, Florida East zone, 1983 North American Datum, 2011 adjustment average combined scale factor: 0.99997293 (1.00002707073). All dimensions are Grid dimensions in U.S. Survey Feet, based on said Florida State Plane Coordinate System, Florida East zone, 1983 North American Datum, 2011 adjustment.

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DATE: 3/2020	DATE: 3/2020	18161	1"=200'	OF 6

Printed: Thu 26–Mar–2020 – 09:05AM
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CS# 19–133(

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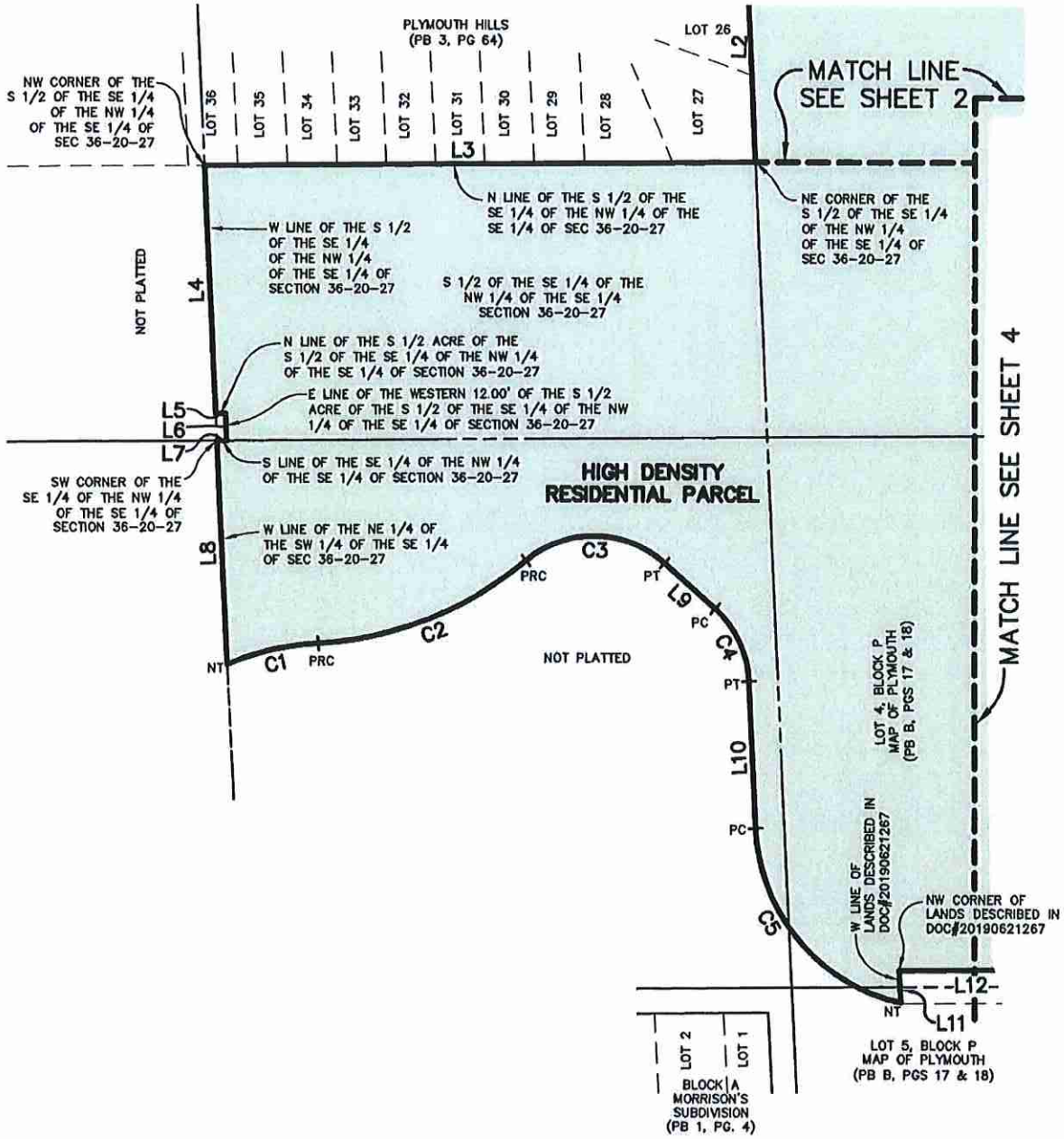
SEE SHEET 5 FOR LINE AND CURVE TABLES.
SEE SHEET 6 FOR DESCRIPTION.

200' 0 200'
SCALE 1"=200'

North



PREPARED FOR:

COLLIER–BENGE JOINT VENTURE, LLC

THE FLORIDIAN – HIGH DENSITY RESIDENTIAL PARCEL

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DATE: 3/2020	DATE: 3/2020	18161	1"=200'	OF 6

Printed: Thu 26-Mar-2020 – 09:05AM
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CS# 19-133(1

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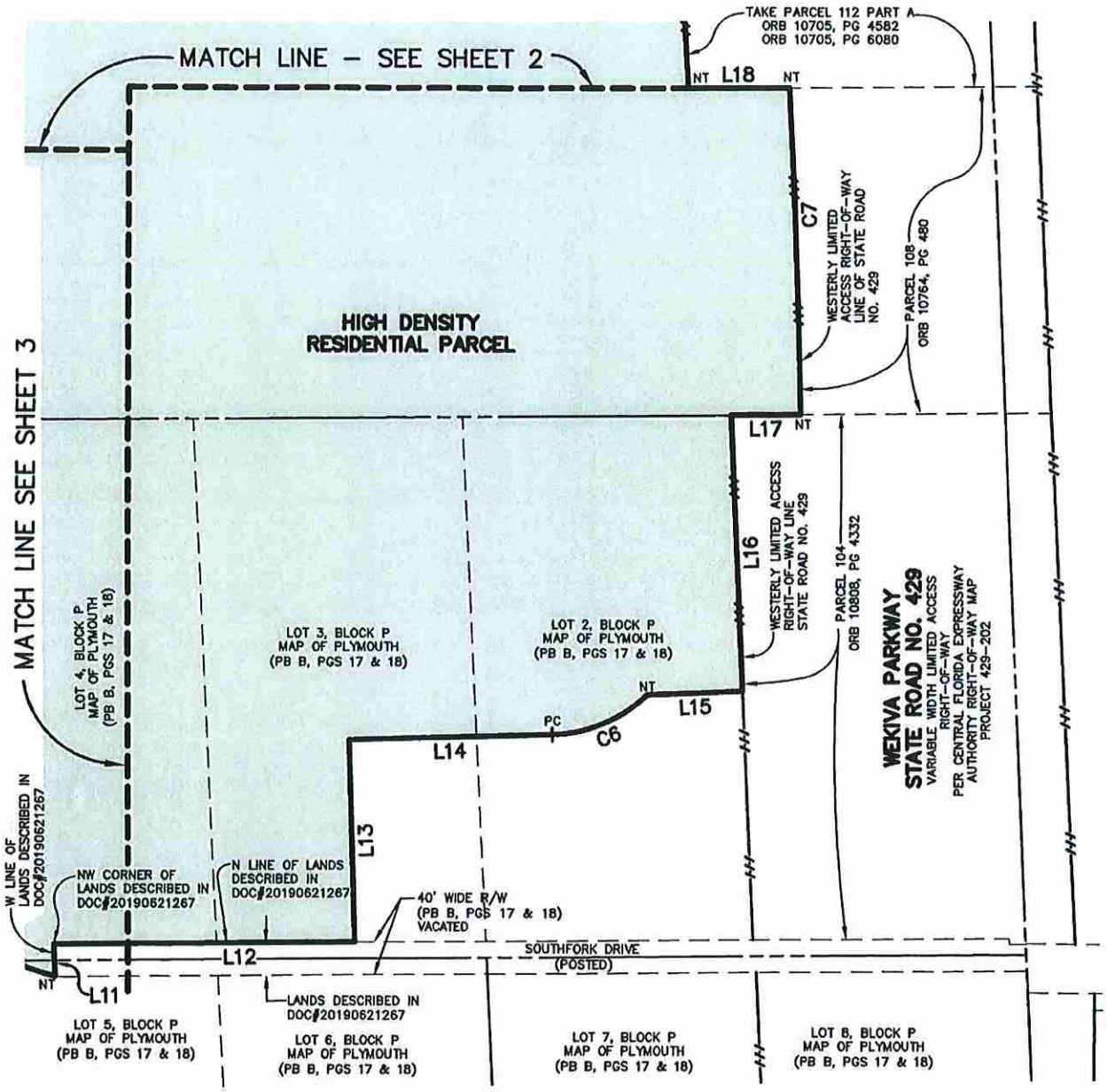
SEE SHEET 6 FOR DESCRIPTION.

200' 0 200'
SCALE 1"=200'
North



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DATE: 3/2020	DATE: 3/2020	18161	1"=200'	OF 6

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CS# 19-133(1

SKETCH OF DESCRIPTION

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SEE SHEETS 2-4 FOR SKETCH.
SEE SHEET 5 FOR LINE AND CURVE TABLES.
SEE SHEET 6 FOR DESCRIPTION.

LINE TABLE		
NUMBER	BEARING	DISTANCE
L1	S89°28'53"W	947.63'
L2	S02°34'31"E	993.64'
L3	S89°29'29"W	665.02'
L4	S02°44'36"E	298.07'
L5	N89°30'13"E	12.01'
L6	S02°44'36"E	32.82'
L7	S89°30'13"W	12.01'
L8	S02°44'36"E	268.72'
L9	S47°53'20"E	81.86'
L10	S02°34'31"E	176.87'
L11	N02°39'46"W	39.14'
L12	N89°31'58"E	369.71'
L13	N01°34'56"W	247.84'
L14	N88°25'04"E	249.18'
L15	N87°39'31"E	118.73'
L16	N02°20'29"W	338.13'
L17	N89°29'17"E	84.79'
L18	S89°29'17"W	125.14'
L19	N37°22'01"E	182.75'
L20	N00°27'45"W	24.71'
L21	S89°31'59"W	46.62'
L22	N52°36'26"W	79.53'
L23	N00°31'22"W	85.34'

CURVE TABLE					
NUMBER	RADIUS	DELTA	LENGTH	CHORD	CHORD BEARING
C1	325.00'	19°59'49"	113.43'	112.85'	N77°02'12"E
C2	425.00'	37°20'00"	276.93'	272.05'	N68°22'07"E
C3	125.00'	82°24'34"	179.79'	164.69'	S89°05'37"E
C4	125.00'	45°18'49"	98.86'	96.30'	S25°13'55"E
C5	225.00'	74°47'42"	293.72'	273.30'	S39°58'22"E
C6	175.00'	42°23'40"	129.49'	126.55'	N67°13'14"E
C7	11294.16'	2°01'48"	400.16'	400.14'	N02°02'26"W
C8	11169.16'	3°11'30"	622.17'	622.09'	N04°40'48"W

PREPARED FOR:

COLLIER-BENGE JOINT VENTURE, LLC

THE FLORIDIAN - HIGH DENSITY RESIDENTIAL PARCEL

DONALD W. McINTOSH ASSOCIATES, INC.
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CERTIFICATE OF AUTHORIZATION NO. LB68

DRAWN BY: BW	CHECKED BY: TS	JOB NO.	SCALE	SHEET 5
DATE: 3/2020	DATE: 3/2020	18161	N/A	OF 6

SKETCH OF DESCRIPTION

SEE SHEET 1 FOR NOTES, LEGEND AND KEY MAP.
SEE SHEETS 2-4 FOR SKETCH.
SEE SHEET 5 FOR LINE AND CURVE TABLES.
SEE SHEET 6 FOR DESCRIPTION.

DESCRIPTION:

That part of MAP OF PLYMOUTH, according to the plat thereof, as recorded in Plat Book B, Pages 17 and 18, of the Public Records of Orange County, Florida and that part of Section 36, Township 20 South, Range 27 East, Orange County, Florida, described as follows:

BEGIN at the Southeast corner of Tract G, according to the plat of STANTON RIDGE, as recorded in Plat Book 99, Pages 131 through 134, of the Public Records of Orange County, Florida; thence S89°28'53"W along the South line of said plat of STANTON RIDGE, for a distance of 947.63 feet to the Southwest corner of said plat of STANTON RIDGE and the West line of the Northeast 1/4 of the Southeast 1/4 of said Section 36; thence S02°34'31"E along said West line, 993.64 feet to the Northeast corner of the South 1/2 of the Southeast 1/4 of the Northwest 1/4 of the Southeast 1/4 of said Section 36; thence S89°29'29"W along the North line of said South 1/2 of the Southeast 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 36, for a distance of 665.02 feet to the Northwest corner of said South 1/2 of the Southeast 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 36, thence S02°44'36"E along the West line of said South 1/2 of the Southeast 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 36, for a distance of 298.07 feet to the North line of the South 1/2 acre of said South 1/2 of the Southeast 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 36; thence departing said West line run N89°30'13"E along said North line, 12.01 feet to the East line of the Western 12.00 feet of said South 1/2 acre of the South 1/2 of the Southeast 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 36; thence departing said North line run S02°44'36"E along said East line, 32.82 feet to the South line of said Southeast 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 36; thence departing said East line run S89°30'13"W along said South line, 12.01 feet to the Southwest corner of said Southeast 1/4 of the Northwest 1/4 of the Southeast 1/4 of Section 36; thence S02°44'36"E along the West line of the Northeast 1/4 of the Southwest 1/4 of the Southeast 1/4 of said Section 36, for a distance of 268.72 feet to a non-tangent curve concave Southerly having a radius of 325.00 feet and a chord bearing of N77°02'12"E; thence departing said West line, run Easterly along the arc of said curve through a central angle of 19°59'49" for a distance of 113.43 feet to the point of reverse curvature of a curve concave Northerly having a radius of 425.00 feet and a chord bearing of N68°22'07"E; thence Easterly along the arc of said curve through a central angle of 37°20'00" for a distance of 276.93 feet to the point of reverse curvature of a curve concave Southerly having a radius of 125.00 feet and a chord bearing of S89°05'37"E; thence Easterly along the arc of said curve through a central angle of 82°24'34" for a distance of 179.79 feet to the point of tangency; thence S47°53'20"E, 81.86 feet to the point of curvature of a curve concave Southwesterly having a radius of 125.00 feet and a chord bearing of S25°13'55"E; thence Southeasterly along the arc of said curve through a central angle of 45°18'49" for a distance of 98.86 feet to the point of tangency; thence S02°34'31"E, 176.87 feet to the point of curvature of a curve concave Northeasterly having a radius of 225.00 feet and a chord bearing of S39°58'22"E; thence Southeasterly along the arc of said curve through a central angle of 74°47'42" for a distance of 293.72 feet to a non-tangent line and the West line of lands described in Official Records Document Number 20190621267, of the Public Records of Orange County, Florida; thence N02°39'46"W along said West line, 39.14 feet to the Northwest corner of said lands described in Official Records Document Number 20190621267; thence N89°31'58"E along the North line of said lands described in Official Records Document Number 20190621267, for a distance of 369.71 feet; thence departing said North line, run N01°34'56"W, 247.84 feet; thence N88°25'04"E, 249.18 feet to the point of curvature of a curve concave Northwesterly having a radius of 175.00 feet and a chord bearing of N67°13'14"E; thence Northeasterly along the arc of said curve through a central angle of 42°23'40" for a distance of 129.49 feet to a non-tangent line; thence N87°39'31"E, 118.73 feet to the Westerly limited access right-of-way line of State Road Number 429, as described in Official Records Book 10808, Page 4332, of the Public Records of Orange County, Florida; thence N02°20'29"W along said Westerly limited access right-of-way line, 338.13 feet; thence N89°29'17"E along said Westerly limited access right-of-way line, 84.79 feet to the Westerly limited access right-of-way line of State Road Number 429, as described in Official Records Book 10764, Page 480, of the Public Records of Orange County, Florida and a non-tangent curve concave Westerly having a radius of 11294.16 feet and a chord bearing of N02°02'26"W; thence Northerly along said Westerly limited access right-of-way line and the arc of said curve through a central angle of 02°01'48" for a distance of 400.16 feet to the Westerly limited access right-of-way line of State Road Number 429, as described in Official Records Book 10705, Page 4582, of the Public Records of Orange County, Florida and as described in Official Records Book 10705, Page 6080, of the Public Records of Orange County, Florida and a non-tangent line; thence S89°29'17"W along said Westerly limited access right-of-way line, 125.14 feet to a non-tangent curve concave Westerly having a radius of 11169.16 feet and a chord bearing of N04°40'48"W; thence Northerly along said Westerly limited access right-of-way line and the arc of said curve through a central angle of 03°11'30" for a distance of 622.17 feet to a non-tangent line; thence N37°22'01"E along said Westerly limited access right-of-way line, 182.75 feet; thence N00°27'45"W along said Westerly limited access right-of-way line, 24.71 feet to the Southeast corner of the aforesaid plat of STANTON RIDGE; thence departing said Westerly limited access right-of-way line run the following courses and distances along the aforesaid South line of the plat of STANTON RIDGE: S89°31'59"W, 46.62 feet; N52°36'26"W, 79.53 feet; N00°31'22"W, 85.34 feet to the POINT OF BEGINNING. This description is based on Florida State Plane Coordinate System East Zone, scale factor of 0.99997293, NAD 83 Datum (2011 adjustment) and all distances are grid dimensions.

Containing 50.199 acres more or less when calculated in ground dimensions.

Being subject to any rights-of-way, restrictions, conditions and easements of record.

PREPARED FOR:

COLLIER-BENGE JOINT VENTURE, LLC

THE FLORIDIAN - HIGH DENSITY RESIDENTIAL PARCEL

DONALD W. McINTOSH ASSOCIATES, INC.
ENGINEERS PLANNERS SURVEYORS
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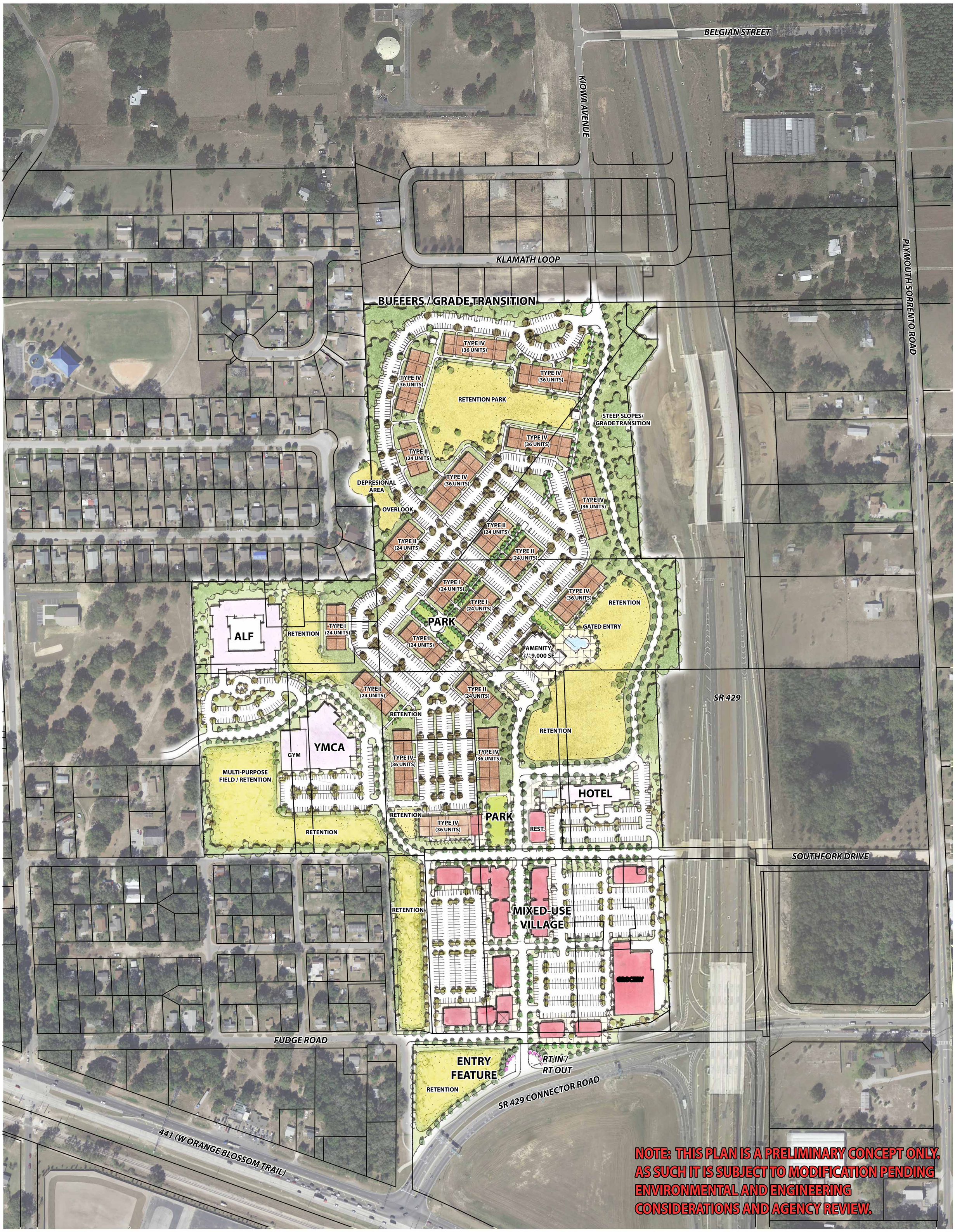

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Development Consulting Brokerage

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CONCEPT PLAN H

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Planning | Urban Design
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Floridian Town Center

City of Apopka Future Land Use Map Amendment
Apopka, Florida

GAI Project Number: A180675.02

April 13, 2020

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1.0 Narrative

The following narrative describes the proposed development of property in the northwest quadrant of the intersection of SR 429 and US 441 (Orange Blossom Trail) in the City of Apopka, FL. This development will require an amendment to the City's Future Land Use Map (FLUM) and a rezoning to accommodate the proposed uses and program, as outlined by City staff in pre-application meetings held for the project on November 14, 2019 and January 24, 2020. This amendment narrative statement provides information regarding existing conditions on the site and surrounding properties, descriptions of the proposed development, as well as justifications of its consistency with the City's Comprehensive Plan.

A community meeting was held for residents and property owners surrounding the proposed development property on December 23, 2019 at the Frank-Subbs Community Center. The meeting notice mailer was sent out to all property owners within 300 feet of the project boundary. The meeting was attended by approximately 25 people. Documentation of the meeting is provided as an attachment to this application.

1.1 Existing Conditions and Project Description

1.1.1 Subject Property Overview

The subject property is a 73.87-acre site, located on the western edge of the City of Apopka, FL, adjacent to the unincorporated community of Plymouth, as shown in Figure 1. The proposed FLUMA site is comprised of sixteen full parcels and one partial parcel, as outlined in Table 1 and in Figure 3.

For many decades prior to development, the site and the surrounding lands were predominantly citrus groves and pasture. In the 1940's and 50's a small enclave of single-family homes and churches began to coalesce to the west of the site, off of Hermit Smith Road and US 441. Though well outside the incorporated area and not officially named, the neighborhood was loosely associated with the nearby communities of Plymouth and Apopka.

By 1980, several homes were scattered across the subject property, and by 1990, plant nurseries had begun to develop and expand. Also during this period, several single family subdivisions were developed near the property off of Hermit Smith Road and Plymouth Sorrento Road. The area's main connection to the region at this time was US 441, since SR 429 had not yet been constructed.

By 2013, SR 429 had expanded into Apopka and terminated at the Connector Road on the southern boundary of the project. In 2015, construction began on segment 1A of the SR 429 extension, which opened July 27, 2017. This new extension follows the eastern boundary of the project and ultimately leads into Lake County.

Table 1.
Parcel Data

Figure 3 Labels	Parcel ID	Owner	Parcel Acreage	Existing Land Uses	Existing FLU Designation (County)	Existing Zoning (County)
1	362027000000093	Collier Benge Land Joint Venture, LLC	14.18 Ac	SFR	Rural	A-1
2	362027000000075	Collier Benge Land Joint Venture, LLC	6.15 Ac	SFR	Rural	A-1
3	362027000000048	Collier Benge Land Joint Venture, LLC	3.01 Ac	MH	Rural	A-1
4	362027000000074	Collier Benge Land Joint Venture, LLC	0.52 Ac	Vacant	Rural	A-1
5	362027000000068	Collier Benge Land Joint Venture, LLC	0.90 Ac	Vacant	Rural	A-1
6*	362027000000066	Williams, Eugene & Willie D	0.61 Ac	MH	Rural	A-1
7	362027000000052	Collier Benge Land Joint Venture, LLC	10.37 Ac	MH	Rural	A-1
8	362027000000083	Williams Fam. Tr.	4.94 Ac	MH	Rural	A-1
9	362027000000085	Williams Fam. Tr.	0.99 Ac	Shed	Rural	A-1
10	362027000000047	William Fam. Tr.	3.99 Ac	4 SFR/Church	Rural	A-1
11	362027000016040	Collier Benge Land Joint Venture, LLC	4.93 Ac	SFR/Nursery	Rural	A-1
12	362027000016030	Collier Benge Land Joint Venture, LLC	4.43 Ac	SFR	Rural	A-1
13	362027000016020	Collier Benge Land Joint Venture, LLC	4.87 Ac	SFR	Rural	A-1
14	062128717216051	Collier Benge Land Joint Venture, LLC	1.90 Ac	Vacant	Rural	A-1
15	062128717216050	Collier Benge Land Joint Venture, LLC	2.84 Ac	SFR	Rural	A-1
16	062128717216060	Collier Benge Land Joint Venture, LLC	4.70 Ac	Comm/Nursery	Rural	A-1
17	062128717216070	Collier Benge Land Joint Venture, LLC	4.54 Ac	SFR/Nursery	Rural	A-1

*Note: This parcel contains a 12-foot gap in the legal description along the western boundary which is of uncertain title/ownership. Though this 12-foot gap is part of the tax parcel, it has been excluded from the FLUMA description and is not part of this application.

1.1.2 Relation to the PUD Rezoning

As a companion to this Future Land Use Amendment (FLUMA) application, we are proposing a rezoning of the entire project to Planned Unit Development (PUD), however, the PUD rezoning will follow under a separate submittal.

1.1.3 Annexation

Approximately 4.14 acres of the project remain in unincorporated Orange County:

- 362027000000048 (Parcel 3)
- 362027000000074 (Parcel 4)
- 362027000000066 (Parcel 6)

The first two parcels are already subject to a proposed annexation, which is currently in the approval process with the City of Apopka (Case Number ANX 20-3). The final unincorporated parcel is being submitted for annexation concurrent with this application.

1.1.4 Proposed Development

The extension of SR 429 through west Apopka and the interchange at US 441 have greatly enhanced the area's regional accessibility and the subject property is now well situated to provide much needed housing options and retail services for this historically underserved part of the county.

As the concept plan in Figure 11 shows the project will feature a new retail town center with opportunities for a grocery store anchor, restaurants, retail stores, and hotel. The retail program will feature a multi-family apartment development with approximately 600 units and an assisted living facility (ALF). Though still in negotiations, the project seeks to also accommodate a location for a YMCA or similar recreational facility.

Table 2 below outlines the proposed development while Tables 3 and 5 on the following pages calculate the maximum development potential on the site according to the City and County's Future Land Use designations. Within the proposed PUD Master Plan, each tract will specify the allowed uses, maximum densities/intensities, and unit types, thus limiting the development accordingly.

Table 2.
Proposed Development Program

Use	Program
Multi-Family	600 units
Assisted Living	180 units
Hotel	~50,000 sq ft 120 rooms
Commercial	~200,000 sq ft

1.1.5 Site Access

The "front door" to the project will be located at the SR 429 Connector Road. At a minimum, the entrance will have a right-in-right-out, and the possibility of an east-bound left-in access is currently being evaluated by traffic engineers.

From the main entrance, a new north-south collector road will be built through the project, connecting the SR 429 Connector to Klamath Loop Road. The project will also connect Plymouth Sorrento Road to Hermit Smith Road via an extension of Southfork Drive. The project will connect Fudge Road to the new north-south connector but will *not* connect to the adjacent Dew Berry Avenue or Barret Drive.

Please see the attached Transportation Analysis for the more complete discussion and documentation of traffic and access.

1.1.6 Adjacent Property

The subject property is largely surrounded by lands owned by Central Florida Expressway Authority (CFX) with SR 429 and its related right-of-way effectively functioning as the eastern boundary of the subject property. The properties located adjacent to the northern and southern boundaries of the subject property are comprised of vacant lands owned by CFX containing stormwater retention, access ramps, etc. Note that the ownership of the 429 Connector Road and pond on the southern boundary is transitioning to the City of Apopka and is expected to be completed prior to adoption of this FLUMA. The properties located to the west of the subject property are the only adjacent properties that are not owned by CFX. The adjacent properties located to the west of the subject property are comprised of single-family neighborhoods, church/religious facilities, and rural homesites. See Section 1.3 for a more detailed Consistency Analysis regarding surrounding uses.

Major adjacent roadways include:

- SR 429 (Wekiva Parkway)
- SR 429 Connector Road
- US 441 (Orange Blossom Trail)

Minor roadways within existing adjacent neighborhoods include:

- Hermit Smith Road
- Dew Berry Avenue
- Southfork Drive

1.1.7 Environmental Conditions

Please see the attached Environmental Assessment Report for a more in-depth discussion of the environmental aspects of the project site.

Floodplain

The site contains no land within the 100-year floodplain, according to the FEMA Flood Map.

Wetlands

The site contains no land currently identified as wetlands.

Topography

The topography of the site generally slopes from the northwest to the southeast, with the highest and lowest elevations being 164' and 110' respectively. A slight ridge runs east-west through the northern section and portions of three small depressional areas are located within the site.

Soils

The site is comprised of soils that fall under the "excessively well drained" and "moderately well drained" hydrologic groups. Please see the Environmental Assessment Report for more detailed information on the site soils.

Listed Species

Documentation of the field review for occurrences of protected flora and fauna is included in the Environmental Assessment Report.

1.2 Future Land Use Amendment Description and Data

As shown in Figure 7, the entire property is currently designated Rural (Orange County). This amendment seeks to change the site FLU designation to Apopka High Density Residential and Commercial, as illustrated in Figure 8. The HDR designation will correspond with the multi-family development and ALF site and the Commercial designation will correspond with the town center/hotel site. Legal descriptions of each proposed FLU

The calculations in Tables 3 and 5 show the development potential of the current and proposed FLU designations of the amendment properties based on maximum densities and intensities allowed by the Future Land Use designation. Note that these numbers do not reflect the actual proposed development program for the site, which is described in Table 2.

Table 3.
Maximum Development Potential

FLUMA Acreage	Current FLU (County)	Max Density/ Intensity	Max Dev. Potential	Proposed FLU (City)	Max Density/ Intensity	Max Dev. Potential	Dev. Potential Difference
50.161	Rural – Orange Co.	1 du/10 acres	5 Units	High Density Residential - HDR	15 du/acre	752 Units	747 Units
2.997	Rural – Orange Co.	1 du/10 acres	2 Units	Commercial - COMM	0.25 FAR	37,163 SF	N/A
20.726	Rural – Orange Co.	1 du/10 acres	20 Units	Commercial - COMM	0.25 FAR	258,343 SF	N/A
			27 Units			**752 Units**	**747 Units**
			0 SF			**295,506 SF**	

Notes: Maximum densities and intensities for each Future Land Use designation are per the City and County Comprehensive Plans.
Maximum intensity under Apopka's HDR FLU includes the allocation of 50 sq ft/du of commercial use per the City Comprehensive Plan.

1.2.1 Level of Service Analysis

The City of Apopka's Comprehensive Plan includes level of service (LOS) standards – minimum standards for public facilities and services required to adequately serve the projected population. Transportation, potable water, sanitary sewer, stormwater, parks and recreation and solid waste are the public facilities and services evaluated by city staff to ensure adequate capacity exists to support the future land use change and whereby the applicant can obtain city concurrency approval during the final development order stage.

A traffic study has been prepared by Traffic & Mobility Consultants and submitted with this application to address roadway LOS standards. Issuance of final site plan approval will confirm consistency with the LOS standards for stormwater management. The remaining city facilities and services are addressed in Table 4.

Table 4 on the following page shows the Existing and Proposed FLU Maximum Development Potential in density/intensity for uses within the amendment area and identifies the net increase in maximum development potential when the amendment is approved. Table 4 also identifies the current and proposed LOS demand for public facilities and services including potable water, sanitary sewer, parks and recreation and solid waste. Please note that Table 4 does not reflect the actual proposed development program for the site. The proposed development program is described in Table 2.

1.2.2 Schools

We have submitted a formal capacity determination application to the Orange County School Board (OCPS) and will be conducting the negotiations for capacity enhancement concurrent with the processing of this FLUMA. OCPS will evaluate school capacity based on their adopted LOS standards and the results of their findings will be provided to the City upon receipt. We

anticipate that the CEA (or other arrangement) will be in place prior to final adoption of the FLUMA and PUD rezoning.

Table 4.
Level of Service Evaluation

Public Facilities	Max FLU Potential (Current)	LOS Standard[2]	Capacity Requirement	Max FLU Potential (Proposed)	LOS Standard[2]	Capacity Requirement	Capacity Difference (Additional Demand)
Potable Water	27 units 72 persons[1]	177 gpd/capita	12,744 gal/day	752 units 2,000 persons[1]	177 gpd/capita 200 gpd/ksf	354,000 gal/day 59,101 gal/day	400,357 gal/day
Sanitary Sewer		81 gpd/capita	5,832 gal/day	295,506 SF of Com.	81 gpd/capita 150 gpd/ksf	162,000 gal/day 44,326 gal/day	200,494 gal/day
Solid Waste		4 lbs/day/capita	288 lbs/day		4 lbs/day/capita 2 lbs/day/ksf	8,000 lbs/day 591 lbs/day	7,712 lbs/day
Recreation		3 acres/1,000 population	0.22 acre		3 acres/1,000 population	6.00 acres	5.78 acres

1. Based on City of Apopka standard of 2.659 persons per household.
2. LOS standards per the City of Apopka Comprehensive Plan.

Table 5 below describes the parcel specific details behind the proposed FLUMA and rezoning actions previously described.

Table 5.
Detailed Future Land Use and Zoning Data

Tract	Parcel Number	Acres	Current FLU (County)[2]	Max Den/ Intensity[2]	Max Development Potential	Proposed FLU	Max Den/ Intensity[2]	Max Development Potential	Development Potential (Difference)	Current Zoning (Co.)	Proposed Zoning (City)
A	362027000000093 362027000000075 362027000000048 362027000000074 362027000000068 362027000000066 362027000000052 362027000000083 362027000000085 362027000000047 362027000016040	50.161	Rural	1 du/10 acres	5 Units	High Density Residential - HDR	15 du/acre	752 Units	747 Units	A-1	PUD
B	362027000016020 362027000016030	2.997	Rural	1 du/10 acres	2 Units	Commercial - COMM	.25 FAR	37,163 SF	N/A	A-1	PUD
C	062128717216051 062128717216050 062128717216060 062128717216070	20.726	Rural	1 du/10 acres	20 Units	Commercial - COMM	.25 FAR	258,343 SF	N/A	A-1	PUD
					27 Units			**752 Units** **295,506 SF**	**747 Units**		

1. Maximum densities and intensities for each Future Land Use designation are per the City of Apopka and Orange County Comprehensive Policy Plan.

2. Maximum intensity under the proposed HDR FLU includes the allocation of 50 sq ft/du of commercial use per the City Comprehensive Plan.

1.3 Consistency Analysis

The property which is the subject of the proposed FLUMA and PUD zoning is comprised of approximately 73.87 acres generally located in the northwest portion of the intersection of SR 429 and US 441, with SR 429 abutting the subject property's entire eastern boundary. The subject property as defined, includes seventeen parcels which contain a total of nine single family dwellings, two mobile homes, five small "villa" homes, one church, and a variety of agricultural and equestrian structures. The development program proposed for the subject property includes a mixture of residential and commercial uses consisting of multi-family dwelling units with amenity center, assisted living, hotel, restaurant, retail, office and recreation/fitness center (YMCA). The current mixture of uses adjacent to and abutting the subject property is comprised of single-family residential, church/religious facility, and vacant lands. The analysis below shows how the proposed project is consistent and compatible with both the City's Comprehensive Plan and the surrounding context.

Table 6.

Project Adjacencies

	FLU	Zoning	Existing Uses
Subject Property	Orange County: *Rural*	Orange County: *A-1*	Manufactured Home: acreage; Single Family: acreage; Plant nursery Vacant: Non-Ag acreage

Adjacent Properties	FLU	Zoning	Existing Uses
North	Apopka: *Res. Low Suburban*	Apopka: *RSF-1A*	Vacant (CFX)
South	Apopka: *Mixed Use*	Apopka: *MU-ES*	Connector Road Stormwater Retention (CFX)
East	Orange County: *Rural*	Orange County: *A-1*	SR 429; Vacant (CFX)
West	Orange County: *Rural; Institutional*	Orange County: *R-1; A-1*	Vacant; Church/Religious; Manufactured Home: acreage; Single Family: 52-131 ft wide lots

There are no compatibility issues to the north, east, or south of the site. As detailed in the table above, the properties located adjacent to the northern, southern, and eastern boundaries of the property are owned by the Central Florida Expressway Authority (CFX). The vacant lands to the north are comprised of the partially improved Stanton Ridge subdivision which was acquired for the construction of the SR 429 extension. These lots will not be developed as single-family. The property located south of the site is comprised of stormwater retention and on/off ramps to SR 429. As noted previously, SR 429 itself and its related right-of-way function as the eastern boundary of the subject property.

The properties located to the west of the subject property are the only lands adjacent to the subject property that are not owned by CFX. There are 31 residential lots that are adjacent to or directly abutting the western boundary of the property. Note that while these 31 residential lots are identified as Rural on Orange County's Future Land Use Map, the individual lots and the neighborhoods within which they are located are not consistent with the Rural Future Land Use category of the Orange County Comprehensive Plan. With an average lot width of 69 ft. these 31 adjacent or abutting residential lots range in width from 52 ft. to 131 ft. with roughly half of the adjacent or abutting lots being 60 ft. wide or less. In addition, the built densities of these neighborhoods average 3.75 dwelling units per acre, which is significantly greater than the maximum density of 1 dwelling unit per 10 acres permitted within the Rural Future Land Use category.

While the development program proposed for the subject property features multi-family residential densities that are greater than those of surrounding single-family neighborhoods, the development program proposed calls for greater amounts of open space and recreational amenities. Unlike the adjacent and surrounding properties, the proposed development program and plan will be established and solidified through the application of Planned Unit Development zoning. Planned Unit Development zoning is appropriate for the proposed development program based on Policy 3.1 of the Future Land Use Element of the City's Comprehensive Plan, which states, in part, that Planned Unit Development zoning is designed to provide an alternative method of land development not available within the framework of other zoning districts to special projects which merit such treatment; allow the development of sites that would normally be difficult to develop due to topography, soils, or other site specific features; allow a variety of housing types; accommodate mixed uses; and offer a maximum amount of open space and recreational amenities.

The concept plan and corresponding FLUMA were developed to make effective use of the site and the surrounding transportation investments, but also to reduce potential impacts to adjacent neighborhoods.

- The multi-family apartments and ALF will abut 15 single family parcels in unincorporated Orange County. These properties will be appropriately buffered according to City Land Development Code and the conditions of the future PUD. The buildings will be limited to three stories.
- The potential YMCA site abuts 9 single family parcels in unincorporated Orange County but can be separated by the placement of retention and perimeter buffers.
- The retail center concentrates the more intense commercial uses including hotel, restaurants, retail, and office in the southern portion of the property closest to the Connector Road and SR 429. The access for these uses will be from the main spine road and from Southfork Drive. Fudge Road will connect through and provide access for the adjacent neighbors but will not be a significant source of cut-through traffic due to the configuration of the intersection of Fudge Road at Hermit Smith Road. Retention and buffers can also be used to help separate the commercial uses from the five single family parcels to the west. Except for the hotel, the retail buildings are expected to be one story. Should any other buildings need to exceed one story, they will be situated away from the residential area.

END NARRATIVE

429 WEST
Project № 18131.1
January 2020

TRANSPORTATION FACILITIES ANALYSIS
CITY OF APOPKA
FLORIDA

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EXECUTIVE SUMMARY

Project Information

Name: 429 West

Location: SR 429 Connector Road, northwest corner of SR 441 and SR 429, in the City of Apopka, Florida

Description: Change Future Land Use from Rural Estates to Planned Development (PD)

Maximum Allowable Development on 73.274-acres:

Current = 7 single family residential units

Proposed = 743 multi-family residential units

295,506 square feet retail use

Trip Generation

Proposed amendment will result in the following additional traffic:

Daily: 12,248 Daily trips

PM Peak: 1,119 PM peak hour trips

Findings

- All study segments currently operate at adequate level of service (LOS).
- In the year 2024 the existing transportation network is projected to continue to be adequate.
- In the year 2030, the planned transportation network is projected to be adequate, except US 441 from Ponkan Road to SR 429 Connector Road which will be deficient due to background traffic growth.
- The proposed amendment does not cause any deficiencies on the transportation network.

Recommendations

- The proposed development will undergo further traffic analysis as the project undergoes review through the City's Concurrency System during subsequent development approvals. Any impacts to the offsite network by the development will be addressed through the City's process.

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1.0 INTRODUCTION

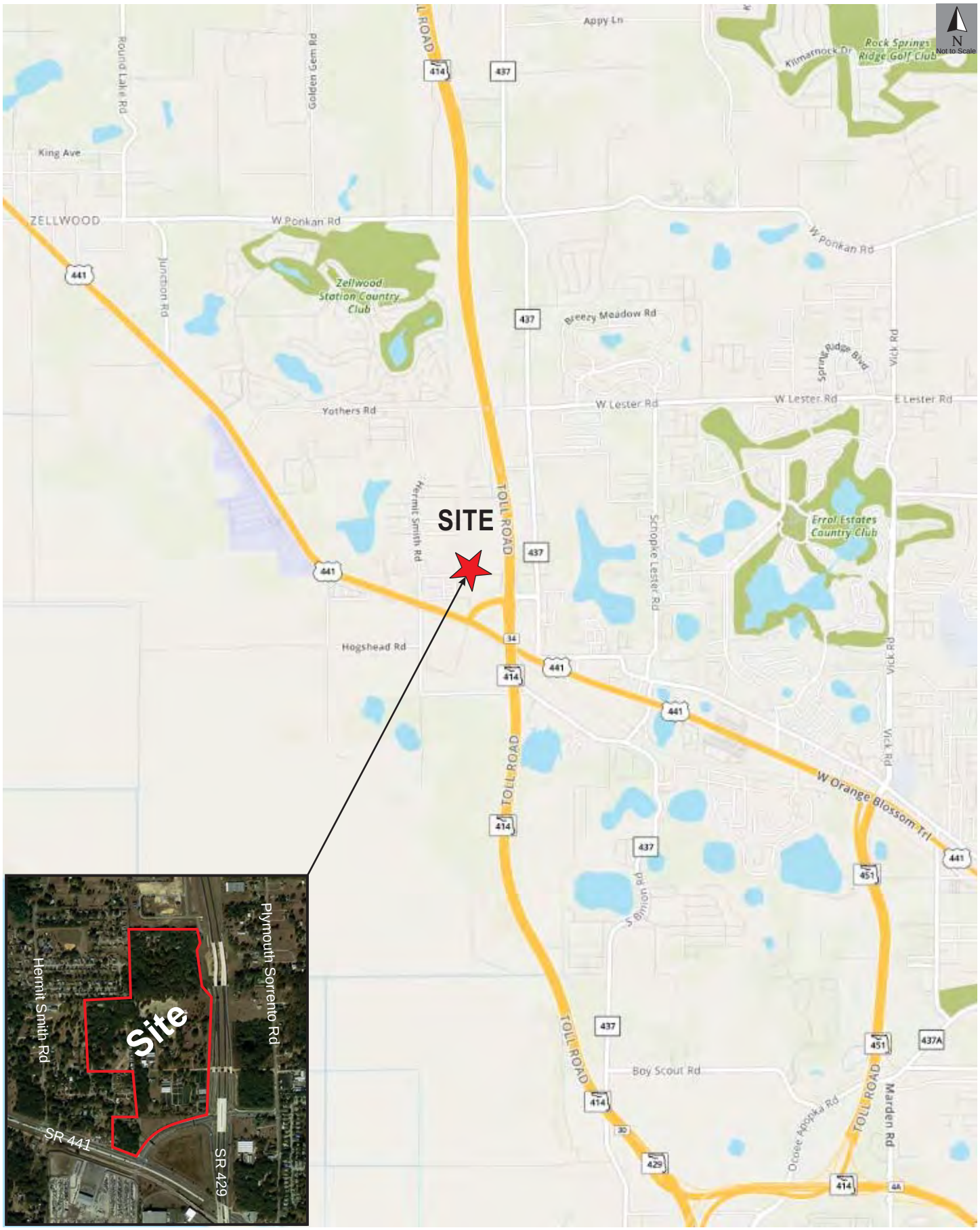
This analysis was prepared in support of the application to amend the City of Apopka Comprehensive Plan's (CP) Future Land Use (FLU) for the properties located at SR 429, west of Hermit Smith Road, in The City of Apopka. **Figure 1** depicts the site location and the 2-mile preliminary impact area. A view of the property assemblage is provided in **Appendix A**.

The overall area that is the subject to this amendment is 73.274 acres. The overall property is currently within Orange County has a FLU of Planned Development-Rural. The proposed amendment is to change the FLU designation for the overall property to City of Apopka Planned Development (PD).

Table 1 summarizes the land uses, area, densities and maximum allowable development yields for the site as currently adopted, and with the requested Comprehensive Plan Amendment (CPA).

Table 1
Future Land Use Designations

Land Use Designation	Jurisdiction	Units
Current FLU		
Rural	Orange	7 DU
Maximum FLU		
HDR	Apopka	743 DU
Retail		295.506 KSF



Site Location Map

429 West

18131.1

Figure 1

2.0 EXISTING TRAFFIC CONDITIONS

The existing traffic conditions were evaluated within the project's primary influence area. This included the area's major roadways which were analyzed for Daily and PM peak hour capacity conditions.

The existing conditions on the roadway network were analyzed by comparing the latest available traffic volumes on each of the roadway segments to the adopted capacity thresholds. The existing conditions analysis was based on information obtained from the latest City of Apopka Traffic Counts posted on the City's website. Existing volumes were adjusted to the year (2019) using the annual growth rate of 2% calculated for this area from historical volumes. The traffic count information and growth rate calculations are provided in **Appendix B**.

Table 2 summarizes the existing conditions capacity analysis in the area. This analysis reveals that currently all roadway segments within the study area operate at adequate Level of Service (LOS).

Table 2
Existing Conditions Capacity Analysis

Roadway	Segment	# Lns	LOS Std	Daily Conditions Capacity	Daily Conditions Traffic	Daily Conditions LOS	PM Peak Conditions Capacity	PM Peak Conditions Traffic	PM Peak Conditions Dir	PM Peak Conditions LOS
US 441	Ponkan Rd to Yothers Rd	4	D	49,500	48,103	B	2,480	2,084	SB	A
US 441	Yothers Rd to SR 429 Connector Rd	4	D	49,500	48,103	B	2,480	2,084	SB	A
US 441	SR 429 Connector Rd to Plymouth Sorrento Rd	4	D	49,500	28,977	A	2,480	1,244	SB	A
US 441	Plymouth Sorrento Rd to Boy Scout Blvd	4	D	49,500	29,471	A	2,480	1,253	SB	A
US 441	Boy Scout Blvd to Errol Parkway	4	D	55,400	33,262	A	2,600	1,315	NB	A
US 441	Errol Parkway to SR 451	4	D	55,400	33,262	A	2,600	1,315	NB	A
Hermit Smith Rd	US 441 to Yother Rd	2	D	14,000	1,338	C	680	169	NB	C
Plymouth Sorrento Rd	Ponkon Rd to Lester Rd/Yothers Rd	2	E	17,700	10,721	C	880	507	NB	C
Plymouth Sorrento Rd	Lester Rd/Yothers Rd to SR 429 Connector Rd	2	E	19,000	11,286	C	950	629	NB	C
Plymouth Sorrento Rd	SR 429 Connector Rd to US 441	2	E	17,700	6,819	C	880	356	NB	C
SR 429 Connector	Plymouth Sorrento Rd to US 441	4	E	39,800	15,954	C	2,000	824	EB	C
SR 429 North	SR 414 to West US 441	6	E	108,800	12,532	B	5,380	1,143	NB	B
SR 429 South	West US 441 to Kelly Park Rd	4	E	72,600	12,811	B	3,590	995	SB	B
Binion Rd (CR 437)	Boy Scout Blvd to Lakeview Dr	2	E	17,700	6,315	C	880	381	NB	C
Binion Rd (CR 437)	Lakeview Dr to US 441	2	E	17,700	4,780	C	880	306	SB	C
Lester Rd	Rock Springs Rd to Vick Rd	2	E	14,000	5,072	C	720	252	EB	C
Lester Rd	Vick Rd to Schopke Lester Rd	2	E	14,000	5,072	C	720	252	EB	C
Lester Rd	Schopke Lester Rd to Plymouth Sorrento Rd	2	E	14,000	11,310	D	720	226	EB	C
Old Dixie Highway	Plymouth Sorrento Rd to Boy Scout Blvd	2	E	14,000	2,756	C	720	181	SB	C
Old Dixie Highway	Boy Scout Blvd to Errol Pkwy	2	E	14,000	4,785	C	720	274	SB	C
Old Dixie Highway	Errol Parkway to Vick Rd	2	E	14,000	9,116	D	720	502	SB	D
Ponkon Rd	Round Lake Rd to Plymouth Rd	2	E	14,000	5,550	C	720	245	EB	C
Ponkon Rd	Plymouth Sorrento Rd to Vick Rd	2	E	15,900	5,193	C	790	274	EB	C
Schopke Lester Rd	Lester Rd to Old Dixie Hwy	2	E	14,000	3,586	C	720	203	NB	C
Yothers Rd	US 441 to Plymouth Sorrento Rd	2	E	14,000	1,392	C	720	71	WB	C

3.0 PLANNED AND PROGRAMMED IMPROVEMENTS

The Metroplan Orlando Transportation Improvement Plan (TIP), as well as Orange County's Capital Improvement Program (CIP) and the Long-Range Transportation Plan (LRTP) were reviewed to identify any planned or programmed improvements to the transportation facilities in this area, which revealed that there are no major improvements planned in the immediate vicinity of the proposed development.

4.0 PROJECT TRIPS

4.1 Trip Generation

The trip generation for the existing and proposed land use densities was calculated using trip generation information published by the Institute of Transportation Engineers (ITE) in *Trip Generation, 10th Edition.* Trip generation rates and calculations are summarized in **Table 3**, which shows the daily and PM peak hour trips for the current and proposed future land uses. Detailed information sheets and supporting information are included in **Appendix C**.

Table 3
Trip Generation Calculation

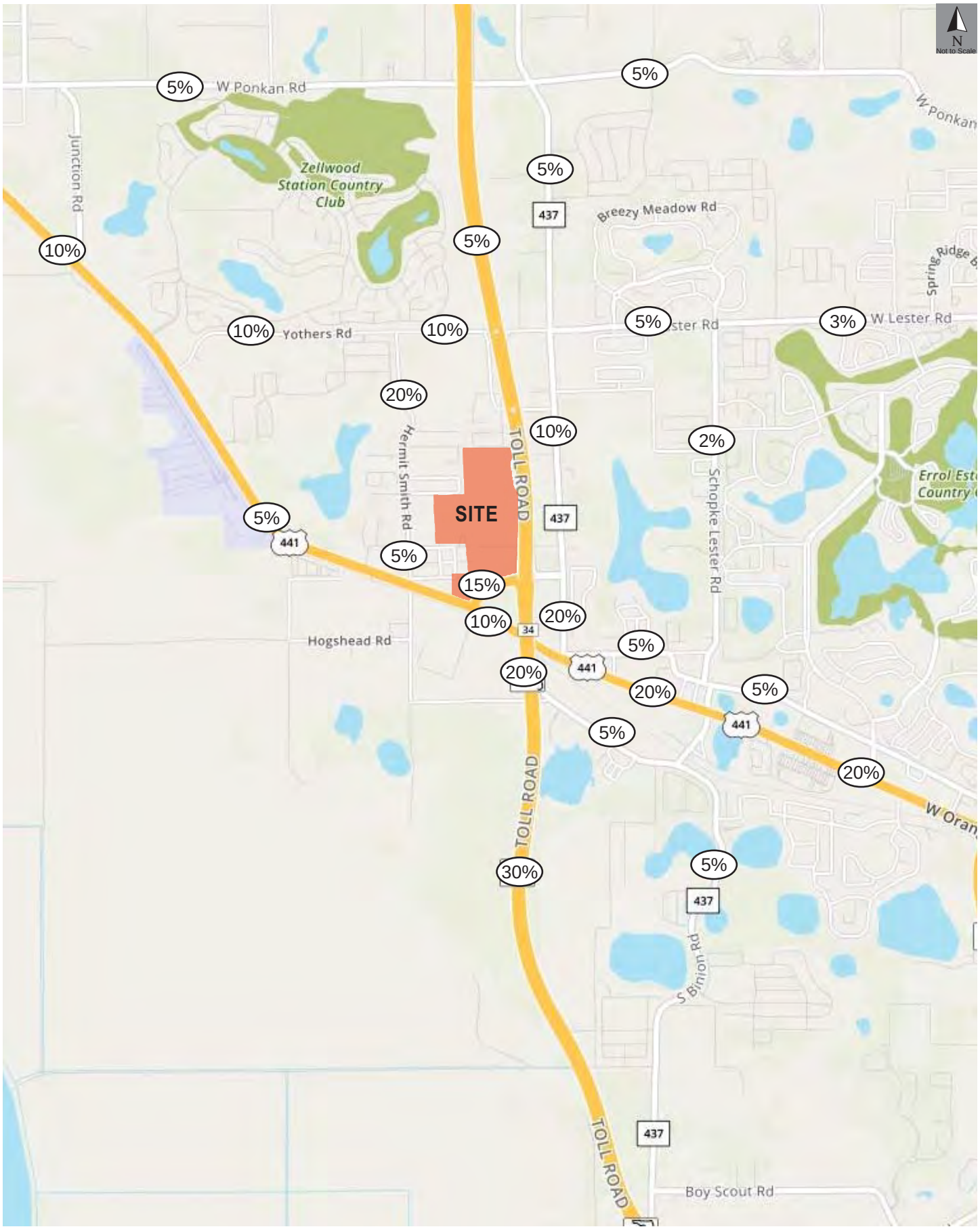
ITE			Daily		PM Peak Hour			
Code	Land Use	Size	Rate	Trips	Rate	Total	Enter	Exit
Existing - Rural								
210	Single Family Residential	7 DU	12.86	90	1.13	8	5	3
Proposed - PD								
221	Multi-Family Residential	743 DU	5.45	4,049	0.44	327	199	128
820	Retail	295.506 KSF	42.50	12,559	4.10	1,212	582	630
		Total Trip Generation		***16,608***		***1,539***	***781***	***758***
		Pass-by Retail (34%)		*4,270*		*412*	*198*	*214*
		Net New Trip Generation		***12,338***		***1,127***	***583***	***544***
		Net Change in Trips w/Proposed Amendment		**12,248**		**1,119**	**578**	**541**

Trip generation analysis based on ITE Trip Generation Manual, 10th Edition
Pass-By rate based on ITE Trip Generation Manual, 3rd Edition

The proposed amendment will result in net increase of 12,248 daily trips and 1,119 PM peak hour trips on the roadway network.

4.2 Trip Distribution

A project specific trip distribution pattern was developed using the Orlando Urban Area Transportation Study (OUATS) model. The adopted model was slightly adjusted to include the proposed development and prevailing traffic patterns in the area. The proposed trip distribution is illustrated in **Figure 2.** Project trips were assigned to the study roadways based on this distribution. The OUATS model output is included in **Appendix D**.



Project Trip Distribution

429 West

18131.1

Figure

5.0 PROJECTED CONDITIONS ANALYSIS

Projected conditions were assessed to evaluate the impact of the proposed amendment on the roadway network. The projected conditions analysis was performed for the Interim Year (2024) and the Horizon Year (2030). The analyses were conducted for the base condition (without the amendment) and for the proposed condition (with the amendment).

5.1 Background Traffic Volumes and Transportation Network

Projected background traffic volumes for the 2030 analysis were calculated based on historical and projected growth rates on the study segments. Based on growth profile for the area, an average annual growth of 2% was applied, which reflects historical growth.

The transportation network applied in the Interim Year analysis is the existing and committed transportation network. The Horizon Year analysis was performed with the planned transportation network.

5.2 Interim Year 2024 Conditions

The 2024 Interim Year analysis was conducted comparing projected traffic volumes to the roadway network capacity and service volumes. **Table 4** summarizes the results of the analysis, which reveals that in the year 2024, US 441 is projected to be deficient within the daily capacity, but not in the PM peak hour, due to background traffic growth. The analysis in **Table 5** indicates that the proposed amendment will not cause any roadway segments to become deficient.

5.3 Horizon Year 2030 Conditions

The Horizon Year analysis was conducted for projected background traffic volumes in the year 2030. **Table 6** summarizes the base conditions analysis, which shows that the roadway segment of US 441from Ponkan Road to SR 429 Connector will continue to deteriorate absent further planned improvements in the year 2030. Analysis of projected conditions with the additional traffic resulting from the amendment, summarized in **Table 7,** shows that the proposed amendment will not cause any other roadway segments to become deficient in the planning horizon.

Table 4
Interim Year 2024 Base Conditions Analysis

Roadway	Segment	# Lns	LOS Std	2024 Daily Trips Capacity	2024 Daily Trips Traffic	2024 Daily Trips LOS	2024 PM Peak Trips Capacity	2024 PM Peak Trips Traffic	2024 PM Peak Trips Dir	2024 PM Peak Trips LOS
US 441	Ponkan Rd to Yothers Rd	4	D	49,500	52,913	F	2,480	2,292	SB	A
US 441	Yothers Rd to SR 429 Connector Rd	4	D	49,500	52,913	F	2,480	2,292	SB	A
US 441	SR 429 Connector Rd to Plymouth Sorrento Rd	4	D	49,500	31,875	A	2,480	1,368	SB	A
US 441	Plymouth Sorrento Rd to Boy Scout Blvd	4	D	49,500	32,418	A	2,480	1,378	SB	A
US 441	Boy Scout Blvd to Errol Parkway	4	D	55,400	36,588	A	2,600	1,447	NB	A
US 441	Errol Parkway to SR 451	4	D	55,400	36,588	A	2,600	1,447	NB	A
Hermit Smith Rd	US 441 to Yother Rd	2	D	13,300	1,472	C	680	186	NB	C
Plymouth Sorrento Rd	Ponkon Rd to Lester Rd/Yothers Rd	2	E	17,700	11,793	C	880	558	NB	C
Plymouth Sorrento Rd	Lester Rd/Yothers Rd to SR 429 Connector Rd	2	E	19,000	12,415	C	950	692	NB	C
Plymouth Sorrento Rd	SR 429 Connector Rd to US 441	2	E	17,700	7,501	C	880	392	NB	C
SR 429 Connector	Plymouth Sorrento Rd to US 441	4	E	39,800	17,549	C	2,000	906	EB	C
SR 429 North	SR 414 to West US 441	6	E	108,800	13,785	B	5,380	1,257	NB	B
SR 429 South	West US 441 to Kelly Park Rd	4	E	72,600	14,092	B	3,590	1,095	SB	B
Binion Rd (CR 437)	Boy Scout Blvd to Lakeview Dr	2	E	17,700	6,947	C	880	419	NB	C
Binion Rd (CR 437)	Lakeview Dr to US 441	2	E	17,700	5,258	C	880	337	SB	C
Lester Rd	Rock Springs Rd to Vick Rd	2	E	14,000	5,579	C	720	277	EB	C
Lester Rd	Vick Rd to Schopke Lester Rd	2	E	14,000	5,579	C	720	277	EB	C
Lester Rd	Schopke Lester Rd to Plymouth Sorrento Rd	2	E	14,000	12,441	D	720	249	EB	C
Old Dixie Highway	Plymouth Sorrento Rd to Boy Scout Blvd	2	E	14,000	3,032	C	720	199	SB	C
Old Dixie Highway	Boy Scout Blvd to Errol Pkwy	2	E	14,000	5,264	C	720	301	SB	C
Old Dixie Highway	Errol Parkway to Vick Rd	2	E	14,000	10,028	D	720	552	SB	D
Ponkon Rd	Round Lake Rd to Plymouth Rd	2	E	14,000	6,105	C	720	270	EB	C
Ponkon Rd	Plymouth Sorrento Rd to Vick Rd	2	E	15,900	5,712	C	790	301	EB	C
Schopke Lester Rd	Lester Rd to Old Dixie Hwy	2	E	14,000	3,945	C	720	223	NB	C
Yothers Rd	US 441 to Plymouth Sorrento Rd	2	E	14,000	1,531	C	720	78	WB	C

Table 5
Interim Year 2024 Projected Conditions Analysis

Roadway	Segment	# Lns	LOS Std	2024 Daily Trips						2024 PM Peak Trips					
				Capacity	Backg'd	Distr	Project	Total	LOS	Capacity	Backg'd	Dir	Project	Total	LOS
US 441	Ponkan Rd to Yothers Rd	4	D	49,500	52,913	10%	1,225	52,913	F	2,480	2,292	SB	58	2,292	A
US 441	Yothers Rd to SR 429 Connector Rd	4	D	49,500	52,913	10%	1,225	52,913	F	2,480	2,292	SB	58	2,292	A
US 441	SR 429 Connector Rd to Plymouth Sorrento Rd	4	D	49,500	31,875	10%	1,225	31,875	A	2,480	1,368	SB	54	1,368	A
US 441	Plymouth Sorrento Rd to Boy Scout Blvd	4	D	49,500	32,418	20%	2,450	32,418	A	2,480	1,378	SB	108	1,378	A
US 441	Boy Scout Blvd to Errol Parkway	4	D	55,400	36,588	20%	2,450	36,588	A	2,600	1,447	NB	116	1,447	A
US 441	Errol Parkway to SR 451	4	D	55,400	36,588	20%	2,450	36,588	A	2,600	1,447	NB	116	1,447	A
Hermit Smith Rd	US 441 to Yother Rd	2	D	13,300	1,472	20%	2,450	1,472	C	680	186	NB	116	186	C
Plymouth Sorrento Rd	Ponkon Rd to Lester Rd/Yothers Rd	2	E	17,700	11,793	5%	612	11,793	C	880	558	NB	27	558	C
Plymouth Sorrento Rd	Lester Rd/Yothers Rd to SR 429 Connector Rd	2	E	19,000	12,415	10%	1,225	12,415	C	950	692	NB	58	692	C
Plymouth Sorrento Rd	SR 429 Connector Rd to US 441	2	E	17,700	7,501	20%	2,450	7,501	C	880	392	NB	116	392	C
SR 429 Connector	Plymouth Sorrento Rd to US 441	4	E	39,800	17,549	5%	612	17,549	C	2,000	906	EB	27	906	C
SR 429 North	SR 414 to West US 441	6	E	108,800	13,785	30%	3,674	13,785	B	5,380	1,257	NB	173	1,257	B
SR 429 South	West US 441 to Kelly Park Rd	4	E	72,600	14,092	5%	612	14,092	B	3,590	1,095	SB	27	1,095	B
Binion Rd (CR 437)	Boy Scout Blvd to Lakeview Dr	2	E	17,700	6,947	5%	612	6,947	C	880	419	NB	29	419	C
Binion Rd (CR 437)	Lakeview Dr to US 441	2	E	17,700	5,258	5%	612	5,258	C	880	337	SB	27	337	C
Lester Rd	Rock Springs Rd to Vick Rd	2	E	14,000	5,579	0%	0	5,579	C	720	277	EB	0	277	C
Lester Rd	Vick Rd to Schopke Lester Rd	2	E	14,000	5,579	3%	367	5,579	C	720	277	EB	16	277	C
Lester Rd	Schopke Lester Rd to Plymouth Sorrento Rd	2	E	14,000	12,441	5%	612	12,441	D	720	249	EB	27	249	C
Old Dixie Highway	Plymouth Sorrento Rd to Boy Scout Blvd	2	E	14,000	3,032	5%	612	3,032	C	720	199	SB	27	199	C
Old Dixie Highway	Boy Scout Blvd to Errol Pkwy	2	E	14,000	5,264	5%	612	5,264	C	720	301	SB	27	301	C
Old Dixie Highway	Errol Parkway to Vick Rd	2	E	14,000	10,028	5%	612	10,028	D	720	552	SB	27	552	D
Ponkon Rd	Round Lake Rd to Plymouth Rd	2	E	14,000	6,105	5%	612	6,105	C	720	270	EB	29	270	C
Ponkon Rd	Plymouth Sorrento Rd to Vick Rd	2	E	15,900	5,712	5%	612	5,712	C	790	301	EB	27	301	C
Schopke Lester Rd	Lester Rd to Old Dixie Hwy	2	E	14,000	3,945	2%	245	3,945	C	720	223	NB	11	223	C
Yothers Rd	US 441 to Plymouth Sorrento Rd	2	E	14,000	1,531	10%	1,225	1,531	C	720	78	WB	54	78	C

Table 6
Horizon Year 2030 Base Conditions Analysis

Roadway	Segment	# Lns	LOS Std	2030 Daily Trips Capacity	2030 Daily Trips Traffic	2030 Daily Trips LOS	2030 PM Peak Trips Capacity	2030 PM Peak Trips Traffic	2030 PM Peak Trips Dir	2030 PM Peak Trips LOS
US 441	Ponkan Rd to Yothers Rd	4	D	49,500	58,686	F	2,480	2,542	SB	F
US 441	Yothers Rd to SR 429 Connector Rd	4	D	49,500	58,686	F	2,480	2,542	SB	F
US 441	SR 429 Connector Rd to Plymouth Sorrento Rd	4	D	49,500	35,352	A	2,480	1,518	SB	A
US 441	Plymouth Sorrento Rd to Boy Scout Blvd	4	D	49,500	35,955	A	2,480	1,529	SB	A
US 441	Boy Scout Blvd to Errol Parkway	4	D	55,400	40,580	A	2,600	1,604	NB	A
US 441	Errol Parkway to SR 451	4	D	55,400	40,580	A	2,600	1,604	NB	A
Hermit Smith Rd	US 441 to Yother Rd	2	D	13,300	1,632	C	680	206	NB	B
Plymouth Sorrento Rd	Ponkon Rd to Lester Rd/Yothers Rd	2	E	17,700	13,080	C	880	619	NB	C
Plymouth Sorrento Rd	Lester Rd/Yothers Rd to SR 429 Connector Rd	2	E	19,000	13,769	C	950	767	NB	C
Plymouth Sorrento Rd	SR 429 Connector Rd to US 441	2	E	17,700	8,319	C	880	434	NB	C
SR 429 Connector	Plymouth Sorrento Rd to US 441	4	E	39,800	19,464	C	2,000	1,005	EB	C
SR 429 North	SR 414 to West US 441	6	E	108,800	15,289	B	5,380	1,394	NB	B
SR 429 South	West US 441 to Kelly Park Rd	4	E	72,600	15,629	B	3,590	1,214	SB	B
Binion Rd (CR 437)	Boy Scout Blvd to Lakeview Dr	2	E	17,700	7,704	C	880	465	NB	C
Binion Rd (CR 437)	Lakeview Dr to US 441	2	E	17,700	5,832	C	880	373	SB	C
Lester Rd	Rock Springs Rd to Vick Rd	2	E	14,000	6,188	C	720	307	EB	C
Lester Rd	Vick Rd to Schopke Lester Rd	2	E	14,000	6,188	C	720	307	EB	C
Lester Rd	Schopke Lester Rd to Plymouth Sorrento Rd	2	E	14,000	13,798	E	720	276	EB	C
Old Dixie Highway	Plymouth Sorrento Rd to Boy Scout Blvd	2	E	14,000	3,362	C	720	221	SB	C
Old Dixie Highway	Boy Scout Blvd to Errol Pkwy	2	E	14,000	5,838	C	720	334	SB	D
Old Dixie Highway	Errol Parkway to Vick Rd	2	E	14,000	11,122	D	720	612	SB	D
Ponkon Rd	Round Lake Rd to Plymouth Rd	2	E	14,000	6,771	D	720	299	EB	C
Ponkon Rd	Plymouth Sorrento Rd to Vick Rd	2	E	15,900	6,335	C	790	334	EB	C
Schopke Lester Rd	Lester Rd to Old Dixie Hwy	2	E	14,000	4,375	C	720	248	NB	C
Yothers Rd	US 441 to Plymouth Sorrento Rd	2	E	14,000	1,698	C	720	87	WB	C

Table 7
Horizon Year 2030 Projected Conditions Analysis

Roadway	Segment	# Lns	LOS Std	2030 Daily Trips						2030 PM Peak Trips					
				Capacity	Backg'd	Distr	Project	Total	LOS	Capacity	Backg'd	Dir	Project	Total	LOS
US 441	Ponkan Rd to Yothers Rd	4	D	49,500	58,686	10%	1,225	59,911	F	2,480	2,542	SB	58	2,600	F
US 441	Yothers Rd to SR 429 Connector Rd	4	D	49,500	58,686	10%	1,225	59,911	F	2,480	2,542	SB	58	2,600	F
US 441	SR 429 Connector Rd to Plymouth Sorrento Rd	4	D	49,500	35,352	10%	1,225	36,577	A	2,480	1,518	SB	54	1,572	A
US 441	Plymouth Sorrento Rd to Boy Scout Blvd	4	D	49,500	35,955	20%	2,450	38,405	A	2,480	1,529	SB	108	1,637	A
US 441	Boy Scout Blvd to Errol Parkway	4	D	55,400	40,580	20%	2,450	43,030	A	2,600	1,604	NB	116	1,720	A
US 441	Errol Parkway to SR 451	4	D	55,400	40,580	20%	2,450	43,030	A	2,600	1,604	NB	116	1,720	A
Hermit Smith Rd	US 441 to Yother Rd	2	D	13,300	1,632	20%	2,450	4,082	C	680	206	NB	116	322	C
Plymouth Sorrento Rd	Ponkon Rd to Lester Rd/Yothers Rd	2	E	17,700	13,080	5%	612	13,692	C	880	619	NB	27	646	C
Plymouth Sorrento Rd	Lester Rd/Yothers Rd to SR 429 Connector Rd	2	E	19,000	13,769	10%	1,225	14,994	C	950	767	NB	58	825	C
Plymouth Sorrento Rd	SR 429 Connector Rd to US 441	2	E	17,700	8,319	20%	2,450	10,769	C	880	434	NB	116	550	C
SR 429 Connector	Plymouth Sorrento Rd to US 441	4	E	39,800	19,464	5%	612	20,076	C	2,000	1,005	EB	27	1,032	C
SR 429 North	SR 414 to West US 441	6	E	108,800	15,289	30%	3,674	18,963	B	5,380	1,394	NB	162	1,556	B
SR 429 South	West US 441 to Kelly Park Rd	4	E	72,600	15,629	5%	612	16,241	B	3,590	1,214	SB	29	1,243	B
Binion Rd (CR 437)	Boy Scout Blvd to Lakeview Dr	2	E	17,700	7,704	5%	612	8,316	C	880	465	NB	29	494	C
Binion Rd (CR 437)	Lakeview Dr to US 441	2	E	17,700	5,832	5%	612	6,444	C	880	373	SB	27	400	C
Lester Rd	Rock Springs Rd to Vick Rd	2	E	14,000	6,188	0%	0	6,188	C	720	307	EB	0	307	C
Lester Rd	Vick Rd to Schopke Lester Rd	2	E	14,000	6,188	3%	367	6,555	C	720	307	EB	16	323	C
Lester Rd	Schopke Lester Rd to Plymouth Sorrento Rd	2	E	14,000	13,798	5%	612	14,410	F	720	276	EB	27	303	C
Old Dixie Highway	Plymouth Sorrento Rd to Boy Scout Blvd	2	E	14,000	3,362	5%	612	3,974	C	720	221	SB	27	248	C
Old Dixie Highway	Boy Scout Blvd to Errol Pkwy	2	E	14,000	5,838	5%	612	6,450	C	720	334	SB	27	361	D
Old Dixie Highway	Errol Parkway to Vick Rd	2	E	14,000	11,122	5%	612	11,734	D	720	612	SB	27	639	D
Ponkon Rd	Round Lake Rd to Plymouth Rd	2	E	14,000	6,771	5%	612	7,383	D	720	299	EB	29	328	C
Ponkon Rd	Plymouth Sorrento Rd to Vick Rd	2	E	15,900	6,335	5%	612	6,947	C	790	334	EB	27	361	C
Schopke Lester Rd	Lester Rd to Old Dixie Hwy	2	E	14,000	4,375	2%	245	4,620	C	720	248	NB	11	259	C
Yothers Rd	US 441 to Plymouth Sorrento Rd	2	E	14,000	1,698	10%	1,225	2,923	C	720	87	WB	54	141	C

6.0 STUDY CONCLUSIONS

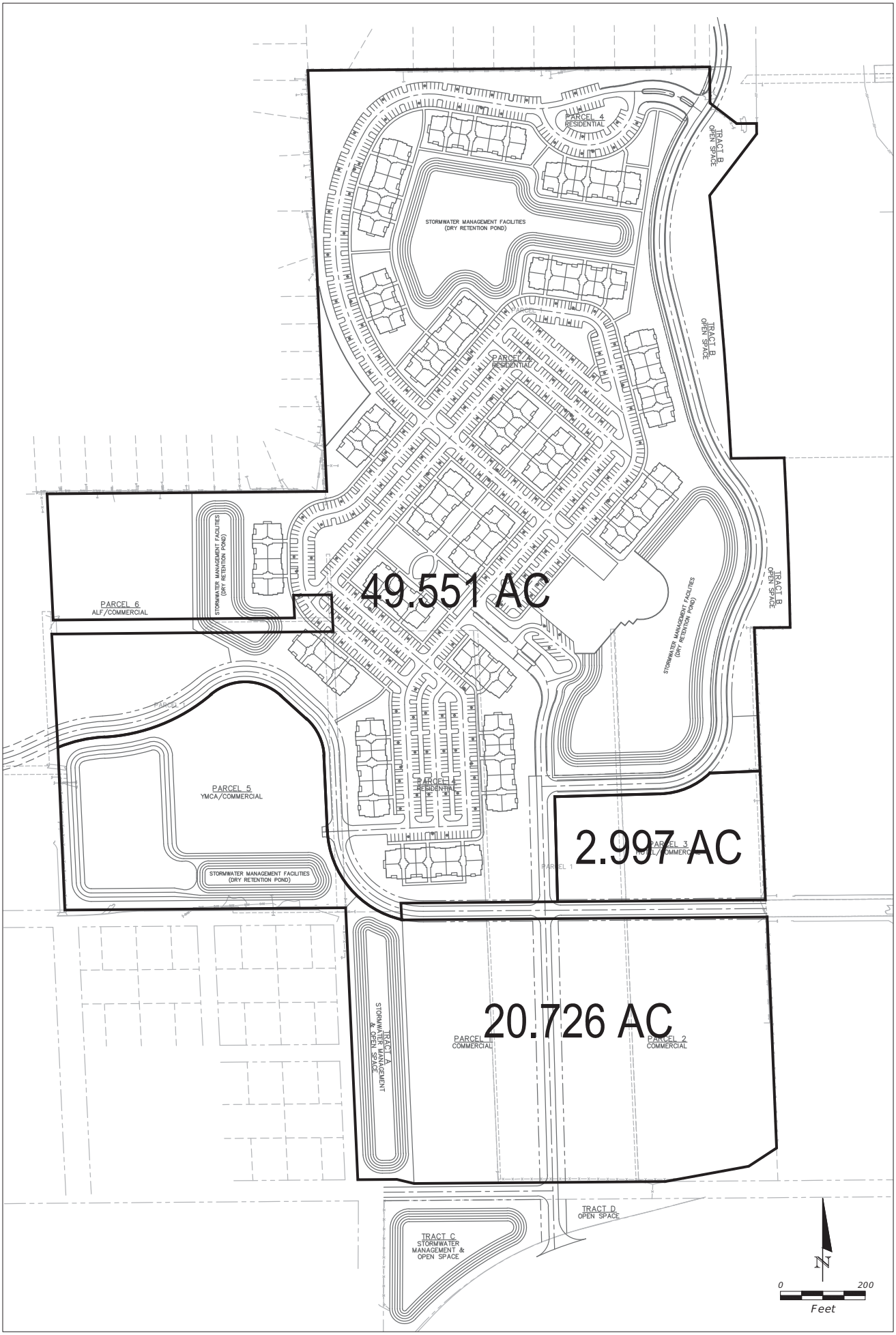
This study was conducted in support of a proposed Comprehensive Plan Amendment application for the 73.274 acre 429 West properties, located on SR 429 west of Hermit Smith Road, in the City of Apopka, Florida.

The requested amendment is to modify the existing FLU designation of the site. The current future land use designation allows the development up to 7 single family dwelling units on the property. With the proposed amendment, the allowable development on the property would increase to 743 multi-family dwelling units, and 295,506 square feet retail use. The requested amendment is to modify the existing future land use of the site from Orange County Rural to City of Apopka PD. The findings of this analysis are as follows:

- The requested amendment would result in an increase 12,248 daily trips, of which 1,119 trips would occur in the PM peak hour.
- An analysis of existing conditions indicates that the roadway network within the study area currently operates at satisfactory LOS.
- Analysis of Interim Year (2024) reveals that that US 441 from Ponkan Road to SR 429 Connector Road is projected to become deficient due to growth in background traffic. The segment will be adequate in the PM peak.
- Analysis of Horizon Year (2030) conditions indicates that US 441 from Ponkan Road to SR 429 Connector Road will continue to be deficient in 2030. The proposed amendment will not cause any roadway segments to become deficient in the Interim Year.
- The proposed development of the site will undergo additional traffic analysis review through the development process, where roadway capacity, traffic operations, access, and intersection capacity will be further evaluated in accordance with the requirements of the City of Apopka's development approvals process. The proposed development will be required to address off-site impacts through the City's Concurrency Management System.

APPENDICES

Appendix A
Preliminary Site Plan



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Apopka 429 Entitlements - Acreage Calculations

Date: 2020.01.03

Appendix B

Existing Traffic Volumes & Growth Calculations

City of Apopka CMS
2017 Daily and PM Peak Hour/Peak Direction (PH/PD) Encumbered Traffic Allocation Worksheets
FINAL REPORT

Base Traffic Volume: 2017 **Revision Date: 2/28/2018**

Roadway Section	# of Lanes	Adopted Standard Roadway Capacity LOS	Daily	PHPD	Applicant Inventory	Encumbered Trips Daily	PM PH/PD	Daily Traffic (1) Base Volume	Available Capacity	PM PH/PD Traffic (1) Base Volume	Available Capacity	Peak Direction
Major Arterials												
SR 436 (Semoran Avenue)												
US 441 to Sheeler Rd	8LD	D	80,100	4,040				24,540	55,426	938	3,097	NB/EB
					Farrish Enterprises	134	5		69.20%		76.66%	
					Applicant Inventory Total	134	5					
Sheeler Rd to Thompson Rd	8LD	D	80,100	4,040				34,334	45,632	1,521	2,514	SB/WB
					Farrish Enterprises	134	5		56.97%		62.23%	
					Applicant Inventory Total	134	5					
Thompson Rd to Roger Williams Rd	8LD	D	80,100	4,040				39,920	39,102	1,748	2,157	SB/WB
					Apopka Gateway Center	170	7		48.82%		53.39%	
					Farrish Enterprises	179	8					
					North Park (FF Rests)	729	120					
					Applicant Inventory Total	1,078	135					
Roger Williams Rd to Piedmont-Wekiwa Rd	8LD	D	80,100	4,040				45,651	33,058	1,871	2,021	SB/WB
					Apopka Gateway Center	259	11		41.27%		50.02%	
					Farrish Enterprises	403	17					
					North Park (FF Rests)	729	120					
					Applicant Inventory Total	1,391	148					
Piedmont Wekiwa Rd to Seminole County Line	6LD	D	59,900	3,020				57,425	1,494	2,415	563	SB/WB
					Apopka Gateway Center	578	25		2.49%		18.64%	
					Farrish Enterprises	403	17					
					Applicant Inventory Total	981	42					
US 441 (Orange Blossom Trail)												
Yothers Rd to SR 429 Connector Rd	4LD	D	49,500	2,480				42,949	1,536	1,861	197	SB/WB
					Avion Point	1,361	64		3.10%		7.94%	
					Avion Point West	1,782	252					
					Carillon (fka Wilkens Farm)	1,519	74					
					Chandler Estates	100	11					
					Hogshead Road Industrial	216	17					
					Orlando Country Airport	37	4					
					Applicant Inventory Total	5,015	422					
SR 429 Connector Rd to Plymouth Sorrento Rd	4LD	D	49,500	2,480				25,872	16,772	1,111	839	SB/WB
					Apopka Expressway Commerce	156	11		33.88%		33.83%	
					Avion Point	2,643	124					
					Avion Point West	1,782	252					
					Carillon (fka Wilkens Farm)	1,321	64					
					Chandler Estates	134	14					
					Clearlake Landing	117	9					
					Hogshead Road Industrial	668	53					
					Orlando Country Airport	35	3					
					Applicant Inventory Total	6,856	530					
Plymouth Sorrento Rd to Boy Scout Blvd	4LD	D	49,500	2,480				26,313	21,313	1,119	1,108	SB/WB
					Apopka Expressway Commerce	104	8		43.06%		44.68%	
					Avion Point West	1,692	239					
					Clearlake Landing	78	6					
					Applicant Inventory Total	1,874	253					
Boy Scout Blvd to Errol Parkway	4LD	D	55,400	2,600				29,698	25,301	1,174	1,390	NB/EB
					Clearlake Landing	194	15		45.67%		53.46%	
					Poe Reserve	207	21					
					Applicant Inventory Total	401	36					
Errol Parkway to SR 451	4LD	D	5,009 (2)	230 (2)				N/A	4,100	N/A	141	SB/WB
					Lake Marshall	286	28		81.85%		61.30%	
					Poe Reserve	456	46					
					Self Help Credit Union	167	15					
					Applicant Inventory Total	909	89					

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Minor Arterials (Continued)												
CR 437A (Ocoee-Apopka Road/Michael Gladden Boulevard/Central Avenue) (Continued)												
Bradshaw Rd to Central Ave	2L	E	15,600	800				6,037	7,038	284	303	NB/EB
					Cooper Oak (fka Bradshaw Commerce Park)	20	4		45.12%		37.88%	
					Cooper Palms	47	7					
					Dollar General	122	8					
					Emerson North Townhomes (fka Emerson North Apartments)	233	16					
					Emerson Point Apartments	852	53					
					Johns Road Commerce Center	43	4					
					Lake Marshall	430	42					
					Magnolia Commerce Center	7	1					
					Marden Ridge Apartments	175	32					
					Oakmont Industrial Facility	596	46					
					Applicant Inventory Total	2,525	213					
Michael Gladden Blvd to US 441	2L	E	15,600	800				4,073	11,487	196	600	SB/WB
					Johns Corner	40	4		73.63%		75.00%	
					Applicant Inventory Total	40	4					
Lakeville Road												
Apopka Blvd to Wildwood St	2L	E	17,700	880				5,651	12,049	299	581	NB/EB
					Development Name	0	0		68.07%		66.02%	
					Applicant Inventory Total	0	0					
Plymouth-Sorrento Road (CR 437)												
County Line to Kelly Park Rd	2L	E	31,500	1,640				7,647	22,379	405	1,105	NB/EB
					Kelly Park Commercial (Publix)	1,340	122		71.04%		67.38%	
					Orchid Estates (fka J.B. Nurseries)	134	8					
					Applicant Inventory Total	1,474	130					
Kelly Park Rd to Ponkan Rd	2L	E	17,700	880				10,542	4,132	694	-80	NB/EB
					Kelly Park Commercial (Publix)	2,680	244		23.34%		-9.09%	
					Oak Ridge Subdivision	117	7					
					Orchid Estates (fka J.B. Nurseries)	229	15					
					Applicant Inventory Total	3,026	266					
Ponkan Rd to Lester Rd/Yothers Rd	2L	E	17,700	880				9,572	7,955	453	411	NB/EB
					Chandler Estates	17	2		44.94%		46.70%	
					Oak Ridge Subdivision	50	3					
					Schopke Road Subdivision	106	11					
					Applicant Inventory Total	173	16					
Lester Rd/Yothers Rd to SR 429 Connector Rd	2L	E	19,000	950				10,077	8,536	562	336	NB/EB
					Chandler Estates	33	4		44.93%		35.37%	
					Oak Ridge Subdivision	50	3					
					Stanton Ridge	110	24					
					Schopke Road Subdivision	194	21					
					Applicant Inventory Total	387	52					
SR 429 Connector Rd to US 441	2L	E	17,700	880				6,088	11,209	318	508	NB/EB
					Chandler Estates	33	4		63.33%		57.73%	
					Oak Ridge Subdivision	50	3					
					Stanton Ridge	126	26					
					Schopke Road Subdivision	194	21					
					Applicant Inventory Total	403	54					
Sheeler Road												
SR 436 to US 441	3L	E	32,100	1,620				10,677	21,423	607	1,013	NB/EB
					Development Name	0	0		66.74%		62.53%	
					Applicant Inventory Total	0	0					
US 441 to Apopka Blvd	2L	E	17,700	880				9,650	8,005	420	458	NB/EB
					Farrish Enterprises	45	2		45.23%		52.05%	
					Applicant Inventory Total	45	2					

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Minor Arterials (Continued)												
Sheeler Road (Continued)												
Apopka Blvd to Cleveland St	2L	E	17,700	880				9,683	7,417	436	324	SB/WB
					Silver Oaks	600	120		41.90%		36.82%	
					Applicant Inventory Total	600	120					
Cleveland St to Keene Rd	2L	E	17,700	880				6,941	10,570	385	455	NB/EB
					Silver Oaks	189	40		59.72%		51.70%	
					Applicant Inventory Total	189	40					
SR 429 Connector												
Plymouth Sorrento to US 441	4LD	E	39,800	2,000				14,245	7,417	736	324	NB/EB
					Stanton Ridge	76	16		41.90%		36.82%	
					Applicant Inventory Total	76	16					
Wekiva Springs Road/Piedmont-Wekiwa Road/Hiawassee Road												
Votaw Rd to SR 436	5L	E	39,800	2,000				24,702	14,967	1,335	659	NB/EB
					Apopka Gateway Center	50	2		37.61%		32.95%	
					North Park (FF Rests)	81	4					
					Applicant Inventory Total	131	6					
SR 436 to Piedmont Lakes Blvd	5L	E	39,800	2,000				30,428	8,812	1,558	407	NB/EB
					Apopka Gateway Center	269	12		22.14%		20.35%	
					North Park (FF Rests)	291	23					
					Applicant Inventory Total	560	35					
Piedmont Lakes Blvd to US 441	5L	E	39,800	2,000				32,128	7,381	1,591	386	NB/EB
					North Park (FF Rests)	291	23		18.55%		19.30%	
					Applicant Inventory Total	291	23					
US 441 to CR 424 (Apopka Blvd)	4LD	E	39,800	2,000				21,969	17,831	1,084	916	NB/EB
					Development Name	0	0		44.80%		45.80%	
					Applicant Inventory Total	0	0					
CR 424 (Apopka Blvd) to SR 414	4LD	E	39,800	2,000				20,675	19,125	873	1,127	NB/EB
					Development Name	0	0		48.05%		56.35%	
					Applicant Inventory Total	0	0					
SR 414 to Beggs Rd	4LD	E	39,800	2,000				22,573	17,227	1,012	988	NB/EB
					Development Name	0	0		43.28%		49.40%	
					Applicant Inventory Total	0	0					
Welch Road												
Vick Rd to Rock Springs Rd (CR 435)	2L	E	16,400	840				11,047	4,881	557	246	NB/EB
					Meadow View Apartments	96	7		29.76%		29.29%	
					Sanctuary Golf Estates (fka Apopka Golf Residence)	139	15					
					San Sabastian	237	15					
					Applicant Inventory Total	472	37					
Rock Springs Rd (CR 435) to Ustler Rd	3L	E	35,000	1,720				17,690	17,251	753	963	SB/WB
					San Sabastian	59	4		49.29%		55.99%	
					Applicant Inventory Total	59	4					
Ustler Rd to Thompson Rd	2L	E	33,300	1,640				17,587	15,713	747	893	SB/WB
					Development Name	0	0		47.19%		54.45%	
					Applicant Inventory Total	0	0					
Minor Collectors												
2th Street												
Central Ave to Park Ave	2L	D	9,600	490				1,061	8,539	61	429	SB/WB
					Development Name	0	0		76.99%		64.29%	
					Applicant Inventory Total	0	0					
6th Street												
Park Ave to Alabama Ave	2L	D	9,600	490				2,209	7,391	175	315	SB/WB
					Development Name	0	0		76.99%		64.29%	
					Applicant Inventory Total	0	0					
9th Street												
Central Ave to Park Ave (CR 435)	2L	D	9,600	490				3,954	7,391	180	315	NB/EB
					Dollar General	195	14		76.99%		64.29%	
					Applicant Inventory Total	195	14					

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Minor Collectors (Continued)												
Binion Road (CR 437)/Orange Avenue (CR 437)												
Ocoee-Apopka Rd to Harmon Rd	2L	E	17,700	880				4,171	11,842	239	508	SB/WB
					Apopka Woods	34	2		66.90%		57.73%	
					Avian Pointe	734	45					
					Binion Reserve	105	8					
					Clearlake Landing	155	12					
					Clear Lake Reserve	21	2					
					Magnolia Park Estates (fka Park Place)	87	8					
					Old Palm Center PUD (fka, Thompson Hills Estates)	341	34					
					Vistas at Waters Edge	210	22					
					Applicant Inventory Total	1,687	133					
Harmon Rd to Boy Scout Rd	2L	E	17,700	880				4,585	11,147	281	436	NB/EB
					Apopka Woods	34	2		62.98%		49.55%	
					Avian Pointe	734	45					
					Binion Reserve	105	8					
					Clearlake Landing	155	12					
					Clear Lake Reserve	21	2					
					Magnolia Park Estates (fka Park Place)	87	8					
					Old Palm Center PUD (fka, Thompson Hills Estates)	341	34					
					Vistas at Waters Edge	491	52					
					Applicant Inventory Total	1,968	163					
Boy Scout Rd to Lakeview Dr	2L	E	17,700	880				5,638	8,753	340	317	NB/EB
					Apopka Expressway Commerce	130	10		49.45%		36.02%	
					Avian Pointe	2,200	135					
					Binion Reserve	231	18					
					Chandler Estates	33	4					
					Clearlake Landing	466	35					
					Clear Lake Reserve	43	5					
					Oakmont Industrial Facility	206	16					
					Applicant Inventory Total	3,309	223					
Lakeview Dr to US 441	2L	E	17,700	880				4,268	10,804	273	388	SB/WB
					Apopka Expressway Commerce	312	23		61.04%		44.09%	
					Avian Pointe	1,504	92					
					Avion Point West	624	88					
					Chandler Estates	33	4					
					Clearlake Landing	155	12					
					Applicant Inventory Total	2,628	219					
Boy Scout Road												
Binion Rd to Ocoee-Apopka Rd	2L	E	15,900	790				1,286	12,560	76	575	SB/WB
					Avian Pointe	1,466	90		78.99%		72.78%	
					Binion Reserve	84	7					
					Clearlake Landing	155	12					
					Lake Marshall	143	14					
					Oakmont Industrial Facility	206	16					
					Applicant Inventory Total	2,054	139					
Bradshaw Road												
US 441 to Johns Rd	2L	E	15,900	790				4,579	7,485	230	162	NB/EB
					Cooper Oak (fka Bradshaw Commerce Park)	117	22		47.08%		20.51%	
					Cooper Palms	284	41					
					Emerson North Townhomes (fka Emerson North Apartments)	154	11					
					Emerson Point Apartments	306	17					
					Faircloth Lakes	290	29					
					Johns Road Commerce Center	259	25					
					Lake Gem Commerce Center	312	43					
					Lake Marshall	1,864	182					
					Magnolia Commerce Center	70	14					
					Oakmont Industrial Facility	180	14					
					Applicant Inventory Total	3,836	398					

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Minor Collectors (Continued)												
Lake Avenue												
Martin St to Orange St	2L	D	13,300	680				2,338	10,962	145	535	NB/EB
					Development Name	0	0		82.42%		78.68%	
					Applicant Inventory Total	0	0					
Orange St to US 441	2L	D	13,300	680				1,279	12,021	72	608	SB/WB
					Development Name	0	0		90.38%		89.41%	
					Applicant Inventory Total	0	0					
Lake Doe Boulevard												
US 441 to Dunn Cove Dr	2L	D	13,300	680				3,550	11,233	195	406	SB/WB
					Poe Reserve	788	79		84.46%		59.71%	
					Applicant Inventory Total	788	79					
Lake Francis Drive												
Schopke Lester Rd to Errol Pkwy	2L	D	13,300	680				807	12,130	37	600	NB/EB
					Errol Clubhouse Villas	363	43		91.20%		88.24%	
					Applicant Inventory Total	363	43					
Errol Pkwy to Vick Rd	2L	D	13,300	680				3,374	9,717	167	488	SB/WB
					Errol Clubhouse Villas	209	25		73.06%		71.76%	
					Applicant Inventory Total	209	25					
Lester Road												
Rock Springs Rd to Vick Rd	2L	E	14,000	720				4,529	10,098	225	479	NB/EB
					Carriage Hills	287	26		72.13%		66.53%	
					Meadow View Apartments	19	1					
					Rock Springs Estates	65	7					
					San Sabastian	119	8					
					Applicant Inventory Total	490	42					
Vick Rd to Schopke Lester Rd	2L	E	14,000	720				4,529	8,929	225	447	NB/EB
					Carriage Hills	452	41		63.78%		62.08%	
					Meadow View Apartments	58	4					
					Rock Springs Estates	32	3					
					Applicant Inventory Total	542	48					
Schopke Lester Rd to Plymouth Sorrento Rd	2L	E	14,000	720				3,502	10,098	202	479	NB/EB
					Carriage Hills	369	33		72.13%		66.53%	
					Stanton Ridge	31	6					
					Applicant Inventory Total	400	39					
Lust Street												
SR 429 to Ocoee Apopka Rd	2L	E	14,000	720				62	11,727	3	582	SB/WB
					Avian Pointe	2,211	135		83.76%		80.83%	
					Applicant Inventory Total	2,211	135					
Marden Road												
Ocoee Apopka Rd to Entrance	2L	E	14,000	720				1,668	9,559	105	317	NB/EB
					Emerson North Townhomes (fka Emerson North Apartments)	428	30		68.28%		44.03%	
					Emerson Point Apartments	1,292	72					
					Marden Ridge Apartments	1,053	196					
					Applicant Inventory Total	2,773	298					
Marden Road												
Entrance to Keene Rd	2L	E	14,000	720				1,668	9,559	105	317	NB/EB
					Emerson North Townhomes (fka Emerson North Apartments)	428	30		68.28%		44.03%	
					Emerson Point Apartments	1,292	72					
					Marden Ridge Apartments	702	130					
					Applicant Inventory Total	2,422	232					
Martin Street												
Park Ave to Lake Ave	2L	E	14,000	720				3,811	10,149	183	535	SB/WB
					Center of Faith	40	2		72.49%		74.31%	
					Applicant Inventory Total	40	2					

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Minor Collectors (Continued)												
McCormick Road												
Ocoee-Apopka Rd to Clarcona Rd (CR 435)	2L	E	15,900	790				4,668	9,583	196	436	SB/WB
					Apopka Woods	221	15		60.27%		55.19%	
					Old Palm Center PUD (fka, Thompson Hills Estates)	1,428	143					
					Applicant Inventory Total	1,649	158					
Monroe Avenue												
Park Ave to Alabama Ave	2L	D	13,300	680				4,227	9,073	363	317	SB/WB
					Development Name	0	0		68.22%		46.62%	
					Applicant Inventory Total	0	0					
Alabama Ave to Sheeler Rd	2L	D	13,300	680				4,811	8,489	292	388	SB/WB
					Development Name	0	0		63.83%		57.06%	
					Applicant Inventory Total	0	0					
Mt. Plymouth Road												
Kelly Park Rd to Haas Rd	2L	D	15,900	790				9,196	6,704	587	203	NB/EB
					Development Name	0	0		42.16%		25.70%	
					Applicant Inventory Total	0	0					
Haas Rd to Lake County Line	2L	D	15,900	790				8,825	7,075	554	236	NB/EB
					Development Name	0	0		44.50%		29.87%	
					Applicant Inventory Total	0	0					
North Maine Avenue												
Martin St to Old Dixie Hwy	2L	D	13,300	680				3,591	9,709	164	516	NB/EB
					Development Name	0	0		73.00%		75.88%	
					Applicant Inventory Total	0	0					
Old Dixie Highway/West Highland Avenue/Orange Street												
Plymouth Sorrento Rd to Boy Scout Blvd	2L	E	14,000	720				2,461	11,539	162	558	SB/WB
					Development Name	0	0		82.42%		77.50%	
					Applicant Inventory Total	0	0					
Boy Scout Blvd to Errol Pkwy	2L	E	14,000	720				4,272	9,402	245	458	SB/WB
					Canterwood Manor (Dixie Manor @ Errol)	326	17		67.16%		63.61%	
					Applicant Inventory Total	326	17					
Errol Pkwy to Vick Rd	2L	E	14,000	720	.			8,139	5,382	448	237	SB/WB
					Canterwood Manor (Dixie Manor @ Errol)	217	11		38.44%		32.92%	
					Self Help Credit Union	262	24					
					Applicant Inventory Total	479	35					
Vick Rd to Bradshaw Rd	2L	E	14,000	720				9,428	4,524	461	255	NB/EB
					Self Help Credit Union	48	4		32.31%		35.42%	
					Applicant Inventory Total	48	4					
Bradshaw Rd to Hawthorne Ave	2L	E	14,000	720				5,450	8,550	310	410	SB/WB
					Development Name	0	0		61.07%		56.94%	
					Applicant Inventory Total	0	0					
Hawthorne Ave to Park Ave	2L	E	14,000	720				2,670	11,315	129	590	NB/EB
					Park Ave Professional Center	15	1		80.82%		81.94%	
					Applicant Inventory Total	15	1					
Ponkan Road												
Round Lake Rd to Plymouth-Sorrento Rd	2L	E	14,000	720				4,955	9,045	219	501	NB/EB
					Development Name	0	0		64.61%		69.58%	
					Applicant Inventory Total	0	0					
Plymouth-Sorrento Rd to Vick Rd	2L	E	15,900	790				4,637	10,392	245	479	NB/EB
					Appy Lane Subdivision	46	5		65.36%		60.63%	
					Chandler Estates	26	3					
					Hillside at Wekiva (fka Ponkan Reserve - North)	110	12					
					Oak Ridge Subdivision	50	3					
					Orchid Estates (fka J.B. Nurseries)	560	35					
					Ponkan Reserve - South	79	8					
					Applicant Inventory Total	871	66					

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Minor Collectors (Continued)												
Ponkan Road (Continued)												
Vick Rd to Rock Springs Rd	2L	E	15,900	790				4,930	9,880	232	462	NB/EB
					Appy Lane Subdivision	115	12		62.14%		58.48%	
					Chandler Estates	63	7					
					Hillside at Wekiva (fka Ponkan Reserve - North)	264	28					
					Orchid Estates (fka J.B. Nurseries)	458	29					
					Ponkan Reserve - South	190	20					
					Applicant Inventory Total	1,090	96					
Rogers Road												
North of Lester Rd	2L	E	14,000	720				1,500	13,579	80	636	NB/EB
					Carriage Hills	821	74		68.36%		60.76%	
					Applicant Inventory Total	821	74					
Sandpiper Road												
Park Ave to Ustler Rd	2L	E	15,900	790				4,868	10,870	299	480	SB/WB
					Sandpiper Road Subdivision	162	11		68.36%		60.76%	
					Applicant Inventory Total	162	11					
Ustler Rd to Thompson Rd	2L	E	15,900	790				5,880	9,643	364	401	SB/WB
					Sandpiper Road Subdivision	377	25		60.65%		50.76%	
					Applicant Inventory Total	377	25					
Schopke-Lester Road												
Lester Rd to Old Dixie Hwy	2L	E	14,000	720				3,202	10,798	182	538	NB/EB
					Development Name	0	0		77.13%		74.72%	
					Applicant Inventory Total	0	0					
Thompson Road												
Welch Rd to Votaw Rd	2L	E	15,900	790				9,956	5,944	487	303	NB/EB
					Development Name	0	0		37.38%		38.35%	
					Applicant Inventory Total	0	0					
Votaw Rd to SR 436	2L	E	14,000	720				9,123	4,743	279	436	SB/WB
					Farrish Enterprises	134	5		33.88%		60.56%	
					Applicant Inventory Total	134	5					
Ustler Road												
Sandpiper Rd to Welch Rd	2L	E	14,000	720				794	13,206	42	678	SB/WB
					Development Name	0	0		94.33%		94.17%	
					Applicant Inventory Total	0	0					
Vick Road												
US 441 to Old Dixie Hwy	2L	E	33,800	1,700				16,843	-4	964	-57	NB/EB
					Center of Faith	40	2		-0.02%		-6.79%	
					Lake Marshall	192	13					
					Meadow View Apartments	19	1					
					Self Help Credit Union	119	11					
					Zarabrooke	76	8					
					Applicant Inventory Total	446	35					
Old Dixie Hwy to Martin St	2L	E	16,400	840				15,958	-4	862	-57	NB/EB
					Center of Faith	40	2		-0.02%		-6.79%	
					Lake Marshall	192	13					
					Meadow View Apartments	19	1					
					Self Help Credit Union	119	11					
					Zarabrooke	76	8					
					Applicant Inventory Total	446	35					
Martin St to Welch Rd	2L	E	16,400	840				14,246	1,633	751	43	NB/EB
					Center of Faith	20	1		9.96%		5.12%	
					Meadow View Apartments	192	13					
					Sanctuary Golf Estates (fka Apopka Golf Residence)	170	18					
					Self Help Credit Union	72	7					
					Zarabrooke	67	7					
					Applicant Inventory Total	521	46					

City of Apopka CMS
2017 Daily and PM Peak Hour/Peak Direction (PH/PD) Encumbered Traffic Allocation Worksheets
FINAL REPORT

Base Traffic Volume: 2017 **Revision Date: 2/28/2018**

Roadway Section	# of Lanes	Adopted Standard Roadway Capacity LOS	Daily	PHPD	Applicant Inventory	Encumbered Trips Daily	PM PH/PD	Daily Traffic (1) Base Volume	Available Capacity	PM PH/PD Traffic (1) Base Volume	Available Capacity	Peak Direction
Minor Collectors (Continued)												
Vick Road (Continued)												
Welch Rd to Lake Francis Dr	2L	E	14,000	720				11,359	2,323	591	106	NB/EB
					Meadow View Apartments	288	20		29.76%		29.29%	
					Sanctuary Golf Estates (fka Apopka Golf Residence)	30	3					
					Applicant Inventory Total	318	23					
Lake Francis Dr to Lester Rd	2L	E	14,000	720				8,054	5,818	449	261	NB/EB
					Meadow View Apartments	96	7		29.76%		29.29%	
					Rock Springs Estates	32	3					
					Applicant Inventory Total	128	10					
Lester Rd to Ponkan Rd	2L	E	14,000	720				6,392	7,557	429	287	NB/EB
					Meadow View Apartments	19	1		29.76%		29.29%	
					Rock Springs Estates	32	3					
					Applicant Inventory Total	51	4					
Votaw Road												
Park Ave to Christiana Ave	2L	E	15,900	790				7,418	8,467	493	296	SB/WB
					Park Ave Professional Center	15	1		53.25%		37.47%	
					Applicant Inventory Total	15	1					
Christiana Ave to Thompson Rd	2L	E	15,900	790				7,892	8,008	406	384	NB/EB
					Development Name	0	0		50.36%		48.61%	
					Applicant Inventory Total	0	0					
Yothers Road/Church Drive												
US 441 to Plymouth Sorrento Rd	2L	E	14,000	720				1,243	12,312	63	610	SB/WB
					Carillon (fka Wilkens Farm)	132	6		87.94%		84.72%	
					Chandler Estates	234	25					
					Stanton Ridge	79	16					
					Applicant Inventory Total	445	47					

Notes:
1 Base Volume from Existing Traffic Volume Tables, Available Capacity is Adopted Capacity minus (Base Volume plus Encumbered Traffic), and percentage shown represents amount of Available Capacity remaining.
2 Allowable 15% Degradation Thresholds Capacity, see attached Transportation Consulting Group's 12/29/92 letter.
Source: 2017 Traffic Counts from ***Luke Transportation Engineering Consultants, Inc.***

TABLE 7

Generalized **Peak Hour Directional** Volumes for Florida's **Urbanized Areas**[1]

12/18/12

INTERRUPTED FLOW FACILITIES

STATE SIGNALIZED ARTERIALS

Class I (40 mph or higher posted speed limit)

Lanes	Median	B	C	D	E
1	Undivided	*	830	880	**
2	Divided	*	1,910	2,000	**
3	Divided	*	2,940	3,020	**
4	Divided	*	3,970	4,040	**

Class II (35 mph or slower posted speed limit)

Lanes	Median	B	C	D	E
1	Undivided	*	370	750	800
2	Divided	*	730	1,630	1,700
3	Divided	*	1,170	2,520	2,560
4	Divided	*	1,610	3,390	3,420

Non-State Signalized Roadway Adjustments

(Alter corresponding state volumes by the indicated percent.)

Non-State Signalized Roadways - 10%

Median & Turn Lane Adjustments

Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors
1	Divided	Yes	No	+5%
1	Undivided	No	No	-20%
Multi	Undivided	Yes	No	-5%
Multi	Undivided	No	No	-25%
–	–	–	Yes	+ 5%

One-Way Facility Adjustment

Multiply the corresponding directional volumes in this table by 1.2

UNINTERRUPTED FLOW FACILITIES

FREEWAYS

Lanes	B	C	D	E
2	2,260	3,020	3,660	3,940
3	3,360	4,580	5,500	6,080
4	4,500	6,080	7,320	8,220
5	5,660	7,680	9,220	10,360
6	7,900	10,320	12,060	12,500

Freeway Adjustments

Auxiliary Lane	Ramp Metering
+ 1,000	+ 5%

UNINTERRUPTED FLOW HIGHWAYS

Lanes	Median	B	C	D	E
1	Undivided	420	840	1,190	1,640
2	Divided	1,810	2,560	3,240	3,590
3	Divided	2,720	3,840	4,860	5,380

Uninterrupted Flow Highway Adjustments

Lanes	Median	Exclusive left lanes	Adjustment factors
1	Divided	Yes	+5%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

BICYCLE MODE[2]

(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Paved Shoulder/Bicycle Lane Coverage	B	C	D	E
0-49%	*	150	390	1,000
50-84%	110	340	1,000	>1,000
85-100%	470	1,000	>1,000	**

PEDESTRIAN MODE[2]

(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Sidewalk Coverage	B	C	D	E
0-49%	*	*	140	480
50-84%	*	80	440	800
85-100%	200	540	880	>1,000

BUS MODE (Scheduled Fixed Route)[3]

(Buses in peak hour in peak direction)

Sidewalk Coverage	B	C	D	E
0-84%	> 5	≥ 4	≥ 3	≥ 2
85-100%	> 4	≥ 3	≥ 2	≥ 1

[1] Values shown are presented as peak hour directional volumes for levels of service and are for the automobile/truck modes unless specifically stated. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the Highway Capacity Manual and the Transit Capacity and Quality of Service Manual.

[2] Level of service for the bicycle and pedestrian modes in this table is based on number of motorized vehicles, not number of bicyclists or pedestrians using the facility.

[3] Buses per hour shown are only for the peak hour in the single direction of the higher traffic flow.

* Cannot be achieved using table input value defaults.

** Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached. For the bicycle mode, the level of service letter grade (including F) is not achievable because there is no maximum vehicle volume threshold using table input value defaults.

Source:
Florida Department of Transportation
Systems Planning Office
www.dot.state.fl.us/planning/systems/sm/los/default.shtm

TABLE 1

Generalized **Annual Average Daily** Volumes for Florida's **Urbanized Areas**

12/18/12

INTERRUPTED FLOW FACILITIES

STATE SIGNALIZED ARTERIALS

Class I (40 mph or higher posted speed limit)

Lanes	Median	B	C	D	E
2	Undivided	*	16,800	17,700	**
4	Divided	*	37,900	39,800	**
6	Divided	*	58,400	59,900	**
8	Divided	*	78,800	80,100	**

Class II (35 mph or slower posted speed limit)

Lanes	Median	B	C	D	E
2	Undivided	*	7,300	14,800	15,600
4	Divided	*	14,500	32,400	33,800
6	Divided	*	23,300	50,000	50,900
8	Divided	*	32,000	67,300	68,100

Non-State Signalized Roadway Adjustments

(Alter corresponding state volumes by the indicated percent.)

Non-State Signalized Roadways - 10%

Median & Turn Lane Adjustments

Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors
2	Divided	Yes	No	+5%
2	Undivided	No	No	-20%
Multi	Undivided	Yes	No	-5%
Multi	Undivided	No	No	-25%
–	–	–	Yes	+ 5%

One-Way Facility Adjustment

Multiply the corresponding two-directional volumes in this table by 0.6

BICYCLE MODE[2]

(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Paved Shoulder/Bicycle Lane Coverage	B	C	D	E
0-49%	*	2,900	7,600	19,700
50-84%	2,100	6,700	19,700	>19,700
85-100%	9,300	19,700	>19,700	**

PEDESTRIAN MODE[2]

(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)

Sidewalk Coverage	B	C	D	E
0-49%	*	*	2,800	9,500
50-84%	*	1,600	8,700	15,800
85-100%	3,800	10,700	17,400	>19,700

BUS MODE (Scheduled Fixed Route)[3]

(Buses in peak hour in peak direction)

Sidewalk Coverage	B	C	D	E
0-84%	> 5	≥ 4	≥ 3	≥ 2
85-100%	> 4	≥ 3	≥ 2	≥ 1

UNINTERRUPTED FLOW FACILITIES

FREEWAYS

Core Urbanized

Lanes	B	C	D	E
4	47,400	64,000	77,900	84,600
6	69,900	95,200	116,600	130,600
8	92,500	126,400	154,300	176,600
10	115,100	159,700	194,500	222,700
12	162,400	216,700	256,600	268,900

Urbanized

Lanes	B	C	D	E
4	45,800	61,500	74,400	79,900
6	68,100	93,000	111,800	123,300
8	91,500	123,500	148,700	166,800
10	114,800	156,000	187,100	210,300

Freeway Adjustments

Auxiliary Lanes Present in Both Directions	Ramp Metering
+ 20,000	+ 5%

UNINTERRUPTED FLOW HIGHWAYS

Lanes	Median	B	C	D	E
2	Undivided	8,600	17,000	24,200	33,300
4	Divided	36,700	51,800	65,600	72,600
6	Divided	55,000	77,700	98,300	108,800

Uninterrupted Flow Highway Adjustments

Lanes	Median	Exclusive left lanes	Adjustment factors
2	Divided	Yes	+5%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-25%

[1]Values shown are presented as two-way annual average daily volumes for levels of service and are for the automobile/truck modes unless specifically stated. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the Highway Capacity Manual and the Transit Capacity and Quality of Service Manual.

[2] Level of service for the bicycle and pedestrian modes in this table is based on number of motorized vehicles, not number of bicyclists or pedestrians using the facility.

[3] Buses per hour shown are only for the peak hour in the single direction of the higher traffic flow.

* Cannot be achieved using table input value defaults.

** Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D become F because intersection capacities have been reached. For the bicycle mode, the level of service letter grade (including F) is not achievable because there is no maximum vehicle volume threshold using table input value defaults.

Source:
Florida Department of Transportation
Systems Planning Office
www.dot.state.fl.us/planning/systems/sm/los/default.shtm

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2018 HISTORICAL AADT REPORT

COUNTY: 75 - ORANGE

SITE: 8003 - PLYMOUTH/SORRENTO RD, N OF US 441/SR 500/OBT - OFF SYSTEM

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2018	7400 F	N 3600	S 3800	9.00	53.20	4.30
2017	7200 C	N 3500	S 3700	9.00	52.60	3.90
2016	9800 V	0	0	9.00	52.50	5.70
2015	9600 R	0	0	9.00	53.20	4.40
2014	9400 T			9.00	53.20	3.80
2013	9300 S	0	0	9.00	53.30	4.10
2012	9200 F	0	0	9.00	52.90	3.60
2011	9200 C	N 0	S 0	9.00	52.70	3.50

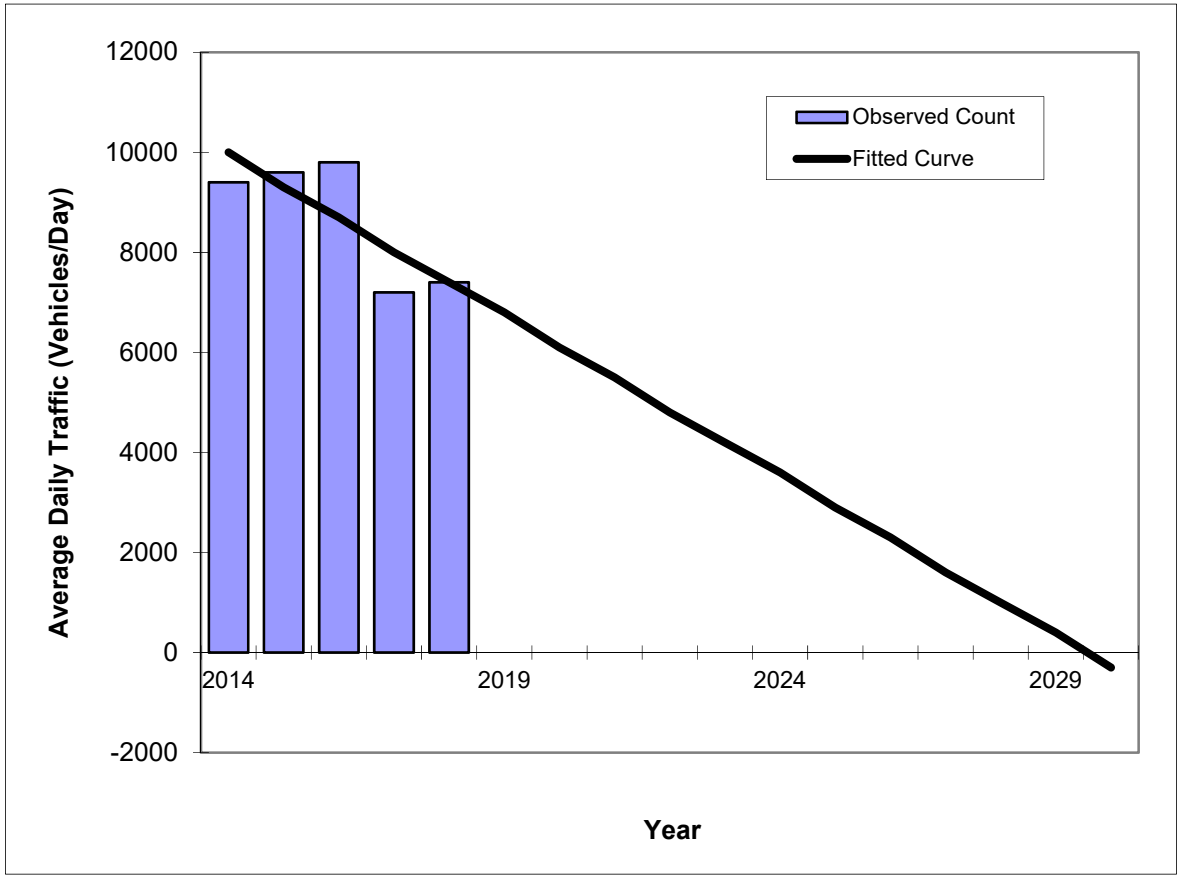
AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Traffic Trends - V2.0

PLYMOUTH-SORRENTO RD --

PIN#	973215-1
Location	1

County:	Orange (75)
Station #:	0
Highway:	PLYMOUTH-SORRENTO RD



Year	Traffic (ADT/AADT) Count*	Trend**
2014	9400	10000
2015	9600	9300
2016	9800	8700
2017	7200	8000
2018	7400	7400
2020 Opening Year Trend		
2020	N/A	6100
2023 Mid-Year Trend		
2023	N/A	4200
2030 Design Year Trend		
2030	N/A	-300
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

** Annual Trend Increase:	-640
Trend R-squared:	63.52%
Trend Annual Historic Growth Rate:	-6.50%
Trend Growth Rate (2018 to Design Year):	-8.67%
Printed:	22-Oct-19

Straight Line Growth Option

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2018 HISTORICAL AADT REPORT

COUNTY: 75 - ORANGE

SITE: 8335 - CR-437/BINION RD, 900 FT S OF LAKEVIEW DR - OFF SYSTEM

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2018	5200 S	N 2600	S 2600	9.00	53.20	5.80
2017	5200 F	N 2600	S 2600	9.00	52.60	6.20
2016	5000 C	N 2500	S 2500	9.00	52.50	6.00
2015	5900 T	0	0	9.00	53.20	7.20
2014	5800 S			9.00	53.20	5.70
2013	5700 F	0	0	9.00	53.30	5.40
2012	5700 C	N 0	S 0	9.00	52.90	5.20

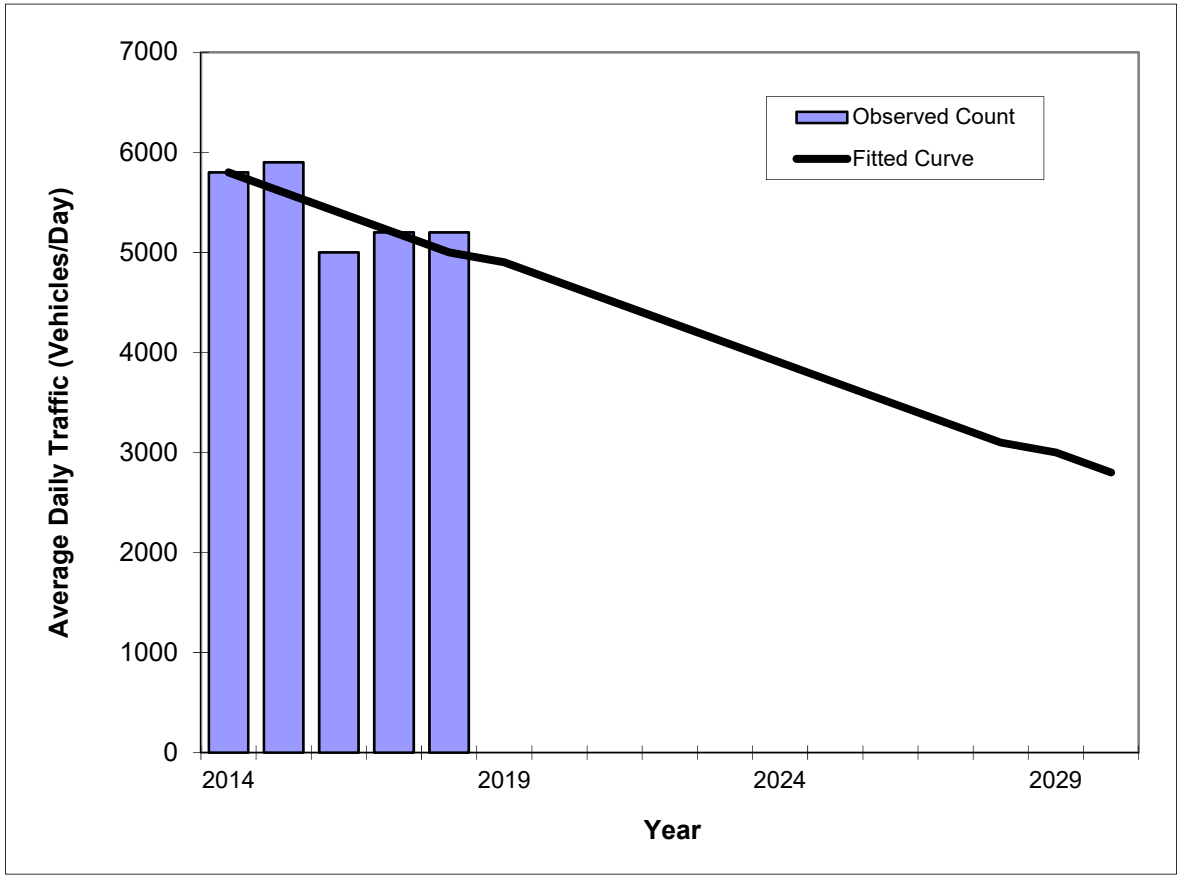
AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Traffic Trends - V2.0

BINION RAOD --

PIN#	973215-1
Location	1

County:	Orange (75)
Station #:	0
Highway:	BINION RAOD



Year	Traffic (ADT/AADT) Count*	Trend**
2014	5800	5800
2015	5900	5600
2016	5000	5400
2017	5200	5200
2018	5200	5000
2020 Opening Year Trend		
2020	N/A	4700
2023 Mid-Year Trend		
2023	N/A	4100
2030 Design Year Trend		
2030	N/A	2800
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

** Annual Trend Increase:	-190
Trend R-squared:	55.71%
Trend Annual Historic Growth Rate:	-3.45%
Trend Growth Rate (2018 to Design Year):	-3.67%
Printed:	22-Oct-19

Straight Line Growth Option

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2018 HISTORICAL AADT REPORT

COUNTY: 75 - ORANGE

SITE: 0002 - ON US-441, 0.151 MI. NW OF CR-437 (UVL)

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2018	24000 C	N 12000	S 12000	9.00	53.20	3.80
2017	25000 C	N 12500	S 12500	9.00	52.60	3.90
2016	24000 C	N 12000	S 12000	9.00	52.50	6.20
2015	23500 C	N 11500	S 12000	9.00	53.20	5.80
2014	23000 C	N 11500	S 11500	9.00	53.20	6.00
2013	32500 C	N 17000	S 15500	9.00	53.30	5.80
2012	30500 C	N 16000	S 14500	9.00	52.90	9.00
2011	32500 C	N 17000	S 15500	9.00	52.70	8.10
2010	33500 C	N 17000	S 16500	8.87	52.83	7.90
2009	32500 C	N 17000	S 15500	8.79	53.70	7.50
2008	34500 C	N 17500	S 17000	8.80	53.99	9.90
2007	34500 C	N 17000	S 17500	8.63	54.08	9.80
2006	33000 C	N 18000	S 15000	8.59	53.01	9.80
2005	32000 C	N 17500	S 14500	8.60	54.10	4.80
2004	32500 C	N 17000	S 15500	8.70	52.80	10.40
2003	34500 C	N 17500	S 17000	8.60	54.20	9.30

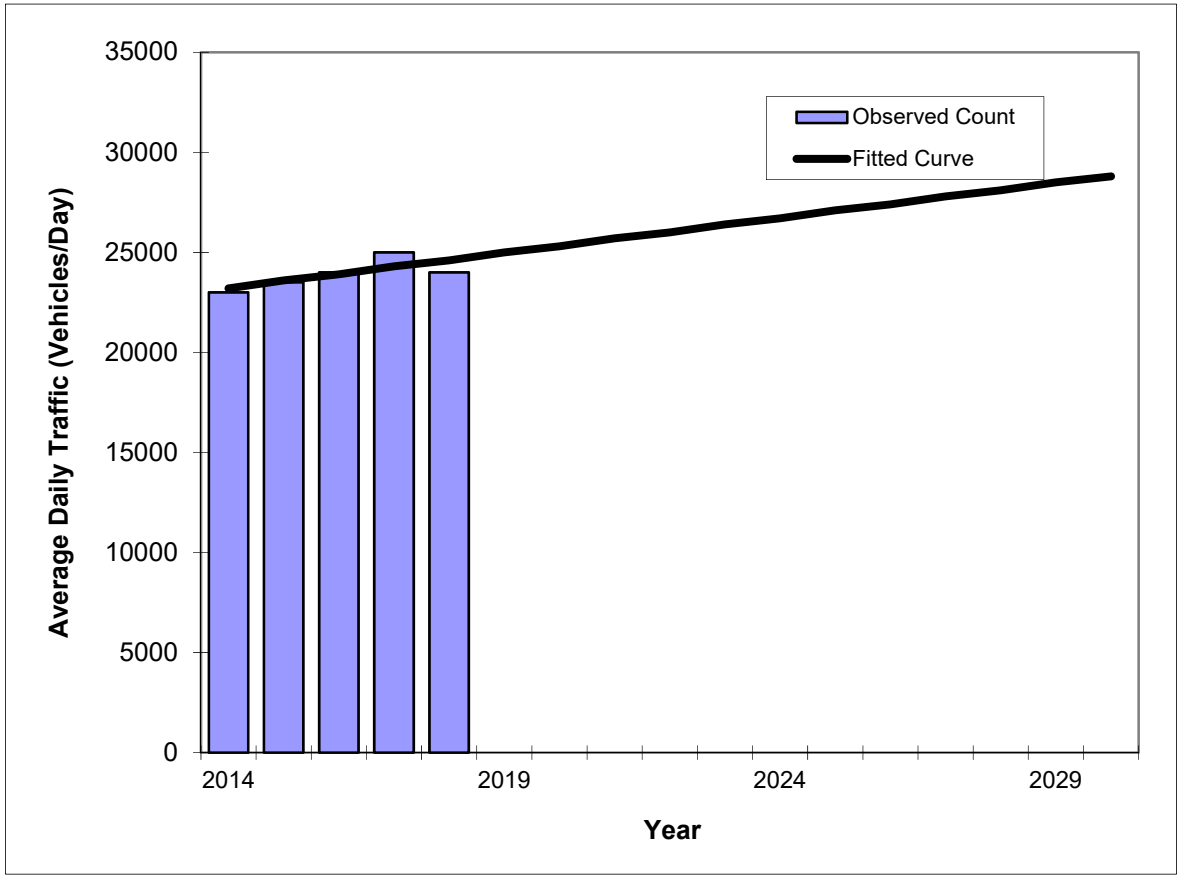
AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Traffic Trends - V2.0

ORANGE BLOSSOM TRAIL --

PIN#	973215-1
Location	1

County:	Orange (75)
Station #:	0
Highway:	ORANGE BLOSSOM TRAIL



Year	Traffic (ADT/AADT) Count*	Trend**
2014	23000	23200
2015	23500	23600
2016	24000	23900
2017	25000	24300
2018	24000	24600
2020 Opening Year Trend		
2020	N/A	25300
2023 Mid-Year Trend		
2023	N/A	26400
2030 Design Year Trend		
2030	N/A	28800
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	350
Trend R-squared:	55.68%
Trend Annual Historic Growth Rate:	1.51%
Trend Growth Rate (2018 to Design Year):	1.42%
Printed:	22-Oct-19

Straight Line Growth Option

*Axle-Adjusted

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2018 HISTORICAL AADT REPORT

COUNTY: 75 - ORANGE

SITE: 0082 - ON US-441, 1.031 MI. SE OF CR-437 (UCLP)

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2018	27000 F	N 14000	S 13000	9.00	53.20	3.60
2017	27000 C	N 14000	S 13000	9.00	52.60	3.60
2016	28500 C	N 14000	S 14500	9.00	52.50	3.60
2015	27500 C	N 14000	S 13500	9.00	53.20	4.00
2014	27500 C	N 14000	S 13500	9.00	53.20	3.60
2013	38000 C	N 20500	S 17500	9.00	53.30	4.00
2012	37000 C	N 18000	S 19000	9.00	52.90	12.00
2011	38000 C	N 19000	S 19000	9.00	52.70	8.80
2010	40000 C	N 20000	S 20000	8.87	52.83	8.50
2009	40000 C	N 20000	S 20000	8.79	53.70	9.40
2008	41000 C	N 20500	S 20500	8.80	53.99	9.70
2007	40500 C	N 19500	S 21000	8.63	54.08	9.30
2006	41500 C	N 20500	S 21000	8.59	53.01	10.40
2005	38000 C	N 20000	S 18000	8.60	54.10	4.80
2004	36500 F	N 18500	S 18000	8.70	52.80	10.40
2003	36500 C	N 18500	S 18000	8.60	54.20	9.30

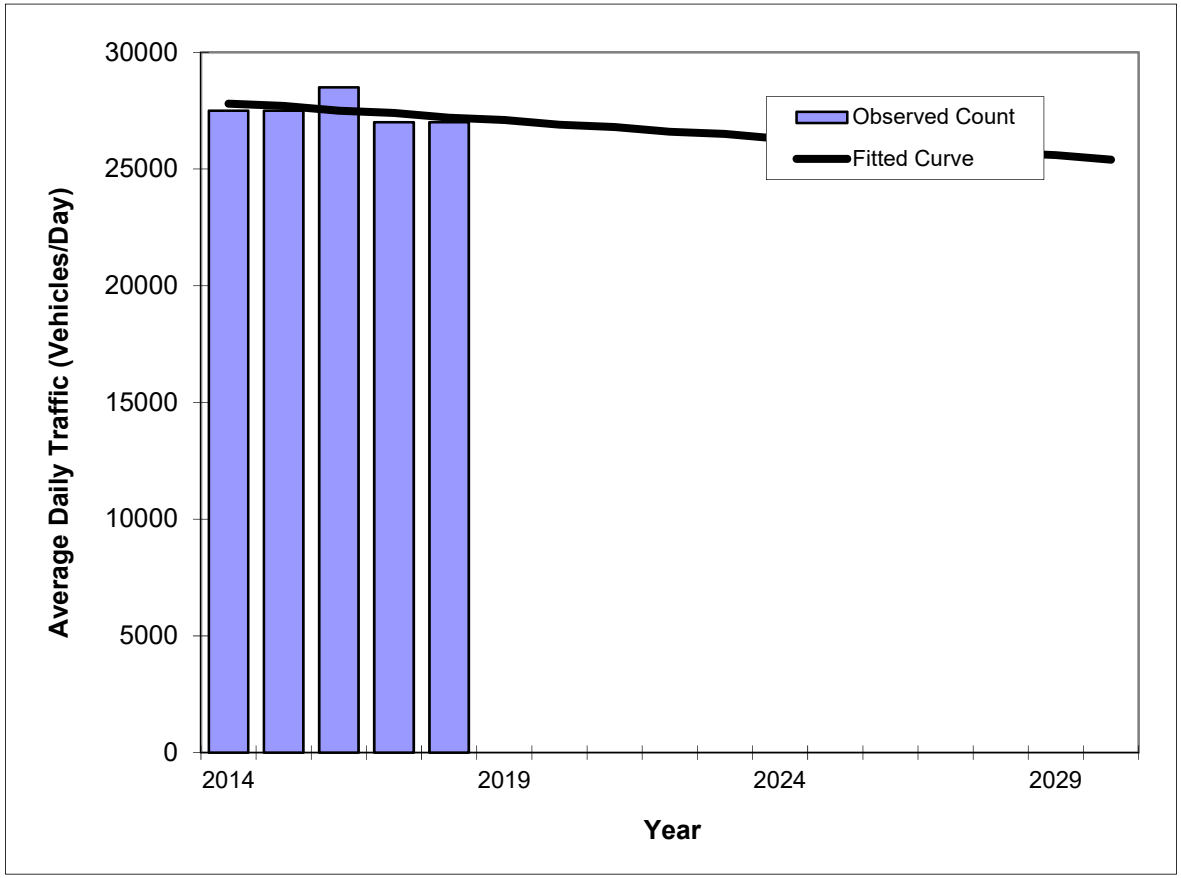
AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Traffic Trends - V2.0

ORANGE BLOSSOM TRAIL --

PIN#	973215-1
Location	1

County:	Orange (75)
Station #:	0
Highway:	ORANGE BLOSSOM TRAIL



Year	Traffic (ADT/AADT) Count*	Trend**
2014	27500	27800
2015	27500	27700
2016	28500	27500
2017	27000	27400
2018	27000	27200
2020 Opening Year Trend		
2020	N/A	26900
2023 Mid-Year Trend		
2023	N/A	26500
2030 Design Year Trend		
2030	N/A	25400
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

** Annual Trend Increase:	-150
Trend R-squared:	15.00%
Trend Annual Historic Growth Rate:	-0.54%
Trend Growth Rate (2018 to Design Year):	-0.55%
Printed:	22-Oct-19

Straight Line Growth Option

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2018 HISTORICAL AADT REPORT

COUNTY: 75 - ORANGE

SITE: 8103 - PONKAN ROAD, E OF US-441/SR-500/ORANGE BLOSSOM TRAIL - OFF SYSTEM

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2018	2600 F	E 1200	W 1400	9.00	53.20	4.30
2017	2600 C	E 1200	W 1400	9.00	52.60	3.90
2016	2000 V	0	0	9.00	52.50	5.70
2015	2000 R	0	0	9.00	53.20	4.40
2014	2000 T			9.00	53.20	3.80
2013	2000 S	0	0	9.00	53.30	4.10
2012	2000 F	0	0	9.00	52.90	3.60
2011	2000 C	E 0	W 0	9.00	52.70	3.50

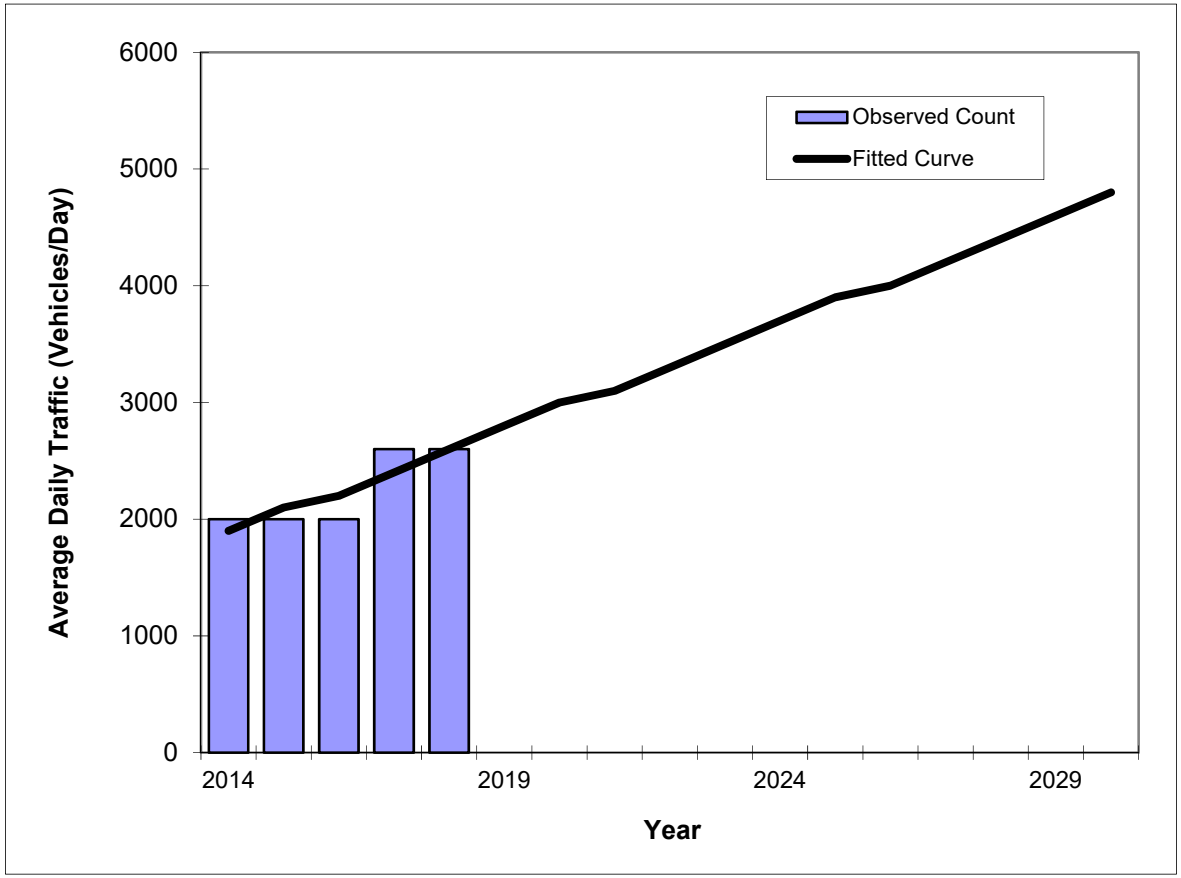
AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Traffic Trends - V2.0

PONKAN RD --

PIN#	973215-1
Location	1

County:	Orange (75)
Station #:	0
Highway:	PONKAN RD



Year	Traffic (ADT/AADT) Count*	Trend**
2014	2000	1900
2015	2000	2100
2016	2000	2200
2017	2600	2400
2018	2600	2600
2020 Opening Year Trend		
2020	N/A	3000
2023 Mid-Year Trend		
2023	N/A	3500
2030 Design Year Trend		
2030	N/A	4800
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

** Annual Trend Increase:	180
Trend R-squared:	75.00%
Trend Annual Historic Growth Rate:	9.21%
Trend Growth Rate (2018 to Design Year):	7.05%
Printed:	22-Oct-19

Straight Line Growth Option

ADT TRAFFIC SERVICES
4807 FISKE CIR
ORLANDO, FL 32826
(407)310-5264

Hermit Smith Rd-24hr Volume Counts-1
Site Code: 000000000001
Station ID: Hermit Smith Rd
.30 Miles north of US 441

Start Time	1/9/2019 Wed	S.B Morning	S.B Afternoon	Hour Totals Morning	Hour Totals Afternoon	N.B Morning	N.B Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		2	16			3	7				
12:15		1	7			4	9				
12:30		1	7			0	13				
12:45		1	10	5	40	1	10	8	39	13	79
01:00		1	11			2	13				
01:15		1	10			1	13				
01:30		0	8			2	11				
01:45		1	14	3	43	3	11	8	48	11	91
02:00		1	13			3	18				
02:15		1	15			0	14				
02:30		0	18			1	24				
02:45		0	21	2	67	0	20	4	76	6	143
03:00		0	13			1	16				
03:15		0	12			0	20				
03:30		1	10			0	15				
03:45		1	10	2	45	0	22	1	73	3	118
04:00		0	11			0	20				
04:15		2	11			0	13				
04:30		1	10			1	20				
04:45		6	16	9	48	0	30	1	83	10	131
05:00		4	12			3	27				
05:15		5	8			1	28				
05:30		11	23			0	21				
05:45		5	17	25	60	1	15	5	91	30	151
06:00		9	11			5	23				
06:15		18	26			2	23				
06:30		22	16			6	28				
06:45		18	12	67	65	7	11	20	85	87	150
07:00		22	14			3	27				
07:15		17	14			7	14				
07:30		23	11			14	16				
07:45		19	10	81	49	9	17	33	74	114	123
08:00		19	10			12	13				
08:15		12	4			5	10				
08:30		12	4			7	10				
08:45		11	7	54	25	10	18	34	51	88	76
09:00		6	9			6	8				
09:15		12	7			5	12				
09:30		11	12			9	11				
09:45		9	7	38	35	3	9	23	40	61	75
10:00		9	3			10	5				
10:15		15	3			10	7				
10:30		10	2			7	7				
10:45		9	5	43	13	13	5	40	24	83	37
11:00		7	1			11	4				
11:15		8	2			6	5				
11:30		7	2			11	1				
11:45		11	2	33	7	10	4	38	14	71	21
Total		362	497			215	698			577	1195
Percent		42.1%	57.9%			23.5%	76.5%			32.6%	67.4%
Grand Total		362	497			215	698			577	1195
Percent		42.1%	57.9%			23.5%	76.5%			32.6%	67.4%
ADT		ADT 1,788		AADT 1,788							

Appendix C
Trip Generation Information Sheets

Single-Family Detached Housing
(210)

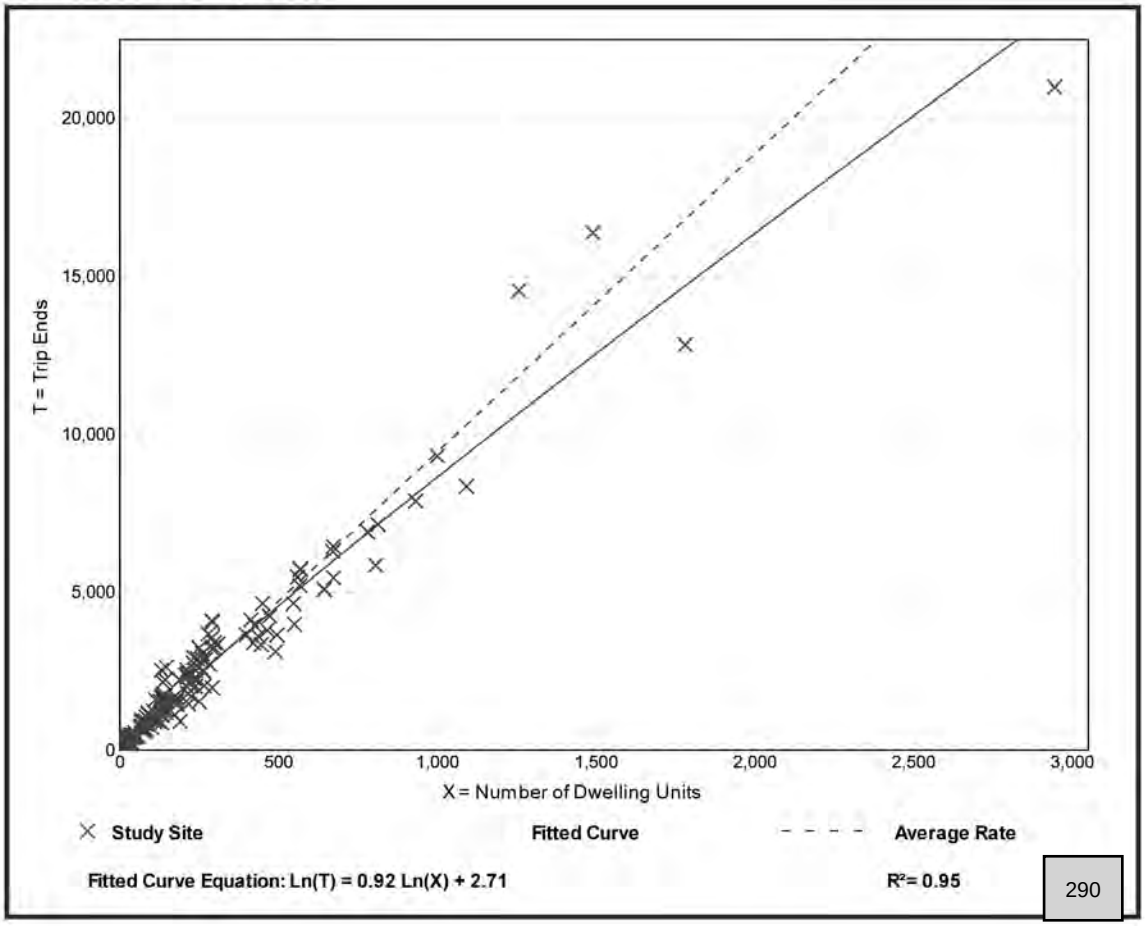
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 159
Avg. Num. of Dwelling Units: 264
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.44	4.81 - 19.39	2.10

Data Plot and Equation



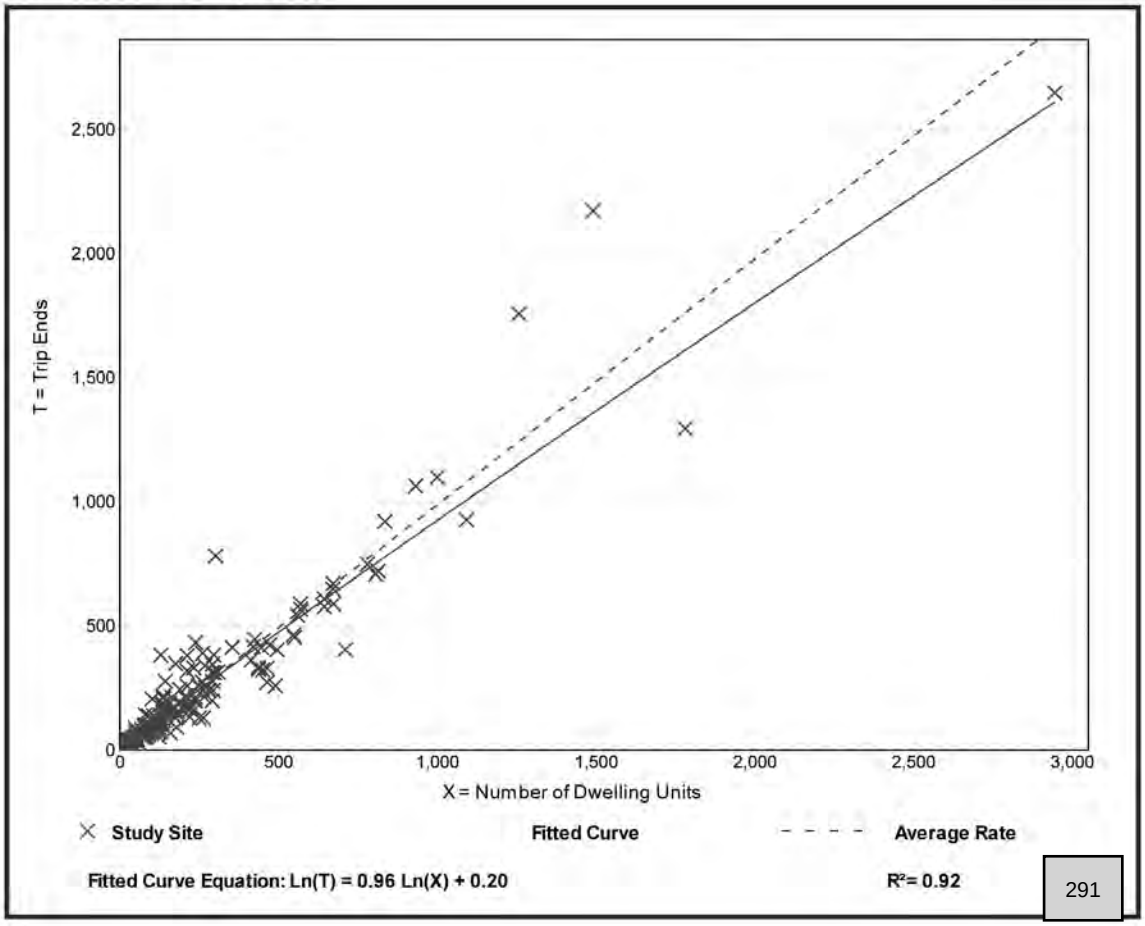
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	190
Avg. Num. of Dwelling Units:	242
Directional Distribution:	63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.99	0.44 - 2.98	0.31

Data Plot and Equation



Multifamily Housing (Mid-Rise)
(221)

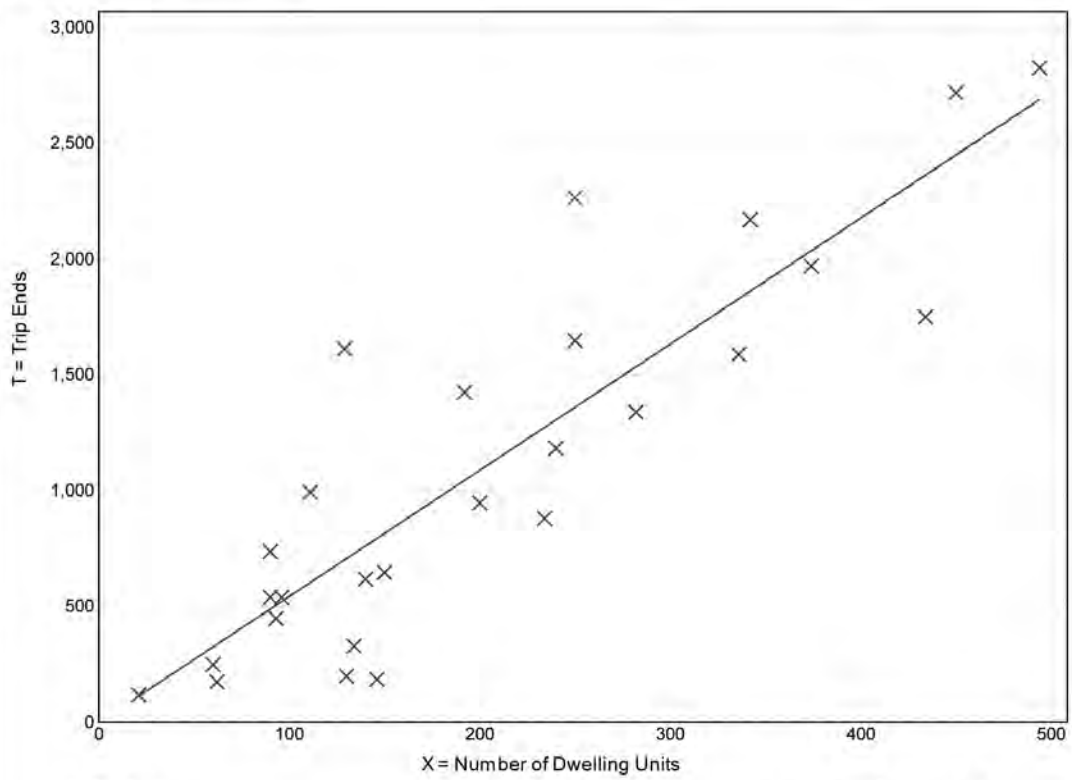
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 27
Avg. Num. of Dwelling Units: 205
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
5.44	1.27 - 12.50	2.03

Data Plot and Equation



× **Study Site** **Fitted Curve** - - - - **Average Rate**

Fitted Curve Equation: T = 5.45(X) - 1.75 **R^2= 0.77**

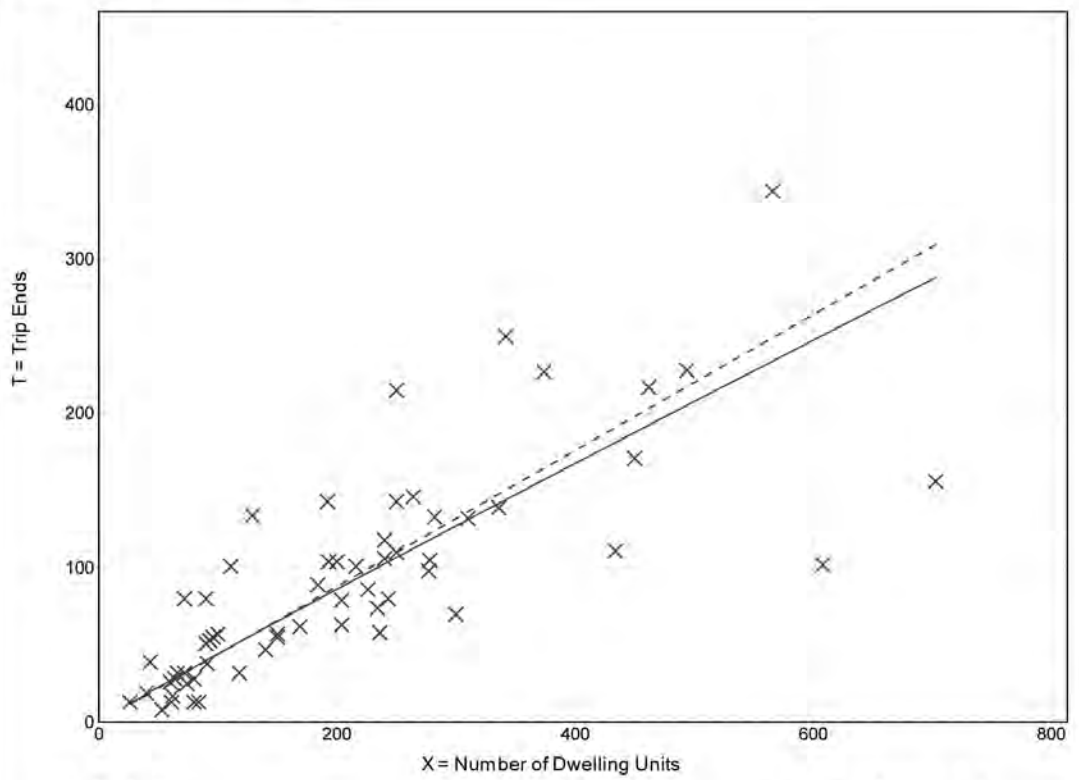
Multifamily Housing (Mid-Rise)
(221)

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: 60
Avg. Num. of Dwelling Units: 208
Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.44	0.15 - 1.11	0.19

Data Plot and Equation



× **Study Site** **Fitted Curve** - - - - **Average Rate**

Fitted Curve Equation: Ln(T) = 0.96 Ln(X) - 0.63 **R^2= 0.72**

Shopping Center
(820)

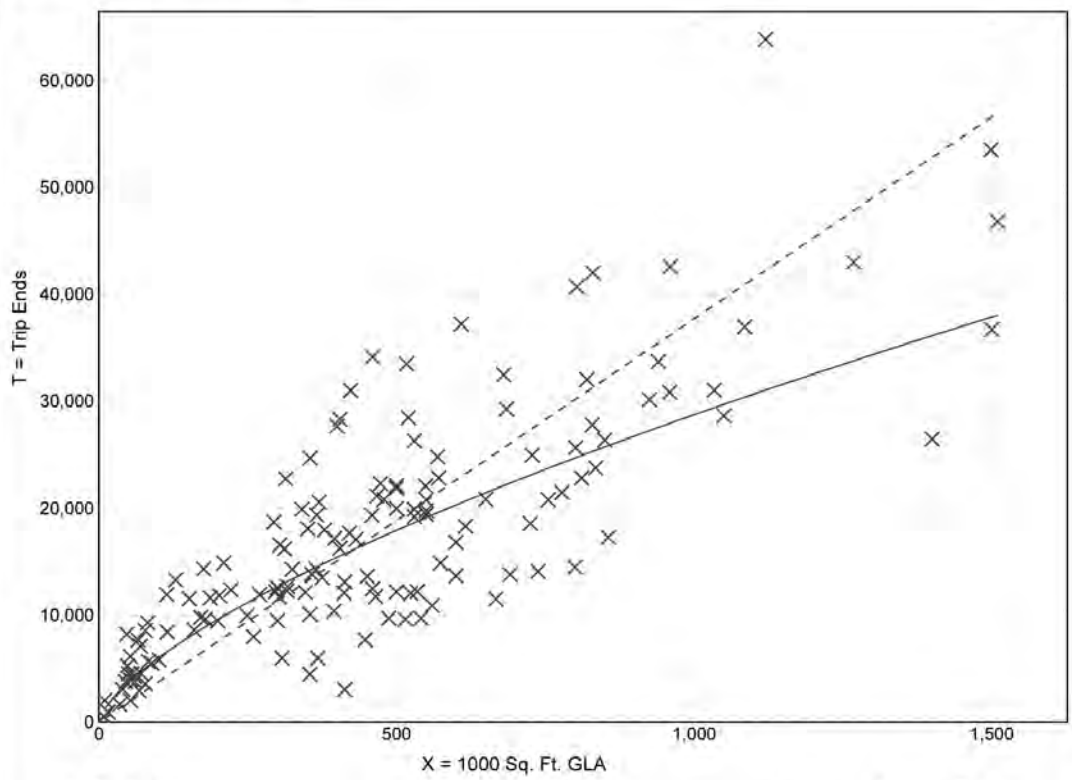
Vehicle Trip Ends vs: 1000 Sq. Ft. GLA
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 147
1000 Sq. Ft. GLA: 453
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
37.75	7.42 - 207.98	16.41

Data Plot and Equation



× **Study Site** **Fitted Curve** - - - - **Average Rate**

Fitted Curve Equation: Ln(T) = 0.68 Ln(X) + 5.57 **R^2= 0.76**

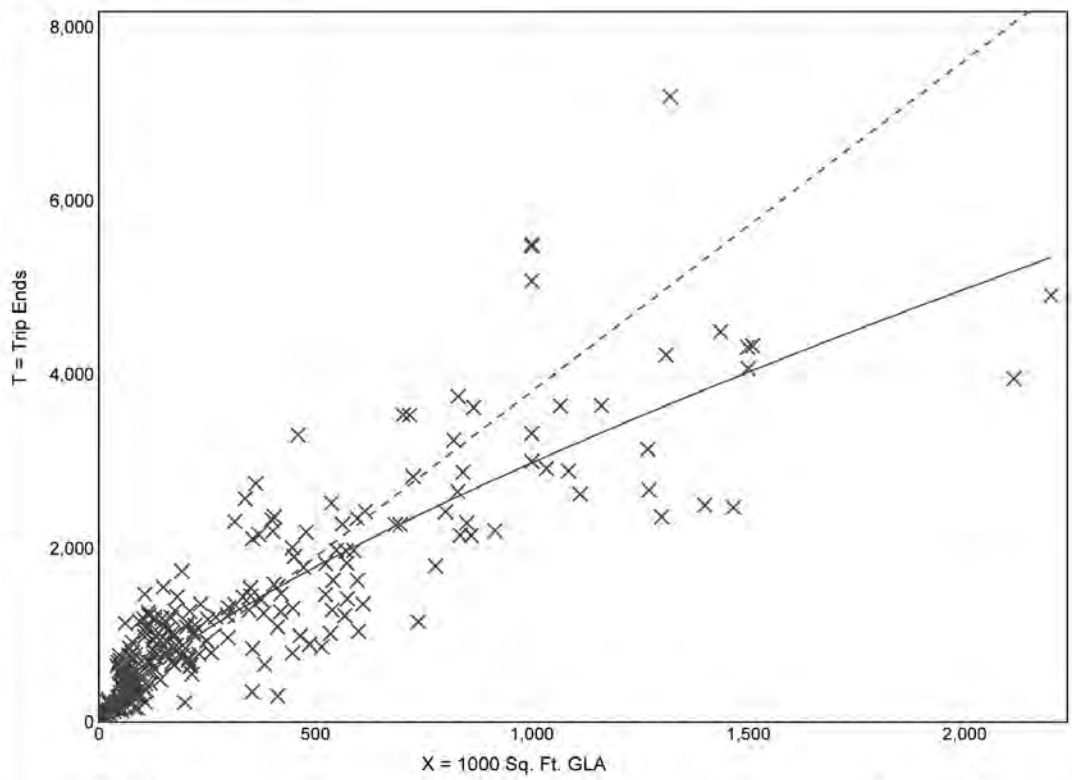
Shopping Center
(820)

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:	261
1000 Sq. Ft. GLA:	327
Directional Distribution:	48% entering, 52% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
3.81	0.74 - 18.69	2.04

Data Plot and Equation



× **Study Site** **Fitted Curve** - - - - **Average Rate**

Fitted Curve Equation: Ln(T) = 0.74 Ln(X) + 2.89 **R^2= 0.82**

Table E.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

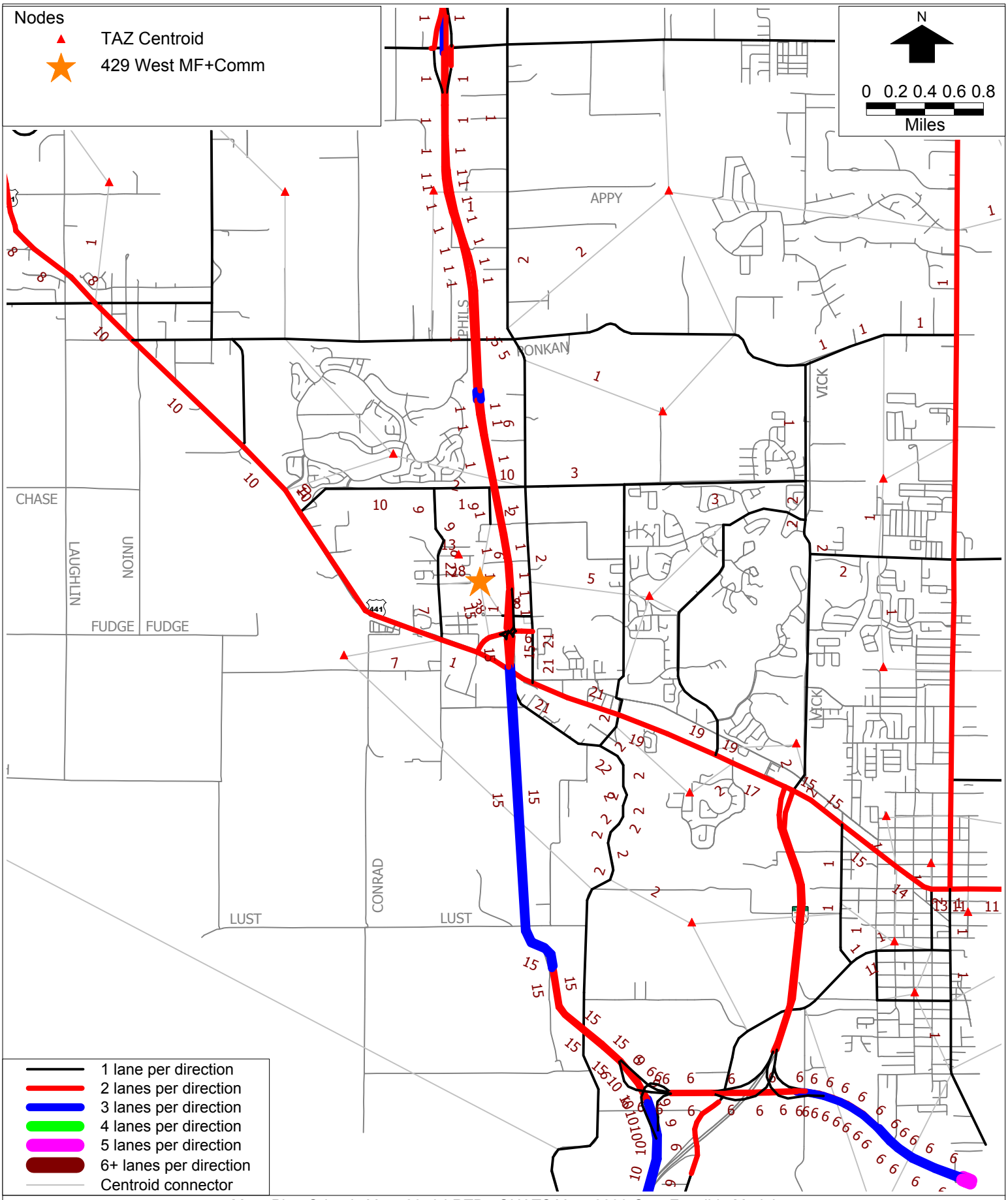
Table E.9 (Cont'd) Pass-By and Non-Pass-By Trips Weekday, PM Peak Period Land Use Code 820—Shopping Center

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	—	69,347	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

Appendix D
OUATS Model



MetroPlan Orlando Year 2040 LRTP - OUATS Year 2030 Cost Feasible Model
Project Distribution - 429 West CPA - P18131.1
C:\FSUTMS\D5\OUATS.2040\Base\CF2030\P18131\Output\HRLDXY_C30.NET 10/10/2019

cube (Licensed to Traffic and Mobility Consultants)

Bio-Tech Consulting Inc.
Environmental and Permitting Services

info@bio-techconsulting.com
www.bio-techconsulting.com

March 31, 2020

Tony Benge
Benge Development
1157 Tom Gurney Drive
Winter Park, Florida 32789

Proj: Apopka 429 West Site, Orange County, Florida
Sections 1 & 36, Townships 20 & 21 South, Range 27 East
(BTC File #303-17)
Re: Environmental Assessment Report

Dear Mr. Benge:

In March of 2020, Bio-Tech Consulting, Inc. (BTC) conducted an environmental assessment of the approximately 73.8-acre Apopka 429 West Site. This site is located within the City of Apopka, west of State Road 429, north of US 441, and east of Dew Berry Avenue; within Sections 1 and 36, Townships 20 and 21 South, Range 27 East, Orange County, Florida (Figures 1, 2, and 3). This environmental assessment included the following elements:

- review of soil types mapped within the property boundaries;
- evaluation of land use types/vegetative communities present;
- field review for occurrence of protected flora and fauna; and,
- an overview of all potential permitting constraints.

SOILS

According to the Soil Survey of Orange County, Florida, prepared by the U.S. Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS), five (5) soil types exist within the site boundary (Figure 4). These soil types include the following.

Orlando: Main Office
3025 East South Street
Orlando, FL 32803

Vero Beach Office
4445 N A1A
Suite 221
Vero Beach, FL 32963

Jacksonville Office
1157 Beach Boulevard
Jacksonville Beach, FL 32250

Tampa Office
6011 Benjamin Road
Suite 101 B
Tampa, FL 33634

Key West Office
1107 Key Plaza
Suite 259
Key West, FL 33040

Aquatic & Land
Management Operations
3825 Rouse Road
Orlando, FL 32817

407.894.5969
877.894.5969
407.894.5970 fax

- **Candler fine sand, 0 to 5 percent slopes (#4)**
- **Candler fine sand, 5 to 12 percent slopes (#5)**
- **Candler-Urban land complex, 0 to 5 percent slopes (#7)**
- **Tavares fine sand, 0 to 5 percent slopes (#46)**
- **Tavares - Millhopper fine sands, 0 to 5 percent slopes (#47)**

The following presents a brief description of the soil types mapped for the site:

Candler fine sand, 0 to 5 percent slopes (#4) is a nearly level to gently sloping, excessively drained soil found on the uplands. The surface layer of this soil type generally consists of very dark grayish brown fine sand about 5 inches thick. The seasonal high-water table for this soil type is at a depth of more than 80 inches. Permeability of this soil type is rapid in the surface and subsurface layers and is rapid to moderately rapid in the subsoil.

Candler fine sand, 5 to 12 percent slopes (#5) is a sloping to strongly sloping, excessively drained soil found on the uplands. The surface layer of this soil type generally consists of dark grayish brown fine sand about 4 inches thick. The seasonal high-water table for this soil type is at a depth of more than 80 inches. Permeability of this soil type is rapid in the surface and subsurface layers and is rapid to moderately rapid in the subsoil.

Candler-Urban land complex, 0 to 5 percent slopes (#7) is a nearly level to gently sloping and excessively drained soil complex found in the uplands. Typically, the surface layer of Chandler soil is very dark grayish brown find sand about 4 inches thick. The subsurface layer, to a depth of about 67 inches, is very pale brown fine sand. A seasonal high water table is at a depth of more than 80 inches. The permeability of Chandler soils is rapid in the surface and subsurface layers and rapid to moderately rapid in the subsoil.

Tavares fine sand, 0 to 5 percent slopes (#46) is a nearly level to gently sloping, moderately well drained soil found on low ridges and knolls on the uplands. The surface layer of this soil type generally consists of very dark gray fine sand about 6 inches thick. The seasonal high water table for this soil type is at a depth of 40 to 80 inches for more than 6 months, and recedes to a depth of more than 80 inches during extended dry periods. Permeability of this soil type is very rapid throughout.

Tavares - Millhopper fine sands, 0 to 5 percent slopes (#47) are nearly level to gently sloping, moderately well drained soils found on low ridges and knolls on the uplands and on the flatwoods. Typically the surface layer of Tavares and Millhopper soils is dark grayish brown fine sand about 6 inches thick. The seasonal high water table for Tavares soil is at a depth of 40 to 72 inches for more than 6 months, and recedes to a depth of more than 80 inches during extended dry periods. The seasonal high water table for Millhopper soil is at a depth of 40 to 60 inches for 1 to 4 months, and recedes to a depth of 60 to 72 inches for 2 to 4 months. Permeability of Tavares soil is very rapid. Permeability of Millhopper soil is rapid in the surface and subsurface layers and is moderately rapid or moderate in the subsoil.

Pursuant to the Hydric Soils of Florida Handbook, Fourth Edition, March 2007, the Florida Association of Environmental Soil Scientists (FAESS) does not consider the main components or inclusions in either of the soil types associated with the site to be hydric.

LAND USE TYPES/VEGETATIVE COMMUNITIES

The Apopka 429 West Site currently supports seven (7) land use types/vegetative communities. These land use types/vegetative communities were identified utilizing the Florida Land Use, Cover and Forms Classification System, Level III (FLUCFCS, FDOT, January 2004) (Figure 5). The on-site upland land use types/vegetative communities are classified as Residential, Low Density (110), Religious (172), Open Land (190), Unimproved Pastures (212), Nurseries and Vineyards (240), Horse Farms (251), and Upland Hardwood Forests (420). No wetland/surface water land use types/vegetative communities exist within the limits of the site. The following provides a brief description of these on-site land use types/vegetative communities.

Uplands:

110 – Residential, Low Density

The project site contains multiple areas of occupied and abandoned single-family homes that are most consistent with the Residential, Low Density (110) FLUCFCS classification. Homesites differ across the site from 1950's wooden-built houses and mobile home units to block construction homes with associated barns, sheds, and driveways. Vegetative species observed within this land use type include laurel oak (*Quercus laurifolia*), live oak (*Quercus virginana*), chinaberry tree (*Melia azedarach*), slash pine (*Pinus elliottii*), common ragweed (*Ambrosia artemisiifolia*), caesarweed (*Urena lobata*), American beautyberry (*Callicarpa americana*), camphor tree (*Cinnamomum camphora*), lantana (*Lantana camara*), beggar ticks (*Bidens alba*), and Virginia creeper (*Parthenocissus quinquefolia*).

172 – Religious

The western portion of the site contains the Prince of Peace Church and surrounding mowed grass parking which is most consistent with the Religious (172) FLUCFCS classification. Vegetative species observed within this land use type include laurel oak (*Quercus laurifolia*), live oak (*Quercus virginana*), chinaberry tree (*Melia azedarach*), slash pine (*Pinus elliottii*), common ragweed (*Ambrosia artemisiifolia*), bahiagrass (*Paspalum notatum*), rose natalgrass (*Melinis repens*), field sandspur (*Cenchrus incertus*), roadgrass (*Eleocharis baldwinii*), and caesarweed (*Urena lobata*).

190 – Open Land

The southern extent of the site contains an open area adjacent to the SR 429 access road which is most consistent with the Open Land (190) FLUCFCS classification. This area is well maintained and consists predominately of bahiagrass (*Paspalum notatum*) and bermudagrass (*Cynodon dactylon*).

212 – Unimproved Pastures

A large central area within the subject site consist of previously grazed pastures and is most consistent with the Unimproved Pastures (212) FLUCFCS classification. These pastures were likely grazed by horses from the neighboring Horse Farm. Vegetative species observed within this land use type include laurel oak (*Quercus laurifolia*), live oak (*Quercus virginana*), chinaberry tree (*Melia azedarach*), earpod tree (*Enterolobium cyclocarpum*), slash pine (*Pinus elliottii*), winged sumac (*Rhus copallinum*), hercules club (*Zanthoxylum americanum*), saltbush (*Baccharis halimifolia*), American beautyberry (*Callicarpa americana*), common ragweed (*Ambrosia artemisiifolia*), bahiagrass (*Paspalum notatum*), rose natalgrass (*Melinis repens*), field sandspur (*Cenchrus incertus*), Virginia pepperweed (*Lepidium virginicum*), bracken fern (*Pteridium aquilinum* var. *pseudocaudatum*), pricklypear cactus (*Opuntia humifusa*), flattop goldenrod (*Euthamia graminifolia*), blue mistflower (*Conoclinium coelestinum*), bahiagrass (*Paspalum notatum*), bermudagrass (*Cynodon dactylon*), broomsedge (*Andropogon virginicus*), caesarweed (*Urena lobata*), purple passionflower (*Passiflora incarnata*), and muscadine grapevine (*Vitis rotundifolia*).

240 – Nurseries and Vineyards

Two areas within the subject site are most consistent with the Nurseries and Vineyards (240) FLUCFCS classification. Both areas are abandoned nurseries with remaining irrigation piping, pumps, and multiple plant growing plots. Vegetative species observed within this land use type include common ragweed (*Ambrosia artemisiifolia*), bahiagrass (*Paspalum notatum*), rose natalgrass (*Melinis repens*), field sandspur (*Cenchrus incertus*), Virginia pepperweed (*Lepidium virginicum*), bahiagrass (*Paspalum notatum*), bermudagrass (*Cynodon dactylon*), and muscadine grapevine (*Vitis rotundifolia*) with some scattered laurel oak (*Quercus laurifolia*), live oak (*Quercus virginana*), and slash pine (*Pinus elliottii*).

251 – Horse Farm

A central portion of the site contains an abandoned equestrian operation most consistent with the Horse Farm (251) FLUCFCS classification. This area contains a large stable with areas of fencing and corals. This central area connects through a gate to the Unimproved Pasture land uses. Vegetative species observed within this land use type include laurel oak (*Quercus laurifolia*), live oak (*Quercus virginana*), chinaberry tree (*Melia azedarach*), slash pine (*Pinus elliottii*), common ragweed (*Ambrosia artemisiifolia*), bahiagrass (*Paspalum notatum*), rose natalgrass (*Melinis repens*), Brazilian pepper (*Schinus terebinthifolia*), Virginia creeper (*Parthenocissus quinquefolia*), and muscadine grapevine (*Vitis rotundifolia*).

420 – Upland Hardwood Forests

The northern portion of the site contains a native community with scattered areas of disturbance from the historic agricultural land work. This area most consistent with the Upland Hardwood Forests (420) FLUCFCS classification. Vegetative species observed within this community type included laurel oak (*Quercus laurifolia*), live oak (*Quercus virginana*), turkey oak (*Quercus laevis*), longleaf pine (*Pinus palustris*), slash pine (*Pinus elliottii*), hercules club (*Zanthoxylum americanum*), common persimmon (*Diospyros virginiana*), winged sumac (*Rhus copallinum*), saw palmetto (*Serenoa repens*), gallberry (*Ilex glabra*), Adam's needle (*Yucca filamentosa*), common ragweed (*Ambrosia artemisiifolia*), narrowleaf silkgrass (*Pityopsis graminifolia*), pricklypear cactus (*Opuntia humifusa*), rose natalgrass (*Melinis repens*), American beautyberry (*Callicarpa americana*), broomsedge (*Andropogon virginicus*), lantana (*Lantana camara*), beggar ticks (*Bidens alba*), Virginia creeper (*Parthenocissus quinquefolia*), greenbriar (*Smilax* spp.), and muscadine grapevine (*Vitis* spp.).

WILDLIFE AND PROTECTED SPECIES

Using methodologies outlined in the Florida's Fragile Wildlife (Wood, 2001); Measuring and Monitoring Biological Diversity Standard Methods for Mammals (Wilson, et al., 1996); and Florida Fish and Wildlife Conservation Commission's (FFWCC's) Gopher Tortoise Permitting Guidelines (April 2008 - revised May 2017); an assessment for "listed" floral and faunal species was conducted at the site on March 17, 2020. This assessment included both direct observations and indirect evidence, such as tracks, burrows, tree markings, and vocalizations that indicated the presence of species observed. The assessment focused on species that are "listed" by the FFWCC's Official Lists - Florida's Endangered Species, Threatened Species and Species of Special Concern (December 2018) that have the potential to occur in Orange County (Table 1).

Reptiles and Amphibians:
brown anole (*Norops sagrei*)
eastern black racer (*Coluber constrictor*)
gopher tortoise (*Gopherus polyphemus*)
green anole (*Anolis carolinensis*)
six-lined racerunner (*Cnemidophorus sexlineatus sexlineatus*)

Birds:
Black Vulture (*Coragyps atratus*)
Blue Jay (*Cyanocitta cristata*)
Mourning Dove (*Zenaida macroura*)
Northern Cardinal (*Cardinalis cardinalis*)
Northern Mockingbird (*Mimus polyglottos*)
Pine Warbler (*Dendroica pinus*)
Red-shouldered Hawk (*Buteo lineatus*)

Mammals:
coyote (*Canis latrans*)
eastern gray squirrel (*Sciurus carolinensis*)
nine-banded armadillo (*Dasypus novemcinctus*)
northern raccoon (*Procyon lotor*)
southeastern pocket gopher (*Geomys pinetis*)
Virginia opossum (*Didelphis virginiana*)

One (1) of the above species, the gopher tortoise (*Gopherus polyphemus*), is listed in the FFWCC's Official Lists - Florida's Endangered Species, Threatened Species, and Species of Special Concern (December 2018). The following provides a brief description of particular wildlife species as they relate to the development of the site.

Gopher Tortoise (*Gopherus polyphemus*)
State Listed as "Threatened" by FFWCC

Currently the gopher tortoise (*Gopherus polyphemus*) is classified as a "Category 2 Candidate Species" by the U.S. Fish and Wildlife Service (USFWS), and as of September 2007 is classified as "Threatened" by FFWCC, and as "Threatened" by FCREPA. The basis of the "Threatened" classification by the FFWCC for the gopher tortoise is due to habitat loss and destruction of burrows. Gopher tortoises are commonly found in areas with well-drained soils associated with the pine flatwoods, pastures and abandoned orange groves. Several other protected species known to occur in Orange County have a possibility of occurring in this area, as they are gopher tortoise commensal species. These species include the eastern indigo snake (*Drymarchon corais couperi*), Florida mouse (*Podomys floridanus*), and the gopher frog (*Rana capito*). However, none of these species were observed during the survey conducted.

The FFWCC provides three (3) options for developers that have gopher tortoises on their property. These options include: 1) avoidance (i.e., 25-foot buffer around burrow), 2) preservation of habitat, and 3) off-site relocation. As such, resolution of the gopher tortoise issue will need to be permitted through the FFWCC prior to any on-site development activities.

Bald Eagle (*Haliaeetus leucocephalus*)
State protected by F.A.C. 68A-16.002 and federally protected by both the Migratory Bird Treaty Act (1918) and the Bald and Golden Eagle Protection Act (1940)

In August of 2007, the US Fish and Wildlife Service (USFWS) removed the Bald Eagle from the list of federally endangered and threatened species. Additionally, the Bald Eagle was removed from FFWCC's imperiled species list in April of 2008. Although the Bald Eagle is no longer protected under the Endangered Species Act, it is still protected under the Bald and Golden Eagle Protection Act, the Migratory Bird Treaty Act, and FFWCC's Bald Eagle rule (Florida Administrative Code 68A-16.002 Bald Eagle (*Haliaeetus Leuchocephalus*).

In May of 2007, the USFWS issued the National Bald Eagle Management Guidelines. In April of 2008, the FFWCC adopted a new Bald Eagle Management Plan that was written to closely follow the federal guidelines. In November of 2017, the FFWCC issued "A Species Action Plan for the Bald Eagle" in response to the sunset of the 2008 Bald Eagle Management Plan. Under the USFWS's management plans, buffer zones are recommended based on the nature and magnitude of the project or activity. The recommended protective buffer zone is 660 feet or less from the nest tree, depending on what activities or structures are already near the nest. As provided within the above referenced Species Action Plan, the USFWS is the regulating body responsible for issuing permits for Bald Eagles. In 2017, the need to obtain a State permit (FFWCC) for the take of Bald Eagles or their nests in Florida was eliminated following revisions to Rule 68A-16.002, F.A.C.. A USFWS Bald Eagle "Non-Purposeful Take Permit" is not needed for any activity occurring outside of the 660-foot buffer zone. No activities are permitted within 330 feet of a nest without a USFWS permit.

In addition to the on-site evaluation for listed species, BTC conducted a review of FFWCC's database and Audubon's Eagle Watch program database for recorded Bald Eagle nests within the surrounding 660 feet of the site. This review revealed that there are no Bald Eagle nests through the 2017-2018 nesting season, within 660 feet of the project site's boundaries. Thus, no developmental constraints are expected with respect to Bald Eagle nests.

CITY OF APOPKA HABITAT EVALUATION

The City of Apopka requires within its Land Development Code a series of environmental evaluation criteria. The attached tables review the rankings and evaluation criteria for the on-site land use types. The evaluation scores for each of the seven (7) land use types/vegetative communities identified for the site each ranked below a total individual value of 169 (see attached). When a site contains a listed species and the ranking for the site's land use type/vegetative community is less than 169, the applicant will address this listed species via coordination with the FFWCC prior to construction activities. It should be noted that the gopher tortoise (*Gopherus Polyphemus*), a FFWCC listed wildlife species, was identified within the limits of the Apopka 429 West Site during the wildlife assessments conducted by BTC.

As stated in the Apopka Land Development Code 5.02.04, when a site containing listed species receives a score of 169 or higher, the city shall require preservation through an easement of an area which will sustain a viable population. If the site ranks below 169, the City of Apopka shall allow relocation and/or mitigation measures of the identified species on a case by case basis. We trust the above assessment and attached tables address the City of Apopka's concerns regarding the environmental issues associated with the Apopka 429 West Site. Although the FFWCC listed gopher tortoise was observed within the limits of the property, this field assessment and wildlife

survey does not preclude other wildlife species from moving into the area or making use of the habitat in the future.

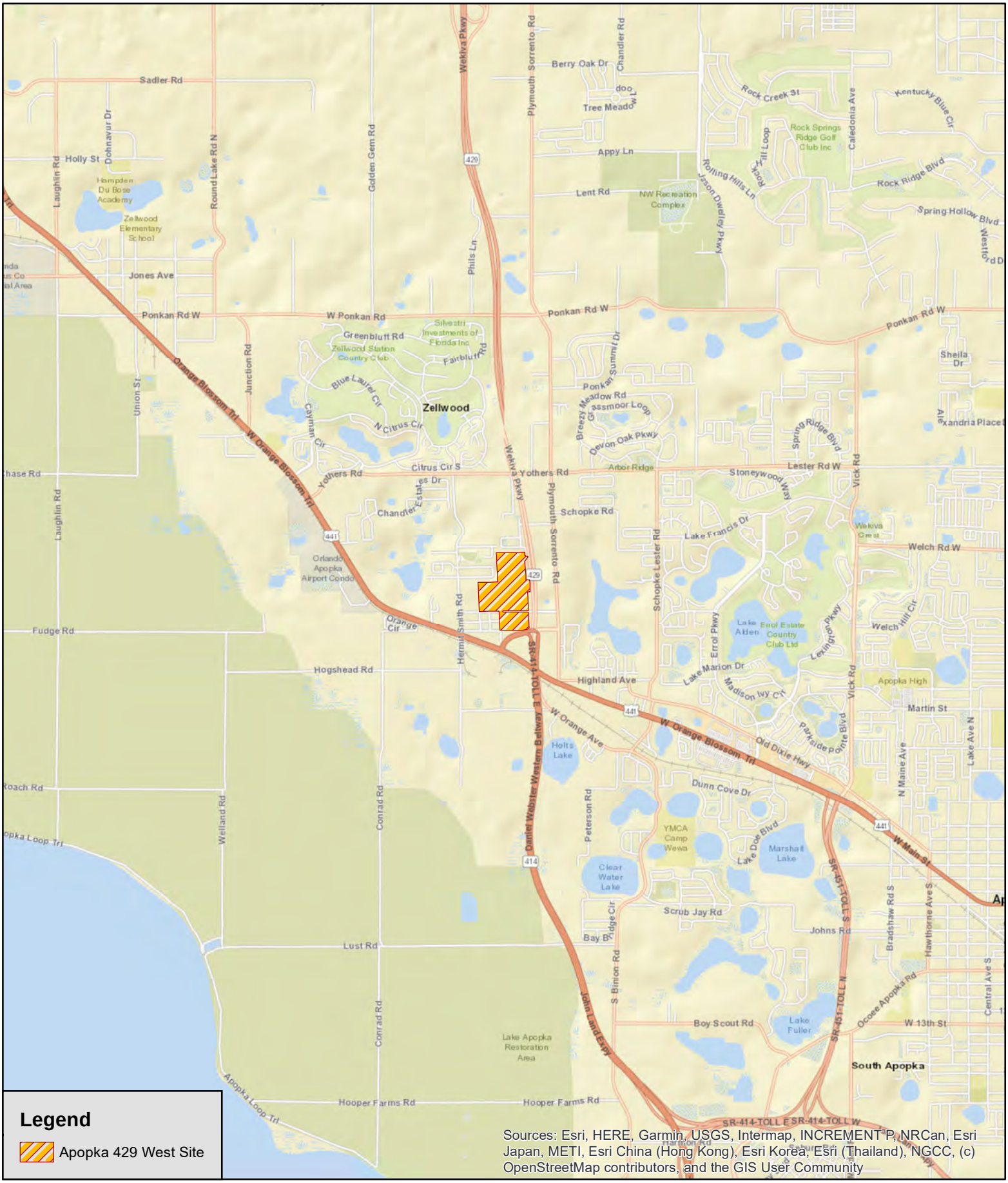
The environmental limitations described in this document are based on observations and technical information available on the date of the on-site evaluation. This report is for general planning purposes only. The limits of any on-site wetlands/surface waters can only be determined and verified through field delineation and/or on-site review by the pertinent regulatory agencies. The wildlife surveys conducted within the subject property boundaries do not preclude the potential for any listed species, as noted on Table 1 (attached), currently or in the future. Should you have any questions or require any additional information, please do not hesitate to contact our office at (407) 894-5969. Thank you.

Regards,

Spencer Clark
Field Biologist

John Miklos
President

attachments



Bio-Tech Consulting Inc.
Environmental and Permitting Services
3025 E. South Street Orlando, FL 32803
Ph: 407-894-5969 Fax: 407-894-5970
www.bio-techconsulting.com

Apopka 429 West Site
Orange County, Florida
Figure 1
Location Map

N
W E
S

6,000 Feet

Project #: 303-17
Produced B[illegible]C
Date: 3/31/2020

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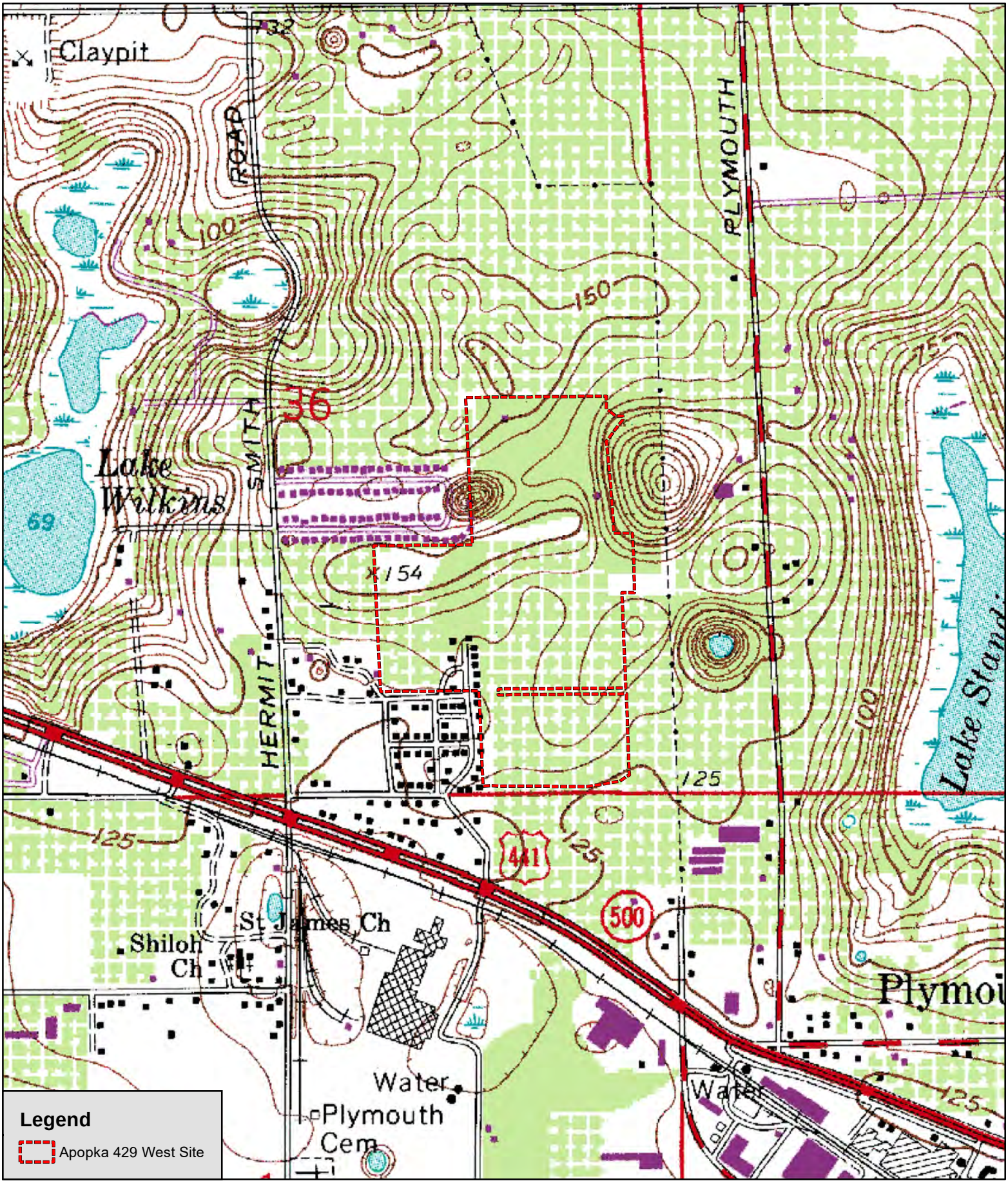
Apopka 429 West Site
Orange County, Florida
Figure 2
2019 Aerial Photograph Map

N
W E
S

480 Feet

Project #: 303-17
Produced B[illegible]'C
Date: 3/31/2020



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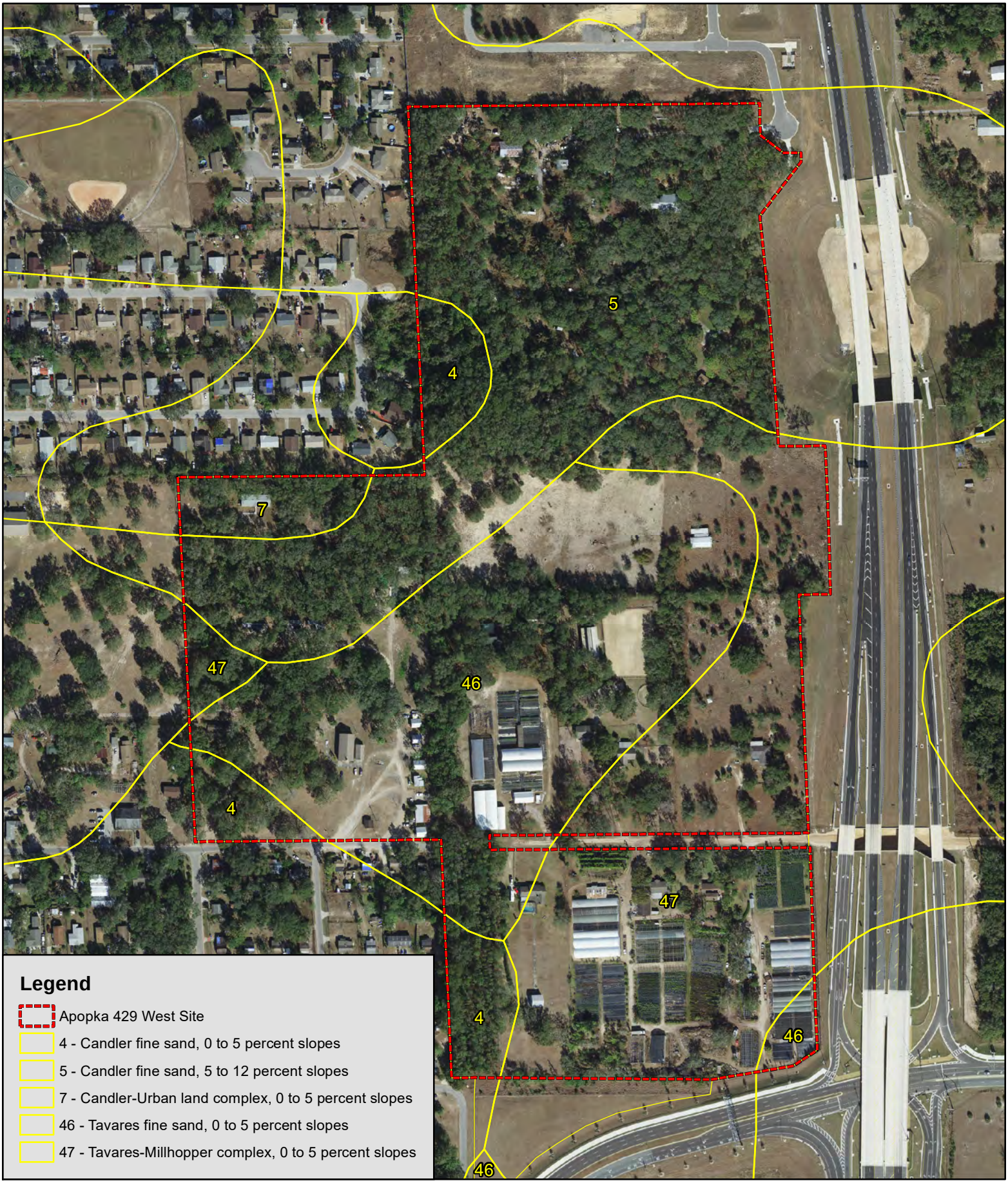
Apopka 429 West Site
Orange County, Florida
Figure 3
USGS Topographic Map

N
W E
S

1,200 Feet

Project #: 303-17
Produced B[illegible]C
Date: 3/31/2020



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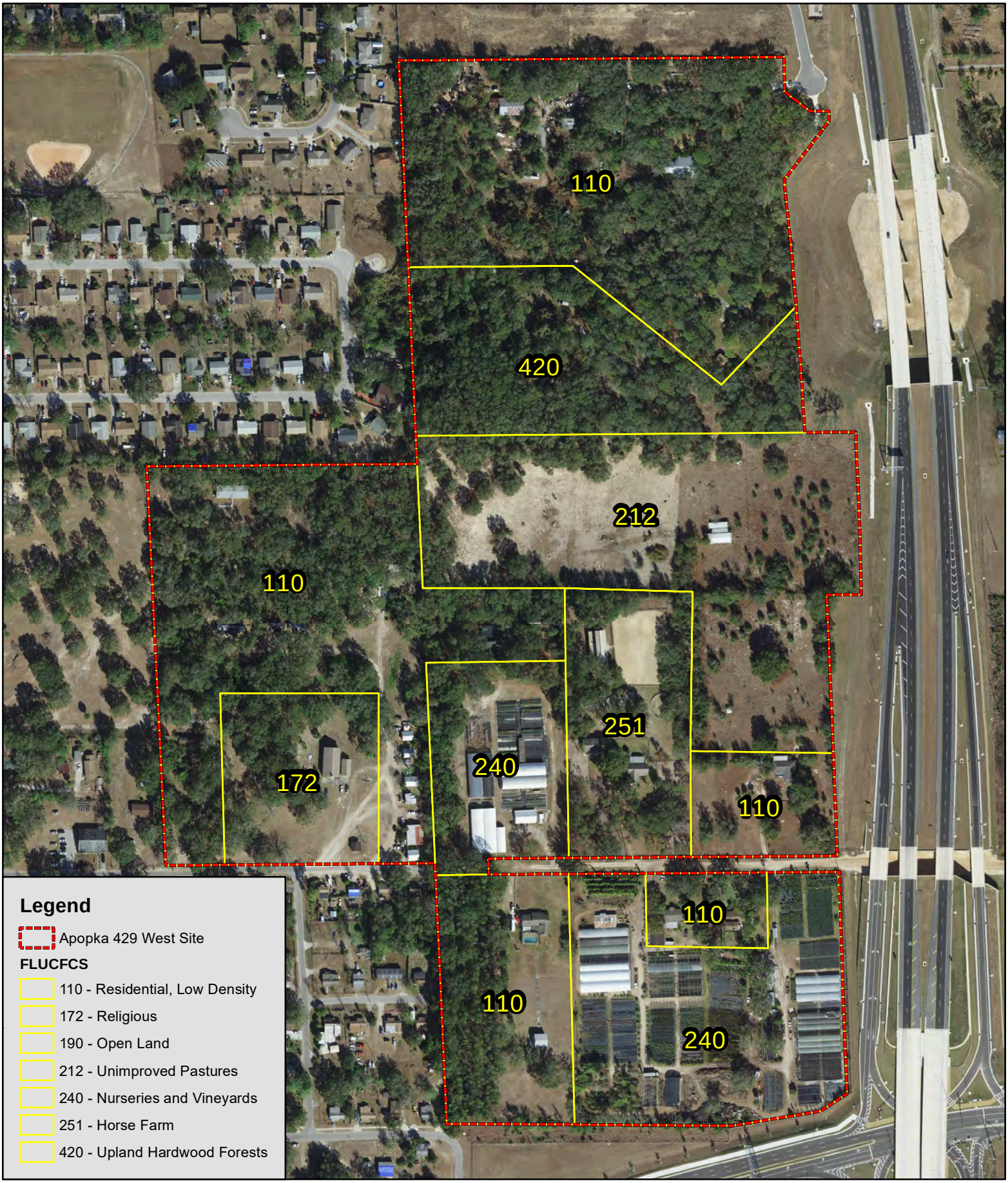
Apopka 429 West Site
Orange County, Florida
Figure 4
USDA-NRCS Soils Map

N
W E
S

480 Feet

Project #: 303-17
Produced B[illegible]'C
Date: 3/31/2020



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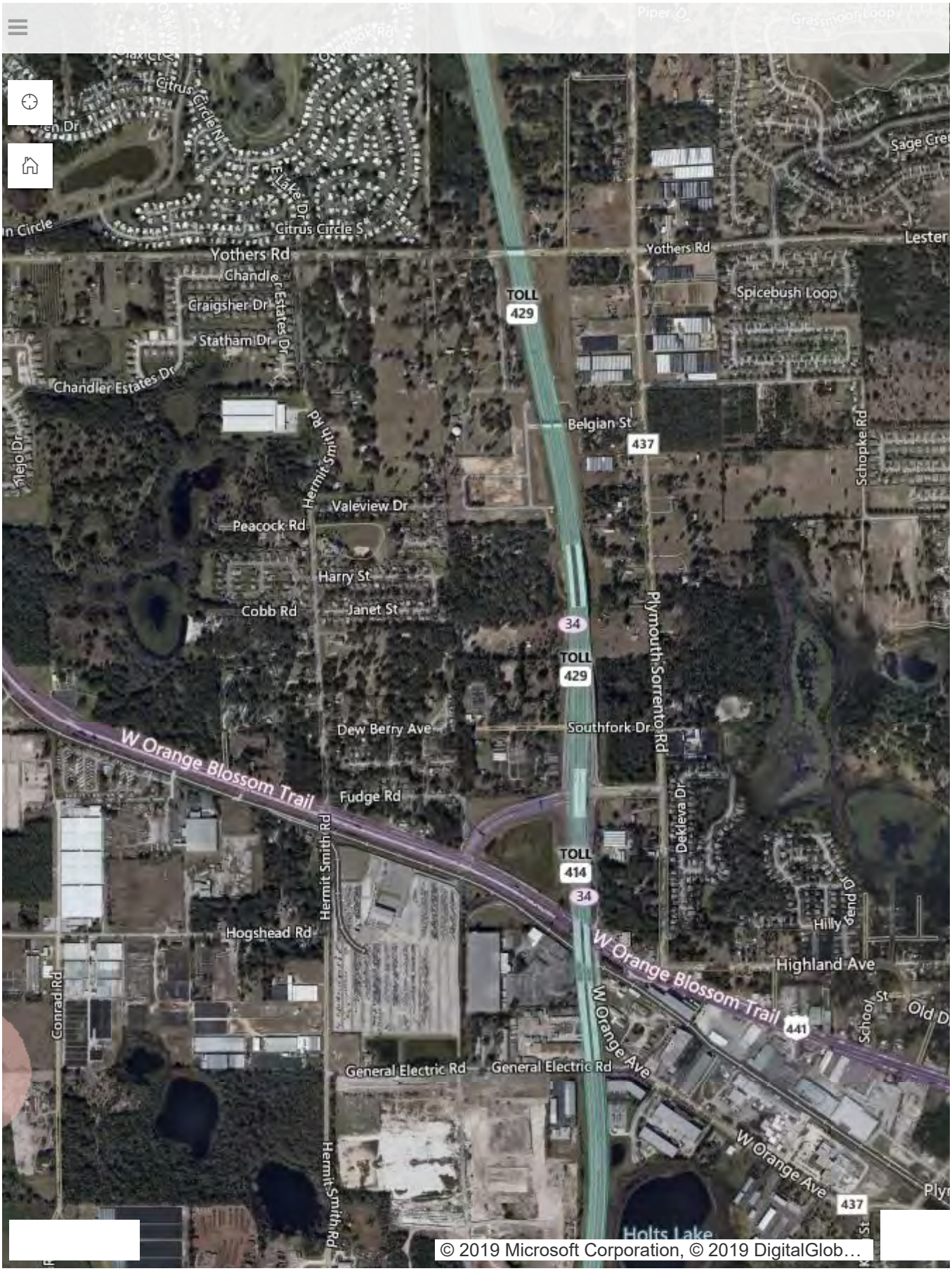
Apopka 429 West Site
Orange County, Florida
Figure 5
FLUCFCS Map

N
W E
S

440 Feet

Project #: 303-17
Produced B[illegible]C
Date: 3/31/2020


Citrus Circle N
E Lake Dr
Citrus Circle S
Yothers Rd
Chandler Estates Dr
Craigsher Dr
Statham Dr
Chandler Estates Dr
Hermit Smith Rd
Peacock Rd
Valeview Dr
Harry St
Cobb Rd
Janet St
TOLL 429
Belgian St
437
Yothers Rd
Spicebush Loop
Schopke Rd
34
TOLL 429
Plymouth Sorrento Rd
Dew Berry Ave
Southfork Dr
W Orange Blossom Trail
Fudge Rd
Dekleva Dr
TOLL 414
34
Hillyend Dr
Hogshead Rd
Highland Ave
W Orange Blossom Trail
441
School St
Conrad Rd
W Orange Ave
General Electric Rd
General Electric Rd
W Orange Ave
437
Holts Lake
© 2019 Microsoft Corporation, © 2019 DigitalGlob…

Apopka 429 West Site, Orange County, Florida
City of Apopka - Listed Species Habitat Evaluation

Community:	**Residential, Low Density (110)**		
Unit Value	**Rank**	**Residential, Low Density (110) Cover Type**	**Explanation**
15	1	Vegetative Community/ Land Use Type	Community not rare, sensitive, threatened, or endangered and not containing or likely to contain threatened or endangered species
60	3	Animal Species	Habitat contains or is likely to contain listed species the gopher tortoise
6	1	Manageability Feasibility/Potential	Site would have minimal management constraints
16	1	Ecological Viability	Low potential for viability of featured attribute(s)
0	0	Adjacency to Existing Publicly Owned Conservation Lands	Site non-adjacent
0	0	Historical/Archaeological Value	Site contains no historic, archaeological sites
60	2	Aquifer Recharge Potential	Aquifer recharge potential; high (soils excessively well drained)
8	1	Degree of Disturbance	Site highly disturbed
0	0	Wildlife Corridor Potential	Site not within or adjacent to wildlife corridor
165		**TOTAL**	

Apopka 429 West Site, Orange County, Florida
City of Apopka - Listed Species Habitat Evaluation

Community:	**Religious (172)**		
Unit Value	**Rank**	**Residential, Low Density (110) Cover Type**	**Explanation**
15	1	Vegetative Community/ Land Use Type	Community not rare, sensitive, threatened, or endangered and not containing or likely to contain threatened or endangered species
20	1	Animal Species	Habitat contains or is likely to contain no listed species
6	1	Manageability Feasibility/Potential	Moderate management constraints would exist
16	1	Ecological Viability	Low potential for viability of featured attribute(s)
0	0	Adjacency to Existing Publicly Owned Conservation Lands	Site non-adjacent
0	0	Historical/Archaeological Value	Site contains no historic, archaeological sites
60	2	Aquifer Recharge Potential	Aquifer recharge potential; high (soils excessively well drained)
8	1	Degree of Disturbance	Site highly disturbed
0	0	Wildlife Corridor Potential	Site not within or adjacent to wildlife corridor
125		**TOTAL**	

Apopka 429 West Site, Orange County, Florida
City of Apopka - Listed Species Habitat Evaluation

Community:	**Open Land (190)**		
Unit Value	**Rank**	**Residential, Low Density (110) Cover Type**	**Explanation**
15	1	Vegetative Community/ Land Use Type	Community not rare, sensitive, threatened, or endangered and not containing or likely to contain threatened or endangered species
20	1	Animal Species	Habitat contains or is likely to contain no listed species
6	1	Manageability Feasibility/Potential	Moderate management constraints would exist
16	1	Ecological Viability	Low potential for viability of featured attribute(s)
0	0	Adjacency to Existing Publicly Owned Conservation Lands	Site non-adjacent
0	0	Historical/Archaeological Value	Site contains no historic, archaeological sites
60	2	Aquifer Recharge Potential	Aquifer recharge potential; high (soils excessively well drained)
8	1	Degree of Disturbance	Site highly disturbed
0	0	Wildlife Corridor Potential	Site not within or adjacent to wildlife corridor
125		**TOTAL**	

Apopka 429 West Site, Orange County, Florida
City of Apopka - Listed Species Habitat Evaluation

Community:	**Unimproved Pastures (212)**		
Unit Value	**Rank**	**Residential, Low Density (110) Cover Type**	**Explanation**
15	1	Vegetative Community/ Land Use Type	Community not rare, sensitive, threatened, or endangered and not containing or likely to contain threatened or endangered species
60	3	Animal Species	Habitat contains or is likely to contain listed species the gopher tortoise
6	1	Manageability Feasibility/Potential	Moderate management constraints would exist
16	1	Ecological Viability	Low potential for viability of featured attribute(s)
0	0	Adjacency to Existing Publicly Owned Conservation Lands	Site non-adjacent
0	0	Historical/Archaeological Value	Site contains no historic, archaeological sites
60	2	Aquifer Recharge Potential	Aquifer recharge potential; high (soils excessively well drained)
8	1	Degree of Disturbance	Site highly disturbed
0	0	Wildlife Corridor Potential	Site not within or adjacent to wildlife corridor
165		**TOTAL**	

Apopka 429 West Site, Orange County, Florida
City of Apopka - Listed Species Habitat Evaluation

Community:	**Nurseries and Vineyards (240)**		
Unit Value	**Rank**	**Residential, Low Density (110) Cover Type**	**Explanation**
15	1	Vegetative Community/ Land Use Type	Community not rare, sensitive, threatened, or endangered and not containing or likely to contain threatened or endangered species
20	1	Animal Species	Habitat contains or is likely to contain no listed species
6	1	Manageability Feasibility/Potential	Moderate management constraints would exist
16	1	Ecological Viability	Low potential for viability of featured attribute(s)
0	0	Adjacency to Existing Publicly Owned Conservation Lands	Site non-adjacent
0	0	Historical/Archaeological Value	Site contains no historic, archaeological sites
60	2	Aquifer Recharge Potential	Aquifer recharge potential; high (soils excessively well drained)
8	1	Degree of Disturbance	Site highly disturbed
0	0	Wildlife Corridor Potential	Site not within or adjacent to wildlife corridor
125		**TOTAL**	

Apopka 429 West Site, Orange County, Florida
City of Apopka - Listed Species Habitat Evaluation

Community:	**Horse Farm (251)**		
Unit Value	**Rank**	**Residential, Low Density (110) Cover Type**	**Explanation**
15	1	Vegetative Community/ Land Use Type	Community not rare, sensitive, threatened, or endangered and not containing or likely to contain threatened or endangered species
60	3	Animal Species	Habitat contains or is likely to contain listed species the gopher tortoise
6	1	Manageability Feasibility/Potential	Moderate management constraints would exist
16	1	Ecological Viability	Low potential for viability of featured attribute(s)
0	0	Adjacency to Existing Publicly Owned Conservation Lands	Site non-adjacent
0	0	Historical/Archaeological Value	Site contains no historic, archaeological sites
60	2	Aquifer Recharge Potential	Aquifer recharge potential; high (soils excessively well drained)
8	1	Degree of Disturbance	Site highly disturbed
0	0	Wildlife Corridor Potential	Site not within or adjacent to wildlife corridor
165		**TOTAL**	

Apopka 429 West Site, Orange County, Florida
City of Apopka - Listed Species Habitat Evaluation

Community:	**Upland Hardwood Forests (420)**		
Unit Value	**Rank**	**Residential, Low Density (110) Cover Type**	**Explanation**
15	1	Vegetative Community/ Land Use Type	Community not rare, sensitive, threatened, or endangered and not containing or likely to contain threatened or endangered species
60	3	Animal Species	Habitat contains or is likely to contain listed species the gopher tortoise
6	1	Manageability Feasibility/Potential	Moderate management constraints would exist
16	1	Ecological Viability	Low potential for viability of featured attribute(s)
0	0	Adjacency to Existing Publicly Owned Conservation Lands	Site non-adjacent
0	0	Historical/Archaeological Value	Site contains no historic, archaeological sites
60	2	Aquifer Recharge Potential	Aquifer recharge potential; high (soils excessively well drained)
8	1	Degree of Disturbance	Site highly disturbed
0	0	Wildlife Corridor Potential	Site not within or adjacent to wildlife corridor
165		**TOTAL**	

CITY OF APOPKA
PLANNING COMMISSION

X	PUBLIC HEARING	MEETING OF:	June 9, 2020
___	SITE PLAN	FROM:	Community Development
___	SPECIAL REPORTS	EXHIBITS:	Land Use Report
___	OTHER:		Vicinity Map
			Future Land Use Map
			Adjacent Zoning Map
			Adjacent Uses Map

SUBJECT: **COMPREHENSIVE PLAN – SMALL SCALE – FUTURE LAND USE AMENDMENT – DEWAR NURSERY**

REQUEST: **COMPREHENSIVE PLAN – SMALL SCALE – FUTURE LAND USE AMENDMENT – DEWAR NURSERY**
FROM: "COUNTY" RURAL
TO: "CITY" INDUSTRIAL (MAX. 0.60 FAR)

SUMMARY:

OWNER:	AED Dewar Nursery 2019 Trust
APPLICANT:	Tara Tedrow
LOCATION:	North of E. Keene Road and West of Clarcona Road
PARCEL ID NUMBER:	22-21-28-0000-00-137
EXISTING USE:	Nursery
CURRENT ZONING:	"T" (Transitional District)
TRACT SIZE:	4.94 +/- acres
MAXIMUM ALLOWABLE DEVELOPMENT:	EXISTING: 1 Dwelling Unit PROPOSED: 129,111 non-residential sq. ft. +/-

DISTRIBUTION

Mayor Nelson	Finance Director	Public Services Director
Commissioners	HR Director	Recreation Director
City Administrator	IT Director	City Clerk
Community Development Director	Police Chief	Fire Chief

ADDITIONAL COMMENTS: The subject property was annexed into the city on October 1, 2014 by Ordinance Number 2383. The proposed "Industrial" Future Land Use is compatible with the property due to the "Industrial" Future Land Use being found in the vicinity. This application is being processed simultaneously with an application to rezone the subject property from T (Transitional District) to I-L (Light Industrial District).

COMPREHENSIVE PLAN COMPLIANCE: The proposed Future Land Use, "Industrial", is consistent with the proposed zoning designation, "I-L, Light Industrial District". Site development cannot exceed the density allowed by the Future Land Use policies. Planning & Zoning staff determines that the below policies support an "Industrial" designation at the subject site:

Future Land Use Element

Policy 3.1.l Industrial

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.

SCHOOL CAPACITY REPORT: The proposed future land use amendment will not impact public school enrollment. Therefore, the property is exempt from school capacity enhancement per the School Interlocal Planning Agreement.

ORANGE COUNTY NOTIFICATION: The JPA requires the City to notify the County 30 days before any public hearing or advisory board. The City properly notified Orange County on May 13, 2020.

PUBLIC HEARING SCHEDULE:
June 9, 2020 - Planning Commission (5:30 pm)
July 1, 2020 - City Council (1:30 pm) - 1st Reading
July 15, 2020 – City Council (7:00 pm) – 2nd Reading and Adoption

DULY ADVERTISED:
May 29, 2020 – Public Notice and Notification (Apopka Chief); Property owner(s) were notified of the hearing schedule via U.S. Postal Service mail.

RECOMMENDATION ACTION:

The Development Review Committee: finds the proposed amendment consistent with the Comprehensive Plan and compatible with the character of the surrounding areas, recommending approval of the proposed Future Land Use Designation of "Industrial" for the property owned by AED Dewar Nursery 2019 Trust and located at 251 E. Keene Road.

Planning Commission Recommended Motion: Find the proposed Future Land Use amendment consistent with the Comprehensive Plan and compatible with the character of the surrounding area, and recommend approval of the change of Future Land Use Designation from "County" Rural to "City" Industrial, subject to the findings of the Staff Report.

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.

LAND USE REPORT

I. RELATIONSHIP TO ADJACENT PROPERTIES:

Direction	*Future Land Use*	*Zoning*	*Present Use*
North (City)	"City" Agriculture	AG	Equestrian Center
East (City)	"City" Commercial	C-C	Vacant
South (County)	"County" Rural Settlement 1/5	A-1	Single Family Homes
West (City)	"County" Rural	T	Nursery

II. LAND USE ANALYSIS

The subject property is currently a nursery, future development must comply with the Industrial future land use designation & be consistent with the Comprehensive Plan policies listed above.

The proposed Industrial future land use designation is consistent with the general future land use character of the surrounding area.

Wekiva River Protection Area: No
Area of Critical State Concern: No
DRI / FQD: No

JPA: The City of Apopka and Orange County entered into a Joint Planning Area (JPA) agreement on October 26, 2004. The subject property is located within the "Core Area" of the JPA. The proposed FLUM Amendment request for a change from "County" Rural to "City" Industrial (Max. 0.6 FAR) is consistent with the terms of the JPA (Second Amendment). AED Dewar Nursery 2019 Trust is the property owner, and has been notified of the hearing schedule.

Transportation: Road access to the site is from E. Keene Road.

Wekiva Parkway and Protection Act: The proposed amendment has been evaluated against the adopted Wekiva Study Area Comprehensive Plan policies. The proposed amendment is consistent with the adopted mandates and requirements. The proposed Future Land Use Map (FLUM) amendment has been reviewed against the best available data, with regard to aquifer and groundwater resources. The City of Apopka's adopted Comprehensive Plan addresses aquifer recharge and stormwater run-off through the following policies:

- Future Land Use Element, Policies 4.16, 14.4, 15.1, 16.2 and 18.2
- Infrastructure Element, Policies 1.5.5, 4.2.7, 4.4, 4.4.1, 4.4.2 and 4.4.3
- Conservation Element, Policy 3.18

Karst Features: The Karst Topography Features Map from the Florida Department of Environmental Protection shows that there are karst features in the vicinity of this property.

Analysis of the relationship of the amendment to the population projections: The proposed future land use designation for the property is Industrial (Max. 0.6 FAR) Based on the housing element of the City's Comprehensive Plan, this amendment will not increase the City's future population.

CALCULATIONS:
ADOPTED: 1 Unit(s) x 2.659 p/h = 2 persons
PROPOSED: 0 Unit(s) x 2.659 p/h = 0 persons (129,111 non-residential sq. ft.

Housing Needs: This amendment will not negatively impact the housing needs as projected in the Comprehensive Plan.

Habitat for species listed as endangered, threatened or of special concern: A habitat study is required for developments greater than ten (10) acres in size. At the time the Master Site Plan or Major Development Plan is submitted to the City, the development applicant must conduct a species survey and submit a habitat management plan if any threatened or endangered species are identified within the project site.

Transportation: The City of Apopka is a Transportation Concurrency Exception Area. Refer to Chapter 3 of the City of Apopka 2010 Comprehensive Plan.

Sanitary Sewer Analysis

1. Facilities serving the site; current LOS; and LOS standard: None; 81 GPD/Capita; 90 GPD/1,000sf

If the site is not currently served, please indicate the designated service provider: City of Apopka

2. Projected total demand under existing designation: 162 GPD

3. Projected total demand under proposed designation: 11,620 GPD

4. Capacity available: Yes

5. Projected LOS under existing designation: 81 GPD/Capita

6. Projected LOS under proposed designation: 90 GPD/1,000sf

7. Improvement/expansions already programmed or needed as a result if proposed amendment: Force main extension required

Potable Water Analysis

1. Facilities serving the site; current LOS; and LOS standard: None; 174 GPD/Capita; 200 GPD/1,000sf

If the site is not currently served, please indicate the designated service provider: City of Apopka

2. Projected total demand under existing designation: 348 GPD

3. Projected total demand under proposed designation: 25,822 GPD

4. Capacity available: Yes

5. Projected LOS under existing designation: 174 GPD/Capita

6. Projected LOS under proposed designation: 200 GPD/1,000sf

7. Improvement/expansions already programmed or needed as a result of the proposed amendment: None

8. Parcel located within the reclaimed water service area.

Solid Waste

1. Facilities serving the site: City of Apopka

2. If the site is not currently served, please indicate the designated service provider: City of Apopka

3. Projected LOS under existing designation: 4 lbs/ day /Capita

4. Projected LOS under proposed designation: 4 lbs / day /1,000sf

5. Improvement/expansions already programmed or needed as a result of the proposed amendment: None

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

Infrastructure Information

Water treatment plant permit number: CUP No. 3217

Permitting agency: St. John's River Water Management District

Permitted capacity of the water treatment plant(s): 24.141 MGD

Total design capacity of the water treatment plant(s): 33.696 MGD

Availability of distribution lines to serve the property: Yes

Availability of reuse distribution lines available to serve the property: Yes

Drainage Analysis

1. Facilities serving the site:

2. Projected LOS under existing designation:

3. Projected LOS under proposed designation:

4. Improvement/expansion: On site retention / detention ponds

Recreation

1. Facilities serving the site; LOS standard: City of Apopka Parks System ; 3 acre / 1000 capita

2. Projected facility under existing designation: 0 acres

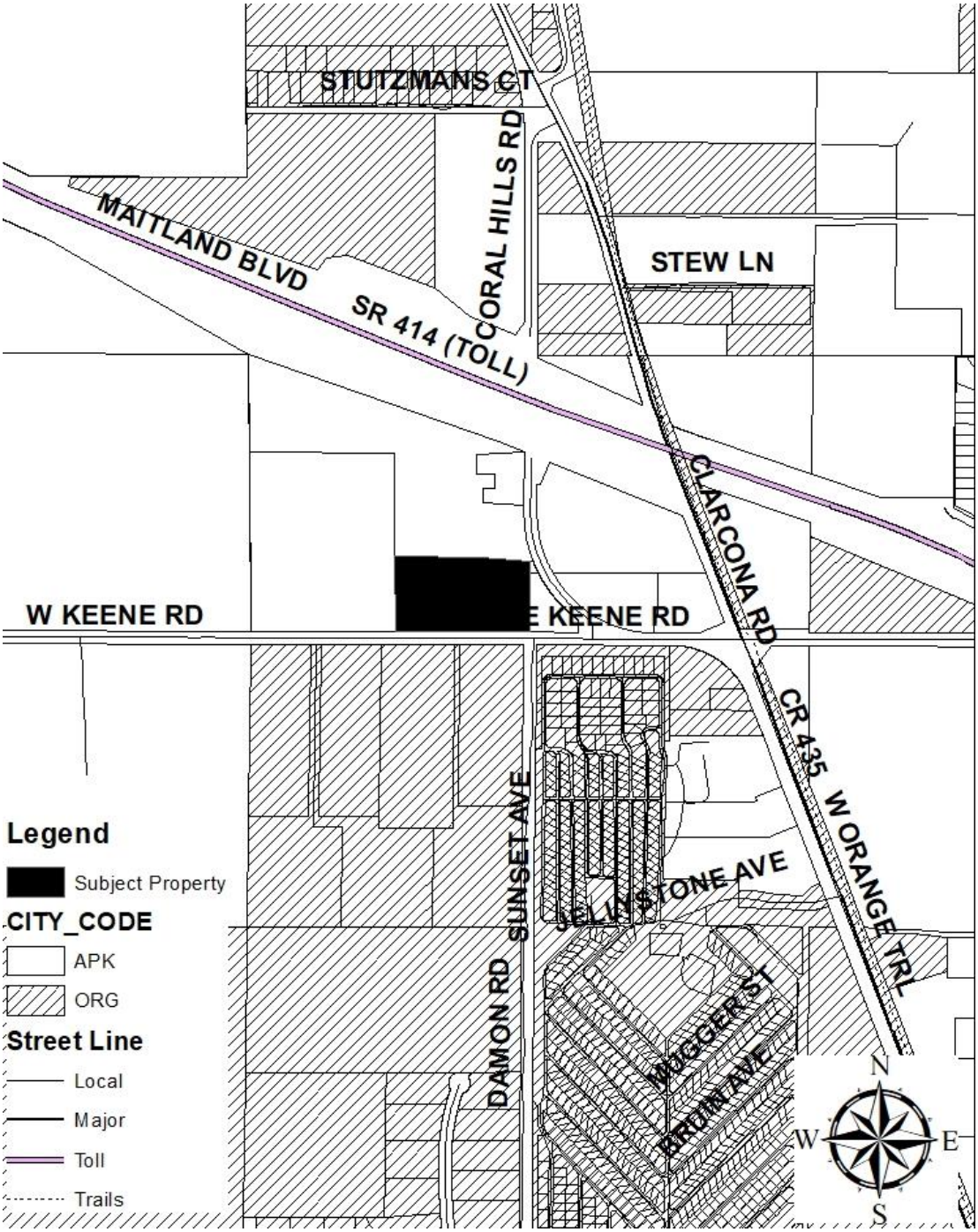
3. Projected facility under proposed designation: 0 acres

4. Improvement/expansions already programmed or needed as a result of the proposed amendment: None

N

AED Dewar Nursery 2019 Trust
4.94 +/- acres
Proposed Small-Scale Future Land Use Amendment:
From: "County" Rural
To: "City" Industrial
Parcel ID #: 22-21-28-0000-00-137

VICINITY MAP



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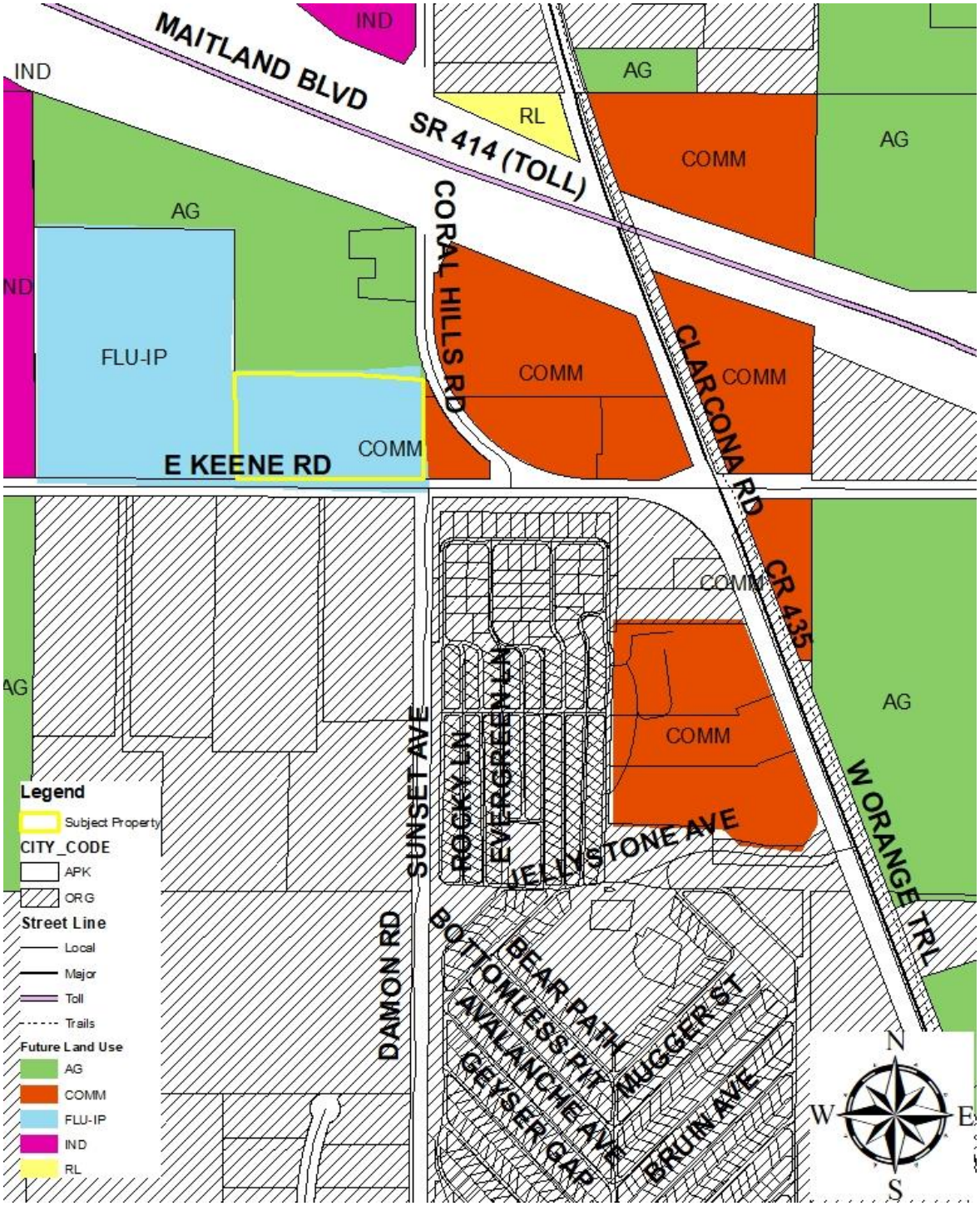
FUTURE LAND USE MAP



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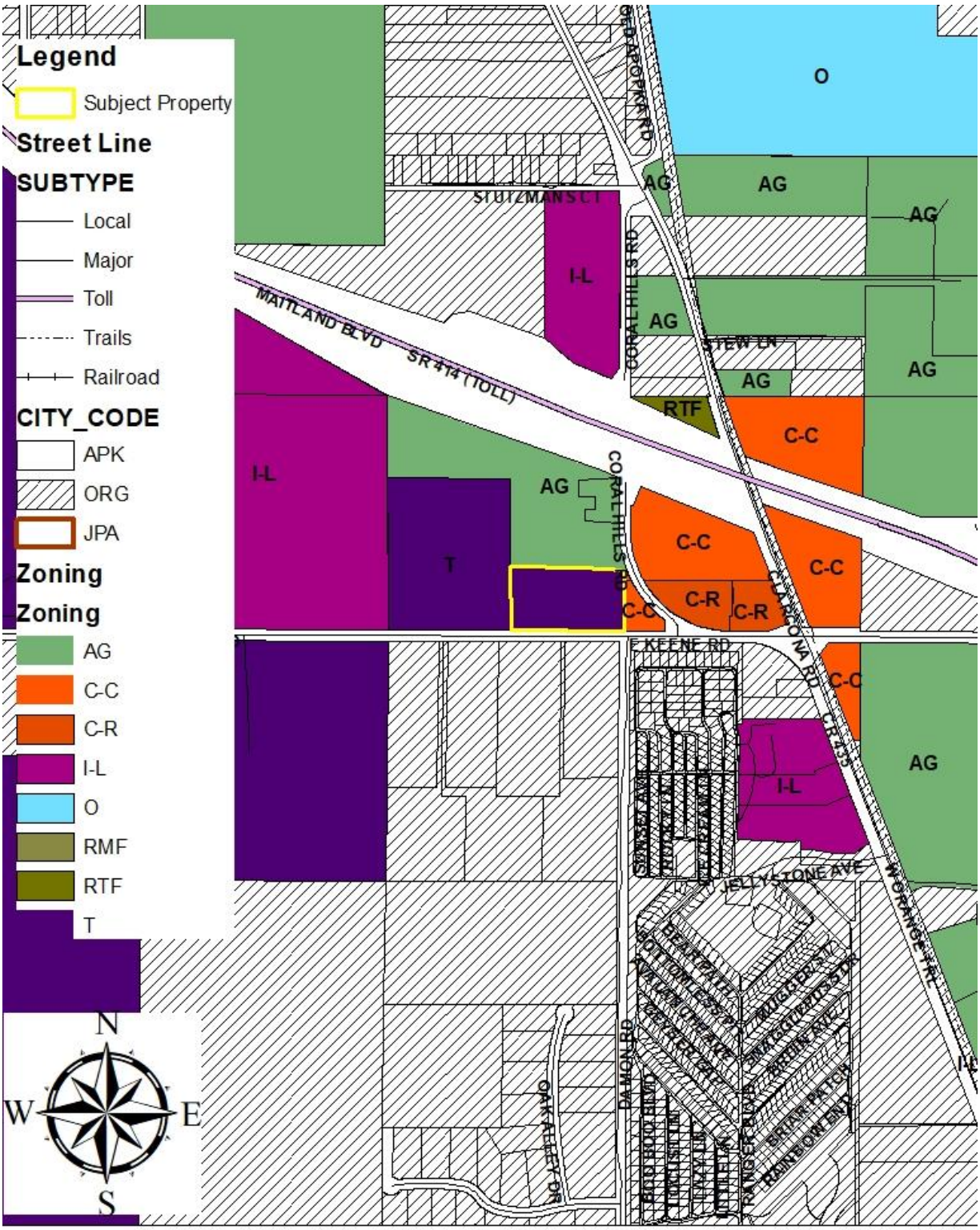
ADJACENT ZONING



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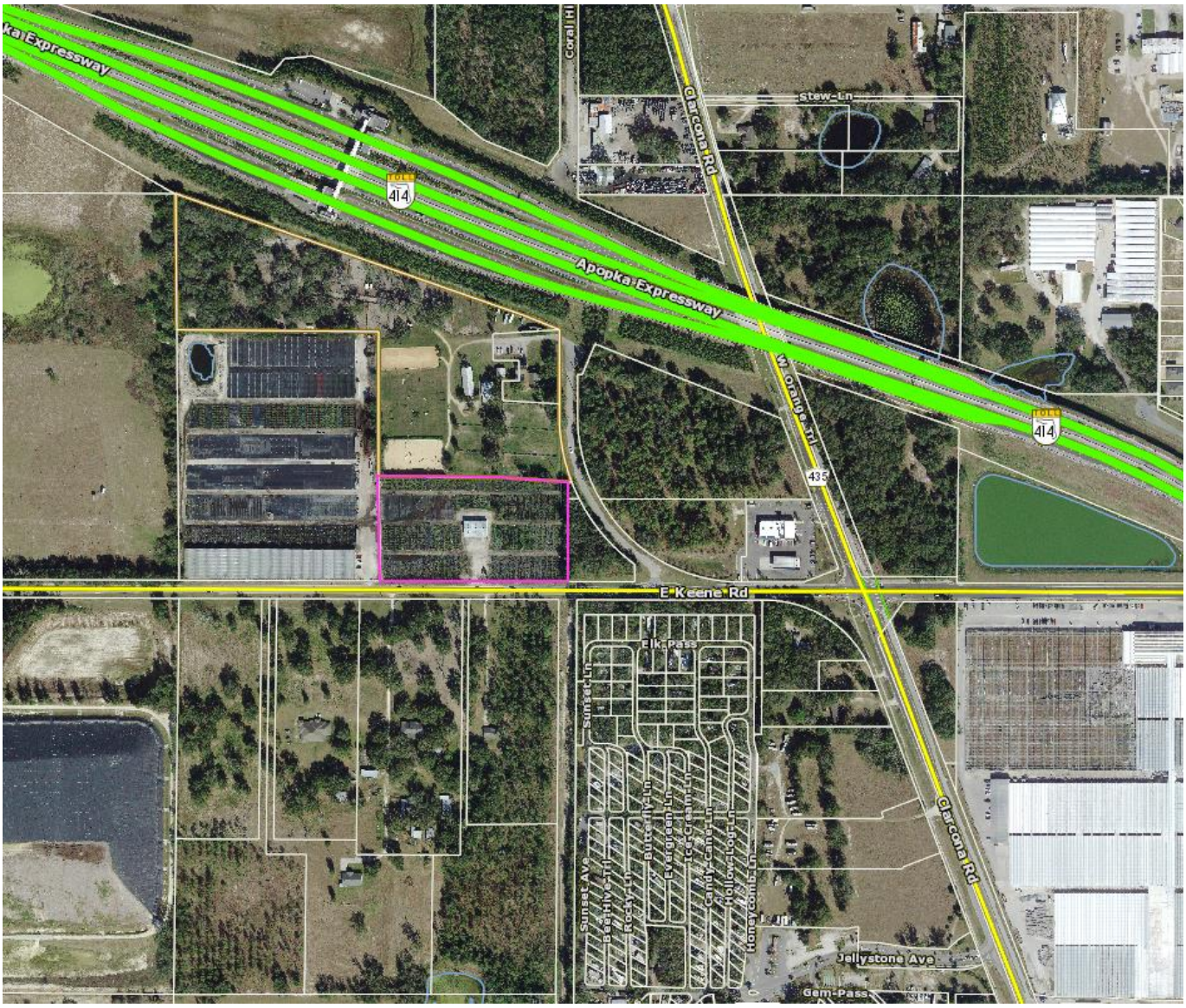
ADJACENT USES



CITY OF APOPKA
PLANNING COMMISSION

X	PUBLIC HEARING	MEETING OF:	June 9, 2020
____	SITE PLAN	FROM:	Community Development
____	SPECIAL REPORTS	EXHIBITS:	Zoning Report
____	OTHER:		Vicinity Map
			Future Land Use Map
			Adjacent Zoning Map
			Adjacent Uses Map

SUBJECT: **CHANGE OF ZONING – DEWAR NURSERY**

REQUEST: **CHANGE OF ZONING – DEWAR NURSERY**
FROM: T (TRANSITIONAL DISTRICT)
TO: I-L (LIGHT INDUSTRIAL DISTRICT)

SUMMARY:

OWNER:	AED Dewar Nursery 2019 Trust
APPLICANT:	Tara Tedrow
PARCEL ID NUMBER:	22-21-28-0000-00-137
LOCATION:	North of E. Keene Road and West of Clarcona Road
FUTURE LAND USE:	"County" Rural
EXISTING USE:	Nursery
CURRENT ZONING:	T (Transitional District)
PROPOSED ZONING:	I-L (Light Industrial District)
TRACT SIZE:	4.94 +/- acres
MAXIMUM ALLOWABLE DEVELOPMENT:	EXISTING: 1 Dwelling Unit PROPOSED: 129,111 non-residential sq. ft. - "Industrial" FLU

DISTRIBUTION

Mayor Nelson	Finance Director	Public Services Director
Commissioners	HR Director	Recreation Director
City Administrator	IT Director	City Clerk
Community Development Director	Police Chief	Fire Chief

ADDITIONAL COMMENTS: The subject property was annexed into the city on October 1, 2014 by Ordinance Number 2383. The subject area consists of approximately 4.94 acres and contains a nursery. The proposed I-L zoning is compatible with the property due to the I-L zoning being found in the vicinity. This application is being processed simultaneously with an application for a small-scale future land use amendment from "County" Rural to "City" Industrial.

COMPREHENSIVE PLAN COMPLIANCE: The proposed I-L (Light Industrial District) zoning is consistent with the proposed Industrial (Max. 0.6 FAR) Future Land Use Designation. Site development cannot exceed the intensity allowed by the Future Land Use policies.

SCHOOL CAPACITY REPORT: The proposed zoning change will not create additional residential units and thus will not have an impact on school enrollment. Therefore, the property is exempt from school capacity enhancement per the School Interlocal Planning Agreement.

ORANGE COUNTY NOTIFICATION: The JPA requires the City to notify the County 30 days before any public hearing or advisory board. The City properly notified Orange County on May 13, 2020.

PUBLIC HEARING SCHEDULE:
June 9, 2020 - Planning Commission (5:30 pm)
July 1, 2020 - City Council (1:30 pm) - 1st Reading
July 15, 2020 – City Council (7:00 pm) – 2nd Reading and Adoption

DULY ADVERTISED:
May 29, 2020 – Public Notice and Notification (Apopka Chief); Property owner(s) were notified of the hearing schedule via U.S. Postal Service mail.

RECOMMENDATION ACTION:

The **Development Review Committee** finds the proposed amendment consistent with the Comprehensive Plan and compatible with the character of the surrounding areas, recommending approval of the proposed Change of Zoning from "T, Transitional District" to "I-L, Light Industrial District" for the property owned by AED Dewar Nursery 2019 Trust and located at 251 E. Keene Road.

Recommended Motion: Find the proposed change of zoning consistent with the Comprehensive Plan and compatible with the character of the surrounding areas, recommending approval of the proposed Change of Zoning from "T, Transitional District" to "I-L, Light Industrial District" for the property owned by AED Dewar Nursery 2019 Trust and located at 251 E. Keene Road.

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.

ZONING REPORT

RELATIONSHIP TO ADJACENT PROPERTIES:

Direction	*Future Land Use*	*Zoning*	*Present Use*
North (City)	"City" Agriculture	AG	Equestrian Center
East (City)	"City" Commercial	C-C	Vacant
South (County)	"County" Rural Settlement 1/5	A-1	Single Family Homes
West (City)	"County" Rural	T	Nursery

LAND USE & TRAFFIC COMPATIBILITY:

The property is currently accessed from 251 E. Keene Road. Properties in the vicinity contain an Industrial Future Land Use designation.

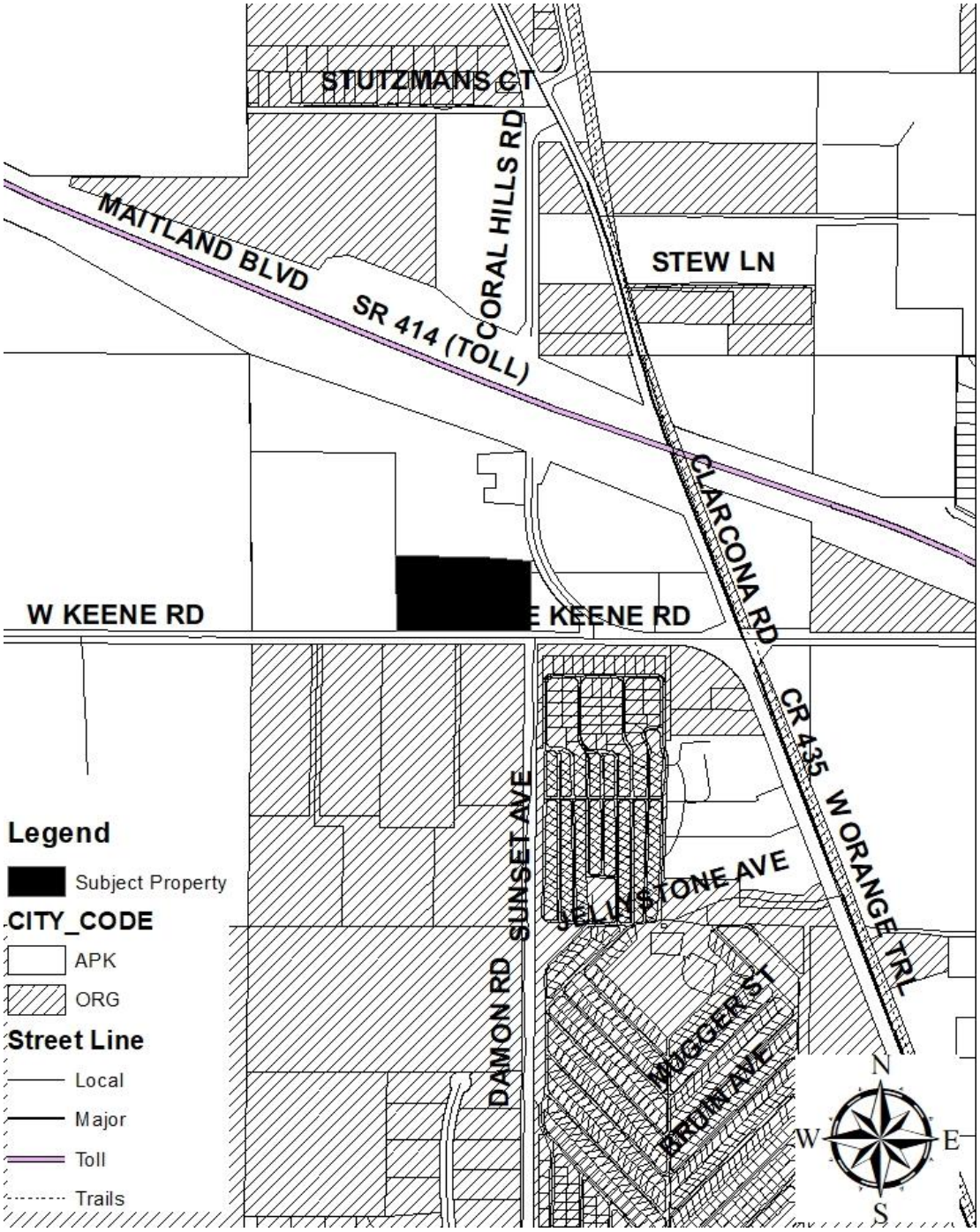
COMPREHENSIVE PLAN COMPLIANCE:

The proposed I-L zoning is consistent with the proposed Future Land Use designation, "Industrial" (Max. 0.6 FAR) and with the character of the surrounding area. Development Plans shall not exceed the density allowed in the adopted Future Land Use designation.

N

AED Dewar Nursery 2019 Trust
4.94 +/- acres
Proposed Rezoning:
From: T, Transitional District
To: I-L, Light Industrial District
Parcel ID #: 22-21-28-0000-00-137

VICINITY MAP



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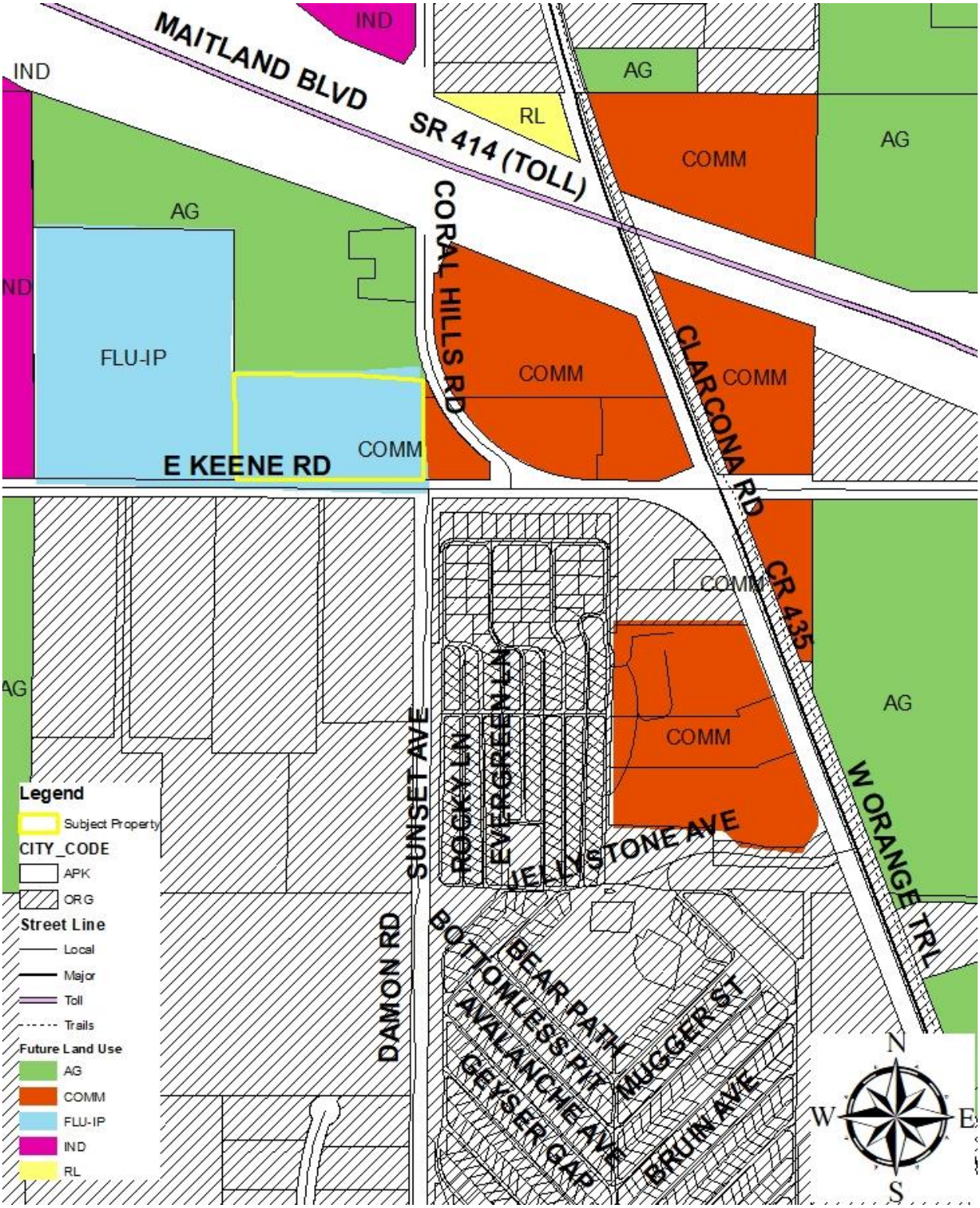
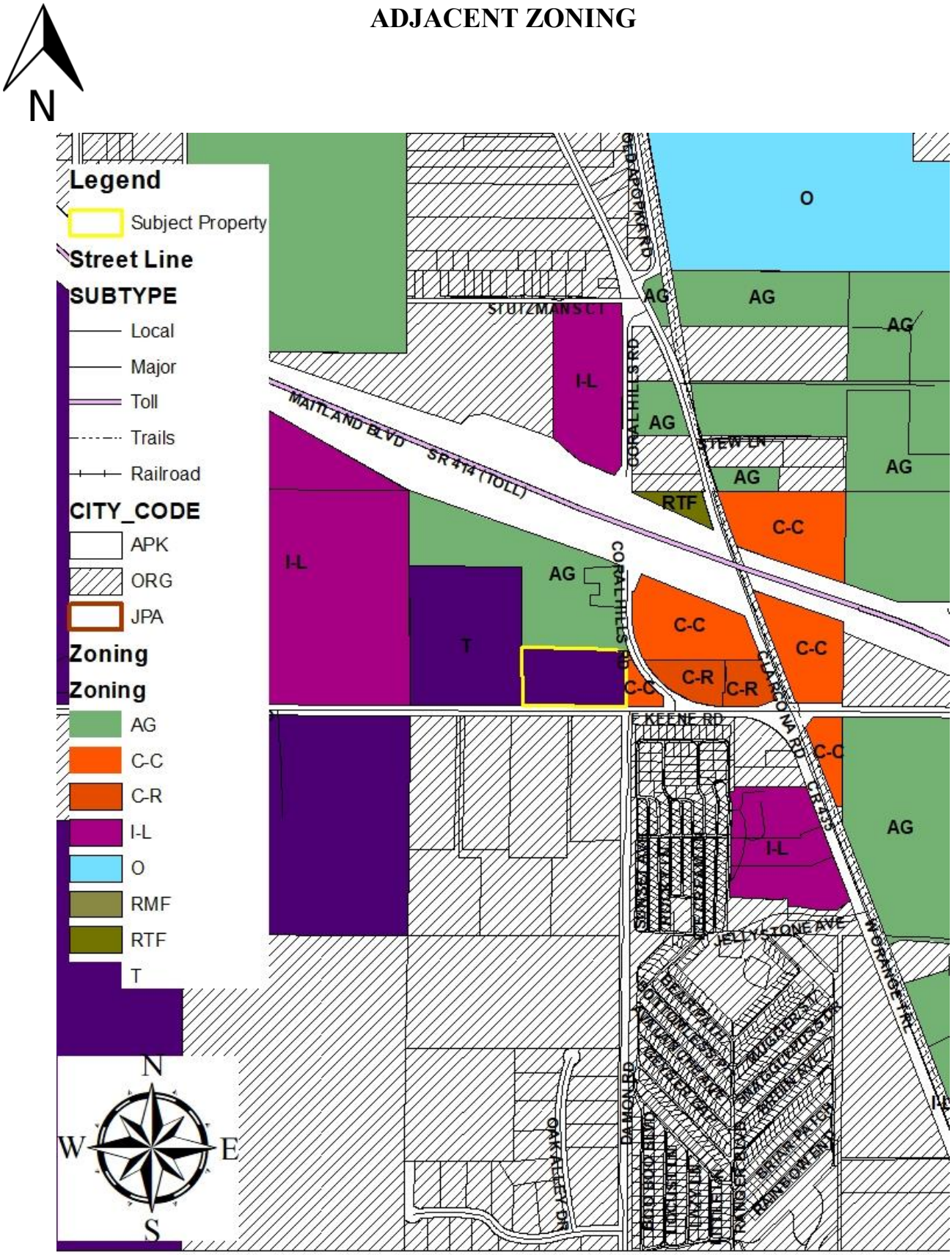
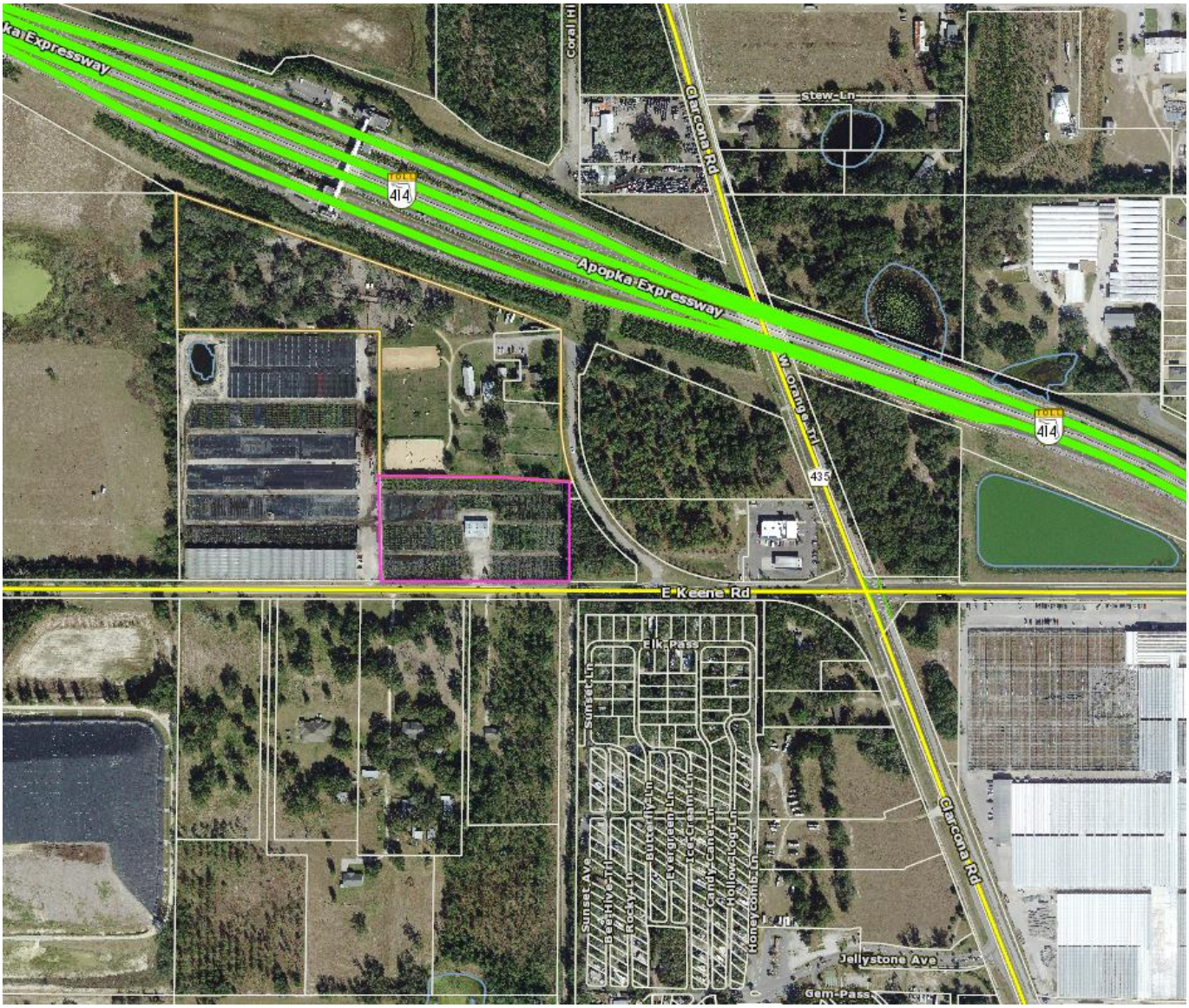
FUTURE LAND USE MAP



ADJACENT ZONING



ADJACENT USES



CITY OF APOPKA
PLANNING COMMISSION

X	PUBLIC HEARING	MEETING OF:	June 9, 2020
X	SITE PLAN	FROM:	Community Development
	SPECIAL REPORTS	EXHIBITS:	Vicinity Map
	OTHER:		Major Development Plan

SUBJECT: **CORAL HILLS ROAD SELF STORAGE**

REQUEST: **RECOMMEND APPROVAL OF THE CORAL HILLS ROAD SELF STORAGE MAJOR DEVELOPMENT PLAN**

SUMMARY:

OWNER:	A Space Storage Clarcona, LLC
APPLICANT:	Larry Poliner, P.E.
LOCATION:	2200 Coral Hills Road
PARCEL ID NUMBER:	22-21-28-0000-00-066
EXISTING USE:	Vacant
FLUM DESIGNATION:	Industrial
CURRENT ZONING:	I-L (Light Industrial)
PROPOSED DEVELOPMENT:	Self-storage facility developed in two phases
TRACT SIZE:	9.0 acres +/-
APPLICABLE LDC:	2019

DISTRIBUTION

Mayor Nelson	Finance Director	Public Services Director
Commissioners	HR Director	Recreation Director
City Administrator	IT Director	City Clerk
Community Development Director	Police Chief	Fire Chief

RELATIONSHIP TO ADJACENT PROPERTIES:

Direction	***Future Land Use***	***Zoning***	***Present Use***
North (County)	"County" Rural	"County" A-1	Place of Worship & Single-Family Homes
East (County & City)	"County" Rural & "City" Agriculture	"County" A-1 & "City" AG	Vacant Properties, Salvage Yard, & Construction Equipment Rental Facility
South (County)	"County" Agriculture	"City" AG	S.R. 414
West (County)	"County" Rural	"County" R-T	S.R. 414 Retention Ponds

Project Use: The applicant has submitted a Major Development Plan for a self-storage facility that will be developed in two phases. Phase 1 will consist of two buildings totaling 52,875 square feet that are labeled as Buildings A and B. Building A is a 38,500 square foot hybrid climate controlled self-storage building. Building B is a 14,375 square foot non-climate controlled self-storage building. In addition, an outdoor boat/RV parking area will be provided within the center of the site on Phase 1. Upon the commencement of Phase 2, the outdoor boat/RV parking area will be converted to climate controlled self-storage in three separate buildings totaling 81,950 square feet. In addition, a 24-unit canopy covered RV parking area will be constructed on the southern portion of the site concurrent with Phase 2. As a condition of approval, only operable vehicles may be permitted to be stored in the RV area. The vehicles shall not be inhabited.

A Site Plan will be required to be submitted and approved in accordance with all applicable requirements of the LDC for Phase 2 as it develops.

Access: The site will be accessed via Coral Hills Road via a full access point. The terminus of Coral Hills Road is at the southern end of the site and dead ends at the right-of-way of SR 414, which is elevated above the site. Coral Hills Road is accessed via Clarcona Road approximately ½ mile south of E. Cleveland Street.

Stormwater: Stormwater retention is proposed to be located on the northern portion of the site. The pond is proposed to be a dry pond.

Reclaimed water and wastewater: Currently the site is not served by City reclaimed water and wastewater lines and requires the extension of these lines to the site. Public Services has agreed to the provisions of a Reclaimed Water and Wastewater System Development Agreement which allows the applicant to construct an Individual Distributed Wastewater Treatment System (IDWTS) on the Property prior to City installing a wastewater collection system in the vicinity of the Property, at which time the Developer will connect the Property's wastewater system to City centralized wastewater system. The IDWTS shall be operational prior to and as a condition of Developer receiving a Certificate of Occupancy for a self-storage warehouse business. Any change of use of the Property to a use other than a self-storage warehouse business shall require connection to the City's central sewer system at the Owners expense. At such time the site is served by reclaimed water and wastewater, the owner will be required to connect to these lines.

Buffer/Tree Program: The site is heavily wooded. A tree mitigation payment will be required to be paid for trees that are removed as part of development of the site. Landscape materials including Japanese Privet, Live Oak, Viburnum, and Bahia Sod are proposed.

These materials are consistent with the requirements of the Land Development Code.

CONDITIONS OF APPROVAL: The applicant has agreed to the following conditions of approval:

1. Only operable vehicles may be permitted to be stored in the RV area. The vehicles shall not be inhabited.

2. City Council approval of a Reclaimed Water and Wastewater System Development Agreement which allows the applicant to construct an Individual Distributed Wastewater Treatment System (IDWTS) on the Property prior to City installing a wastewater collection system in the vicinity of the Property, at which time the Developer will connect the Property's wastewater system to City centralized wastewater system.

ORANGE COUNTY NOTIFICATION: Orange County was notified at the time of the Major Development Plan submittal for this property through the DRC agenda distribution.

PUBLIC HEARING SCHEDULE:
June 9, 2020 - Planning Commission, 5:30 pm
July 1, 2020 - City Council, 1:30 pm

RECOMMENDATION ACTION:

The **Development Review Committee** finds the Major Development Plan consistent with the Land Development Code.

Recommended Motion: Find the Major Development Plan for the Coral Hills Road Self-Storage Facility consistent with the 2019 Land Development Code.

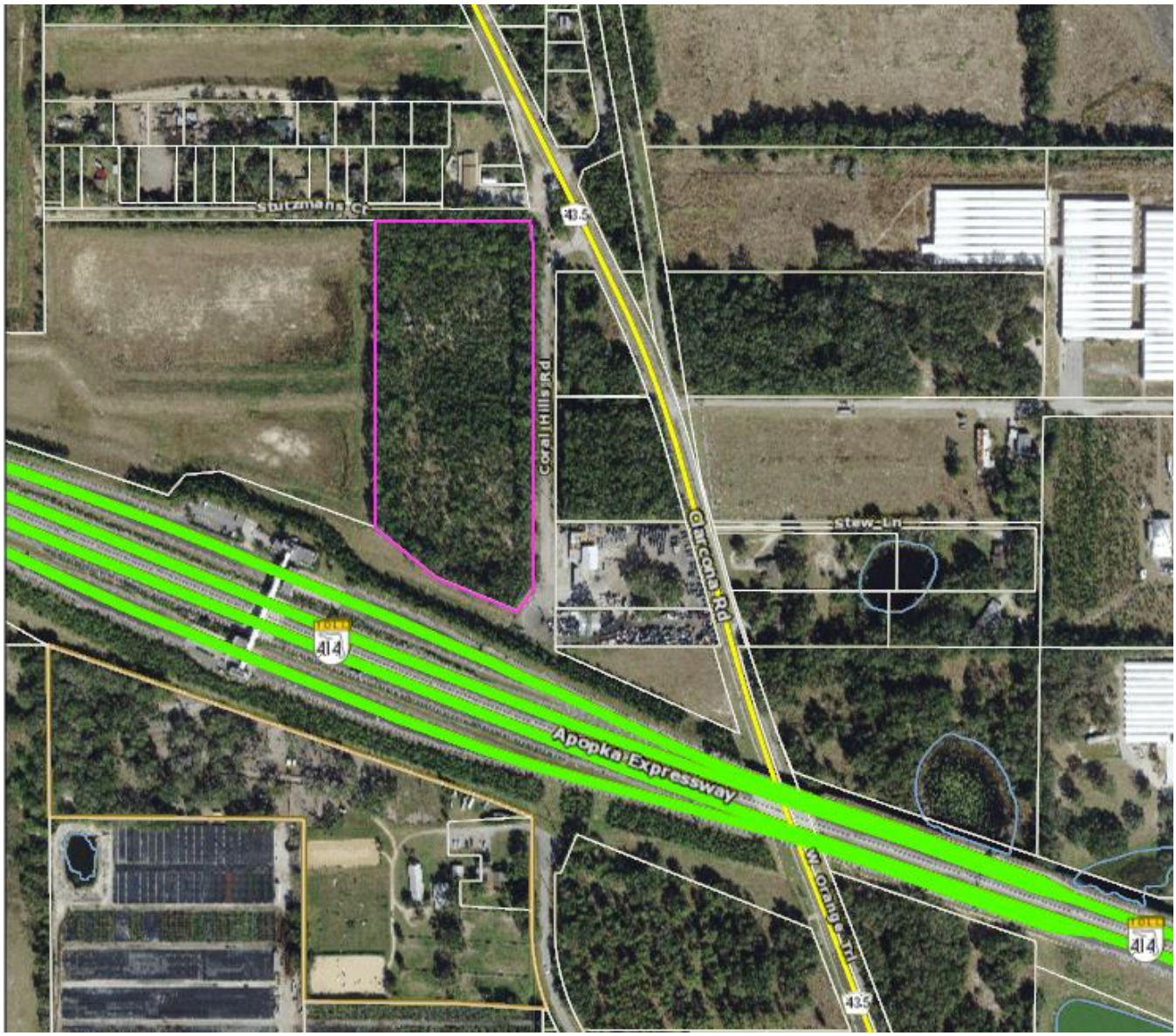
Planning Commission Role: The role of the Planning Commission for this development application is to advise the City Council to approve or deny based on consistency with the Comprehensive Plan and Land Development Code.

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.

Project: Coral Hills Road Self Storage
Owned by: A Space Storage Clarcona, LLC
Location: 2200 Coral Hills Road
Parcel ID#: 22-21-28-0000-00-066

N

VICINITY MAP



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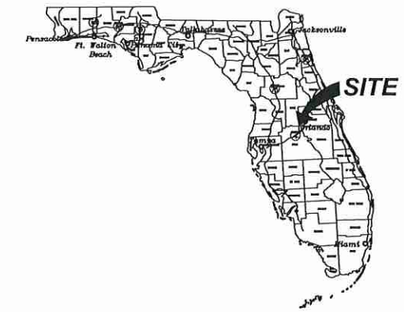
CORAL HILLS ROAD SELF STORAGE
MAJOR DEVELOPMENT PLAN

2200 CORAL HILLS ROAD, APOPKA, 32703
PARCEL ID: 22-21-28-0000-00-066

MAY 2020



PROJECT TEAM:

LAND OWNER/APPLICANT:
TIM HUDSPETH
ACCUTECH
407-292-9007

CIVIL ENGINEER:
LAURENCE POLINER
RCE CONSULTANTS, LLC
617 ARVERN DRIVE
ALTAMONTE SPRINGS, FL 32701
407-452-8633

SURVEYOR:
IRELAND & ASSOCIATES SURVEYING, INC.
800 CURRENCY CIRCLE, SUITE 1020
LAKE MARY, FL 32746
407-678-3366

UTILITY SERVICE PROVIDERS

POTABLE WATER	CITY OF APOPKA
NON-POTABLE WATER	CITY OF APOPKA
WASTEWATER	CITY OF APOPKA
POWER	DUKE ENERGY
TELECOMMUNICATIONS	SPECTRUM
GAS	LAKE APOPKA

VICINITY MAP
N.T.S.

AERIAL MAP
N.T.S.

SHEET INDEX

SHEET	DESCRIPTION
C-1.0	COVER SHEET
C-2.0	GENERAL NOTES
C-3.0	SITE PLAN
C-3.1	FIRE TRUCK ROUTE PLAN
C-4.0	UTILITY PLAN
C-4.1	UTILITY PLAN
C-4.2	UTILITY NOTES
C-5.0	GRADING AND DRAINAGE PLAN
C-5.1	GRADING AND DRAINAGE PLAN
C-5.2	DRAINAGE DETAILS
C-6.0	SWPPP PLAN
C-6.1	EROSION CONTROL DETAILS
C-7.0	CONSTRUCTION DETAILS
C-7.1-7.3	UTILITY DETAILS
PH-1	SITE PHOTOMETRIC PLAN
L-1	LANDSCAPE PLAN
I-1	IRRIGATION PLAN
TM-1 - TM-6	TREE MITIGATION PLANS
	BOUNDARY/TOPOGRAPHIC SURVEY

LEGAL DESCRIPTION:

The South 7/8 of the Northwest 1/4 of the Southwest 1/4 of Section 22–21–28, less the West 189.18 feet, less the North & South 30 feet for Road Right–of–Way, & less a parcel 100 feet by 100 feet in the Southwest Corner.

And Less:

Commence at the Northwest corner of the Southwest 1/4 of Section 22–21–28, thence run South 00°31'48" East, 1314.98 feet; thence run South 89°51'02" East, 189.19 feet; thence run North 00°31'48" West, 130.01 feet to the Point of Beginning.

Thence Continue North 00°31'48" West, 990.69 feet; thence run South 89°52'44" East, 684.59 feet; thence run South 00°06'14" West, 807.93 feet; thence run South 50°42'32" East, 209.04 feet; thence run South 67°37'06" East, 230 ft; thence run South 22°22'54" West, 50.00 feet; thence run South 73°23'12" East, 62.70 feet; thence run North 89°51'02" West, 988.53 feet; thence run North 00°31'48" West, 100.01 feet; thence run North 89°51'02" West, 100.01 feet to the Point of Beginning.

RCE Consultants
Engineering Real Solutions

RCE CONSULTANTS, LLC

617 ARVERN DRIVE
ALTAMONTE SPRINGS, FL. 32701
LARRY@RCECONSULTANTS.NET

REV.	DATE	DESCRIPTION	REV.
1	04/30/2020	CITY DRC COMMENTS	

CORAL HILLS ROAD SELF STORAGE

COVER SHEET

DRAWN: LMP
DESIGNED: DM
CHECKED LMP
PROJECT # 33.2019

5/29/2020

Laurence Poliner #56974
RCE CONSULTANTS, LLC
Certificate of Authorization 29307

DocuSign Envelope ID: 07DB5A53-9A4C-4B52-91C7-64651329AE89

GENERAL NOTES

1. UNLESS OTHERWISE SPECIFIED, ALL WORK SHALL BE PERFORMED CONSISTENT WITH THE FOLLOWING SPECIFICATIONS:

- CITY OF APOPKA, FLORIDA
- ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
- FLORIDA DEPARTMENT OF TRANSPORTATION
- FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
- NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

2. THE GEOTECHNICAL REPORT SHALL BE REVIEWED BY THE CONTRACTOR, AND THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE SITE, INCLUDING ALL SURFACE AND SUBSURFACE CONDITIONS, THE WORK REQUIRED, AND ALL OTHER CONDITIONS THAT MAY AFFECT THE SUCCESSFUL COMPLETION OF THE JOB PRIOR TO COMMENCEMENT OF WORK.

3. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND PERMIT CONDITIONS BEARING ON THE CONDUCT OF THE WORK, AS DRAWN AND SPECIFIED. IF THE CONTRACTOR OBSERVES THAT THE DRAWINGS AND SPECIFICATIONS ARE AT VARIANCE THEREWITH, HE SHALL PROMPTLY NOTIFY THE ENGINEER, IN WRITING, AND ANY NECESSARY CHANGES SHALL BE ADJUSTED, AS PROVIDED IN THE AGREEMENT FOR CHANGES IN THE WORK.

4. THE CONTRACTOR SHALL BE RESPONSIBLE TO THE OWNER AND THE ENGINEER FOR THE ACTS AND OMISSIONS OF CONTRACTOR'S EMPLOYEES AND ALL HIS SUBCONTRACTORS AND THEIR AGENTS AND EMPLOYEES AND OTHER PERSONS PERFORMING ANY OF THE WORK UNDER A CONTRACT WITH THE CONTRACTOR.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL NECESSARY ARRANGEMENTS WITH GOVERNMENTAL DEPARTMENTS, PUBLIC UTILITIES, PUBLIC CARRIERS, SERVICE COMPANIES, AND CORPORATIONS OWNING OR CONTROLLING ROADWAYS, RAILWAYS, WATER, SEWER, GAS, ELECTRICAL, TELEPHONE, AND TELEGRAPH FACILITIES SUCH AS PAVEMENTS, TRACKS, PIPING, WIRES, CABLES, CONDUITS, POLES, GUYS, OR OTHER SIMILAR FACILITIES, INCLUDING INCIDENTAL STRUCTURES CONNECTED THEREWITH THAT ARE ENCOUNTERED IN THE WORK IN ORDER THAT SUCH ITEMS MAY BE PROPERLY SUPPORTED, PROTECTED OR LOCATED.

6. UNLESS OTHERWISE SPECIFIED IN THE GENERAL CONDITIONS, ALL CONSTRUCTION IS TO BE GOVERNED BY THE PLANS, APPLICABLE PERMITS, AND SPECIFICATIONS HEREIN, AND ALL APPLICABLE FEDERAL, STATE AND LOCAL BUILDING AND SAFETY CODES, LAWS AND ORDINANCES.

7. PRIOR TO PERFORMING ANY WORK WITHIN ANY PUBLIC OR UTILITY RIGHT-OF-WAY, CONTRACTOR SHALL OBTAIN AUTHORIZATION AND PERMIT FROM JURISDICTION RESPONSIBLE FOR SUCH RIGHT-OF-WAY. IN ADDITION, CONTRACTOR SHALL OBTAIN GAS I.D. NUMBER FROM LOCAL GAS COMPANY AND NOTIFY SUNSHINE STATE ONE-CALL UTILITY NOTIFICATION CENTER AT 1-800-432-4770 AT LEAST 48 HOURS PRIOR TO START OF WORK.

8. PRIOR TO PERFORMING ANY WORK WITHIN ANY PUBLIC RIGHT-OF-WAY, CONTRACTOR SHALL DEVELOP AND IMPLEMENT A TRAFFIC CONTROL PLAN CONSISTENT WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION, AND SUBMIT TO THE COUNTY ENGINEER FOR APPROVAL.

9. IN THE EVENT THE CONTRACTOR DISCOVERS ANY ERRORS OR OMISSIONS IN THE PLANS HE SHALL IMMEDIATELY NOTIFY THE ENGINEER AND/OR OWNER OR OWNER'S AGENT.

10. CONTRACTOR SHALL PRESERVE AND PROTECT ALL PERMANENT REFERENCE MONUMENTS, PERMANENT CONTROL POINTS, PERMANENT BENCH MARKS AND PROPERTY CORNERS. IN THE EVENT THE MONUMENTS, POINTS OR MARKERS ARE DISTURBED THE CONTRACTOR SHALL EMPLOY A FLORIDA REGISTERED LAND SURVEYOR TO RESET OR REPLACE THEM.

11. THE OWNER, OWNER'S AGENT AND INSPECTORS OF APPLICABLE GOVERNMENT JURISDICTIONS, SHALL AT ALL TIMES HAVE ACCESS TO THE WORK WHEREVER AND WHENEVER IT IS IN PREPARATION OR PROGRESS; AND THE CONTRACTOR SHALL PROVIDE PROPER FACILITIES FOR SUCH ACCESS AND FOR THE INSPECTION.

12. IT IS THE CONTRACTOR'S RESPONSIBILITY TO TAKE ALL REASONABLE AND PRUDENT PRECAUTIONS TO INSURE THAT ALL COMPLETED WORK, MATERIALS AND EQUIPMENT STORED ON SITE ARE SAFE AND SECURED FROM UNAUTHORIZED ACCESS, USE, THEFT, OR VANDALISM. SUCH PRECAUTIONS MAY INCLUDE INSTALLATION OF SIGNS, FENCES, OR POSTING OF SECURITY GUARDS.

13. CONTRACTOR SHALL, AT ALL TIMES, UTILIZE ALL NORMALLY ACCEPTED AND REASONABLY EXPECTED SAFETY PRACTICES AND COMPLY WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES AND GUIDELINES PERTAINING TO SAFE UTILIZATION OF EQUIPMENT OR MATERIALS AS PUBLISHED BY THEIR MANUFACTURER'S.

14. PRIOR TO INITIATING ANY EXCAVATION (INCLUDING BUT NOT LIMITED TO TUNNELS, DITCHES, STORM WATER PONDS, CANALS, ARTIFICIAL LAKES) CONTRACTOR SHALL INSTALL FENCES AND/OR TAKE ALL OTHER REASONABLE AND PRUDENT STEPS TO INSURE THAT ACCESS TO EXCAVATION BY UNAUTHORIZED PERSONNEL IS PREVENTED.

15. CONTRACTOR SHALL COMPLY IN EVERY RESPECT WITH THE PROVISIONS OF THE FLORIDA STATE TRENCH SAFETY ACT.

16. THE CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS FOR THE SAFETY OF, AND SHALL PROVIDE ALL REASONABLE PROTECTION TO PREVENT DAMAGE, INJURY OR LOSS TO:
    - A. ALL EMPLOYEES ON THE WORK AND ALL OTHER PERSONS WHO MAY BE AFFECTED THEREBY;
    - B. ALL THE WORK AND ALL MATERIALS AND EQUIPMENT TO BE INCORPORATED THEREIN, WHETHER IN STORAGE ON OR OFF THE SITE, UNDER THE CARE, CUSTODY OR CONTROL OF THE CONTRACTOR OR ANY OF ITS SUBCONTRACTORS;
    - C. OTHER PROPERTY AT THE SITE OR ADJACENT THERETO, INCLUDING TREES, SHRUBS, LAWNS, WALKS, PAVEMENTS, ROADWAY, STRUCTURES AND UTILITIES NOT DESIGNATED FOR DEMOLITION IN THE COURSE OF CONSTRUCTION.

17. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAFETY CODES AND WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC, QUASI PUBLIC OR OTHER AUTHORITY HAVING JURISDICTION FOR THE SAFETY OF PERSONS OR PROPERTY OR FOR THEIR PROTECTION AGAINST DAMAGE, INJURY OR LOSS, OR DESIGNED TO PROTECT THE ENVIRONMENT. THE CONTRACTOR SHALL ERECT AND MAINTAIN, AS REQUIRED BY EXISTING CONDITIONS AND PROGRESS OF THE WORK, ALL REASONABLE SAFEGUARDS FOR SAFETY AND PROTECTION, INCLUDING POSTING DANGER SIGNS AND OTHER WARNINGS AGAINST HAZARDS, PROMULGATING SAFETY REGULATIONS AND NOTIFYING OWNERS AND USERS OF ADJACENT UTILITIES OF THE EXISTENCE OF HAZARDS AND OF THE SAFETY REGULATIONS.

18. ALL DAMAGE OR LOSS TO ANY PROPERTY CAUSED IN WHOLE OR IN PART BY THE CONTRACTOR, A SUBCONTRACTOR, OR BY ANYONE FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE, SHALL BE REMEDIED BY THE CONTRACTOR, EXCEPT DAMAGE OR LOSS PROPERLY ATTRIBUTABLE SOLELY TO THE ACTS OR OMISSIONS OF THE OWNER, OR THE ENGINEER OR ANYONE EMPLOYED BY THEM, OR FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE, AND NOT PROPERLY ATTRIBUTABLE IN WHOLE OR IN PART, TO THE FAULT OR NEGLIGENCE OF THE CONTRACTOR.

19. THOSE PARTS OF WORK IN PLACE WHICH ARE SUBJECT TO DAMAGE BECAUSE OF OPERATIONS BEING CARRIED ON ADJACENT THERETO SHALL BE COVERED, BOARDED UP OR SUBSTANTIALLY ENCLOSED WITH ADEQUATE PROTECTION BY THE CONTRACTOR AT CONTRACTOR'S EXPENSE.

20. UNTIL FINAL ACCEPTANCE OF THE WORK BY OWNER, THE CONTRACTOR SHALL HAVE THE CHARGE AND CARE OF AND SHALL BEAR THE RISK OF INJURY OR DAMAGE, LOSS OR EXPENSE TO ANY PART THEREOF, OR TO ANY MATERIALS STORED ON SITE, BY THE ACTION OF THE ELEMENTS OR FROM ANY OTHER CAUSE WHETHER ARISING FROM THE EXECUTION OR NON-EXECUTION OF THE WORK. THE CONTRACTOR SHALL REBUILD, REPAIR, RESTORE AND MAKE GOOD ALL INJURIES OR DAMAGES TO ANY PORTION OF THE WORK OCCASIONED BY ANY OF THE ABOVE CAUSES BEFORE FINAL ACCEPTANCE AND SHALL BEAR THE EXPENSES THEREOF.

21. ADEQUATE TRAFFIC CONTROL, BARRICADES AND FLAGMAN SERVICES SHALL BE FURNISHED AND MAINTAINED BY THE CONTRACTOR AT ALL POINTS WHERE CONVEYING EQUIPMENT ENGAGED ON THE WORK REGULARLY ENTERS ONTO OR CROSSES TRAFFIC-CARRYING ROADS.

22. THE CONTRACTOR SHALL COMPLY IN EVERY RESPECT WITH THE FEDERAL OCCUPATIONAL HEALTH AND SAFETY ACT OF 1970 AND ALL RULES AND REGULATIONS NOW OR HEREAFTER IN EFFECT UNDER SAID ACT, AND THE CONTRACTOR FURTHER AGREES TO COMPLY WITH ANY AND ALL APPLICABLE STATE LAWS AND REGULATIONS PERTAINING TO JOB SAFETY AND HEALTH.

23. CONTRACTOR AND ITS SUBCONTRACTORS SHALL USE, HANDLE, TRANSPORT, AND DISPOSE OF ALL MATERIALS (HAZARDOUS OR OTHERWISE) IN COMPLIANCE WITH ALL PRESENT FEDERAL, STATE AND LOCAL ENVIRONMENTAL, HEALTH OR SAFETY LAW, INCLUDING, BUT NOT LIMITED TO, ALL SUCH STATUTES, REGULATIONS, RULES, ORDINANCES, CODES, AND RULES OF COMMON LAW.

24. CONTRACTOR FURTHER AGREES THAT CONTRACTOR AND ITS SUBCONTRACTORS SHALL NOT CAUSE THE DISCHARGE, RELEASE OR DISPOSAL OF ANY HAZARDOUS MATERIAL CREATED BY ITS WORK ON OR ABOUT THE JOB SITE. IN THE EVENT OF ANY SPILL, RELEASE OR ANY OTHER REPORTABLE OCCURRENCE, CONTRACTOR SHALL NOTIFY THE APPROPRIATE GOVERNMENTAL AGENCY AND SHALL TAKE SUCH ACTION AS MAY BE NECESSARY TO MINIMIZE THE DELETERIOUS EFFECT OF SUCH SPILL ON PERSONS OR PROPERTY.

25. THE CONTRACTOR SHALL PROTECT AND KEEP OWNER (INCLUDING THEIR AGENTS AND EMPLOYEES) FREE AND HARMLESS FROM ANY AND ALL LIABILITY, PUBLIC OR PRIVATE, PENALTIES, CONTRACTUAL OR OTHERWISE, LOSSES, DAMAGES, COSTS, ATTORNEY'S FEES, EXPENSES, CAUSES OF ACTION, CLAIMS OR JUDGMENTS RESULTING FROM THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AS AMENDED OR ANY RULE OR REGULATION PROMULGATED THEREUNDER OR OF ANY STATE LAWS OR REGULATIONS PERTAINING TO JOB SAFETY AND HEALTH ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE PERFORMANCE OF WORK OR WORK TO BE PERFORMED UNDER THIS CONTRACT, AND CONTRACTOR SHALL INDEMNIFY OWNER FROM ANY SUCH CLAIMS, PENALTIES, SUITS OR ACTIONS, PUBLIC OR PRIVATE, ADMINISTRATIVE OR JUDICIAL, INCLUDING ATTORNEY'S FEES PAID OR INCURRED BY OR ON BEHALF OF OWNER, JOINTLY OR SEVERALLY, AND/OR THEIR AGENTS AND EMPLOYEES. THE CONTRACTOR FURTHER AGREES, IN THE EVENT OF A CLAIMED VIOLATION OF ANY FEDERAL OR STATE SAFETY AND HEALTH LAW OR REGULATION ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE PERFORMANCE OF WORK OR WORK TO BE PERFORMED UNDER THIS CONTRACT, OWNER MAY IMMEDIATELY TAKE WHATEVER ACTION IS DEEMED NECESSARY BY OWNER TO REMEDY THE CLAIMED VIOLATION. ANY AND ALL COSTS OR EXPENSES PAID OR INCURRED BY OWNER IN TAKING SUCH ACTION SHALL BE BORNE BY CONTRACTOR, AND CONTRACTOR AGREES TO PROTECT, HOLD HARMLESS AND INDEMNIFY OWNER AGAINST ANY AND ALL SUCH COSTS OR EXPENSES.

26. CONTRACTOR AND ITS SUBCONTRACTORS SHALL, UPON COMPLETION OF PERFORMANCE OF ALL DUTIES UNDER THIS CONTRACT, REMOVE ALL SUPPLIES, MATERIALS, AND WASTE CONTAINING AND HAZARDOUS MATERIAL FROM THE JOB SITE. CONTRACTOR SHALL BEAR FULL FINANCIAL RESPONSIBILITY, AS BETWEEN THE PARTIES OF THIS CONTRACT, FOR THE COMPLIANCE OF CONTRACTOR AND ITS SUBCONTRACTORS WITH THE PROVISIONS OF THIS CONTRACT.

27. CONTRACTOR AGREES TO INDEMNIFY, DEFEND, PROTECT AND HOLD THE OWNER HARMLESS FROM AND AGAINST ANY CLAIMS INCLUDING, WITHOUT LIMITATION, ACTUAL ATTORNEY'S FEES AND ANY COSTS OF INVESTIGATION, SOILS TESTING, GOVERNMENTAL APPROVALS, REMEDIATION AND CLEANUP ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE FAILURE OF CONTRACTOR OR ITS SUBCONTRACTORS, OR THEIR AGENTS, EMPLOYEES, OFFICERS, OR REPRESENTATIVES, TO COMPLY WITH THE TERMS OF THESE CONSTRUCTION DOCUMENTS.

28. SHOULD CONTRACTOR OR ITS SUBCONTRACTORS DISCHARGE, RELEASE OR DISPOSE OF ANY HAZARDOUS MATERIAL ON OR ABOUT THE JOB SITE IN VIOLATION OF THESE CONSTRUCTION DOCUMENTS, CONTRACTOR SHALL IMMEDIATELY SO INFORM OWNER & ENGINEER IN WRITING. IN THE EVENT OF ANY SPILL, RELEASE OR ANY OTHER REPORTABLE OCCURRENCE, CONTRACTOR SHALL NOTIFY THE APPROPRIATE GOVERNMENTAL AGENCY, OWNER & ENGINEER AND SHALL TAKE SUCH ACTION AS MAY BE NECESSARY TO MINIMIZE THE DELETERIOUS EFFECT OF SUCH SPILL ON PERSONS OR PROPERTY.

29. IN THE EVENT CONTRACTOR OR ITS SUBCONTRACTORS ENCOUNTER ON THE PREMISES ANY PIPELINE, UNDERGROUND STORAGE TANK OR OTHER CONTAINER, OF ANY KIND, THAT MAY CONTAIN A HAZARDOUS MATERIAL, OR ENCOUNTER MATERIAL REASONABLY BELIEVED TO BE A HAZARDOUS MATERIAL, CONTRACTOR SHALL IMMEDIATELY STOP WORK IN THE AREA AFFECTED AND REPORT THE CONDITION TO OWNER AND/OR ENGINEER IN WRITING.

30. "HAZARDOUS MATERIAL" MEANS ANY SUBSTANCE: (A) THE PRESENCE OF WHICH REQUIRES INVESTIGATION OR REMEDIATION UNDER ANY PRESENT FEDERAL, STATE OR LOCAL STATUTE, REGULATION, ORDINANCE, RULE, CODE, ORDER, ACTION, POLICY OR COMMON LAW, OR (B) WHICH IS OR BECOMES DEFINED AS A "HAZARDOUS WASTE," "HAZARDOUS SUBSTANCE," POLLUTANT OR CONTAMINANT UNDER ANY PRESENT FEDERAL, STATE OR LOCAL STATUTE, REGULATION, RULE OR ORDINANCE OR AMENDMENTS THERETO INCLUDING, WITHOUT LIMITATION, THE COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (42 U.S.C. SECTIONS 9601 ET SEQ.) AND/OR THE RESOURCE CONSERVATION AND RECOVERY ACT (42 U.S.C. SECTIONS 6901 ET SEQ.), OR (C) WHICH IS TOXIC, EXPLOSIVE, CORROSIVE, FLAMMABLE, INFECTIOUS, RADIOACTIVE, CARCINOGENIC, MUTAGENIC, OR OTHERWISE HAZARDOUS AND IS REGULATED BY ANY GOVERNMENTAL AUTHORITY, AGENCY, DEPARTMENT, COMMISSION, BOARD, AGENCY OR INSTRUMENTALITY OF THE UNITED STATES, THE STATE IN WHICH THE PREMISES ARE LOCATED OR ANY POLITICAL SUBDIVISION THEREOF, OR (D) THE PRESENCE OF WHICH ON THE PREMISES CAUSES OR THREATENS TO CAUSE A NUISANCE UPON THE PREMISES OR TO ADJACENT PROPERTIES OR POSES OR THREATENS TO POSE A HAZARD TO THE HEALTH OR SAFETY OF PERSONS ON OR ABOUT THE PREMISES, OR (E) WHICH CONTAINS GASOLINE, DIESEL FUEL OR OTHER PETROLEUM HYDROCARBONS, OR (F) WHICH CONTAINS POLYCHLORINATED BIPHENYLS (PCBS), ASBESTOS, LEAD OR UREA FORMALDEHYDE FOAM INSULATION.

31. THE CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UTILITIES AS TO SIZE, LOCATION, AND ELEVATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY AND ALL CONFLICTS, DEVIATIONS OR OMISSIONS TO THESE CONSTRUCTION DRAWINGS PRIOR TO BEGINNING CONSTRUCTION.

32. IF ANY TESTING, INSPECTION OR APPROVAL REVEAL DEFECTIVE WORK, CONTRACTOR SHALL NOT BE ALLOWED TO RECEIVE ANY ASSOCIATED COSTS AND THE OWNER SHALL BE ENTITLED TO DEDUCT FROM THE CONTRACT PRICE, BY ISSUING A CHANGE ORDER, OWNER'S COSTS ARISING OUT OF THE DEFECTIVE WORK, INCLUDING COSTS OF REPEATED PROCEDURES, COMPENSATION FOR ENGINEER'S AND DESIGN ENGINEER'S SERVICES AND ALL OTHER RELATED COSTS.

HANDICAP ACCESSIBILITY NOTES:

1. ALL CONSTRUCTION MUST MEET OR EXCEED ALL REQUIREMENTS AS OUTLINED IN THE AMERICANS WITH DISABILITIES ACT (ADA) AND THE FLORIDA ACCESSIBILITY CODE, MOST RECENT EDITIONS. BOTTOM OF CURB RAMP ELEVATION (B.O. RAMP) IS RELATIVE TO EACH CURB RAMP CONDITION. ACTUAL ELEVATIONS SHALL BE BASED ON EXISTING GRADE OF CURB FLOW LINE AT THE B.O. RAMPS.
2. TOP OF CURB ELEVATION ADJACENT TO B.O. RAMP = 0.50 FT. MAX. UNLESS OTHERWISE NOTED.
3. ADA REQUIREMENTS SUPERSEDE SPOT GRADES AT LOT LINES. CONTRACTOR TO CUT BACK SLOPE AT 3:1 OR FLATTER AS NEEDED FOR RAMP AND SIDEWALK CONNECTION.
4. REFER TO PLAN SHEETS AND SECTIONS FOR LOCATIONS AND SIDEWALK WIDTHS.
5. THE DETECTABLE WARNING STRIP SHALL CONSIST OF A 24 INCH WIDE TACTILE PATTERN OF RAISED TRUNCATED DOMES (ALIGNED PATTERN). DOMES SHALL HAVE A DIAMETER OF 0.9 INCH, A HEIGHT OF 0.2 INCH, AND A CENTER TO CENTER SPACING OF 2.35 INCHES. THE RAMP DETECTABLE WARNING STRIP SHALL BE CONTRASTING IN COLOR. THE MATERIAL USED TO PROVIDE CONTRAST SHALL CONTRAST BY AT LEAST 70%.
6. THE CROSS SLOPE OF RAMP SURFACES AND ADJACENT STREET GRADES SHALL BE NO MORE THAN 1:50 OR 2% MAXIMUM.
7. CURB RAMPS CONSTRUCTED BY THE CONTRACTOR SHALL MEET ALL CURRENT APPLICABLE A.D.A. REQUIREMENTS AND SHALL HAVE DETECTABLE WARNING COMPLYING WITH A.D.A. REQUIREMENTS. ACCESSIBILITY ROUTES SHALL MEET ALL APPLICABLE A.D.A. REQUIREMENTS.
8. CONTRACTOR TO REFER TO MUNICIPALITY DETAILS AS NEEDED.
9. DRIVEWAY/ROADWAY CROSS SLOPES AT CROSSWALKS SHALL BE MAXIMUM 2% PER ADA REQUIREMENTS.
10. SIDEWALK CROSS SLOPES SHALL BE MAXIMUM 2% PER ADA REQUIREMENTS.
11. CURB RAMP FLARES & LANDINGS SHALL MEET ADA REQUIREMENTS.
12. ACCESSIBLE ROUTE WITH RUNNING SLOPES GREATER THAN 1:20 IS A RAMP AND SHALL COMPLY WITH ADA RAMP REQUIREMENTS.
13. IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO MEET ALL CURRENT ADA STANDARDS. CONTRACTOR SHALL REFER TO FDOT STANDARDS. (INDEX 304, MOST CURRENT EDITION)

RECORD DRAWING AS-BUILT REQUIREMENTS:

AS-BUILT DRAWINGS SHALL BE PREPARED BY AND CERTIFIED (SIGNED AND SEALED) BY A REGISTERED SURVEYOR, AND SHALL BE PROVIDED TO THE ENGINEER OF RECORD UPON COMPLETION OF THE PROJECT SITE IMPROVEMENTS A MINIMUM OF 1 WEEK PRIOR TO CONTRACTORS ATTEMPT FOR FINAL CERTIFICATE OF OCCUPANCY (CO). AS-BUILT DRAWINGS SHALL REFLECT ANY CHANGES TO THE IMPROVEMENTS MADE DURING CONSTRUCTION AND MUST MEET THE MINIMUM REQUIREMENTS OF ALL REGULATORY AGENCIES HAVING JURISDICTION AS WELL AS THE CRITERIA OUTLINED BELOW. BOTH THE ORIGINAL DESIGN AND REVISED AS-BUILT DATA, AS APPLICABLE, MUST BE CLEARLY SHOWN. THE AS-BUILT DRAWINGS MUST BE CLEARLY LABELED AS AS-BUILT OR RECORD DRAWING. THE FOLLOWING INFORMATION, AT A MINIMUM, SHALL BE CERTIFIED ON THE AS-BUILT DRAWINGS:

WATER DISTRIBUTION SYSTEM:

A. LOCATION AND DIMENSIONS OF PIPES, VALVES, FITTINGS, CHANGE OF DIRECTION, AND OTHER ASSOCIATED FACILITIES.

WASTEWATER COLLECTION/TRANSMISSION SYSTEM:

A. LOCATION, DIMENSION, AND INVERT ELEVATIONS OF PIPES, MANHOLES (INCLUDING RIM ELEVATION), LIFTSTATION, FORCEMAIN, FITTINGS, CHANGE IN DIRECTION AND OTHER ASSOCIATED FACILITIES.

PAVING AND DRAINAGE SYSTEM:

- A. DIMENSIONS AND ELEVATIONS OF ALL DISCHARGE STRUCTURES INCLUDING ALL WEIRS, SLOTS, GATES, PIPES, AND SKIMMERS;
- B. LOCATIONS, DIMENSIONS, AND ELEVATIONS OF ALL FILTER, EXFILTRATION, OR UNDERDRAIN SYSTEMS INCLUDING CLEANOUTS, PIPES, CONNECTIONS TO CONTROL STRUCTURES, AND POINTS OF DISCHARGE TO THE RECEIVING WATERS;
- C. DIMENSIONS, ELEVATIONS, CONTOURS, OR CROSS-SECTIONS OF ALL STORMWATER TREATMENT POND STORAGE AREAS SUFFICIENT TO DETERMINE STAGE-STORAGE RELATIONSHIPS OF THE STORAGE AREA, AND THE POND DEPTH AND VOLUME BELOW THE CONTROL WATER ELEVATION FOR NORMALLY WET SYSTEMS;
- D. DIMENSIONS, ELEVATIONS, CONTOURS, FINAL GRADES, OR CROSS-SECTIONS OF THE DRAINAGE SYSTEM IMPROVEMENTS TO DETERMINE FLOW DIRECTIONS AND CONVEYANCE OF RUNOFF TO THE TREATMENT SYSTEM;
- E. DIMENSIONS, ELEVATIONS, CONTOURS, FINAL GRADES, OR CROSS-SECTIONS OF ALL CONVEYANCE SYSTEMS UTILIZED TO CONVEY OFF-SITE RUNOFF AROUND THE SYSTEM;
- F. EXISTING WATER ELEVATION OF SURFACE WATERS AND THE DATE DETERMINED;
- G. ELEVATION AND LOCATION OF BENCHMARK'S FOR THE SURVEY.

ADA FACILITIES:

A. ELEVATIONS AT THE FOUR CORNERS OF ALL HANDICAP PARKING SPACES AND ADJACENT LOADING AISLES.

B. ELEVATIONS AND LOCATIONS FOR ALL ACCESSIBLE RAMPS WHICH ADEQUATELY REFLECT THE BUILT SLOPES.

C. ELEVATIONS AND LOCATIONS ALONG THE PATHS OF CONVEYANCE FOR PEDESTRIAN TRAFFIC AND ALL ADA ACCESSIBLE ROUTES EVERY 25 FT. WHICH ADEQUATELY REFLECT THE SLOPE AND CROSS SLOPE.

RCE Consultants
Engineering Real Solutions

CORAL □ILLS SEL□ STORA□E
□ENERAL NOTES
APOP□A, □L

NO:	DATE:	REVISION / ISSUE DATE:	BY:

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En□ineer of Record
5/28/2020
Laurence Poliner
#56974
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Certificate of Authorization 29307

PROJECT #: 33.2019	
DRAWN: LMP CHECKED: LMP	
DATE: MARCH 2020	SHEET: C□□□□
SCALE: N/A	
□ENERAL NOTES	

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PROJECT DATA

PARCEL ID: 22–21–28–0000–00–066
EXISTING ZONING: I–L
LAND USE PROPOSED: INDUSTRIAL
PROPOSED USE: SELF STORAGE
BUILDING HEIGHT: 35 FT
PROPERTY AREA: 9.00 Acres (392,076 SF)
FAR: 0.13 (52,875 SF/392,076 SF)
BUILDOUT FAR: 0.34 (134,825 / 392,076)
MAX FAR: 0.60

BUILDING SETBACKS (REQUIRD): 10' ON ALL SIDES
BUILDING SETBACKS (PROVIDED):
FRONT (CORAL HILLS ROAD) = 25 FT
SIDE (NORTH) = 163 FT (MIN)
SIDE (SOUTH) = 65 FT
REAR (WEST) = 32 FT

LANDSCAPE BUFFER:
FRONT (CORAL HILLS ROAD) = 20 FT
SIDE (NORTH) = 10 FT
SIDE (SOUTH) = 10 FT
REAR (WEST) = 10 FT

REQUIRED PARKING:
900 SF @1 SPACE/200 SF
4 SPACES REQUIRED
8 SPACES PROVIDED

GREEN BUILDING STANDARDS

PER LDC SECTION 5.11.4, THE FOLLOWING ARE TO BE PROVIDED (4 PTS REQUIRED)

ALL CENTRAL CONDITIONERS ARE TO BE ENERGY STAR QUALIFIED (0.5 PTS)
STORMWATER POND SHALL INFILTRATE RUNOFF FROM THE 100 YEAR STORM EVENT (1 PT)
TURF GRASS SHALL BE LIMITED TO 40% OF THE LANDSCAPED AREA (0.5 PT)
SOURCE A MINIMUM OF 25 PERCENT, BY COST, OF CONSTRUCTION MATERIALS FROM RECYCLED PRODUCTS OR PRODUCTS MANUFACTURED, EXTRACTED, HARVESTED, OR RECOVERED WITHIN 250 MILES OF THE SITE (1.5 PTS)
ALL PROPOSED STRUCTURES SHALL BE GREATER THAN 3 FEET ABOVE THE BASE FLOOD ELEVATION (0.5 PT)

PROPOSED IMPERVIOUS AREA
BUILDING AREA = 52,875 SF
FUTURE BUILDING AREA (PHASE II) 81,950 SF

TOTAL IMPERVIOUS = 250,763 SF OR 5.76 AC. (64%)

PROPOSED PERVIOUS AREA
TOTAL = 141,313 SF OR 3.2 AC. (36%)

OPEN SPACE SET ASIDE CALCULATION
PER LDC SECTION 5.4.4, 5% IS REQUIRED
PROPERTY = 9 ACRES, BUFFERS = 2.01 ACRES = 22%

NO DRY STACKING OF BOATS SHALL BE PERMITTED ON–SITE

OUTDOOR STORAGE AREA CALCULATION:
TOTAL DEVELOPABLE AREA 8.39 ACRES)
TOTAL ALLOWED = 8.39 X 25% = 2.1 ACRES
PERMANENT OUTOOR PARKING =11,520 SF
TEMPORARY PARKING AREA (MINUS ACCESS ISLES) = 81,950 SF
TOTAL OUTDOOR STORAGE = 2.15 ACRES

BUILDING AREAS	
BUILDING	SQ. FT.
BUILDING A	38500
BUILDING B	14375
TOTAL	52875

TOTAL GROSS SQ,FT,= 52 600 SF
Climate Controlled Units
Non Climate Controlled Units

TRAFFIC COUNTS

ITE TRIP GENERATION HANDBOOK
CODE 151, 10TH EDITION

338 TRIPS

HOURS OF OPERATION: 24/7

GENERAL NOTES:

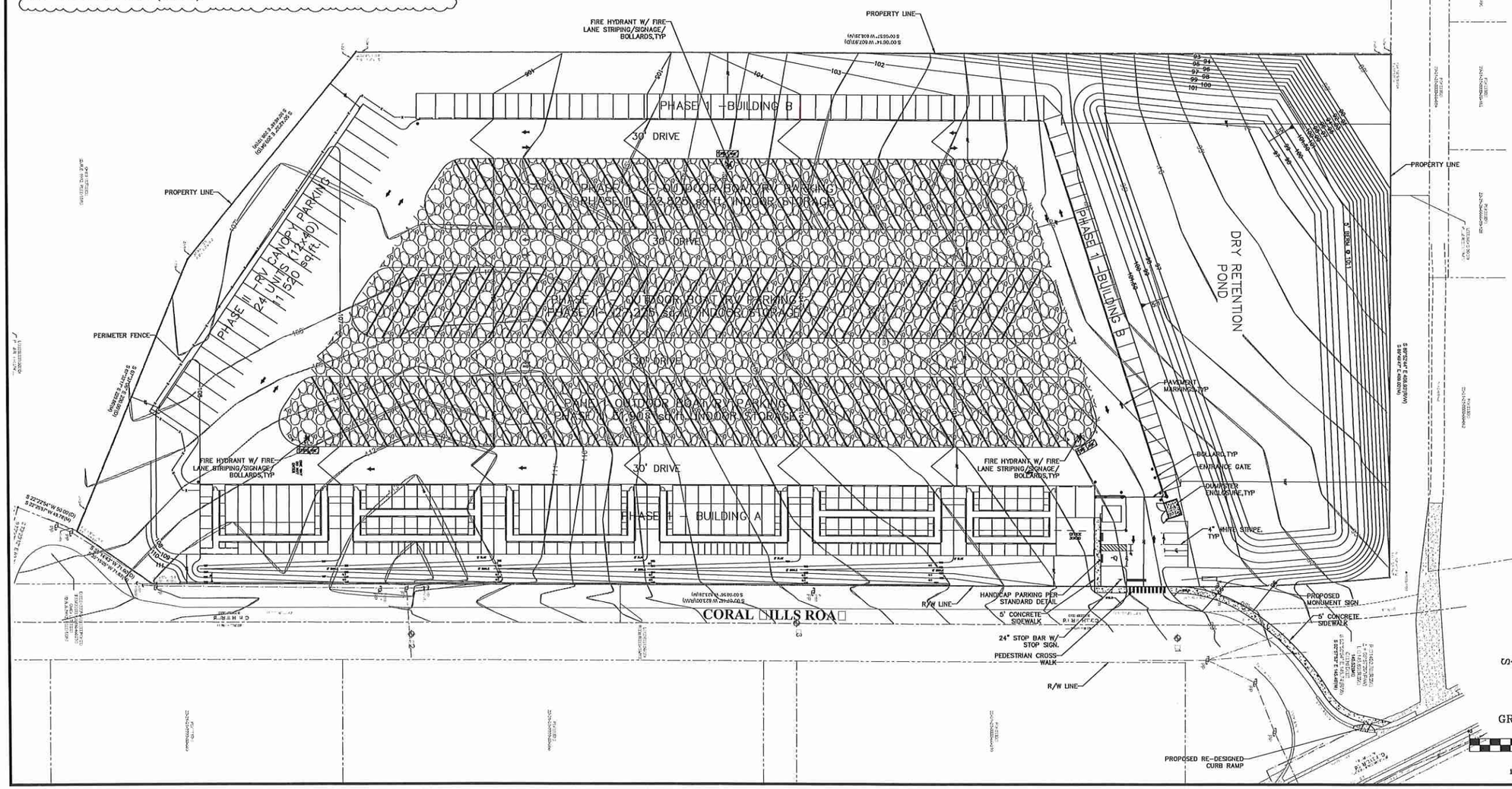
THE ONLY COMMERCIAL USES PERMITTED ON–SITE SHALL BE THE RENTAL OF STORAGE BAYS AND THE PICKUP AND DEPOSIT OF GOODS OR PROPERTY IN DEAD STORAGE. STORAGE BAYS SHALL NOT BE USED TO MANUFACTURE, FABRICATE, OR PROCESS GOODS, TO SERVICE OR REPAIR VEHICLES, SMALL ENGINES OR ELECTRICAL EQUIPMENT, OR CONDUCT SIMILAR REPAIR ACTIVTIES, TO CONDUCT GARAGE SALES OR RETAIL SALES OF ANY KIND, OR TO CONDUCT ANY OTHER COMMERCIAL OR INDUSTRIAL ACTIVTY ON THE SITE.

INDIVIDUAL STORAGE BAYS OR PRIVATE POSTAL BOXES WITHIN A SELF–SERVICE STORAGE FACILITY SHALL NOT BE CONSIDERED PREMISES FOR THE PURPOSE OF ASSIGNING A LEGAL ADDRESS

NO MORE THAN ONE SECURITY OR CARETAKER QUARTERS MAY BE DEVELOPED ON THE SITE, AND SHALL BE INTEGRATED INTO THE BUILDING'S DESIGN.

EXCEPT AS OTHERWISE AUTHORIZED IN THIS SUBSECTION, ALL PROPERTY STORED ON THE SITE SHALL BE ENCLOSED ENTIRELY WITHIN ENCLOSED BUILDINGS.

PROJECT SHALL BE ACCOMPLISHED IN TWO PHASES.



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CORAL HILLS SELF STORAGE
SITE PLAN
APOPKA, FL

NO:	DATE:	REVISION / ISSUE DATE:	BY:
1	4/23/2020	CITY COMMENTS	LMP

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PROJECT #: 33.2019
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SHEET: C
SCALE: 1"=40'
SITE PLAN

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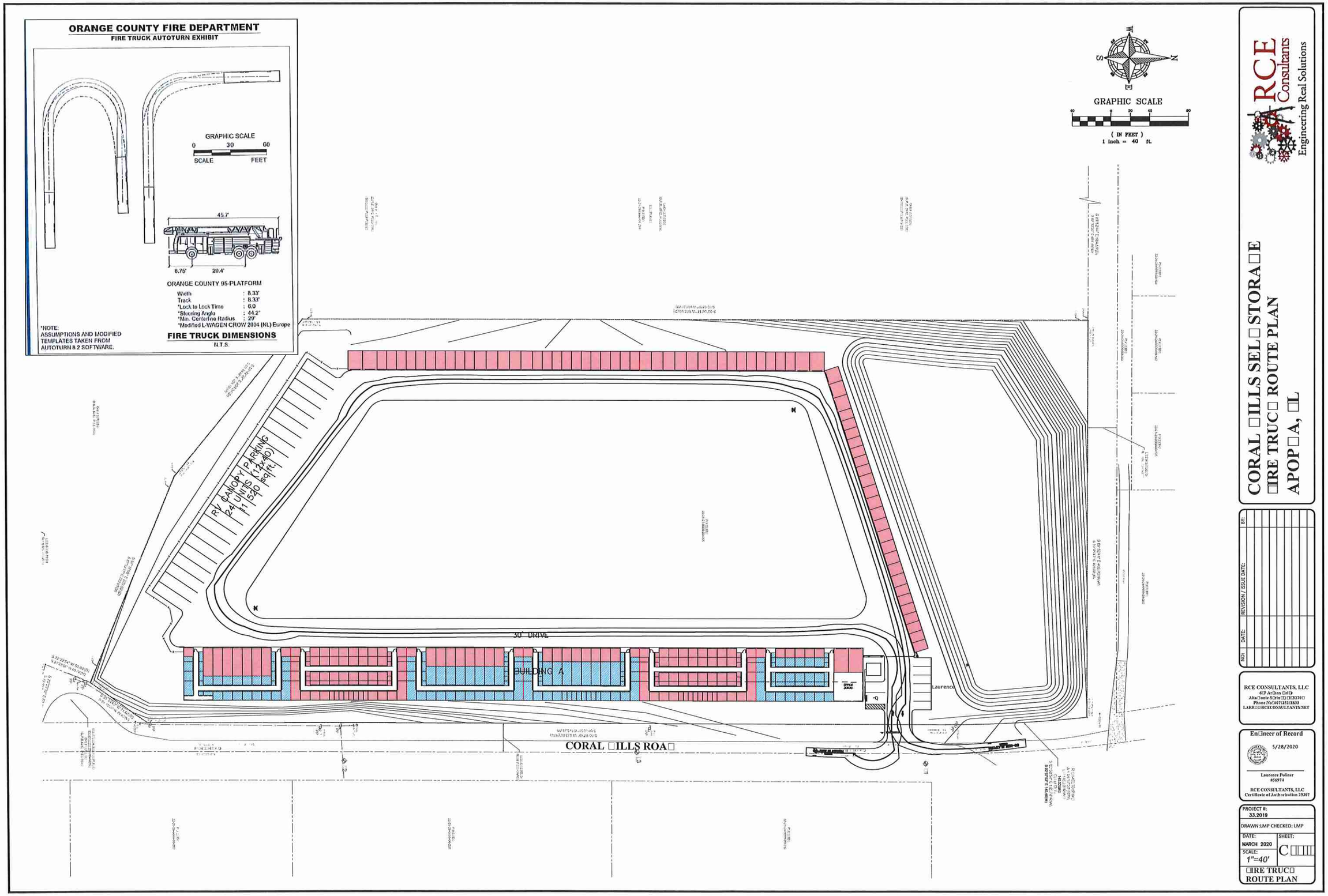

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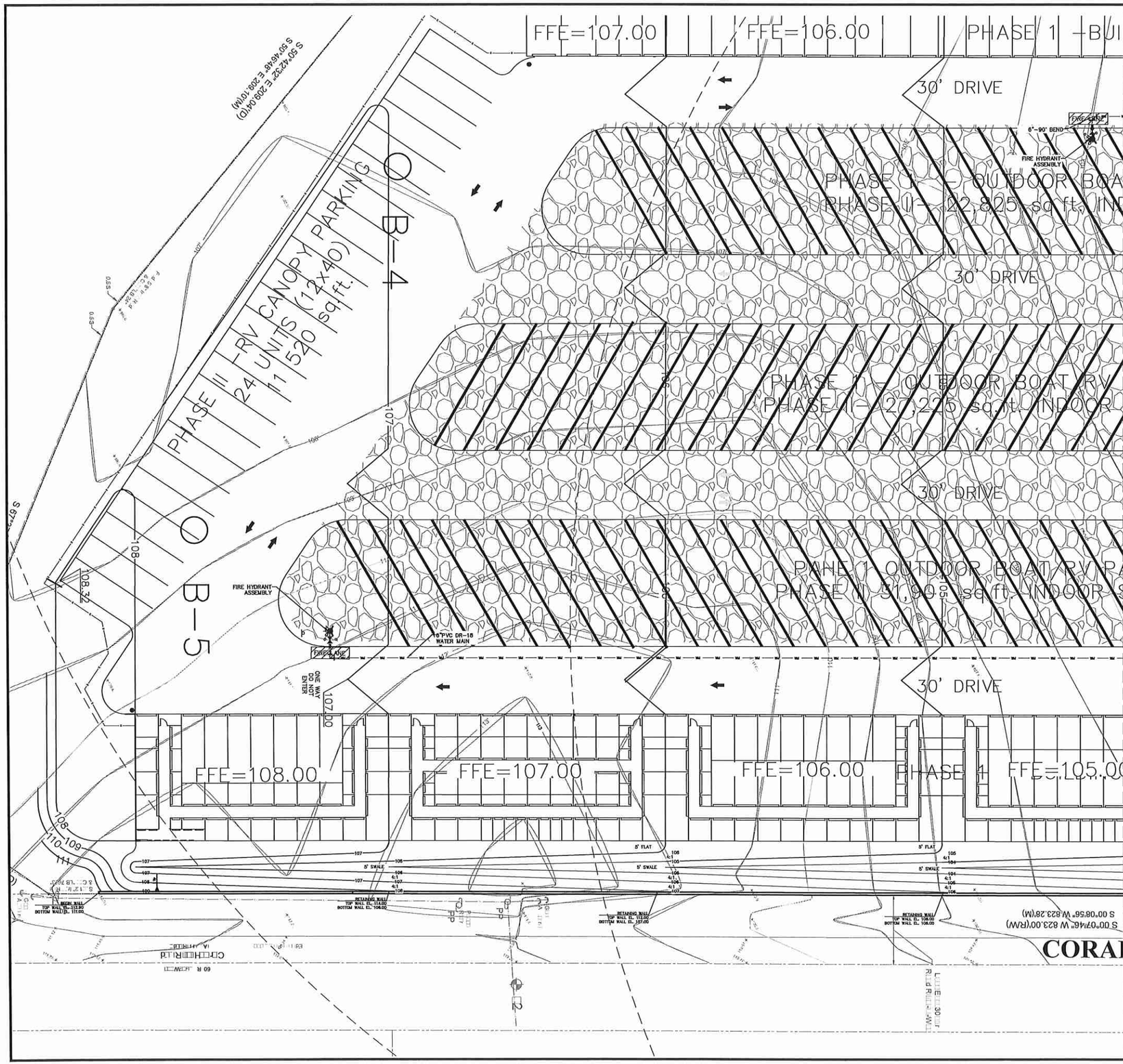

LEGEND

SANITARY SEWER MAIN	SS
SANITARY MANHOLE	
SS DOUBLE SERVICE	
SS SINGLE SERVICE	
RECLAIMED WATER MAIN	
FORCE MAIN	
WATER MAIN	
TEE	
GATE VALVE	
FIRE HYDRANT	
BEND – 45°	
BEND – 22.5°	
BEND – 90°	
BEND – 11.25°	
BLOW OFF VALVE	
REDUCER	
DOUBLE SERVICE	
SINGLE SERVICE	
TAPPING SADDLE W/ GATE VALVE	
BACK FLOW PREVENTER	

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

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Engineering Real Solutions

CORAL □ILLS SEL□STORA□E
UTILIT□ PLAN
APOP□A, □L

NO:	DATE:	REVISION / ISSUE DATE:	BY:

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UTILIT□ PLAN

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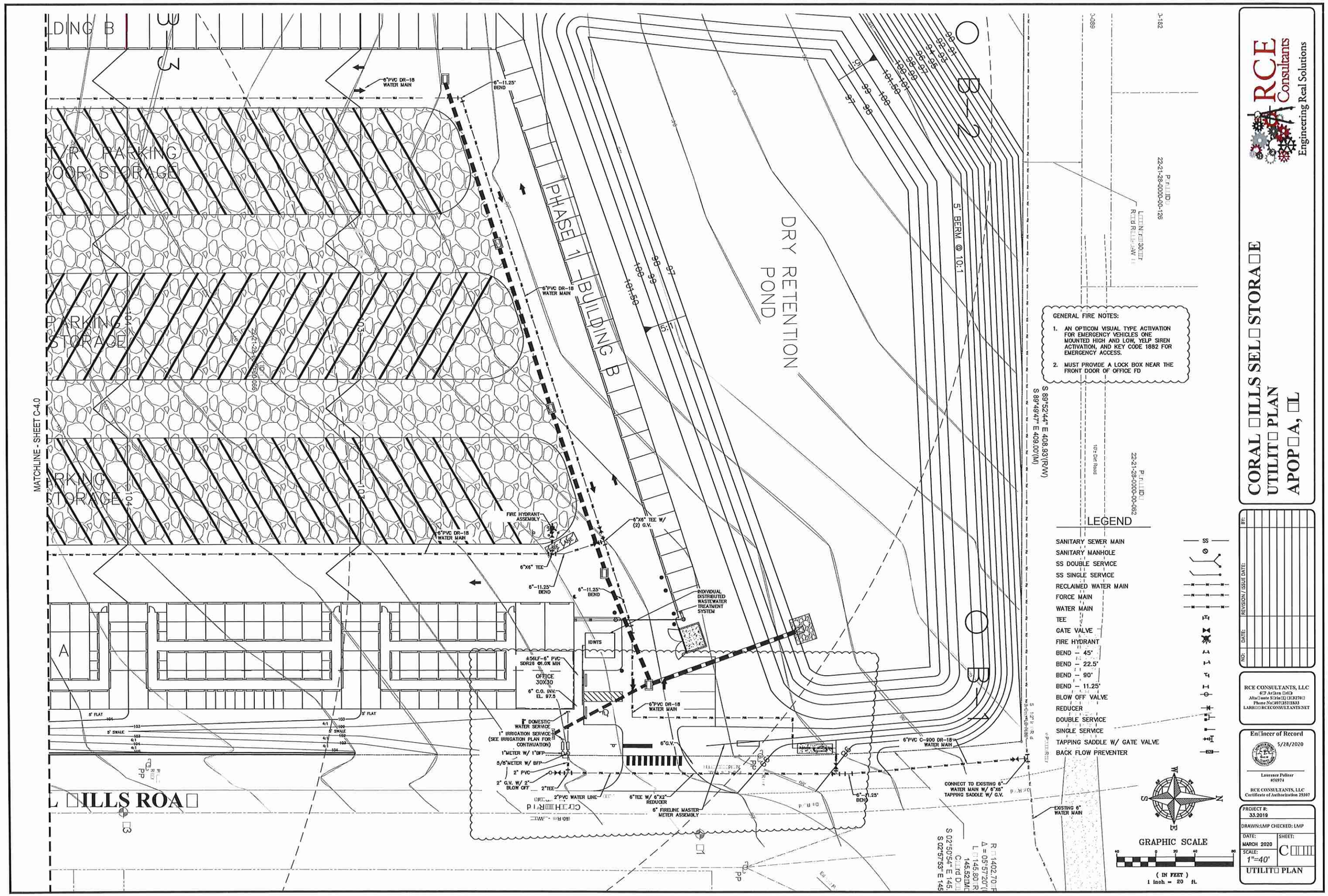

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GENERAL UTILITY NOTES:

SP#

1. BACTERIOLOGICAL TESTS WITH CHLORINE RESIDUALS INDICATED (TAKEN ON TWO CONSECUTIVE DAYS) SHALL BE CONDUCTED AT EACH POTABLE WATER METER FOR EVERY BUILDING, AT EVERY WET-TAP CONNECTION AND EVERY LOCATION INDICATED WITHIN THESE PLANS. RESULTS OF THE BACTERIOLOGICAL TESTS SHALL BE PROVIDED TO THE ENGINEER OF RECORD IMMEDIATELY UPON COMPLETION. BACTERIOLOGICAL TEST RESULTS SHALL BE CONSIDERED UNACCEPTABLE IF THE TESTS WERE COMPLETED MORE THAN 30 DAYS BEFORE THE ENGINEER RECEIVED THE RESULTS.
2. ALL WATERMAINS SHALL BE INSTALLED A MINIMUM OF 36" BELOW FINISHED GRADE.
3. ALL WATERMAINS AND FIRELINES PIPES SHALL BE RESTRAINED VIA MECHANICAL JOINTS.
4. WATER MAIN PVC PIPES LESS THAN 4 INCHES MUST CONFORM TO THE SPECIFICATIONS OF ASTM 1785 (SCHEDULE 40, 80, 120) OR ASTM 2241 SDR21 AND MUST BEAR THE NSF LOGO ON EACH INSTALLED LENGTH.
5. UNDERGROUND MARKING TAPE FOR ALL SANITARY FORCEMAINS SHALL BE INSTALLED 4 TO 8 INCHES BELOW THE FINISHED GRADE SURFACE DIRECTLY OVER THE PIPELINE. MARKER TAPE SHALL BE MADE OF AN INERT POLYETHYLENE MATERIAL HAVING A MINIMUM THICKNESS OF 4 MILS AND BE COLOR CODED "SAFETY GREEN".
6. CONTRACTOR SHALL CONDUCT AND PROVIDE RESULTS IMMEDIATELY TO THE ENGINEER OF RECORD FOR PRESSURE AND LEAKAGE TESTS ON THE FORCE MAIN TRUNK LINE ONCE THE PRESSURE SEWER HAS BEEN INSTALLED AND PARTLY BACKFILLED. FINAL BACKFILL AND COMPACTION SHALL NOT COMMENCE UNTIL APPROVAL OF THE PRESSURE AND LEAKAGE TESTS HAS BEEN PROVIDED BY THE ENGINEER OF RECORD.
7. FOLLOWING SATISFACTORY PRESSURE TEST RESULTS, THE CONTRACTOR SHALL DISINFECT ALL SECTIONS OF THE WATER DISTRIBUTION SYSTEM, AND RECEIVE APPROVAL THEREOF FROM APPROPRIATE AGENCIES PRIOR TO PLACING THE SYSTEM INTO SERVICE.
8. FIRE HYDRANTS SHALL BE PLACED A MINIMUM OF 3 FT. AND A MAXIMUM OF 5 FT. FROM THE CURB OR PAVED ROAD SURFACE UNLESS OTHERWISE APPROVED. NO FENCE, TREE, POST, SHRUB, OR OTHER OBJECT WHICH COULD BLOCK THE HYDRANT FROM NORMAL VIEW OR OBSTRUCT THE HYDRANT'S USE SHALL BE LOCATED WITHIN FOUR (4) FEET OF THE HYDRANT. THE FOUR-AND-ONE-HALF INCH (4-1/2") LARGE VOLUME CONNECTION SHALL FACE THE NEAREST ROADWAY. THE CENTER OF THE STEAMER PORT SHALL BE 18 INCHES MINIMUM AND 24 INCHES MAXIMUM ABOVE FINISHED GRADE. NO HYDRANT SHALL BE PLACED SO AS TO REQUIRE THE SIDEWALK TO BE RELOCATED.
9. ALL FIRE HYDRANT LEADS SHALL HAVE AN INSIDE DIAMETER OF AT LEAST SIX INCHES AND INCLUDE AUXILARY VALVES.
10. WHEN NECESSARY, DEWATERING SHALL BE PROVIDED TO KEEP THE GROUNDWATER ELEVATION A MINIMUM OF 6 INCHES BELOW MAIN BEING LAID.
11. ALL UTILITIES SHALL BE LAID ON A FIRM FOUNDATION WITH ALL UNSUITABLE MATERIAL (MUCK, ROCK, COQUINA, ETC.) REMOVED AND REPLACED WITH CLEAN GRANULAR MATERIAL.
12. TRENCHES SHALL BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE CITY OF APOPKA WITH A MINIMUM COMPACTION OF 98% IN PAVED AREAS AND 95% IN UNPAVED AREAS IN ACCORDANCE WITH AASHTO T-180 MODIFIED PROCTOR TEST.
13. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT TRENCH COMPACTION TESTS BE PROVIDED AT POINTS 12 INCHES ABOVE THE PIPE AND AT 12 INCHES VERTICAL INTERVALS TO FINISH GRADE, AT A MINIMUM SPACING OF EVERY 300 FEET.
14. ALL WATER SERVICE ENDINGS SHALL BE MARKED WITH A 2" X 4" LUMBER (PRESSURE TREATED) EXTENDING 4 FEET ABOVE GRADE, WITH WATER SERVICES SECURED 12" MAXIMUM ABOVE THE GROUND.
15. ALL WATER VALVES, INCLUDING CONCRETE COLLAR (WITH DEBRIS CAP), SHALL BE ADJUSTED TO FINISHED GRADE AND THE VALVE BOX LID, PAINTED BLUE TO MAKE THEM PLAINLY VISIBLE.
16. UPON FINAL ACCEPTANCE OF NEW WATER SYSTEMS, WATER VALVES SHALL BE COMPLETELY OPENED BY PUBLIC UTILITIES PERSONNEL. AT NO TIME SHALL CONTRACTOR OPERATE ANY EXISTING VALVES WITHOUT THE CITY OF APOPKA INSPECTOR PRESENT.
17. ALL WATER MAINS SHALL BE NSF-APPROVED FOR POTABLE WATER USE.
18. PIPE USED IN WATER DISTRIBUTION SYSTEMS SHALL BE EITHER POLYVINYL CHLORIDE (PVC), OR DUCTILE IRON PIPE (DIP).

    (a) ALL PVC PIPE OF NOMINAL DIAMETER FOUR (4) INCHES THROUGH TWELVE (12) INCHES SHALL BE MANUFACTURED IN ACCORDANCE WITH AWWA STANDARD C900, LATEST EDITION. THE PVC PIPE SHALL HAVE A MINIMUM WORKING PRESSURE RATING OF 150PSI AND SHALL HAVE A DIMENSION RATIO (DR) OF 18.
    (b) ALL DUCTILE IRON PIPE SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI/AWWA A21.51/C151 AND HAVE A MINIMUM 350 PRESSURE CLASS RATING
19. PIPE USED IN GRAVITY SEWER CONSTRUCTION SHALL BE POLYVINYL CHLORIDE (PVC) OR DUCTILE IRON PIPE (DIP). WHERE REFERENCE IS MADE TO AN ASTM, ANSI, OR AASHTO DESIGNATION, IT SHALL BE THE LATEST REVISION.

    (a) PVC GRAVITY SEWER PIPE (4 INCH – 15 INCH), ASTM D3034, SDR 35 – UNIFORM MINIMUM "PIPE STIFFNESS" AT FIVE (5) PERCENT DEFLECTION SHALL BE 46PSI. THE JOINTS SHALL BE INTEGRAL BELL ELASTOMERIC GASKET JOINTS MANUFACTURED IN ACCORDANCE WITH ASTM D3212 AND ASTM F477. APPLICABLE UNI-BELL PLASTIC PIPE ASSOCIATION STANDARD IS UNI-B-4. ALL PVC PIPE SHALL BEAR THE NSF-DW SEAL AND BE GREEN IN OVERALL COLOR. THE MINIMUM STANDARD LENGTH OF PIPE SHALL BE THIRTEEN (13) FEET.
    (b) DUCTILE IRON PIPE SHALL CONFORM TO ANSI/AWWA A21.51/C151, CLASS THICKNESS DESIGNED PER ANSI/AWWA A21.50/C150, WITH MECHANICAL OR PUSH ON JOINTS. AN INTERIOR PROTECTIVE LINING OF COAL TAR EPOXY SHALL BE PROVIDED WITH A MINIMUM DRY THICKNESS OF 30 MILS. DUCTILE IRON GRAVITY SEWERS, WHERE REQUIRED BY THE CITY OF APOPKA BASED ON GEOTECHNICAL INVESTIGATIONS, SHALL BE WRAPPED WITH POLYETHYLENE FILM, AWWA C105. SEE APPENDIX C. THE MINIMUM STANDARD LENGTH OF PIPE SHALL BE EIGHTEEN (18) FEET.

ADDITIONAL NOTES

1. ALL EXISTING UTILITIES HAVE BEEN FIELD VERIFIED AT ALL POINTS OF CONNECTION TO, AND AT ALL AREAS OF CONFLICT WITH THE CITY OF APOPKA MAINS.
2. ALL UTILITIES (INCLUDING PUMP STATION IF APPLICABLE) LOCATED OUTSIDE PUBLIC RIGHT-OF-WAYS AND PUBLIC EASEMENTS SHALL BE PRIVATELY OWNED AND MAINTAINED.

FDEP UTILITY CONSTRUCTION NOTES:

1. NOTE TO THE UTILITY: PURSUANT TO 62-555.345; DO NOT PROVIDE WATER SERVICE TO THIS PROJECT (OTHER THAN FLUSHING/TESTING) UNTIL THE DEPARTMENT OF ENVIRONMENTAL PROTECTION HAS ISSUED A LETTER OF CLEARANCE OR THE UTILITY SHALL BE SUBJECT TO ENFORCEMENT ACTION.
2. THE PERMITTEE WILL PROMPTLY NOTIFY THE DEPARTMENT UPON SALE OR LEGAL TRANSFER OF THE PERMITTED FACILITY
3. ALL WATER MAINS AND APPURTENANCES SHALL BE DISINFECTED AND BACTERIOLOGICALLY EVALUATED IN ACCORDANCE WITH RULE 62-555.340, F.A.C.
4. ALL WATER MAIN PIPE, INCLUDING FITTINGS SHALL BE COLOR CODED OR MARKED USING BLUE AS A PREDOMINANT COLOR TO DIFFERENTIATE DRINKING WATER FROM RECLAIMED OR OTHER WATER. UNDERGROUND PLASTIC PIPE SHALL BE SOLID-WALL BLUE PIPE, SHALL HAVE A CO-EXTRUDED BLUE EXTERNAL SKIN, OR SHALL BE WHITE OR BLACK PIPE WITH BLUE STRIPES INCORPORATED INTO, OR APPLIED TO, THE PIPE WALL; AND UNDERGROUND METAL OR CONCRETE PIPE SHALL HAVE BLUE STRIPES APPLIED TO THE PIPE WALL. PIPE STRIPED DURING MANUFACTURING OF THE PIPE SHALL HAVE CONTINUOUS STRIPES THAT RUN PARALLEL TO THE AXIS OF THE PIPE, THAT ARE LOCATED AT NO GREATER THAN 90-DEGREE INTERVALS AROUND THE PIPE, AND THAT WILL REMAIN INTACT DURING AND AFTER INSTALLATION OF THE PIPE. IF TAPE OR PAINT IS USED TO STRIPE PIPE DURING INSTALLATION OF THE PIPE, THE TAPE OR PAINT SHALL BE APPLIED IN A CONTINUOUS LINE THAT RUNS PARALLEL TO THE AXIS OF THE PIPE AND THAT IS LOCATED ALONG THE TOP OF THE PIPE; FOR PIPES WITH AN INTERNAL DIAMETER OF 24 INCHES OR GREATER, TAPE OR PAINT SHALL BE APPLIED IN CONTINUOUS LINES ALONG EACH SIDE OF THE PIPE AS WELL AS ALONG THE TOP OF THE PIPE.

WATER SYSTEM TESTING REQUIREMENTS:

1. THE CONTRACTOR SHALL PERFORM HYDROSTATIC TESTING OF ALL WATER DISTRIBUTION SYSTEMS, AS SET FORTH IN THE FOLLOWING AND SHALL CONDUCT SAID TESTS IN THE PRESENCE OF REPRESENTATIVES FROM THE CITY OF APOPKA AND/OR OTHER AUTHORIZED AGENCIES. THE CONTRACTOR SHALL PROVIDE 48 HOURS ADVANCED NOTICE PRIOR TO TESTING OF THE WATER DISTRIBUTION SYSTEM.
2. ALL TESTING REQUIRED BY THE CITY OF APOPKA SHALL BE PAID FOR BY THE DEVELOPER / CONTRACTOR.
3. ALL PROPOSED WATER MAINS SHALL BE TESTED AND CLEARED FOR SERVICE IN ACCORDANCE WITH THE LATEST AWWA STANDARDS AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION REQUIREMENTS.
4. PRIOR TO HYDROSTATIC TESTING A PRELIMINARY FLUSHING SHALL BE REQUIRED THROUGH FULL DIAMETER FLUSHING OR SWABBING. PRELIMINARY FLUSHING/SWABBING SHALL BE PERFORMED PER AWWA C651 STANDARD – "DISINFECTING WATER MAINS". ALL PIPING SHALL BE THOROUGHLY CLEANED AND FLUSHED PRIOR TO TESTING TO CLEAR THE LINES OF ALL FOREIGN MATTER. WHILE THE PIPING IS BEING FILLED WITH WATER, CARE SHALL BE EXERCISED TO PERMIT THE ESCAPE OF AIR FROM EXTREMITIES ALONG THE TEST SECTION.
5. HYDROSTATIC TESTING SHALL CONSIST OF PRESSURE TEST AND LEAKAGE TEST. PIPING AND APPURTENANCES TO BE TESTED SHALL BE WITHIN SECTIONS BETWEEN VALVES, NOT EXCEEDING 2,000 FEET, UNLESS ALTERNATE METHODS HAVE RECEIVED PRIOR APPROVAL FROM THE CITY OF APOPKA. TESTING SHALL NOT PROCEED UNTIL CONCRETE THRUST BLOCKS ARE IN PLACE AND CURED, OR OTHER RESTRAINING DEVICES INSTALLED.
6. HYDROSTATIC TESTING SHALL BE PERFORMED AT 150 POUNDS PER SQUARE INCH PRESSURE, UNLESS OTHERWISE APPROVED BY THE CITY OF APOPKA, FOR A PERIOD OF NOT LESS THAN TWO (2) HOURS.
7. THE ALLOWABLE RATE OF LEAKAGE SHALL BE LESS THAN THE NUMBER OF GALLONS PER HOUR DETERMINED BY THE FOLLOWING FORMULA:

$$L = \frac{SD*\sqrt{P}}{148{,}000}$$

WHERE:
L = ALLOWABLE LEAKAGE, IN GALLONS PER HOUR
S = LENGTH OF PIPE TESTED, IN FEET
D = NOMINAL DIAMETER OF PIPE, IN INCHES
P = AVERAGE TEST PRESSURE DURING THE LEAKAGE TEST, IN POUNDS PER SQUARE INCH (GAUGE)

8. SHOULD THE TEST FAIL, NECESSARY REPAIRS SHALL BE ACCOMPLISHED BY THE CONTRACTOR AND THE TEST REPEATED UNTIL WITHIN PASSING LIMITS. THE CONTRACTOR SHALL FURNISH ALL THE NECESSARY LABOR, PUMPS, GAUGES AND ALL OTHER ITEMS NECESSARY TO CONDUCT THE REQUIRED WATER DISTRIBUTION SYSTEM TESTING AND PERFORM NECESSARY REPAIRS.

SEWER SYSTEM TESTING REQUIREMENTS:

1. THE CONTRACTOR SHALL PERFORM TESTING OF ALL SANITARY SEWAGE GRAVITY COLLECTION SYSTEMS, AS SET FORTH IN THE FOLLOWING AND SHALL CONDUCT SAID TESTS IN THE PRESENCE OF REPRESENTATIVES FROM THE CITY OF APOPKA AND/OR OTHER AUTHORIZED AGENCIES. THE CONTRACTOR SHALL PROVIDE 48 HOURS ADVANCED NOTICE PRIOR TO TESTING OF THE WASTEWATER DISTRIBUTION SYSTEM.
2. ALL TESTING REQUIRED BY THE CITY OF APOPKA SHALL BE PAID FOR BY THE DEVELOPER / CONTRACTOR.
3. GRAVITY MAINS SHALL BE INSPECTED WITH CCTV FOR ALIGNMENT, GRADE VARIATIONS, SEPARATED PIPES, LEAKS, DEFLECTION, CRACKED, BROKEN OR OTHERWISE DEFECTIVE PIPE TO ENSURE OVERALL PIPE INTEGRITY. THE APPROVED CCTV INSPECTION CONTRACTOR SHALL SUBMIT THE REPORT TO THE CITY OF APOPKA AS REQUIRED.
4. LEAKAGE TESTING FOR GRAVITY MAINS SHALL BE BY LOW-PRESSURE AIR TEST. LEAKAGE TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH THE PROCEDURE FOR "RECOMMENDED PRACTICE FOR LOW PRESSURE AIR TESTING OF INSTALLED SEWER PIPE" AS ESTABLISHED BY THE UNI-BELL PVC PIPE ASSOCIATION.
5. EACH GRAVITY MAIN LEAKAGE TEST SECTION SHALL NOT EXCEED 400 FEET IN LENGTH AND SHALL BE TESTED BETWEEN ADJACENT MANHOLES.

FDEP UTILITY SEPARATION REQUIREMENTS

(62-555.314, F.A.C. LOCATION OF PUBLIC WATER SYSTEM MAINS)

FOR THE PURPOSE OF THIS SECTION, THE PHRASE "WATER MAINS" SHALL MEAN MAINS, INCLUDING TREATMENT PLANT PROCESS PIPING, CONVEYING EITHER RAW, PARTIALLY TREATED, OR FINISHED DRINKING WATER; FIRE HYDRANT LEADS; AND SERVICE LINES THAT ARE UNDER THE CONTROL OF A PUBLIC WATER SYSTEM AND THAT HAVE AN INSIDE DIAMETER OF THREE INCHES OR GREATER.

(1) HORIZONTAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS, RECLAIMED WATER PIPELINES, AND ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS.

- (a) NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THEOUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
- (b) NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER.
- (c) NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY- OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.
- (d) NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST TEN FEET BETWEEN THE OUTSIDE OF THE WATERMAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM" AS DEFINED IN SECTION 381.0065(2), F.S., AND RULE 64E-6.002, F.A.C.

(2) VERTICAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS, AND RECLAIMED WATER PIPELINES.

- (a) NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY- OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES, AND PREFERABLY 12 INCHES, ABOVE OR AT LEAST 12 INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
- (b) NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
- (c) AT THE UTILITY CROSSINGS DESCRIBED IN PARAGRAPHS (A) AND (B) ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY- OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.

(3) SEPARATION BETWEEN WATER MAINS AND SANITARY OR STORM SEWER MANHOLES.

- (a) NO WATER MAIN SHALL PASS THROUGH, OR COME INTO CONTACT WITH, ANY PART OF A SANITARY SEWER MANHOLE.
- (b) EFFECTIVE AUGUST 28, 2003, WATER MAINS SHALL NOT BE CONSTRUCTED OR ALTERED TO PASS THROUGH, OR COME INTO CONTACT WITH, ANY PART OF A STORM SEWER MANHOLE OR INLET STRUCTURE.

(4) SEPARATION BETWEEN FIRE HYDRANT DRAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS, RECLAIMED WATER PIPELINES, AND ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS. NEW OR RELOCATED FIRE HYDRANTS WITH UNDERGROUND DRAINS SHALL BE LOCATED SO THAT THE DRAINS ARE AT LEAST THREE FEET FROM ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.; AT LEAST THREE FEET, AND PREFERABLY TEN FEET, FROM ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER; AT LEAST SIX FEET, AND PREFERABLY TEN FEET, FROM ANY EXISTING OR PROPOSED GRAVITY- OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.; AND AT LEAST TEN FEET FROM ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM" AS DEFINED IN SECTION 381.0065(2), F.S., AND RULE 64E-6.002, F.A.C.

GENERAL NOTES:

1. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN EXCAVATING IN PROXIMITY OF WATER MAINS, WASTEWATER FORCE MAINS, GRAVITY MAINS AND RECLAIMED WATER MAINS. MAIN LOCATIONS SHOWN ON PLANS MAY NOT BE EXACT. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING EXISTING UTILITY LOCATIONS.
2. SHOULD A PIPE EMERGENCY OCCUR, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CITY OF APOPKA.
3. THE CONTRACTOR SHALL NOTIFY THE CITY OF APOPKA AT LEAST SEVEN DAYS PRIOR TO COMMENCEMENT OF THE CONSTRUCTION.
4. THE CONTRACTOR SHALL NOTIFY THE CITY OF APOPKA AT LEAST 48 HOURS PRIOR TO ANY UTILITIES CONSTRUCTION.
5. THE MATERIALS, PRODUCTS, AND CONSTRUCTION OF ALL UTILITIES CONNECTING TO THE CITY OF APOPKA SYSTEM SHALL BE IN CONFORMANCE WITH THE CITY OF APOPKA STANDARDS AND CONSTRUCTION SPECIFICATIONS.
6. ALL CITY MAINS AND FACILITIES WITHIN THE LIMITS OF THE PROJECT SHALL BE SUPPORTED AND PROTECTED AGAINST DAMAGE DURING CONSTRUCTION.
7. THE CONTRACTOR, AT THE CONTRACTOR'S EXPENSE, SHALL IMMEDIATELY REPAIR ALL DAMAGES TO CITY OF APOPKA MAINS AND FACILITIES.
8. THE CONTRACTOR SHALL ADJUST ALL EXISTING CITY OF APOPKA MAINS AND FACILITIES IN CONFLICT WITH NEW GRADE, NEW OR ALTERED ROADWAYS, SIDEWALKS, DRIVEWAYS, OR STORM WATER IMPROVEMENTS. CITY OF APOPKA FACILITIES TO BE ADJUSTED INCLUDE, BUT ARE NOT LIMITED TO PIPELINES, PUMP STATIONS, VALVE BOXES, AIR RELEASE VALVES, FIRE HYDRANTS, MANHOLE COVERS, AND METERS.
9. ONLY THE CITY OF APOPKA SHALL OPERATE CITY WATER, WASTEWATER, AND RECLAIMED WATER VALVES. THE CONTRACTOR SHALL COORDINATE VALVE OPERATION WITH THE CITY OF APOPKA INSPECTOR. FOR OPERATION OF MAINS NOT OWNED BY THE CITY OF APOPKA, IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE APPROPRIATE UTILITY REPRESENTATIVE.
10. CONSTRUCTION ACTIVITIES SHALL NOT CAUSE INTERRUPTIONS IN WATER, WASTEWATER, OR RECLAIMED WATER SERVICE. THE CONTRACTOR SHALL COORDINATE PRE-APPROVED INTERRUPTIONS OF SERVICE WITH THE CITY OF APOPKA INSPECTOR 7 WORKING DAYS IN ADVANCE.
11. THE CONTRACTOR SHALL PROVIDE FOR BYPASSING AND/OR HAULING WASTEWATER DURING APPROVED INTERRUPTIONS OF WASTEWATER FLOWS AND CONNECTIONS. THE CONTRACTOR SHALL SUBMIT A BYPASS PLAN SIGNED AND SEALED BY A PROFESSIONAL ENGINEER TO THE CITY OF APOPKA FOR APPROVAL PRIOR TO IMPLEMENTATION BY CONTRACTOR.
12. ALL VALVES INSTALLED AS PART OF THIS CONSTRUCTION PROJECT SHALL REMAIN CLOSED DURING CONSTRUCTION. KEEP VALVES ON ALL WET TAPS CLOSED UNTIL CLEARED BY FDEP. DO NOT CONNECT NEWLY CONSTRUCTED WATER MAINS TO ANY EXISTING WATER MAINS UNLESS CLEARED BY FDEP AND CITY OF APOPKA.
13. THE CONTRACTOR SHALL PROVIDE A JUMPER ASSEMBLY WITH A BACKFLOW PREVENTER FOR MAKING TEMPORARY CONNECTIONS TO AN EXISTING POTABLE WATER SOURCE IN ORDER TO CHLORINATE AND FLUSH NEW WATER MAINS WITH POTABLE WATER. ANY TEMPORARY POTABLE WATER CONNECTIONS TO RECLAIMED WATER OR FORCEMAIN SHALL ALSO BE EQUIPPED WITH A BACKFLOW PREVENTER.
14. FOR PVC PIPE THAT WILL BE OWNED AND MAINTAINED BY THE CITY OF APOPKA, NO PIPE BENDING IS ALLOWED. THE MAXIMUM ALLOWABLE TOLERANCE FOR JOINT DEFLECTION IS 0.75 DEGREES (3-INCHES PER JOINT PER 20 FT STICK OF PIPE.) ALIGNMENT CHANGE SHALL BE MADE ONLY WITH SLEEVES AND FITTINGS.
15. FOR NON-PVC PIPE THAT WILL BE OWNED AND MAINTAINED BY THE CITY OF APOPKA, LONG RADIUS CURVES, EITHER HORIZONTAL OR VERTICAL, MAY BE INSTALLED WITH STANDARD PIPE BY DEFLECTIONS AT THE JOINTS. MAXIMUM DEFLECTIONS AT PIPE JOINTS, FITTINGS AND LAYING RADIUS FOR THE VARIOUS PIPE LENGTHS SHALL NOT EXCEED 75 PERCENT OF THE PIPE MANUFACTURER'S RECOMMENDATION.

LOCATION OF PUBLIC WATER SYSTEM MAIN IN ACCORDANCE WITH F.A.C. RULE 62-555.314

OTHER PIPE	HORIZONTAL SEPARATION	CROSSINGS (1)	JOINT SPACING @ CROSSINGS (FULL JOINT CENTERED)
STORM SEWER STORMWATER FORCE MAIN RECLAIMED WATER (2)	WATER MAIN 3 FT. MIN	WATER MAIN 12 INCHES IS THE MINIMUM, EXCEPT FOR STORM SEWER (WITH 6 INCHES IS THE MINIMUM AND 12 INCHES IS PREFERRED	ALTERNATE 3 FT MINIMUM WATER MAIN
VACUUM SANITARY SEWER	WATER MAIN 10 FT. PREFERRED 3 FT MIN	WATER MAIN 12 INCHES PREFERRED 6 INCHES MINIMUM	ALTERNATE 3 FT MINIMUM WATER MAIN
GRAVITY OR PRESSURE SANITARY SEWER SANITARY SEWER FORCE MAIN RECLAIMED WATER (4)	WATER MAIN 10 FT PREFERRED 6 FT MIN (3)	WATER MAIN 12 INCHES IS THE MINIMUM, EXCEPT FOR STORM SEWER (WITH 6 INCHES IS THE MINIMUM AND 12 INCHES IS PREFERRED	ALTERNATE 6 FT MINIMUM WATER MAIN
ON-SITE SEWAGE TREATMENT & DISPOSAL SYSTEM	10 FT MIN		

(1) Water main should cross above other pipe. When water main must be below other pipe, the minimum separation is 12 inches.
(2) Reclaimed water regulated under Part III of Chapter 62-610, F.A.C.
(3) 3 ft. for gravity sanitary sewer where the bottom of the water main is laid at least 6 inches above the top of the gravity sanitary sewer.
(4) Reclaimed water not regulated under Part III of Chapter 62-610, F.A.C.

Disclaimer: This document is provided for your convenience only. Please refer to F.A.C. Rule 62-555.314 for additional construction requirements.

RCE Consultants
Engineering Real Solutions

CORAL HILLS SELF STORAGE
UTILITY NOTES
APOPKA, FL

NO:	DATE:	REVISION / ISSUE DATE:	BY:

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Engineer of Record
5/28/2020
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Certificate of Authorization 29307

PROJECT #: 33.2019
DRAWN:LMP CHECKED: LMP
DATE: MARCH 2020
SHEET: C-4.2
SCALE: N/A
UTILITY NOTES

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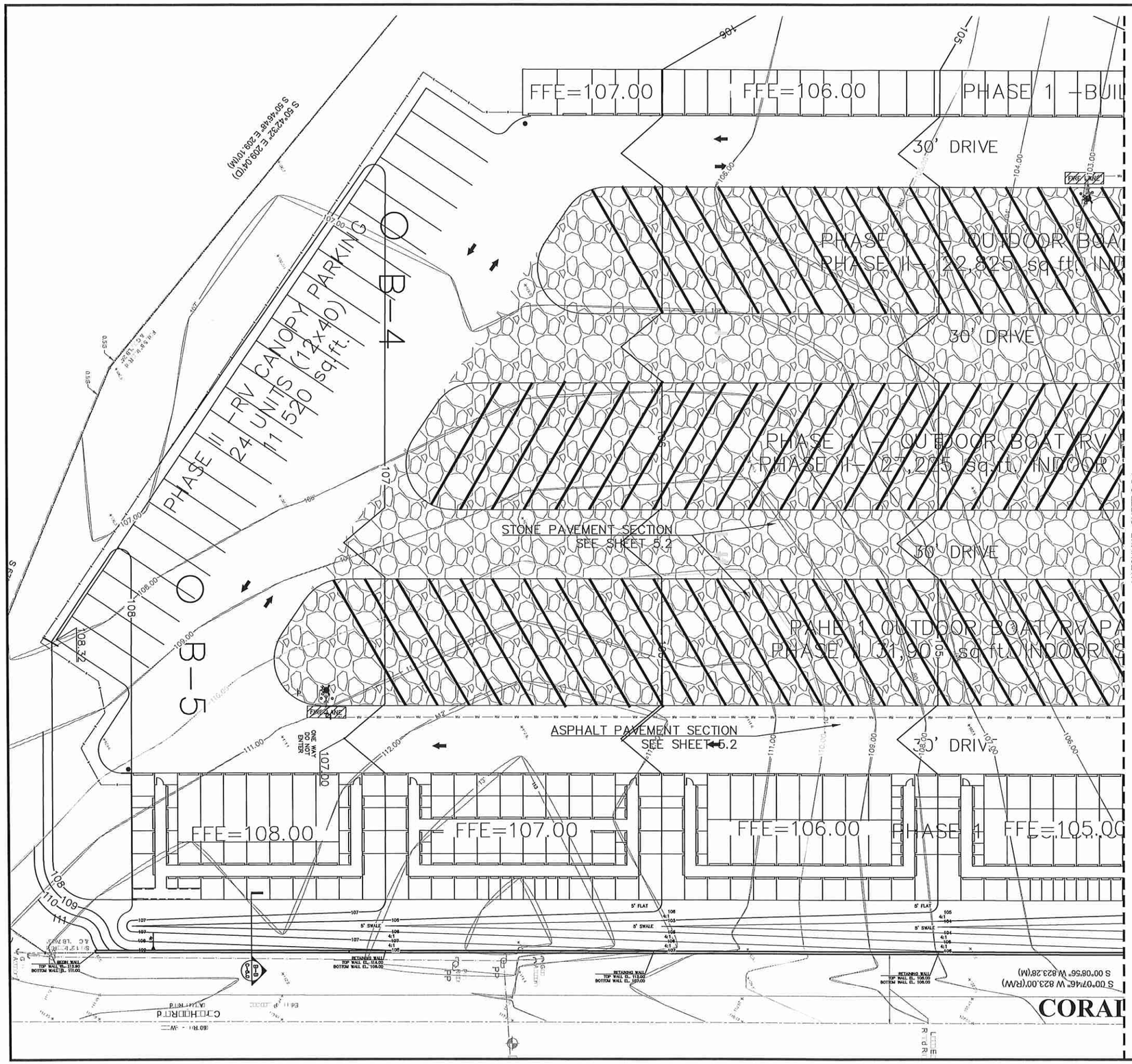

LEGEND

SANITARY SEWER MAIN	SS
SANITARY MANHOLE	
SS DOUBLE SERVICE	
SS SINGLE SERVICE	
RECLAIMED WATER MAIN	
FORCE MAIN	
WATER MAIN	
TEE	
GATE VALVE	
FIRE HYDRANT	
BEND – 45°	
BEND – 22.5°	
BEND – 90°	
BEND – 11.25°	
BLOW OFF VALVE	
REDUCER	
DOUBLE SERVICE	
SINGLE SERVICE	
TAPPING SADDLE W/ GATE VALVE	
BACK FLOW PREVENTER	

GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

RCE Consultants
Engineering Real Solutions

CORAL □ILLS SEL□STORA□E
□RA□IN□ AN□ □RAINA□E PLAN
APOP□A, □L

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En□neer of Record
5/28/2020

Laurence Pullner
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RCE CONSULTANTS, LLC
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PROJECT #: 33.2019
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DATE: MARCH 2020
SHEET: C□□□□
SCALE: 1"=20'
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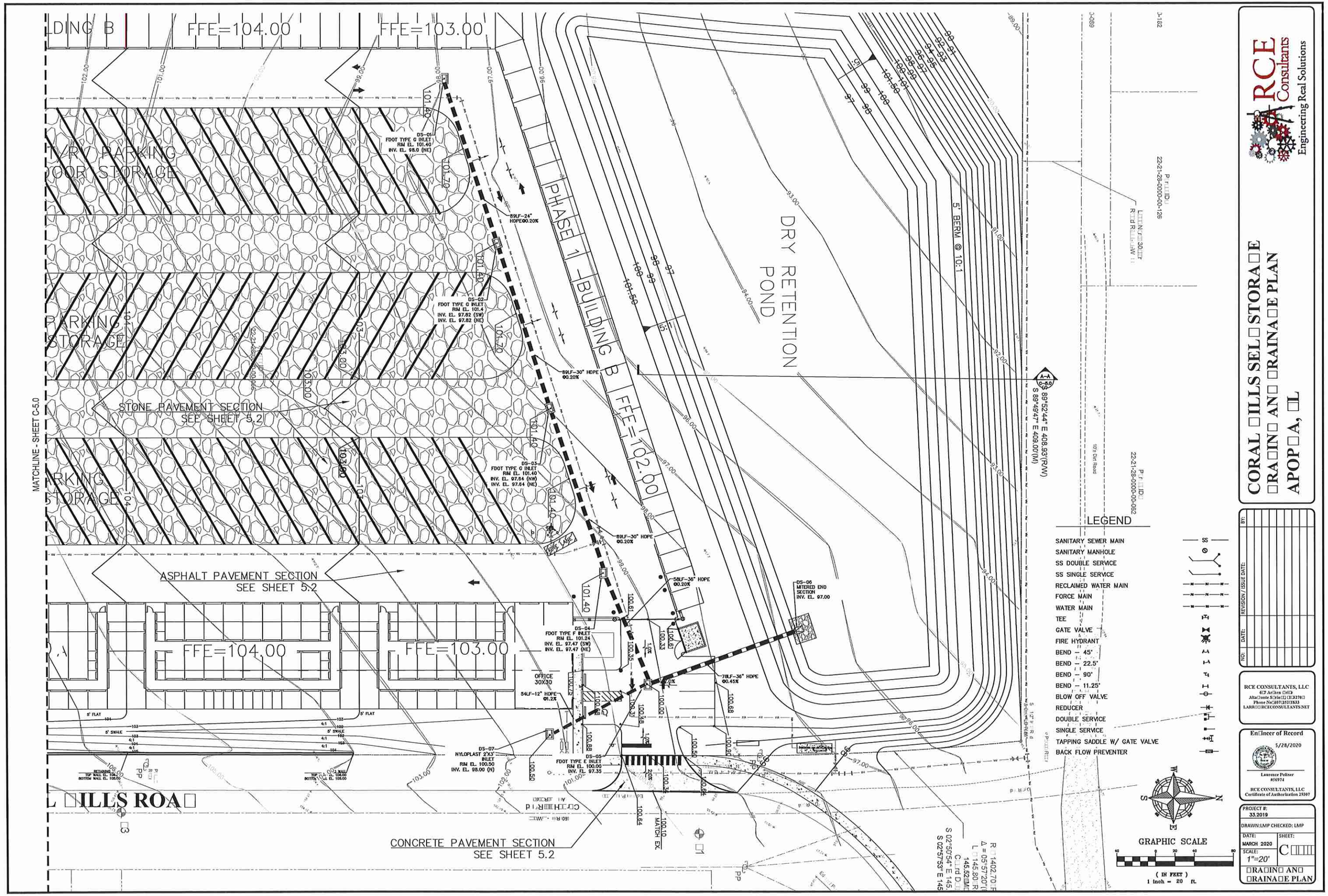

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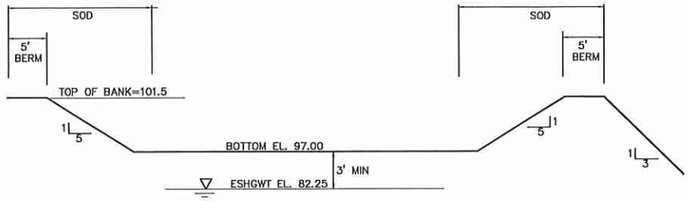

A–A
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DRY RETENTION POND - POND 1

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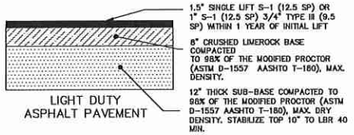
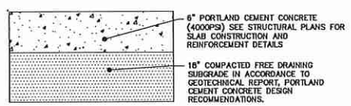
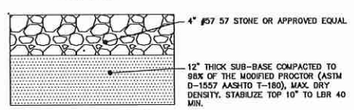


LIGHT DUTY ASPHALT PAVEMENT

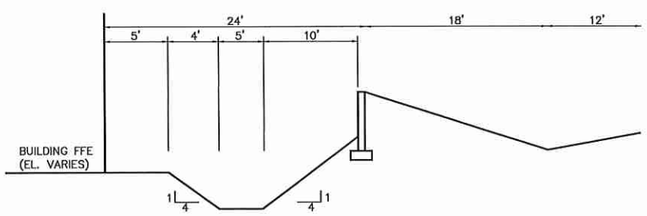


HEAVY DUTY CONCRETE PAVEMENT ENTRANCE



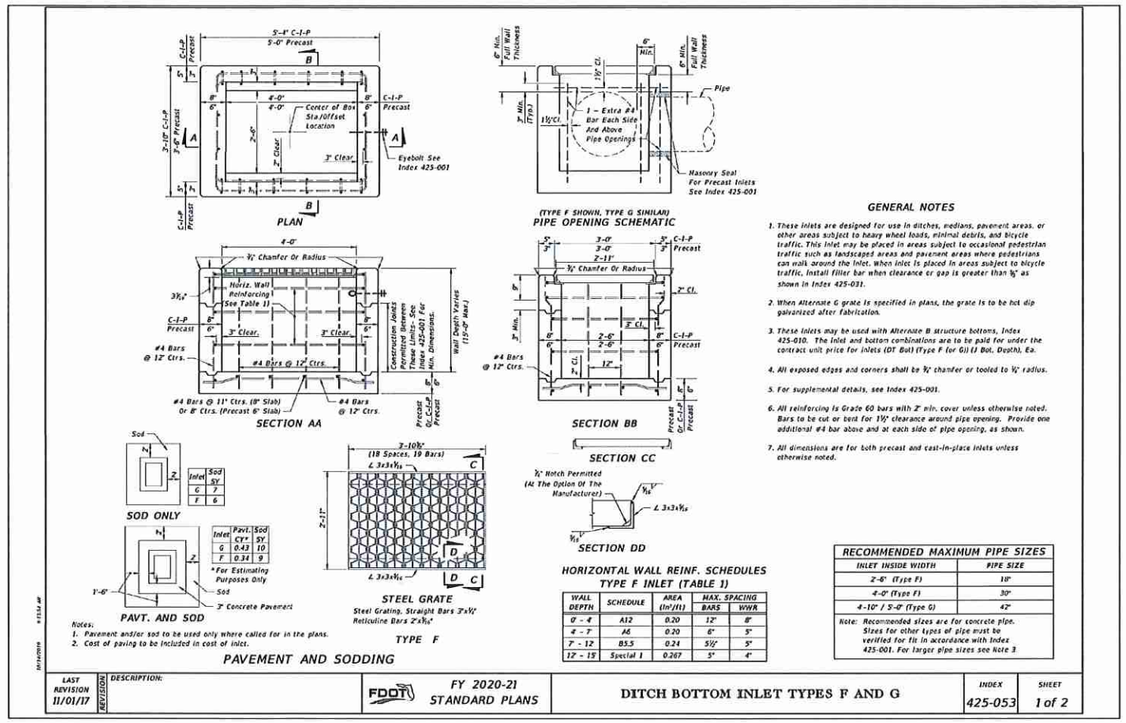
OPEN STORAGE AREA PARKING AND DRIVE ISLE

PAVEMENT SECTIONS



NOTE: ENTIRE SWALL BE SODDED

SWALE CROSS SECTION



GENERAL NOTES

1. These inlets are designed for use in ditches, medians, pavement areas, or other areas subject to heavy wheel loads, minimal debris, and bicycle traffic. This inlet may be placed in areas subject to occasional pedestrian traffic such as landscaped areas and pavement areas where pedestrians can walk around the inlet. When inlet is placed in areas subject to bicycle traffic, install filler bar when clearance or gap is greater than ½" as shown in Index 425-031.
2. When Alternate G grate is specified in plans, the grate is to be hot dip galvanized after fabrication.
3. These inlets may be used with Alternate B structure bottoms, Index 425-010. The inlet and bottom combinations are to be paid for under the contract unit price for inlets (DT Bot) (Type F for G) (I Bot, Depth), Ea.
4. All exposed edges and corners shall be ½" chamfer or tooled to ½" radius.
5. For supplemental details, see Index 425-001.
6. All reinforcing is Grade 60 bars with 2" min. cover unless otherwise noted. Bars to be cut or bent for 1½" clearance around pipe opening. Provide one additional #4 bar above and at each side of pipe opening, as shown.
7. All dimensions are for both precast and cast-in-place inlets unless otherwise noted.

HORIZONTAL WALL REINF. SCHEDULES TYPE F INLET (TABLE 1)

WALL DEPTH	SCHEDULE	AREA (In²/Ft)	MAX. SPACING BARE	MAX. SPACING WWR
0' - 4'	A12	0.20	12"	8"
4' - 7'	A6	0.20	6"	5"
7' - 12'	B5.5	0.24	5½"	5"
12' - 15'	Special 1	0.267	5"	4"

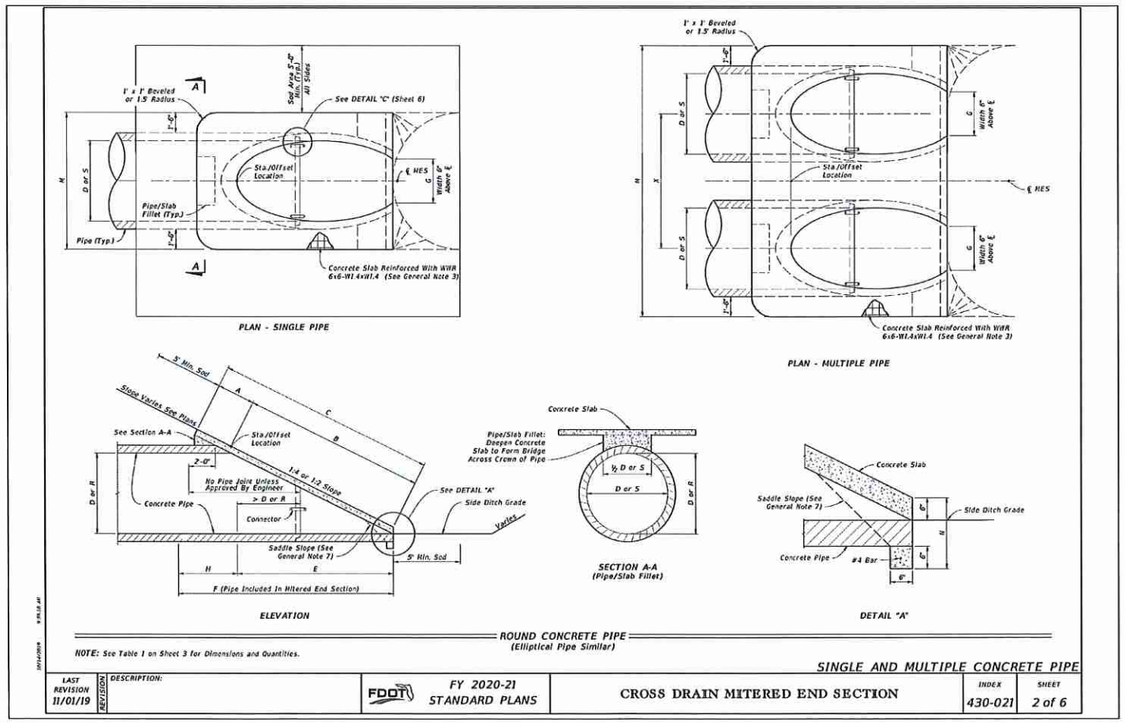
RECOMMENDED MAXIMUM PIPE SIZES

INLET INSIDE WIDTH	PIPE SIZE
2'-0" (Type F)	18"
4'-0" (Type F)	30"
4'-10" / 5'-0" (Type G)	42"

Note: Recommended sizes are for concrete pipe. Sizes for other types of pipe must be verified for fit in accordance with Index 425-001. For larger pipe sizes see Note 3

Notes:
1. Pavement and/or sod to be used only where called for in the plans.
2. Cost of paving to be included in cost of inlet.

LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
11/01/17			FDOT FY 2020-21 STANDARD PLANS	DITCH BOTTOM INLET TYPES F AND G	425-053	1 of 2



NOTE: See Table 1 on Sheet 3 for Dimensions and Quantities.

LAST REVISION	REVISION	DESCRIPTION:			INDEX	SHEET
11/01/19			FDOT FY 2020-21 STANDARD PLANS	CROSS DRAIN MITERED END SECTION	430-021	2 of 6

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NO:	DATE:	REVISION / ISSUE DATE:	BY:

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Laurence Pollner
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Certificate of Authorization 29307

PROJECT #: 33.2019
DRAWN:LMP CHECKED: LMP
DATE: MARCH 2020
SHEET: C□□□
SCALE: N/A
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GENERAL NOTES

GENERAL EROSION SITES

CONTRACTOR IS ADVISED THAT THE U.S. ENVIRONMENTAL PROTECTION AGENCY REQUIRES THAT ALL OPERATORS FILE A NOTICE OF INTENT (NOI) FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NPDES GENERAL PERMIT PRIOR TO BEGINNING WORK. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO OBTAIN THE SAME. IF NOT PROVIDED BY THE ENGINEER AND TO PROVIDE ALL REQUIRED MONITORING REPORTS. A COPY SHALL BE SENT TO THE ENGINEER OF RECORD, ARCHITECT OF RECORD AND THE OWNER.

THE STORMWATER POLLUTION PREVENTION PLAN IS COMPOSED OF THIS DRAWING (SITE MAP), THE STANDARD DETAILS AND THE PLAN NARRATIVE INCLUDED IN SPECIFICATIONS PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.

ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH THE STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND BECOME FAMILIAR WITH THEIR CONTENTS.

CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS INDICATED BY CONDITIONS AT NO ADDITIONAL COST TO OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.

BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.

CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.

GENERAL CONTRACTOR SHALL DEPICTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.

ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.

SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BUOYS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.

DUST ON THE SITE SHALL BE CONTROLLED BY WATERING. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORMWATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.

ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN AND IN THE STORM WATER POLLUTION PREVENTION PLAN SHALL BE INITIATED AS SOON AS PRACTICABLE.

DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 30 DAYS, SHALL BE TEMPORARILY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS FROM THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.

DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY WAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN.

IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.

ALL MATERIAL SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.

ON-SITE AND OFF-SITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.

SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, ROCK BAGS, ETC.) TO PREVENT EROSION.

ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY. THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.

CONTRACTOR SHALL PROVIDE TREE PROTECTION MEASURES AS NEEDED.

DEWATERING IS NOT ANTICIPATED FOR THE INSTALLATION OF UTILITIES.

ALL WORK SHALL BE IN COMPLIANCE WITH NPDES.

MAINTENANCE

ALL MEASURES STATED ON THIS EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A 0.5" RAINFALL EVENT, AND CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING.

INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING OR DETERIORATION.

ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED.

SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED SEDIMENT SHALL BE REMOVED FROM THE FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.

THE CONSTRUCTION ENTRANCE(S) SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.

THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING ON THE TEMPORARY PARKING AS CONDITIONS DEMAND.

OUTLET STRUCTURES IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS OR TRAPS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 50%.

SEQUENCE OF CONSTRUCTION

PHASE I

1. INSTALL STABILIZED CONSTRUCTION ENTRANCES.
2. PREPARE TEMPORARY PARKING AND STORAGE AREA.
3. CONSTRUCT THE SILT FENCES ON THE SITE.
4. CONSTRUCT THE SEDIMENTATION AND SEDIMENT TRAP BASINS.
5. CLEAR AND GRUB THE SITE.
6. START CONSTRUCTION OF BUILDING PAD AND STRUCTURES.
7. BEGIN GRADING THE SITE.

PHASE II

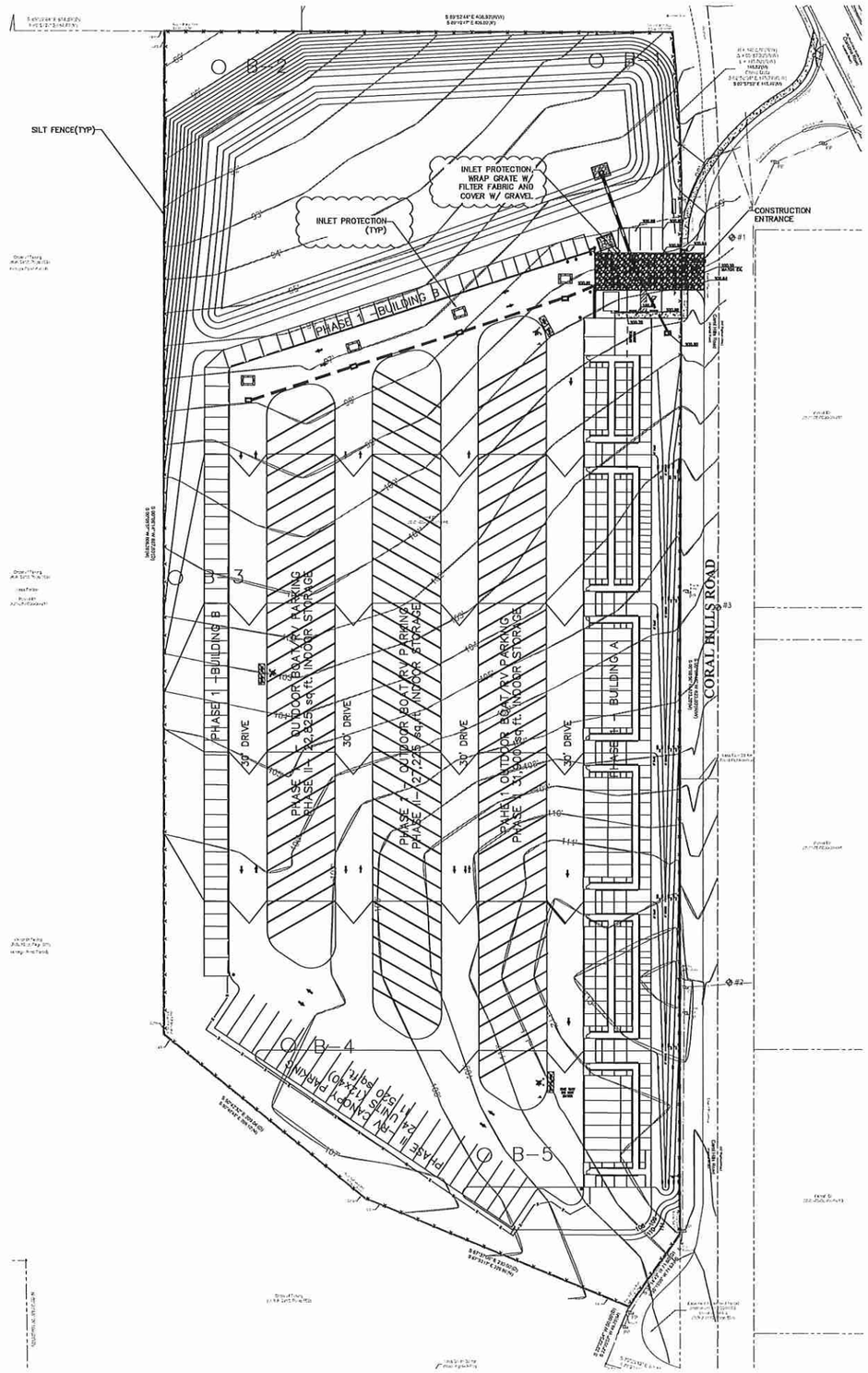
1. TEMPORARY SEED DEMUCKED AREAS.
2. INSTALL UTILITIES, UNDERDRAINS, STORM SEWERS, CURBS AND GUTTERS.
3. INSTALL RIP RAP AROUND OUTLET STRUCTURES.
4. INSTALL INLET PROTECTION AROUND ALL STORM SEWER STRUCTURES.
5. PREPARE SITE FOR PAVING.
6. PAVE SITE.
7. INSTALL INLET PROTECTION DEVICES.
8. COMPLETE GRADING AND INSTALL PERMANENT SEEDING AND PLANTING.
9. REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES (ONLY IF SITE IS STABILIZED.)

N
W E
S

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)
1 inch = 50 ft.



DEVELOPER / OWNER
SITE OPERATOR / GENERAL CONTRACTOR: NAME_____
SUPERINTENDENT: NAME_____

SYMBOLS LEGEND	
	DOUBLE SILT FENCE
	SINGLE SILT FENCE
	SCM-1 ROCK BAGS (USED ON ASPHALT SURFACES)

SOIL EROSION / SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
ROUGH GRADE / SEDIMENT CONTROL																		
TEMPORARY CONTROL MEASURES																		
STRIP & STOCKPILE TOPSOIL																		
STORM FACILITIES																		
TEMPORARY CONSTRUCTION ROADS																		
FOUNDATION / BUILDING CONSTRUCTION																		
SITE CONSTRUCTION																		
PERMANENT CONTROL STRUCTURES																		
FINISH GRADING																		
LANDSCAPING / SEED / FINAL STABILIZATION																		

NOTE: GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR SPECIFIC PROJECT SCHEDULE

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S□ PP PLAN
APOP□A, □L

NO:	DATE:	REVISION / ISSUE DATE:	BY:

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En□ineer of Record
5/28/2020
Laurence Pollner
#56974
RCE CONSULTANTS, LLC
Certificate of Authorization 29387

PROJECT #: 33.2019
DRAWN:LMP CHECKED: LMP
DATE: MARCH 2020
SHEET: C□□□□
SCALE: 1"=50'
S□ PP PLAN

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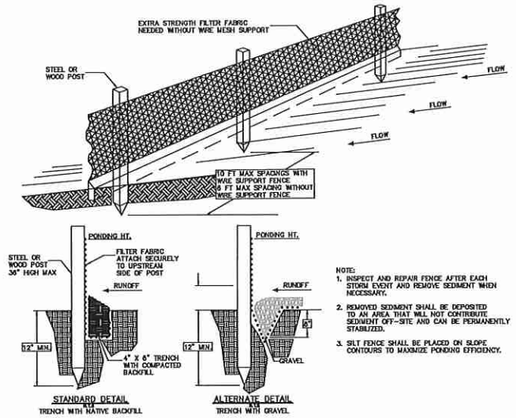

NOTE:
1. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
2. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
3. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

SILT FENCE INSTALLATION
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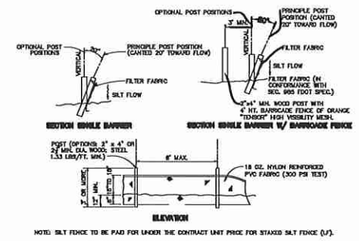
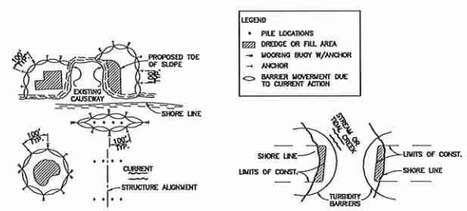


NOTE: SILT FENCE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR STAKED SILT FENCE (L.F.).
FOR ADDITIONAL INFORMATION REFERENCE FDOT INDEX 102

STAKED TURBIDITY BARRIER
N.T.S.



NOTES:
1. TURBIDITY BARRIERS ARE TO BE USED IN ALL PERMANENT BODIES OF WATER REGARDLESS OF WATER DEPTH.
2. NUMBER AND SPACING OF ANCHORS DEPENDENT ON CURRENT VELOCITIES.
3. DEPLOYMENT OF BARRIER AROUND PILE LOCATIONS MAY VARY TO ACCOMMODATE CONSTRUCTION OPERATIONS.
4. NAVIGATION MAY REQUIRE SEGMENTING BARRIER DURING CONSTRUCTION OPERATIONS.

NOTE:
TURBIDITY BARRIERS FOR FLOWING STREAMS AND TIDAL CREEKS MAY BE EITHER FLOATING, OR STAKED TYPES OR ANY COMBINATIONS OF TYPES THAT WILL SUIT SITE CONDITIONS AND MEET EROSION CONTROL AND WATER QUALITY REQUIREMENTS. THE BARRIER TYPE(S) WILL BE AT THE CONTRACTORS OPTION UNLESS OTHERWISE SPECIFIED IN THE PLANS. POSTS IN STAKED TURBIDITY BARRIERS TO BE INSTALLED IN VERTICAL POSITION UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

TURBIDITY BARRIER APPLICATIONS
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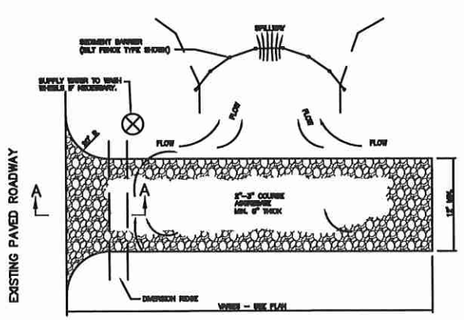


PLAN
N.T.S.

NOTE:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

SECTION 'A-A'
N.T.S.

NOTE:
USE HAYBALES, SILT FENCES, OR OTHER APPROVED MEANS TO CONTAIN RUNOFF TO BASIN AS REQUIRED.

GENERAL NOTES

TEMPORARY ACCESS ROADS AND PARKING AREAS.

1. TEMPORARY ROADS SHALL FOLLOW THE CONTOUR OF THE NATURAL TERRAIN TO THE EXTENT POSSIBLE. SLOPES SHOULD NOT EXCEED 10 PERCENT.
2. TEMPORARY PARKING AREAS SHOULD BE LOCATED ON NATURALLY FLAT AREAS TO MINIMIZE GRADING. GRADES SHOULD BE SUFFICIENT TO PROVIDE DRAINAGE BUT SHOULD NOT EXCEED 4 PERCENT.
3. ROADBEDS SHALL BE AT LEAST 14 FEET (4.8 m) WIDE FOR ONE-WAY TRAFFIC AND 20 FEET (6 m) WIDE FOR TWO-WAY TRAFFIC.
4. ALL CUTS AND FILLS SHALL HAVE SIDE SLOPES THAT ARE STABLE FOR THE PARTICULAR SOIL. SLOPES OF 2:1 OR FLATTER ARE RECOMMENDED FOR CLAY SOILS, AND SLOPES OF 3:1 OR FLATTER ARE RECOMMENDED FOR SANDY SOILS.
5. STORMWATER SYSTEM SHALL BE PROVIDED AS NEEDED AND SHALL BE DESIGNED AND CONSTRUCTED ACCORDING TO APPLICABLE REGULATIONS.
6. THE ROADBED OR PARKING SURFACE SHALL BE CLEARED OF ALL VEGETATION, ROOTS, AND OTHER OBJECTIONABLE MATERIAL.
7. A 6 INCH (15 cm) COURSE OF FDOT NO. 1 AGGREGATE SHALL BE APPLIED IMMEDIATELY AFTER GRADING IS THE COMPLETION OF UTILITY INSTALLATION WITHIN THE RIGHT-OF-WAY. FILTER FABRIC MAY BE APPLIED TO THE ROADBED FOR ADDITIONAL STABILITY ACCORDING TO THE FABRIC MANUFACTURER'S SPECIFICATIONS.

TEMPORARY GRAVEL CONSTRUCTION ENTRANCE
N.T.S.

EROSION CONTROL NOTES

DURING ALL PHASES OF CONSTRUCTION THE SITE GENERAL CONTRACTOR AND ALL SUB-CONTRACTORS SHALL EXERCISE MEASURES TO PREVENT THE EROSION OF SOILS DUE TO THE ACTION OF THE WATER AND WIND. THE CONTRACTS SHALL USE THE FOLLOWING MEASURES TO ACCOMPLISH THIS OBJECTIVE:

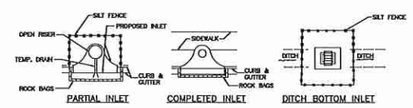
A. SURFACE PROTECTION
1. CLEARING SHALL BE LIMITED SO AS TO EXPOSE THE SMALLEST POSSIBLE AREA OF LAND FOR THE SHORTEST POSSIBLE TIME.
2. EXPOSED AREAS SHALL BE IMMEDIATELY GRADED AND PROTECTED WITH TEMPORARY OR PERMANENT COVER, SUCH AS SOD, SEED AND MULCH, CROWVETCH, LESPEDEZA OR CREEPER. NEWLY GRADED CHANNELS OR STEEP SLOPES WILL REQUIRE THE USE OF FIBROUS MATTING, NETTING OF SEEDED AND MULCHED AREAS, OR THE STAKING OR SHINGLING OF SOD WHILE VEGETATION IS BECOMING ESTABLISHED.

B. RUN-OFF CONTROL
1. LONG AND/OR STEEP SLOPES WILL REQUIRE CONTOUR BENCHING AND FURROWING, OR BERMS TO REDUCE RUN-OFF VELOCITIES.

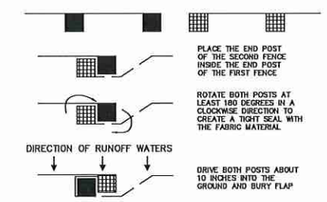
C. SEDIMENT TRAPPING
1. THE TRAPPING OF ERODED PARTICLES WILL BE ACCOMPLISHED BY THE DIVERSION OF RUN-OFF TO SEDIMENT BASINS, EXCAVATION TRAPS, BERMS, STAKED SYNTHETIC HAY BALES, OR FLOATING SILT CURTAINS.
2. THE PROPOSED RETENTION AND/OR DETENTION POND(S) ALONG WITH ANY ENVIRONMENTAL BERM(S)/REAR YARD SWALE(S) SHALL BE CONSTRUCTED FIRST. THE POND(S) AND OUTFALL STRUCTURE(S) MUST BE COMPLETE AND OPERATIONAL PRIOR TO THE PLACEMENT OF ANY IMPERVIOUS SURFACE.
3. TRAPPING DEVICES SHALL BE PERIODICALLY INSPECTED DURING DRY PERIODS AND AFTER EACH RAINFALL EVENT BY THE SITE CONTRACTOR. TRAPPING DEVICES SHALL BE REPLACED IF DETERMINED TO BE INCAPABLE OF PERFORMING INTENDED FUNCTION OF SEDIMENT TRAPPING.
4. TRAPPING DEVICES SHALL REMAIN IN PLACE UNTIL A VEGETATIVE COVER HAS ESTABLISHED SUFFICIENTLY TO STABILIZE THE SOILS AND PREVENT EROSION.

D. SOIL MOISTURE
1. THE CONTRACTOR SHALL HAVE AVAILABLE ON THE CONSTRUCTION SITE A WATER SOURCE CAPABLE OF APPLYING WATER TO DRY EXPOSED SOIL IN ORDER TO PREVENT WIND EROSION. THE APPLICATION RATE AND MANNER SHALL BE SUCH THAT SOIL MOISTURE IS ATTAINED AND NO SURFACE RUN-OFF IS CREATED.

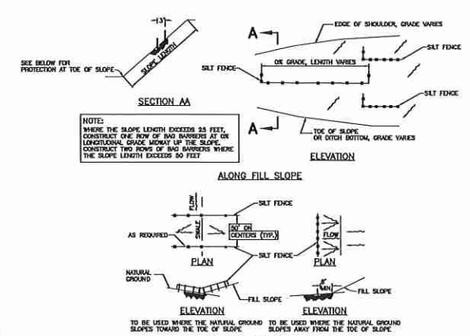
E. RESPONSIBILITY
1. THE CONTRACTOR SHALL BE HELD RESPONSIBLE UNTIL THE CERTIFICATE OF COMPLETION IS ISSUED. AFTER THAT, THE OWNER WILL BE RESPONSIBLE FOR MAINTENANCE OF THE STORMWATER COLLECTION AND RETENTION SYSTEM.



PROTECTION AROUND INLETS OR SIMILAR STRUCTURES



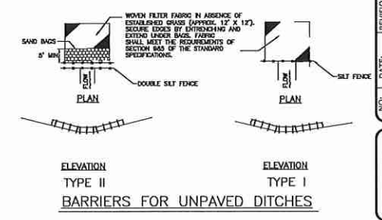
SILT FENCE ATTACHMENT DETAIL
N.T.S.



NOTE:
WHERE THE SLOPE LENGTH EXCEEDS 25 FEET, CONSTRUCT ONE ROW OF BAG BARRIERS AT OR LONGITUDINAL GRADE MIDWAY UP THE SLOPE. CONSTRUCT TWO ROWS OF BAG BARRIERS WHERE THE SLOPE LENGTH EXCEEDS 50 FEET

TO BE USED WHERE THE NATURAL GROUND SLOPES TOWARD THE TOE OF SLOPE
TO BE USED WHERE THE NATURAL GROUND SLOPES AWAY FROM THE TOE OF SLOPE

BARRIERS FOR FILL SLOPES



BARRIERS FOR UNPAVED DITCHES

BARRIERS LAYOUT DETAIL
NOT TO SCALE

RCE Consultants
Engineering Real Solutions

CORAL HILLS SELF STORAGE
EROSION CONTROL DETAILS
APOPKA, FL

NO:	DATE:	REVISION / ISSUE DATE:	BY:

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617 Arrera Drive
Altamonte Springs, FL 32701
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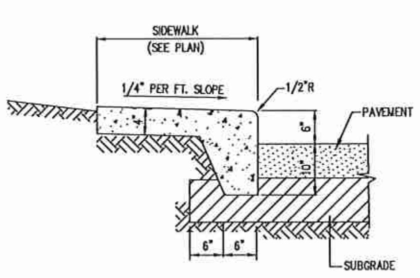
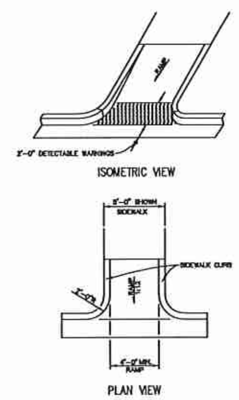
Engineer of Record
5/28/2020
Laurence Pollner
#56974
RCE CONSULTANTS, LLC
Certificate of Authorization 29307

PROJECT #: 33.2019
DRAWN: LMP CHECKED: LMP
DATE: MARCH 2020
SHEET: C-6.1
SCALE: 1"=50'
EROSION CONTROL DETAILS

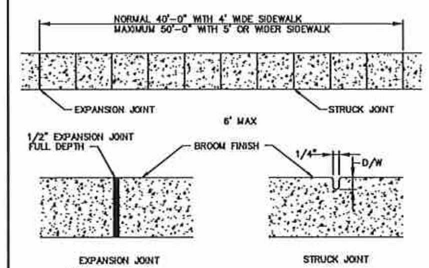
DocuSign Envelope ID: 07DB5A53-9A4C-4B52-91C7-6465132AE89



1 MONOLITHIC CURB & SIDEWALK DETAIL
(3,500 PSI (MIN))
NTS

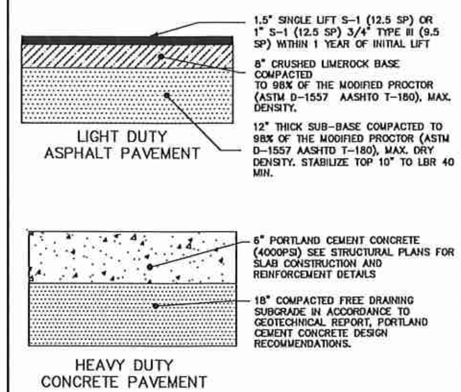


2 CURB RAMP, CR–E
(PER FDOT INDEX 522-002)
NTS

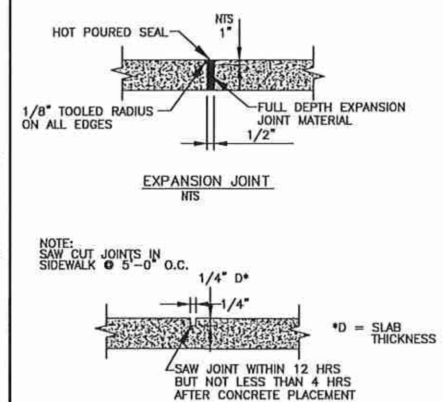


NOTES:
1. SIDEWALK EXPANSION JOINTS TO BE AT ALL TIES TO CONCRETE OTHER THAN DRIVEWAYS. MAXIMUM SPACING SHALL BE 60'.
2. EXPANSION JOINT MATERIAL SHALL BE ASPHALT FIBER IMPREGNATED PREFORMED JOINT FILLER, TO FILL DEPTH OF CONCRETE.

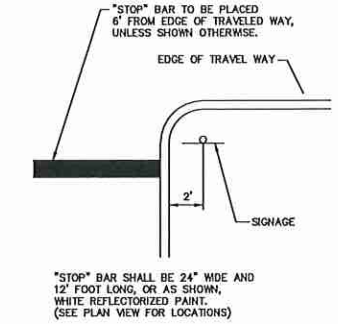
3 CONCRETE SIDEWALK
(3,500 PSI (MIN))
NTS



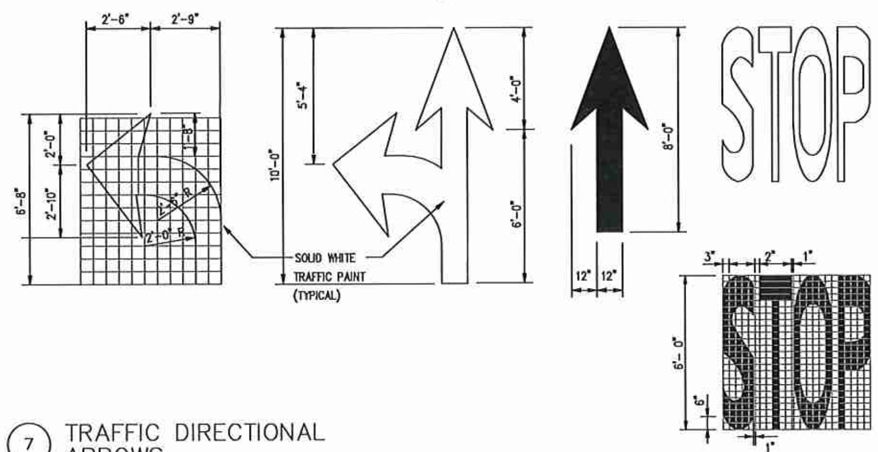
4 PAVEMENT DETAILS
NTS



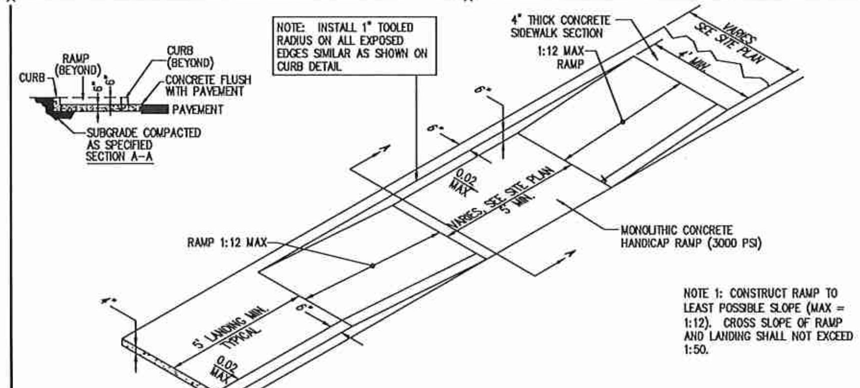
5 SAWED CONSTRUCTION JOINT
NTS



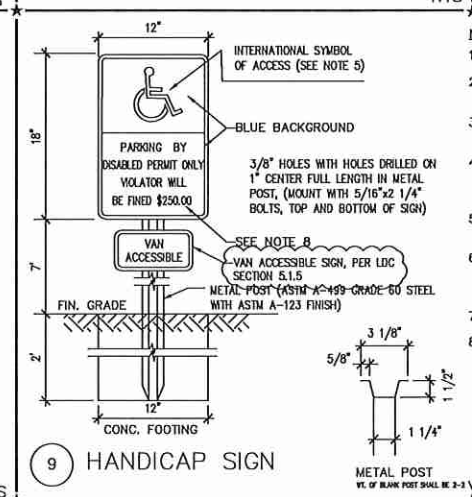
6 STOP BAR W/ SIGNAGE
NTS



7 TRAFFIC DIRECTIONAL ARROWS
NTS



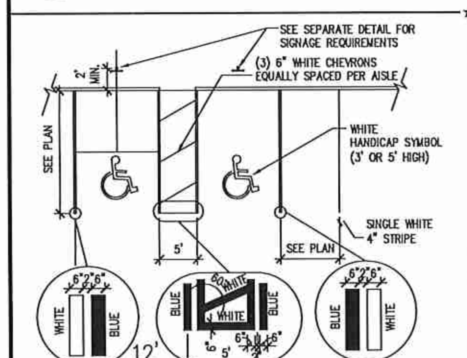
8 SIDE WALK HANDICAP RAMP
3000 PSI (MIN.) CONCRETE
NTS



9 HANDICAP SIGN

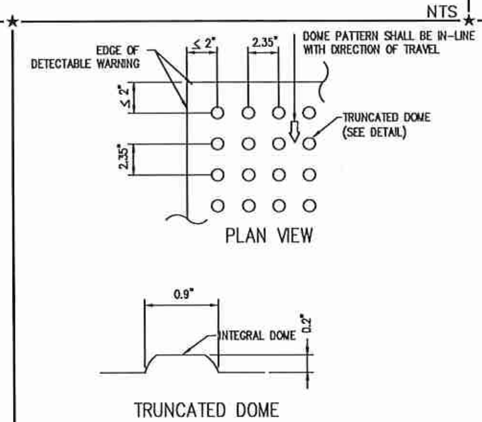
NOTES:
1. ONE (1) SIGN REQUIRED FOR EACH PARKING SPACE.
2. METAL POST TO BE GALVANIZED. ALL BOLTS, NUTS WASHERS AND SCREWS MUST BE RUSTPROOF.
3. CONCRETE FOR FOOTING SHALL BE PORTLAND CEMENT AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 p.s.i.
4. SIGNS WILL BE FABRICATED BY USING REFLECTING COATING IN THE SYMBOL, MESSAGE AND BORDER APPLIED TO A SHEET ALUMINUM BACKING (.080) IN THICKNESS.
5. MESSAGE LETTERING SHALL BE UPPER CASE (WHITE)(SERIES B) 2" HIGH IN ACCORDANCE WITH MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
6. THE SYMBOL IS COMPOSED OF TWO ELEMENTS, A WHITE WHEELCHAIR FIGURE (WHICH SHOULD ALWAYS FACE RIGHT) ON A SQUARE BACKGROUND, INTERNATIONAL BLUE IN COLOR (FED. STD. 595a, COLOR #15180).
7. SIGN POST SHALL BE MIN. 1' CLEAR FROM BACK OF WHEEL STOP OR CURB.
8. CONTRACTOR SHALL VERIFY FINE AMOUNT WITH LOCAL ORDINANCE.

NTS



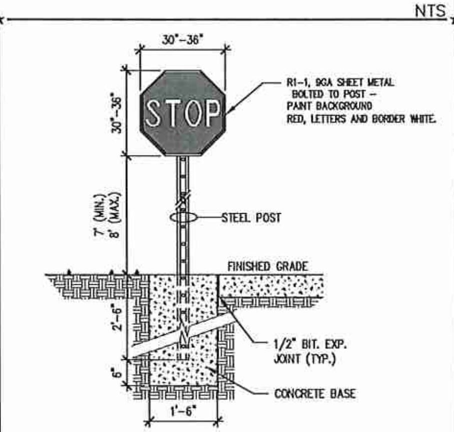
NOTE: FINISHED GRADES OF PAVEMENT IN HC PARKING AND ACCESSIBILITY AISLE SHALL NOT EXCEED 1:50 SLOPE IN ANY DIRECTION.
SEE PLAN FOR STYLE OF HANDICAP RAMP
HANDICAP STRIPING SHALL CONFORM TO FDOT INDEX 17346 (LATEST EDITION)

10 HANDICAP STRIPING
NTS

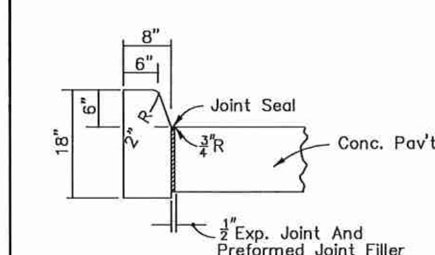


NOTE:
1. CURB RAMP RUNNING SLOPES SHALL NOT BE STEEPER THAN 1:12 AND CROSS SLOPE SHALL BE 0.02 OR FLATTER.
2. DETECTABLE WARNING SURFACES SHALL BE CONSTRUCTED BY TEXTURING OR APPLYING A TRUNCATED DOME MATERIAL IN CONFORMANCE WITH THE U.S. DEPARTMENT OF JUSTICE A.D.A. STANDARDS FOR ACCESSIBLE DESIGN, A.D.A. ACCESSIBILITY GUIDELINES, SECTION 4.29.2. TRANSITION SLOPES ARE NOT TO HAVE DETECTABLE WARNINGS.
3. WHERE A CURB RAMP IS CONSTRUCTED WITHIN AN EXISTING CURB, CURB AND GUTTER AND/OR SIDEWALK, THE EXISTING CURB OR CURB AND GUTTER SHALL BE REMOVED TO THE NEAREST JOINT BEYOND THE CURB TRANSITIONS OR TO THE EXTENT THAT NO REMAINING SECTION OF CURB OR CURB AND GUTTER IS LESS THAN 5' LONG. THE EXISTING SIDEWALK SHALL BE REMOVED TO THE NEAREST JOINT BEYOND THE TRANSITION SLOPE WALK AROUND OR TO THE EXTENT THAT NO REMAINING SECTION OF SIDEWALK IS LESS THAN 5'.
4. WHERE ADJACENT WALKING SURFACES ARE COLORED OR ARE CONSTRUCTED WITH MATERIALS OTHER THAN STANDARD CLASS I PORTLAND CEMENT CONCRETE IN ACCORDANCE WITH SECTION 522 OF THE SPECIFICATIONS, THE PLAN MUST PROVIDE FOR DETECTABLE WARNING SURFACE COLORS OR MATERIALS THAT PROVIDE THE NECESSARY CONTRAST, EITHER DARK-ON-LIGHT OR LIGHT-ON-DARK. (SAFETY YELLOW OR BRICK RED)
5. RECOMMENDED MANUFACTURER: ENGINEERED PLASTICS, INC. (ARMOR TILE) OLYMPIC TOWERS, 300 PEARL STREET, SUITE 200, BUFFALO, NY 14202. PHONE: (800) 682-2525

11 CURB RAMP DETECTABLE WARNING
3000 PSI (MIN.) CONCRETE
NTS

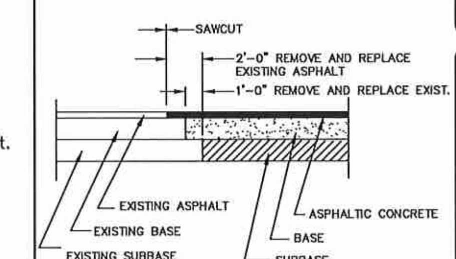


12 STOP SIGN
NTS

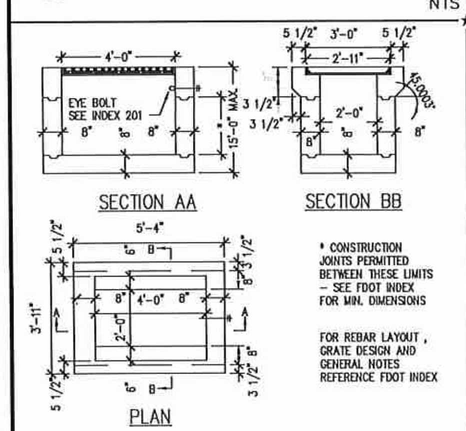


NOTES:
1. ALL CURBING SHALL BE CONSTRUCTED OF CONCRETE THAT WILL OBTAIN A MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI AT 28 DAYS
2. ALL CONCRETE CURBS SHALL BE SPACED WITH A FULL-DEPTH, ½" WIDTH ISOLATION JOINT MATERIAL PRIOR TO PLACEMENT OF ADJACENT CONCRETE PAVEMENT
3. THERE SHALL BE CONTROL JOINTS, EITHER TOOL OR SAW-CUT, MATCH PAVEMENT JOINTS, UNLESS OTHERWISE SPECIFIED; JOINTS SHALL BE FORMED WITHIN 12 HOURS OF PLACEMENT

13 FDOT TYPE D CURB
(3,500 PSI (MIN))
NTS



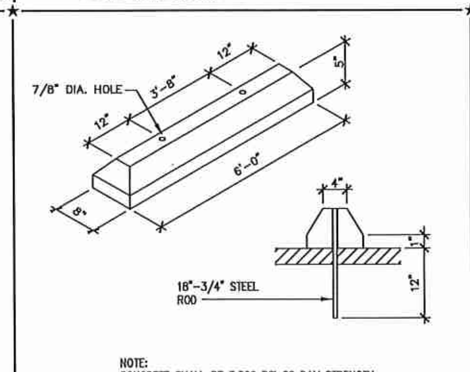
14 SAW CUT DETAIL
NTS



* CONSTRUCTION JOINTS PERMITTED BETWEEN THESE LIMITS - SEE FDOT INDEX FOR MIN. DIMENSIONS

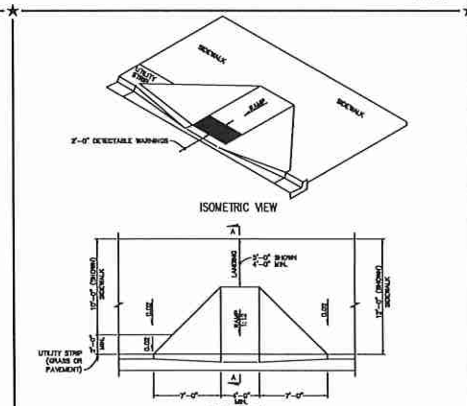
FOR REBAR LAYOUT, GRATE DESIGN AND GENERAL NOTES REFERENCE FDOT INDEX

15 TYPE "F" INLET
(REF: FDOT INDEX 425-053)
NTS

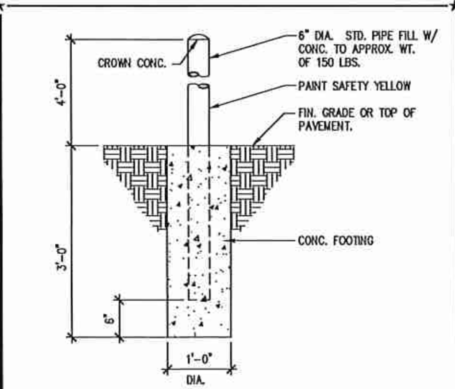


NOTE:
CONCRETE SHALL BE 3,500 PSI 28 DAY STRENGTH

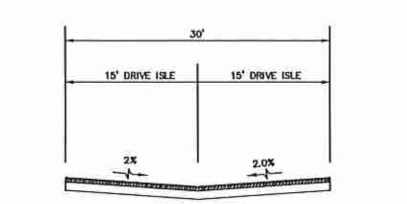
16 CONCRETE WHEEL STOP
NTS



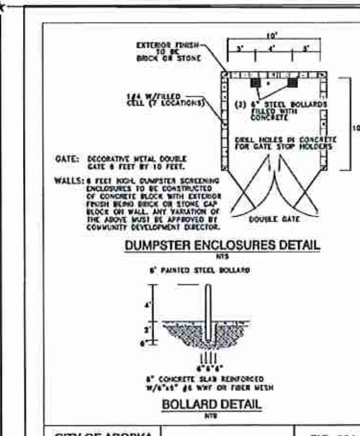
17 CURB RAMP, CR–A
(PER FDOT INDEX 522-002)
NTS



18 BOLLARD
NTS



19 DRIVE ISLE DETAIL
NTS



CORAL □ILLS SEL□ STORA□E
CONSTRUCTION □ETAILS
APOP□A, □L

NO:	DATE:	REVISION / ISSUE DATE:	BY:

RCE CONSULTANTS, LLC
6□7 Ar□en □ri□
Alta□onte S□rin□□ □□3270□
Phone No□407□52□□633
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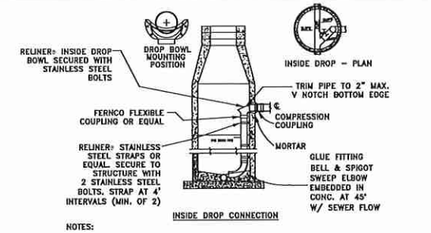
5/28/2020
Laurence Poliner
#56974
RCE CONSULTANTS, LLC
Certificate of Authorization 29307

PROJECT #: 33.2019
DRAWN: LMP CHECKED: LMP
DATE: MARCH 2020
SHEET: C□□□□
SCALE: N/A
CONSTRUCTION □ETAILS

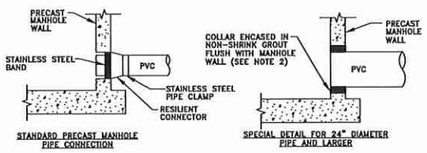
DocuSign Envelope ID: 07DB5A53-8A4C-4B52-91C7-64651328AE89



INSIDE DROP CONNECTION

NOTES:

1. ALL INSIDE DROP CONNECTIONS FOR SERVICES AND COLLECTOR SEWERS SHALL USE THE DROP BOWL AS PRODUCED BY:
   RELINER-DURAN, INC.
   53 MT. ARCHER RD.
   LYME, CT 06371
   (860)434-0277 FAX: (860)434-3195 OR EQUAL.
2. SECURE DROP PIPE TO MANHOLE WALL WITH RELINER-DURAN, INC STAINLESS STEEL ADJUSTABLE CLAMPING BRACKETS.
3. FORCE MAIN RECEIVING MANHOLES MAY BE REQUIRED TO BE LINED IN ACCORDANCE WITH THE CITY OF APOPKA LIST OF APPROVED MATERIALS AND PRODUCTS AS DIRECTED BY THE CITY.



STANDARD PRECAST MANHOLE PIPE CONNECTION

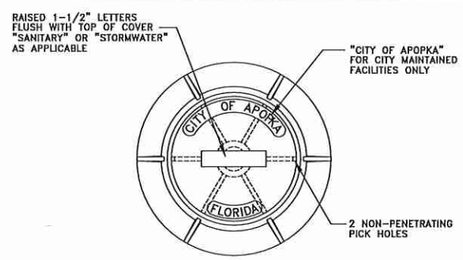
SPECIAL DETAIL FOR 24" DIAMETER PIPE AND LARGER

NOTES:

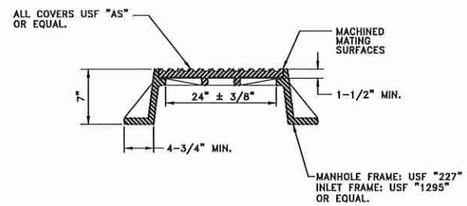
1. DROP PIPE AND FITTINGS SHALL BE OF EQUAL SIZE AND MATERIAL AS THE INFLUENT SEWER.
2. THE CITY MAY APPROVE ALTERNATE WATERTIGHT CONNECTION DETAILS FOR CONNECTION OF 24" DIAMETER PIPES AND LARGER.
3. AN INSIDE DROP CONNECTION SHALL BE REQUIRED FOR ALL INFLUENT WHICH HAVE AN INVERT 24" OR MORE ABOVE THE OUTFLOW PIPE INVERT.
4. CONCRETE TO BE MINIMUM OF 3000 PSI.

MANHOLE CONNECTION DETAILS

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2015	FIG. 201



PLAN



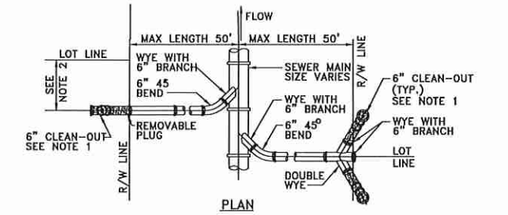
PROFILE

NOTES:

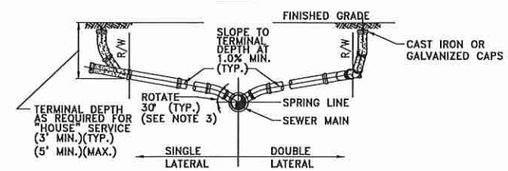
1. MANHOLE FRAME AND COVER ARE TO BE TRAFIC BEARING RATED H-20, CLASS 30 MEETING ASTM A 48.

STANDARD MANHOLE FRAME AND COVER

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 202



PLAN



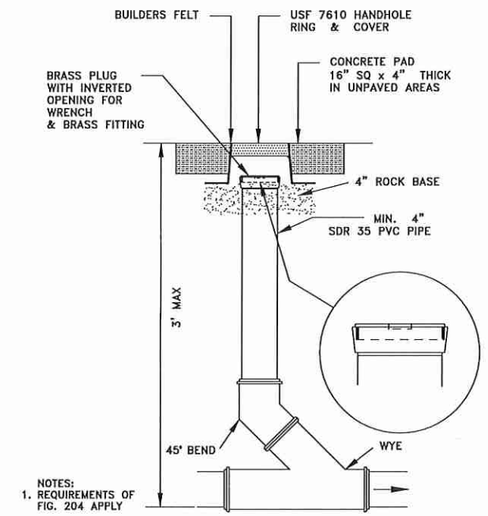
PROFILE

NOTES:

1. CLEAN-OUT (SHOWN SHADED) SHALL BE INSTALLED BY THE BUILDER IN ACCORDANCE WITH STANDARD PLUMBING CODE.
2. LOCATE SINGLE LATERAL AS CLOSE TO LOT LINE AS POSSIBLE.
3. INVERT OF SERVICE LATERAL SHALL NOT ENTER SEWER MAIN BELOW SPRING LINE.
4. RESIDENTIAL SERVICES SHALL BE 4 INCHES & NON-RESIDENTIAL SERVICES SHALL BE 6 INCHES IN DIAMETER AS A MINIMUM.
5. GALVANIZED, OR CAST IRON CLEAN-OUT CAP SHALL BE USED ON THE STUBOUT FOR EACH SERVICE.
6. LATERAL SHALL BE MARKED WITH AN "S" STAMPED OR CUT IN THE CURB.

SERVICE LATERAL DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 204

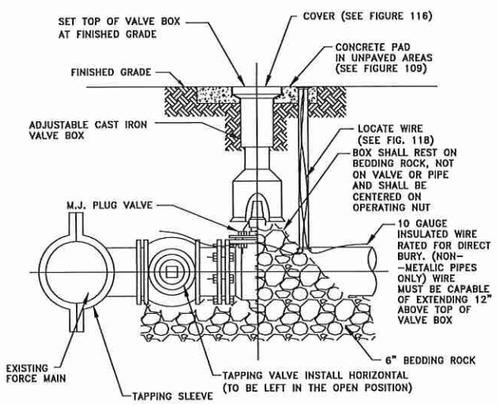


NOTES:
1. REQUIREMENTS OF FIG. 204 APPLY

SANITARY SEWER SERVICE TRAFFIC RATED CLEAN-OUT DETAIL

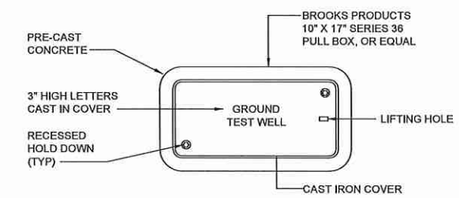
NTS

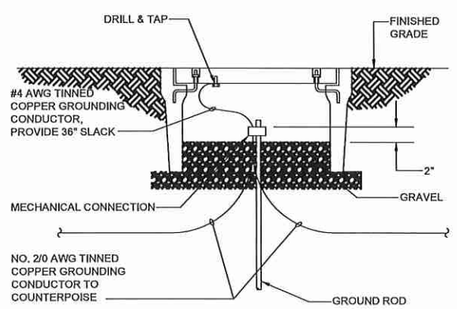
CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 205



FORCE MAIN WET TAP TIE-IN DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 206





GROUND TEST WELL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 307 B

RCE Consultants
Engineering Real Solutions

CORAL HILLS SELF STORAGE
UTILITY DETAILS
APOPKA, FL

NO:	DATE:	REVISION / ISSUE DATE:	BY:

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Engineer of Record
5/28/2020
Laurence Pollner
#56974
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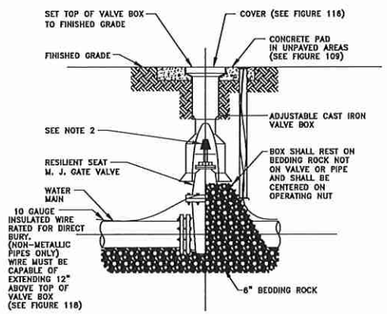
SHEET: C-7.2
SCALE: N/A
UTILITY DETAILS

DocuSign Envelope ID: 07DB5A53-8A4C-4B52-91C7-64651329AE69

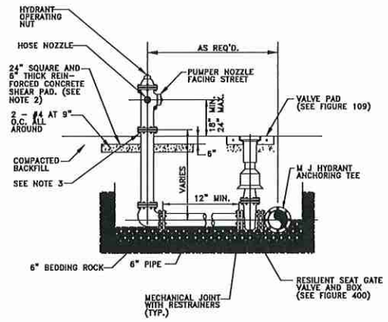


NOTES:

1. PVC EXTENSIONS MAY BE USED ON VALVE BOX INSTALLATION.
2. THE ACTUATING NUT FOR DEEPER VALVES SHALL BE EXTENDED TO WITHIN A 3 FEET BELOW FINISHED GRADE.

GATE VALVE AND BOX DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 400

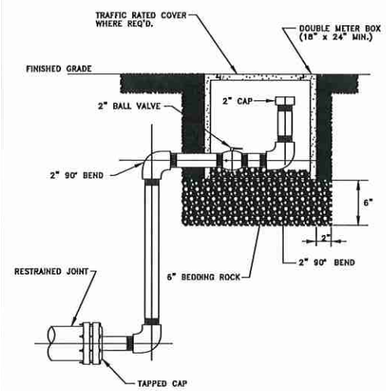


NOTES:

1. FIRE HYDRANT SHALL BE SUPPLIED WITHOUT A WEEP HOLE, OR WITH A PERMANENTLY PLUGGED WEEP HOLE.
2. THE SHEAR PAD SHALL BE RECESSED SIX (6) INCHES BELOW THE FINISHED GRADE AND THE RECESSED SECTION SODDED.
3. CLEARANCE BETWEEN BOTTOM OF BOLTS AND TOP OF SHEAR PAD SHALL BE A TWELVE (12) INCH MINIMUM.
4. FIRE HYDRANTS SHALL BE IDENTIFIED IN ACCORDANCE WITH THE CITY OF APOPKA UTILITIES DESIGN CONSTRUCTION STANDARDS MANUAL.

FIRE HYDRANT ASSEMBLY DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 402

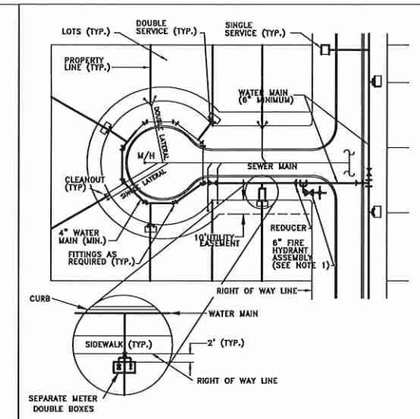


NOTES:

1. ALL 2 INCH PIPE AND FITTINGS SHALL BE SCHEDULE 40 GALVANIZED STEEL OR BRASS WITH THREADED (NPT) JOINTS. USE TEFLON TAPE ON JOINTS.
2. COLOR SHALL BE APPROPRIATE FOR USE.

BLOWOFF VALVE DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 403

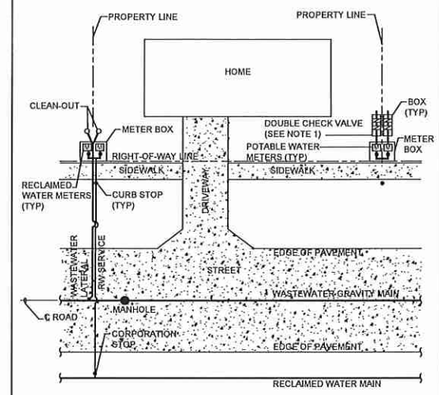


NOTES:

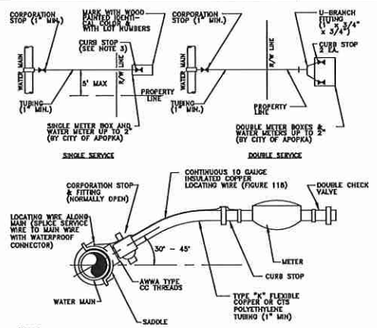
1. ANCHORING TYPE 90° BEND SHALL ONLY BE USED WHERE RIGHT-OF-WAY CONSTRUCTION WILL NOT ALLOW INSTALLATION OF A STRAIGHT ASSEMBLY.
2. POTABLE WATER AND RECLAIMED WATER MAINS SHALL BE LOOPED THROUGHOUT CUL-DE SAC.

TYPICAL SERVICE LOCATION DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 404



TYPICAL RECLAIM WATER DOUBLE SERVICE DETAIL

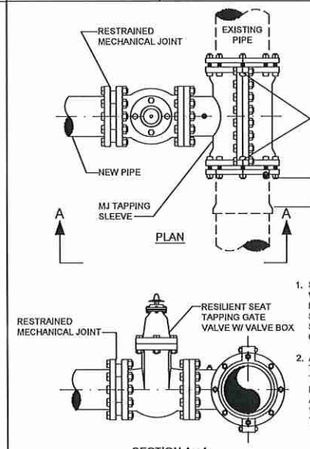


NOTES:

1. ALL FITTINGS SHALL BE BRASS WITH COMPRESSION/PACK JOINT TYPE CONNECTIONS.
2. NO SERVICE LINE SHALL TERMINATE UNDER A DRIVEWAY.
3. EACH SERVICE SHALL TERMINATE AT A CURB STOP(S) WHICH SHALL BE BURIED APPROXIMATELY 3" BELOW FINAL GRADE AND SHALL BE CLEARLY MARKED WITH A 2" x 2" x 18" STAKE WITH THE TOP PAINTED BLUE FOR POTABLE WATER AND PURPLE FOR RECLAIMED WATER, AND MARKED WITH THE NUMBER OF THE LOT(S) TO BE SERVED.
4. RECLAIMED WATER SERVICES SHALL USE PURPLE COLORED CTS POLYETHYLENE TUBING.
5. POTABLE WATER SERVICES SHALL USE BLUE COLORED CTS POLYETHYLENE TUBING.
6. ALL SERVICE UNDER EXISTING OR PROPOSED PAVEMENT SHALL BE INSTALLED IN A MINIMUM 2" PVC SLEEVE.

WATER SERVICE CONNECTION DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 405

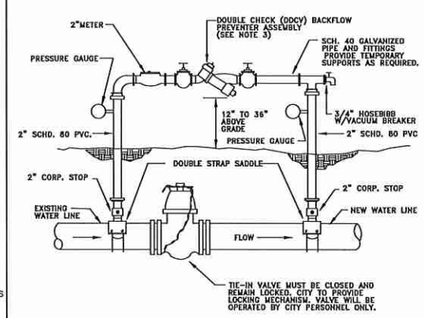


NOTES

1. SIZE ON SIZE WET TAPS WILL CALL FOR FULL ENCIRCLEMENT STAINLESS STEEL MJ TAPPING SLEEVE; MUELLER H-304, OR EQUAL.
2. ALL NEWLY INSTALLED TAPPING SLEEVES & TAPPING VALVES SHALL BE PNEUMATICALLY TESTED AT A TEST PRESSURE OF 150PSI FOR A PERIOD OF THIRTY MINUTES.

WATER AND RECLAIMED WATER MAINS
WET TAP TIE-IN DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 406

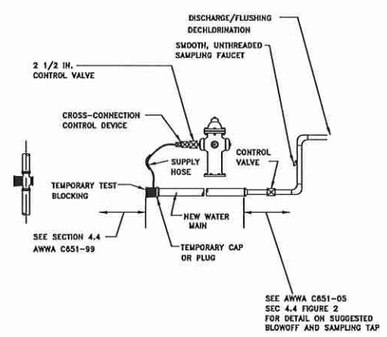


NOTE:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS, ASSEMBLY, AND THE INSTALLATION OF THE DEVICE.
2. SEE FIGURE 504C FOR PROCEDURES.
3. DDCV IS MINIMUM PROTECTION REQUIRED. A RPZ DEVICE MAY BE REQUIRED DEPENDING ON PROJECT. PROVIDE COPY OF LATEST CERTIFICATION TEST RESULTS.

TEMPORARY JUMPER CONNECTION

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 504 A

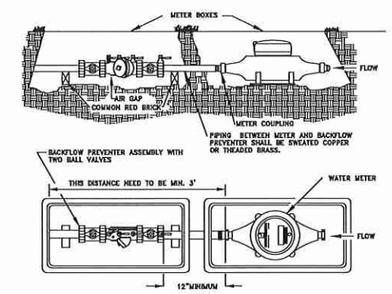


NOTE:

1. SEE FIGURE 504C FOR PROCEDURES.

TEMPORARY JUMPER CONNECTION
FROM FIRE HYDRANT

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 504 B



1. A 3' PIECE OF STRAIGHT PIPE MUST BE CONNECTED TO METER USING THE DESIGNATED HOLES IN THE METER BOX BEFORE ANY ANGLES ARE CONNECTED. THE SAME RULES APPLY FOR DOUBLE METER HOOK-UPS.
2. BACKFLOW DEVICE AND METER ARE TO BE SET BY THE CITY FOR METERS 2-INCH OR LESS IN SIZE.

POTABLE WATER SERVICE DETAIL
FOR LOTS SERVED WITH RECLAIMED WATER

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 505

RCE Consultants
Engineering Real Solutions

CORAL HILLS SELF STORAGE
UTILITY DETAILS
APOPKA, FL

NO:	DATE:	REVISION / ISSUE DATE:	BY:

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Altamonte Springs, FL 32701
Phone No. 407-452-8633
LARRY@RCECONSULTANTS.NET

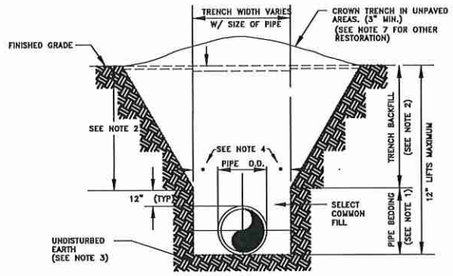
Engineer of Record
5/28/2020

Laurence Pellner
#56974

RCE CONSULTANTS, LLC
Certificate of Authorization 29307

PROJECT #: 33.2019
DRAWN:LMP CHECKED: LMP
DATE: MARCH 2020
SHEET: C-7.2
SCALE: N/A
UTILITY DETAILS

DocuSign Envelope ID: 07DB5A53-9A4C-4B52-91C7-64651329AE89

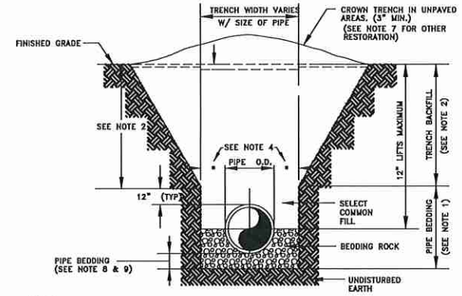


NOTES:

1. PIPE BEDDING: SELECT COMMON FILL COMPACTED TO 98% UNDER PAVEMENT OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
2. TRENCH BACKFILL: COMMON FILL COMPACTED TO 98% UNDER PAVEMENT OF THE MAXIMUM DENSITY AS TO AASHTO T-180.
3. PIPE BEDDING UTILIZING SELECT COMMON FILL OR BEDDING ROCK IN ACCORDANCE WITH TYPE A BEDDING AND TRENCHING DETAIL MAY BE REQUIRED AS DIRECTED BY THE CITY.
4. (*): 15" MAX. FOR PIPE DIAMETERS LESS THAN 24", AND 24" FOR PIPE DIAMETER 24" AND LARGER.
5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
6. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
7. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES.
8. SURFACE RESTORATION WITHIN CITY RIGHT-OF-WAY, SHALL COMPLY WITH REQUIREMENTS OF RIGHT-OF-WAY UTILIZATION REGULATIONS.
9. ALL UNPAVED DISTURBED AREAS SHALL BE SODDED TO MATCH ADJACENT DOMINATE GRASS SPECIES.

TYPE "B" BEDDING AND OPEN-CUT DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 100



NOTES:

1. PIPE BEDDING: SELECT COMMON FILL COMPACTED TO 98% UNDER PAVEMENT OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
2. TRENCH BACKFILL: COMMON FILL COMPACTED TO 98% UNDER PAVEMENT OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
3. USE OF TYPE A BEDDING TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CITY.
4. (*): 15" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX. FOR PIPE DIAMETER 24" AND LARGER.
5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
6. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
7. GRAVITY SEWERS SHALL UTILIZE TYPE A BEDDING IF REQUIRED BY THE CITY. BEDDING DEPTH SHALL BE 4" MINIMUM FOR PIPE DIAMETER LESS THAN 15" AND 8" MINIMUM FOR PIPE DIAMETER 18" AND LARGER.
8. DEPTH FOR REMOVAL OF UNSUITABLE MATERIAL SHALL GOVERN DEPTH OF BEDDING ROCK BELOW THE PIPE. THE CITY SHALL DETERMINE IN THE FIELD IF REMOVAL OF UNSUITABLE MATERIAL IS REQUIRED TO REACH A SUITABLE FOUNDATION.
9. ALL UNPAVED DISTURBED AREAS SHALL BE SODDED TO MATCH ADJACENT DOMINATE GRASS SPECIES.
10. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF THE GOVERNING AGENCIES. SURFACE RESTORATION WITHIN CITY RIGHT-OF-WAY, SHALL COMPLY WITH REQUIREMENTS OF RIGHT-OF-WAY UTILIZATION REGULATIONS.

TYPE "A" BEDDING AND OPEN-CUT DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 101

MINIMUM LENGTH (FT) TO BE RESTRAINED ON EACH SIDE OF FITTING(S). *

	PIPE SIZE										
	6"	8"	10"	12"	16"	18"	20"	24"	30"	36"	48"
90° BEND	33	43	51	60							
45° BEND	14	18	22	25							
22-1/2° BEND	7	9	11	12							
11-1/4° BEND	4	5	6	6							
TEE**	1	7	24	44							
REDUCER (ONE SIZE SMALLER)		41	39	40							
DEAD END	74	96	115	136							

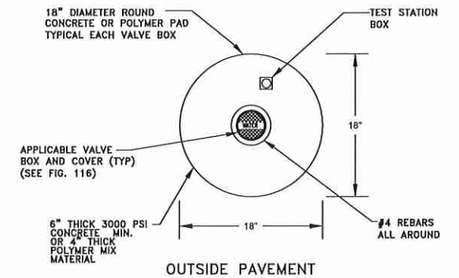
* ONLY RESTRAIN BRANCH PIPE FOR TEES. ONLY RESTRAIN LARGER PIPE FOR REDUCERS
** LENGTH ALONG RUN ASSUMED TO BE 18'

NOTES:

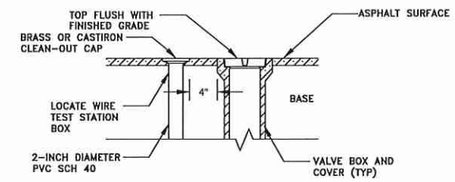
1. FITTINGS SHALL BE DUCTILE IRON RESTRAINED JOINT TYPE. FM FITTINGS TO BE LINED WITH PROTECTO 401.
2. INSTALL FULL LENGTHS OF PIPE WITH TOTAL LENGTH CONTAINING ONLY RESTRAINED JOINTS EQUAL TO OR GREATER THAN LENGTH SHOWN IN TABLE.
3. WHERE TWO OR MORE FITTINGS ARE TOGETHER, USE FITTING WHICH YIELDS GREATEST LENGTH OF RESTRAINED PIPE.
4. IN LINE VALVES AND THROUGH RUN OF TEES OUTSIDE LIMITS OF RESTRAINED JOINTS FROM OTHER FITTINGS NEED NOT BE RESTRAINED UNLESS OTHERWISE INDICATED.
5. LENGTHS SHOWN IN THE TABLE HAVE BEEN CALCULATED IN ACCORDANCE WITH THE PROCEDURE OUTLINED IN "THRUST RESTRAINT DESIGN FOR DUCTILE IRON PIPE" AS PUBLISHED BY DIPRA, FOR PVC WITH THE FOLLOWING ASSUMPTIONS:
   TYPE OF PIPE: PVC
   WORKING PRESSURE: 150 P.S.I.**
   SOIL DESIGNATION: SW(SAND SILT)
   LAYING CONDITIONS: 3
   ** FM = 100 P.S.I. / WM OR RWM = 150 P.S.I.
6. FOR PIPE ENCASED IN POLYETHYLENE INCREASE THE GIVEN VALUE BY A FACTOR OF 1.5.
7. VALUES NOT LISTED IN THE TABLE TO BE COMPLETED BY THE ENGINEER.

RESTRAINED PIPE TABLE (PVC)

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 105



OUTSIDE PAVEMENT

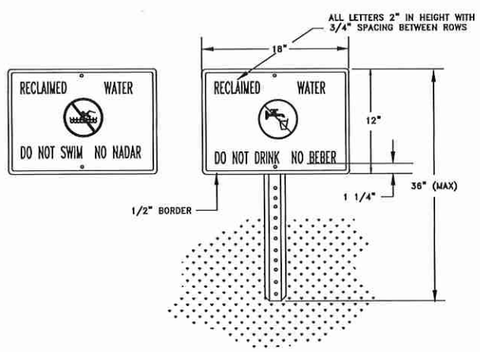


INSIDE PAVEMENT

VALVE IDENTIFICATION TAG TO BE INSTALLED BY CITY & PAID FOR BY DEVELOPER

VALVE BOX

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 109

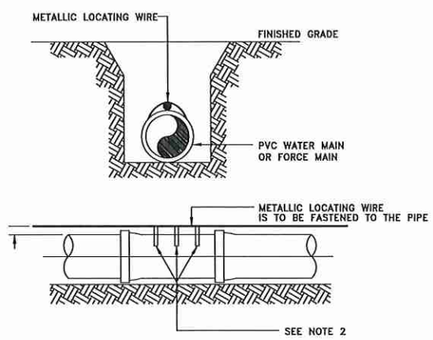


NOTES:

1. HEIGHT OF SIGN WILL DEPEND ON LOCATION AND SURROUNDING LANDSCAPE PLANT TYPES. IN ALL CASES, THE SIGN SHALL BE VISIBLE TO THE PUBLIC.
2. BACKGROUND SHALL BE WHITE. LETTERS AND FIGURES SHALL BE BLACK. PROHIBITIVE SYMBOL SHALL BE RED.
3. ENGINEERING GRADE REFLECTIVE MATERIALS SHALL BE USED.
4. POST SHALL BE U CHANNEL 12 FT. 2 LB. HOT ROLLED HIGH TENSILE RAIL OR BILLET STEEL, HOT DIP GALVANIZED PER ASTM A-123.
5. MOUNTING HARDWARE SHALL BE STAINLESS STEEL.
6. SIGNS SHALL BE PLACED BY THE CONTRACTOR IN ACCORDANCE WITH THE CITY APPROVED ENGINEERING PLANS AND/OR AS APPROVED BY PUBLIC SERVICES DEPARTMENT.

RECLAIMED WATER ADVISORY SIGN

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 115

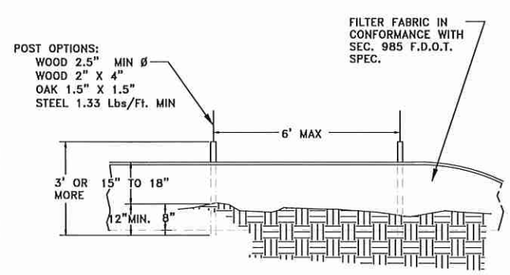


NOTES:

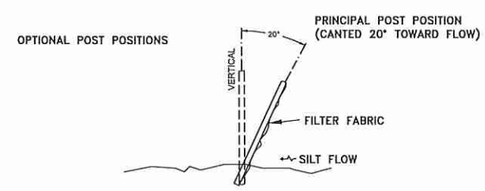
1. PVC PIPE SHALL REQUIRE INSULATED METALLIC LOCATING WIRE (10 AWG-SOLID CCS REINFORCED TRACER WIRE-INSULATED 30 MIL HDPE - 30 VOLT MFG. BY COPPERHEAD INDUSTRIES, LLC OR EQUAL) CAPABLE OF DETECTION BY A CABLE LOCATOR.
2. SHALL BE BURIED DIRECTLY ABOVE THE CENTERLINE OF THE PIPE AND ATTACHED WITH DUCT TAPE OR NYLON STRAPS AT 3 LOCATIONS PER JOINT. LOCATING WIRE SHALL TERMINATE AT THE TEST STATION BOX AS SHOWN IN FIG. 109.
3. BE CAPABLE OF EXTENDING 12" ABOVE TOP OF TEST STATION BOX IN SUCH A MANNER SO AS NOT TO INTERFERE WITH VALVE OPERATION.
4. SPLICES SHOULD BE MADE USING STANDARDS AND PRODUCTS DESIGNED FOR DIRECT BURIAL CONDUCTORS.
5. WIRE INSULATION SHALL BE COLOR CODED FOR THE TYPE OF PIPE BEING INSTALLED.

PVC PIPE LOCATING WIRE DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 118



ELEVATION VIEW



SECTION VIEW

SILT FENCE INSTALLATION

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 602

RCE Consultants
Engineering Real Solutions

CORAL HILLS SELF STORAGE
UTILITY DETAILS
APOPKA, FL

NO.	DATE:	REVISION / ISSUE DATE:	BY:

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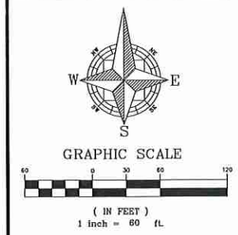
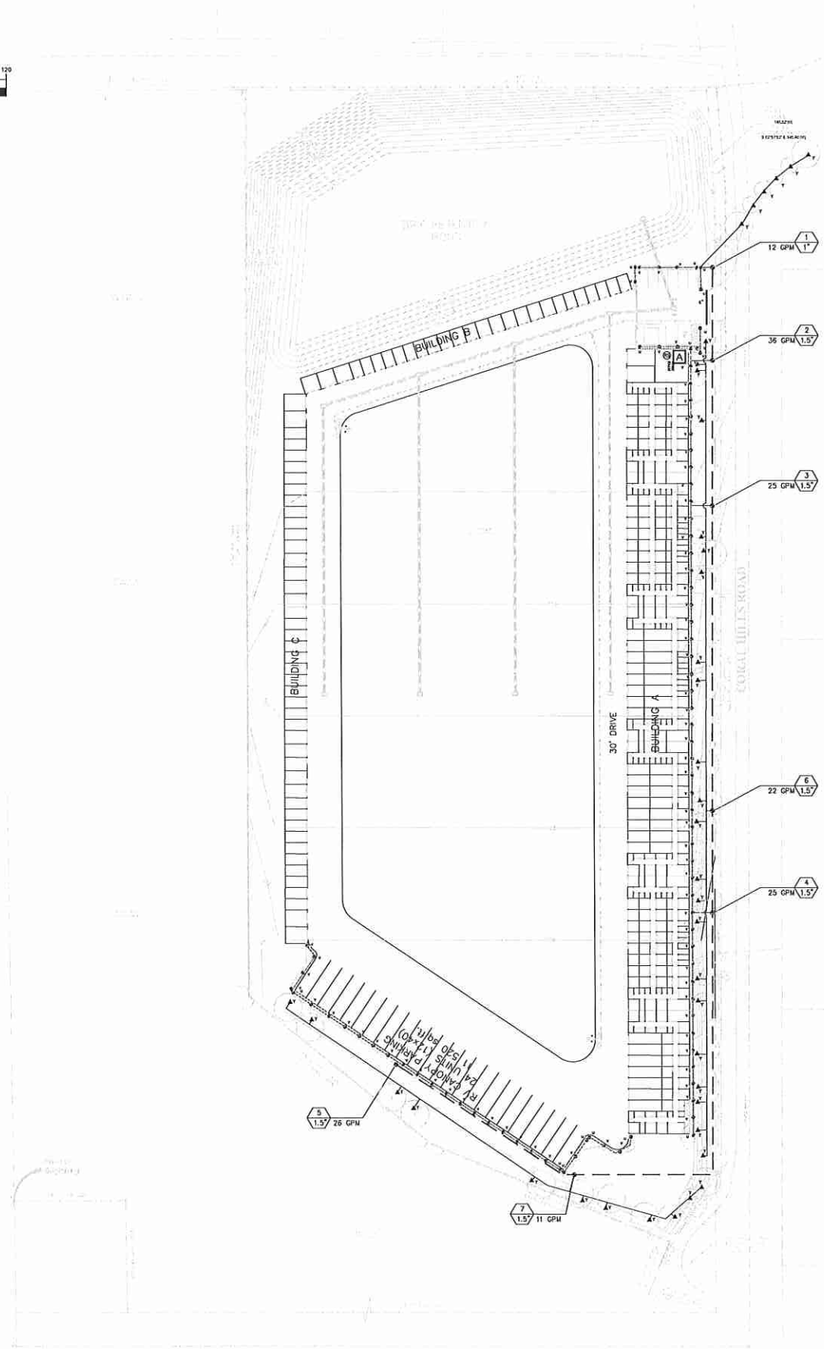
Phone No. 407-452-8633
LABRIV@RCECONSULTANTS.NET

Engineer of Record
5/28/2020
Laurence Pollner
#56914
RCE CONSULTANTS, LLC
Certificate of Authorization 29107

PROJECT #: 33.2019
DRAWN:LMP CHECKED: LMP
DATE: MARCH 2020
SCALE: N/A
SHEET: C-7.3
UTILITY DETAILS

DocuSign Envelope ID: 07DB5A53-8A4C-4B52-91C7-646513294E89





IRRIGATION PLAN

SPRAY HEAD NOZZLE CHART

LETTER	GPM AT 30 P.S.I.	RADIUS	PATTERN
A	1.5	15'	QUARTER
B	1.5	15'	ONE THIRD
C	2.0	15'	HALF
D	2.0	15'	TWO THIRD
E	1.5	15'	THREE QTR.
F	1.5	15'	FULL
G	0.5	12'	LOW QUARTER
H	0.5	12'	LOW CIR. THIRD
I	1.0	12'	LOW CIR. HALF
J	1.0	12'	LOW CIR. 2 THIRD
K	1.5	12'	LOW CIR. 3 QUART.
L	1.5	12'	LOW FULL
M	0.5	12'	FLAT QUARTER
N	0.5	12'	FLAT THIRD
O	0.5	12'	FLAT HALF
P	0.5	12'	FLAT 2 THIRD
Q	0.5	12'	FLAT 3 QUARTER
R	1.2	6' X 12'	SIDE STRIP
S	1.2	6' X 30'	SIDE STRIP
U	1.2	6' X 30'	CENTER STRIP
V	1.2	6' X 12'	SIDE STRIP
T	1.0	5'	STREAM BUBBLER
X	VARIES	12'	ADJUSTABLE ARC

ZONE CHART

NUMBER	GPM	GALLONS PER RUN TIME	TOTAL GALLONS PER CYCLE	TYPE
1	12	25 MIN	300	SPRAY
2	36	25 MIN	900	SPRAY
3	25	25 MIN	625	SPRAY
4	25	25 MIN	625	SPRAY
5	26	25 MIN	650	SPRAY
6	22	30 MIN	660	BUBBLER
7	11	30 MIN	330	BUBBLER
TOTAL GALLONS PER RUN CYCLE 4,090				
TOTAL CYCLE RUN TIME 3 HOURS 5 MINUTES				
TOTAL GALLONS PER WEEK 8,180				
TOTAL WEEKLY RUN TIME 6 HOURS 10 MINUTES				

IRRIGATION LEGEND

BUBBLER HEADS

RAINBIRD FIXED BUBBLER

USE POLY-PIPE OR PVC FLEXIBLE CONNECTIONS

1 & 1 GALLON FIXED BUBBLER

SPRAY BODIES

RAINBIRD 1800 SERIES BODIES & ADAPTERS

PROVIDE SPRAY NOZZLES PER PLAN

USE POLY-PIPE OR PVC FLEXIBLE CONNECTIONS

1" POP-UP SWING SPRAY BODY

A — ELECTRIC IRRIGATION CONTROLLER, NUMBER OF STATIONS SHOWN ON THE PLAN. PEDESTAL MOUNT METAL CABINET WITH RAINBIRD CENTURY SERIES PHASE ELECTRIC POWER BY OTHERS. RAINBIRD ICC-100-M-PED

ELECTRIC IRRIGATION WALL MOUNT PLASTIC BOX WITH RAIN CONTROL MOUNTED INSIDE. RAINBIRD ICC-100-M-WALL OR EQUAL. RAINBIRD PCB WALL SURGUARD VALVE BOXES

ELECTRIC VALVE IDENTIFICATION, SHOWS VALVE LOCATION, STATION NUMBER, SIZE, AND ZONE GPM VOLUME.

1" BRONZE QUICK COUPLER VALVE IN VALVE BOX. MOUNT ON O-RING TYPE BRASS ELBOW. MOUNT IN 10" RECTANGULAR VALVE BOX. PROVIDE ONE 3/4-1 BOX KEY PER FOUR QUICK COUPLER VALVES. RAINBIRD 33C SERIES

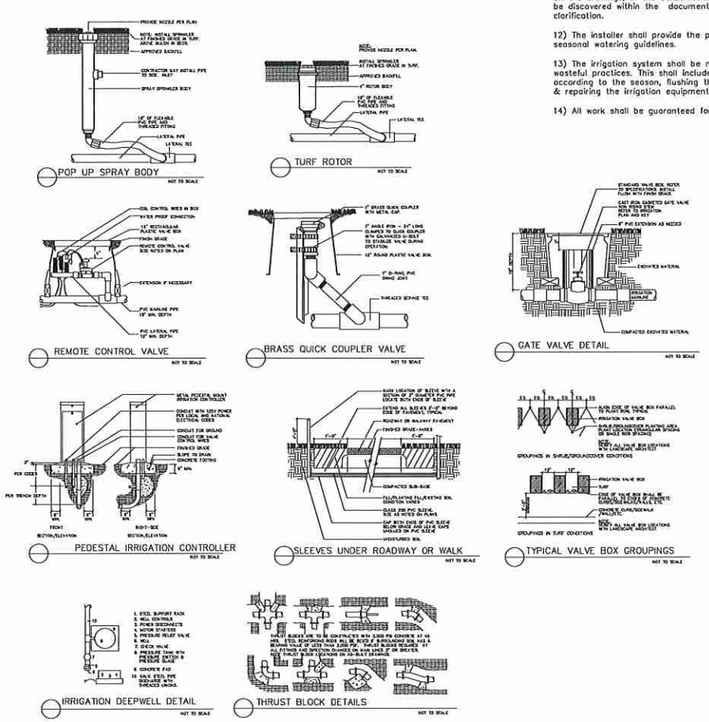
ISOLATION VALVE. PROVIDED 10" VALVE BOX WITH EXTENSIONS. 3/4" AND SMALLER - BRONZE THREAD ON TYPE WITH WIRED HANDLE.

PVC MAINLINE PIPE, SCH80 200, PVC.

2" AND SMALLER, SCH 40 WELD PIPE AND PVC SOLVENT WELD FITTINGS

PVC LATERAL PIPE, SCH80 180, SOLVENT WELD, PVC. SIZE LATERAL PIPE AT 40% OF THE SIZE OF THE MAIN PIPE PER PLAN

PVC SLEEVE PIPE, SCH. 40 PVC, SOLVENT WELD PIPE.



GENERAL IRRIGATION NOTES:

1) The drawings are diagrammatic. The contractor shall not wilfully install the irrigation system when its obvious in the field that unknown obstructions, grade differences or differences in area dimensions exist that might not have been considered in the engineering. Such obstruction or difference should be brought to the attention of the owners authorized representative. In the event this notification is not performed, the irrigation contractor shall assume full responsibility for any revisions.

2) All work shall conform to any and all applicable regulations and codes for the location of the work. The installer shall obtain any necessary locates, permits and inspections.

3) All work shall be closely coordinated with that of other trades, in order to avoid conflicts. Refer to landscape and utilities plans when trenching to avoid trees, shrubs and under ground utilities

4) All material and labor required to provide a complete, operational and fully guaranteed system shall be considered part of the work, whether or not they are specifically indicated in the documents.

5) The contractor shall prepare an as-built drawing on a reproducible paper (sepia or mylar showing all irrigation installation. A mylar or sepia of the original plan maybe obtained from the landscape architect for a fee. The drawing shall locate all mainline and valves by showing exact measurements from hard surfaces. Please show wire direction

6) All heads shall be of the proper type for the areas where located, and shall be installed plumb and with the proper height. All heads and other equipment shall be installed with adequate and uniform clearance from all hard-scaping, to minimize water over spray on impervious areas.

7) Contractor shall perform pressure and volume test on irrigation water source over a continuous 24 hour period prior to the commencement of any construction work. Should the available supply not be adequate to meet the demands of the irrigation system as designed the contractor shall contact the landscape architect prior to construction for design modifications.

8) All zone wiring shall be installed under mainline, if not possible then elec. Conduit shall be used for wire protection using pull boxes 150' o.C. Wires shall be taped every 20 l.F. with adequate slack and surge/ expansion loops and shall be spliced only in valve boxes, using "dby" connectors. The control wire shall be 14-1 uf pvc jacketed, single conductor cable, using red for "hot" and white for valve common. (see plan for spare wires.)

9) All piping and wire passing under paved areas shall be sleeved with sch 40 PVC pipe, sized a minimum of two nominal sizes larger than contained pipe.

10) Any piping shown outside the property line or running outside a landscape area is shown there for clarity only. All lines shall be installed on the property and inside the landscape areas.

11) The installer shall be expected to be familiar with and follow the instructions contained herein, on the drawings, in the construction details, and in the written specifications, should a conflict be discovered within the documents, he shall immediately notify the project manager and request clarification.

12) The installer shall provide the property owner with an irrigation maintenance checklist & seasonal watering guidelines.

13) The irrigation system shall be maintained and managed to ensure water efficiency and prevent wasteful practices. This shall include, but not limited to, resetting the automatic controller according to the season, flushing the filters, testing the rain sensor devices, monitoring, adjusting & repairing the irrigation equipment such that the efficiency of the system is maintained.

14) All work shall be guaranteed for one year from the date of final acceptance.

RCE Consultants
Engineering Real Solutions

SELF STORAGE FACILITY
IRRIGATION PLAN
APOPKA, FLORIDA

NO:	DATE:	REVISION / ISSUE DATE:	BY:

RCE CONSULTANTS, LLC
617 Jeffery Drive
Altamonte Springs, FL 32701
Phone No. 407-452-8633
larry@rceconsultants.net

Landscape Architect of Record

Christopher M. Kennedy
LA0666357

RCE CONSULTANTS, LLC
Certificate of Authorization 29307

BEFORE YOU DIG !
CALL SUNSHINE STATE ONE CALL OF FLORIDA
AT LEAST TWO FULL BUSINESS DAYS BEFORE DIGGING OR DISTURBING EARTH
811
Know what's below. Call before you dig.

PROJECT #: 63.2019
DRAWN:CK CHECKED: LMP
DATE: NOV 2019
SCALE: 1"=30'
SHEET: I-01
IRRIGATION PLAN

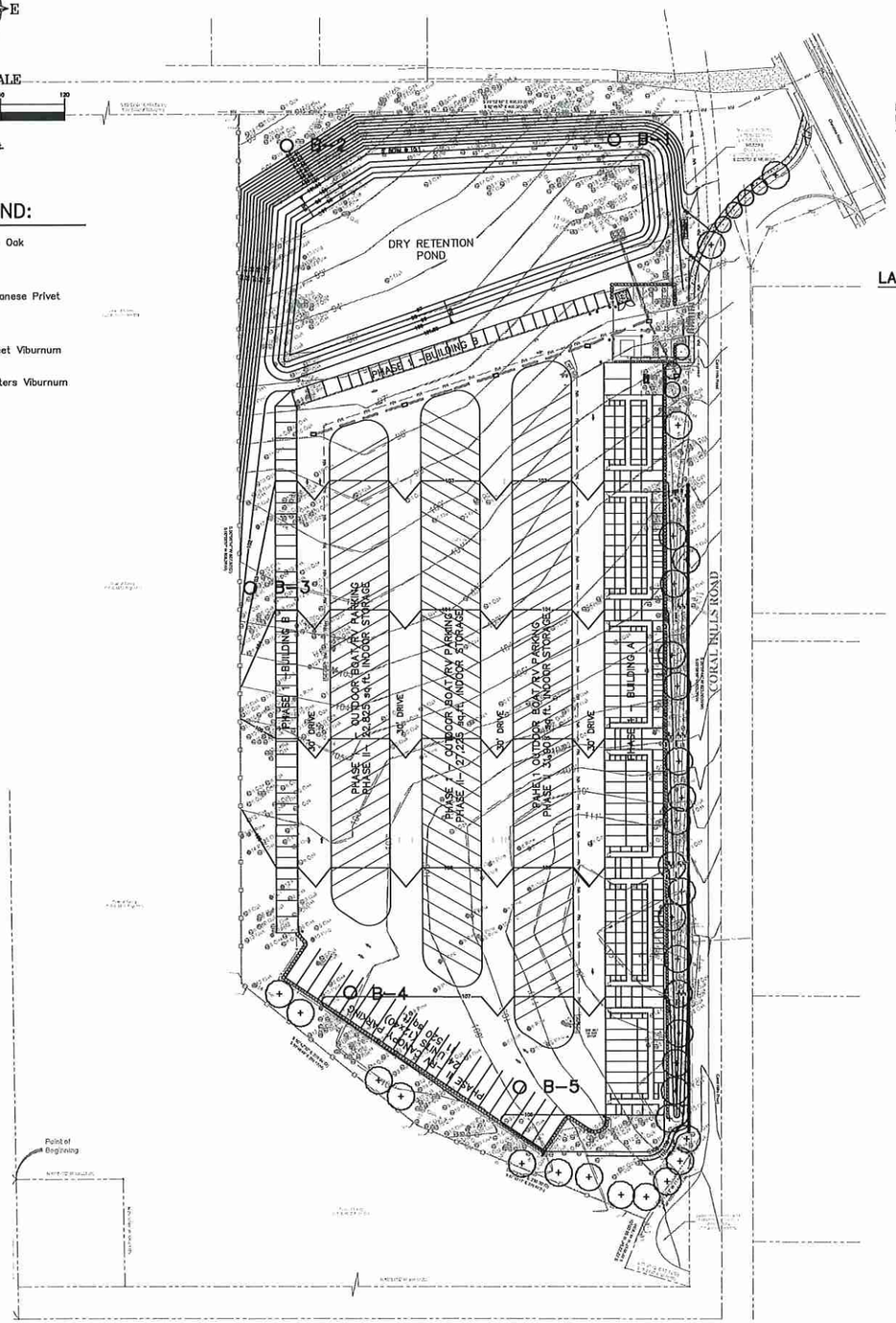
DocuSign Envelope ID: 07DB5A53-8A4C-4B52-81C7-6465132BAE89

GRAPHIC SCALE

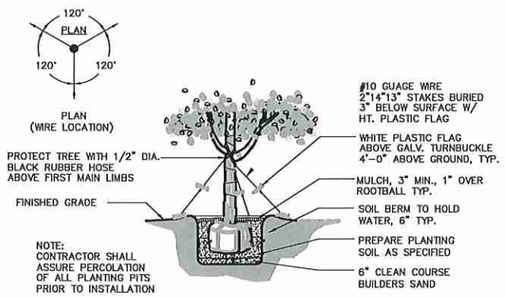
(IN FEET)
1 inch = 60 ft.

PLANT LEGEND:

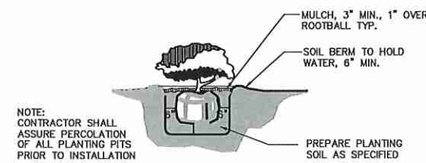
- Live Oak
- Japanese Privet
- Sweet Viburnum
- Walters Viburnum



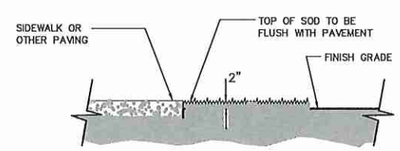
LANDSCAPE PLAN



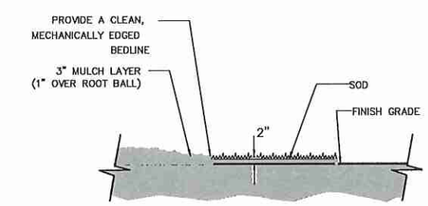
LARGE TREE DETAIL — Scale: N.T.S. (1 / L-01)



SHRUB DETAIL — Scale: N.T.S. (2 / L-01)



SOD PLACEMENT ADJ. TO PAVEMENT — Scale: N.T.S. (3 / L-01)



SOD PLACEMENT ADJ. TO MULCH — Scale: N.T.S. (4 / L-01)

LANDSCAPE NOTES:

1. All plant material shall be Florida Grade No. 1 or better as specified in "Grades and Standards for Nursery Plants", "Parts 1 and 2, by Division of Plant Industry, Florida", Department of Agriculture and Consumer Services, and shall conform to current American Association of Nurserymen 'Standards for Nursery Stock', latest edition.

2. The landscape contractor shall be responsible for verification of quantities the plant list. In the event of a conflict between quantities on the plant list and the plans, the plans shall control and the discrepancy shall be brought to the attention of the landscape architect prior to bid. Any deviation from these plans must be approved by the Landscape Architect or owner's representative.

3. Contractor is responsible for compliance with all applicable building codes, ordinances and local regulations. The contractor shall be responsible for obtaining all necessary permits to perform the work.

4. The landscape contractor is responsible for inspection of existing conditions and promptly reporting all discrepancies and improper conditions (wetness, muck, debris, ect) to the Landscape Architect prior to bidding. Contractor is responsible for soil analysis prior to installation of plantings, and is responsible for all soil amendments to conform to specifications.

5. All tree material shall be container grown unless otherwise specified.

6. The landscape contractor shall aquaint himself with all civil drawings as they relate to paving, site grading, and all utilities, (including water, sewer and electrical supply) to preclude any misunderstanding and ensure trouble free installation. The exact location of all existing structures, underground utilities, existing underground sprinklers and pipe may not be indicated on drawings. The contractor shall conduct his work in a manner to prevent interruption or damage to existing systems which must remain operational. The contractor shall protect utility services which must remain operational and shall be responsible for there replacement if damaged by him.

7. Mulch shall be organic and shall not be placed on top of the root ball or placed against the trunk. Mulch shall be applied a minimum of 12" to 18" from the trunk of any sized tree. Materials such as rock and shells that do not biodegrade, are not deemed acceptable. Failure to install mulch (and type of mulch) as provided in the specification above may result in a failed inspection. See http://hort.ifas.ufl.edu/woody/over-mulching.html for more information.

8. Refer to specifications for complete requirements.

9. In the event of a conflict between quantities on the plant list and the plans, the plan shall take precedent.

IRRIGATION NOTES:

1. All landscaped areas shall be irrigated with a permanent automatic irrigation system providing 100% coverage.

2. An automatic moister sensor/shutoff shall be part of the system.

3. All tree, shrub, and groundcover material proposed for this site is medium to low water use. Micro or drip irrigation will be installed in these beds.

PLANT LIST:

QTY.	ABBREV.	BOTANICAL NAME	COMMON NAME	SIZE & SPECIFICATION
TREES & SHRUBS				
7	LJ	Ligustrum japonicum	Japanese Privet	45 Gal., 2" Total DBH, Multi Trunk, 8'-10' Ht.
32	QV	Quercus virginiana	Live Oak	65 Gal., 3" DBH. 16'-18' Ht.
SHRUBS, VINES & GROUND COVER				
26	WAL	Viburnum obovatum 'Densa'	Dwarf Walter's Viburnum	24" Min. Ht., 3 Gal. 24" O.C.
408	VIB	Viburnum odoratissimum	Sweet Viburnum	36" Min. Ht., 3 Gal. 36" O.C.
SOD& MISCELLANEOUS ITEMS				
SOD		Paspalum notatum	Bahia Solid Sod	SOLID SOD, SOD WILL NOT BE IRRIGATED
MULCH		Shredded Melaleuca Mulch		

RCE Consultants
Engineering Real Solutions

SELF STORAGE FACILITY
LANDSCAPE PLAN
APOPKA, FLORIDA

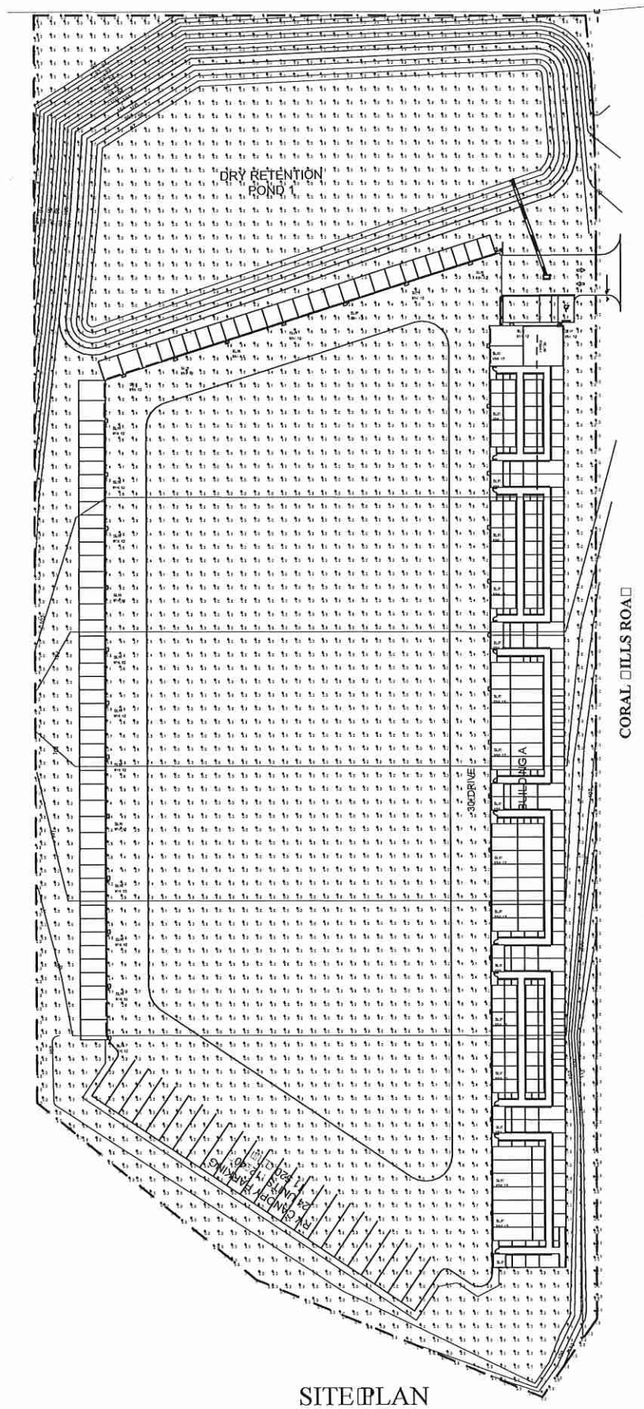
NO:	DATE:	REVISION / ISSUE DATE:	BY:

RCE CONSULTANTS, LLC
617 Arrera Drive
Altamonte Springs, FL 32701
Phone No. 407-452-8633
larry@rceconsultants.net

Landscape Architect of Record
Christopher M. Kennedy
LA0666337
RCE CONSULTANTS, LLC
Certificate of Authorization 29207

PROJECT #: 63.2019
DRAWN:CK CHECKED: LMP
DATE: NOV 2019
SHEET: L-01
SCALE: 1"=30'
LANDSCAPE PLAN

DocuSign Envelope ID: 07DB5A53-9A4C-4BS2-91C7-64651329AE89



SITE□PLAN

L□□d□□□ L□□□□□ S□□□								
S□□ □□	□MANU□AC□	□□	L□□□	D□□□□□□	LL□	L□□□W□□□	L□□□L□□□□	□UG R□□□□
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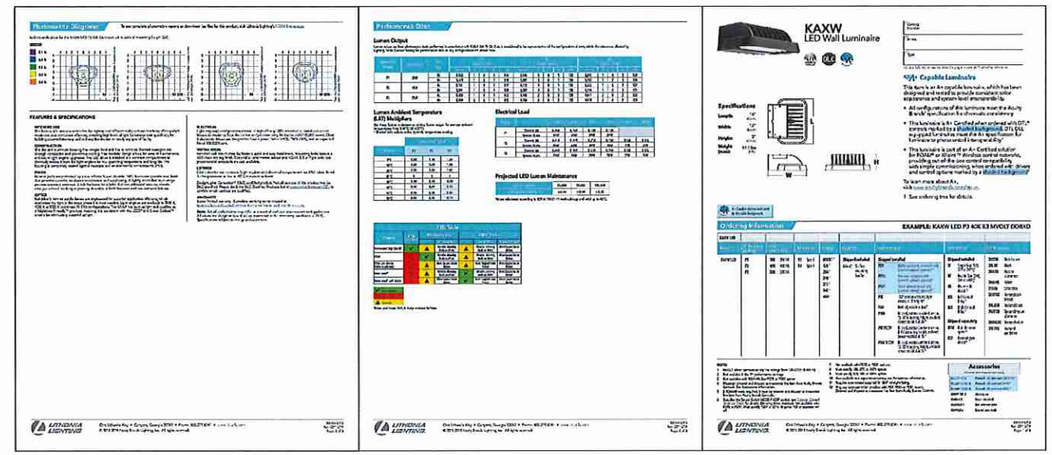
PROPERTY LINE	□□□ □□□□□	□□	□□□	□□□	□□□	N/A□	N/A□



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CORAL □ILLS SEL□STORA□E
P□OTOMETRIC PLAN
APOP□A, □L

RCE Consultants
Engineering Real Solutions

NO:	DATE:	REVISION / ISSUE DATE:	BY:

RCE CONSULTANTS, LLC
637 Ar□rn □rl□
Alta□nte S□te□□ □□3370□
Phone No□407)252□□533
LARR□□ RCE CONSULTANTS.NET

En□neer of Record
5/28/2020
Laurence Pulner
#56974
RCE CONSULTANTS, LLC
Certificate of Authorization 29307

PROJECT #: 33.2019
DRAWN:LMP CHECKED: LMP
DATE: MARCH 2020
SCALE: 1"=50'
SHEET: PH□□
P□OTOMETRIC PLAN

DocuSign Envelope ID: 07D05433-9445-4512-81C7-44511123AE89

Topographic Survey

Location Description

Tax Parcel 78 [illegible] 1/4 of Section 22, Township 21 South, Range 28 East, [illegible] 89.16 [illegible] North & South 30 [illegible] Road Right-of-Way) & [illegible] 100 [illegible] 100 [illegible]

Order

Additional

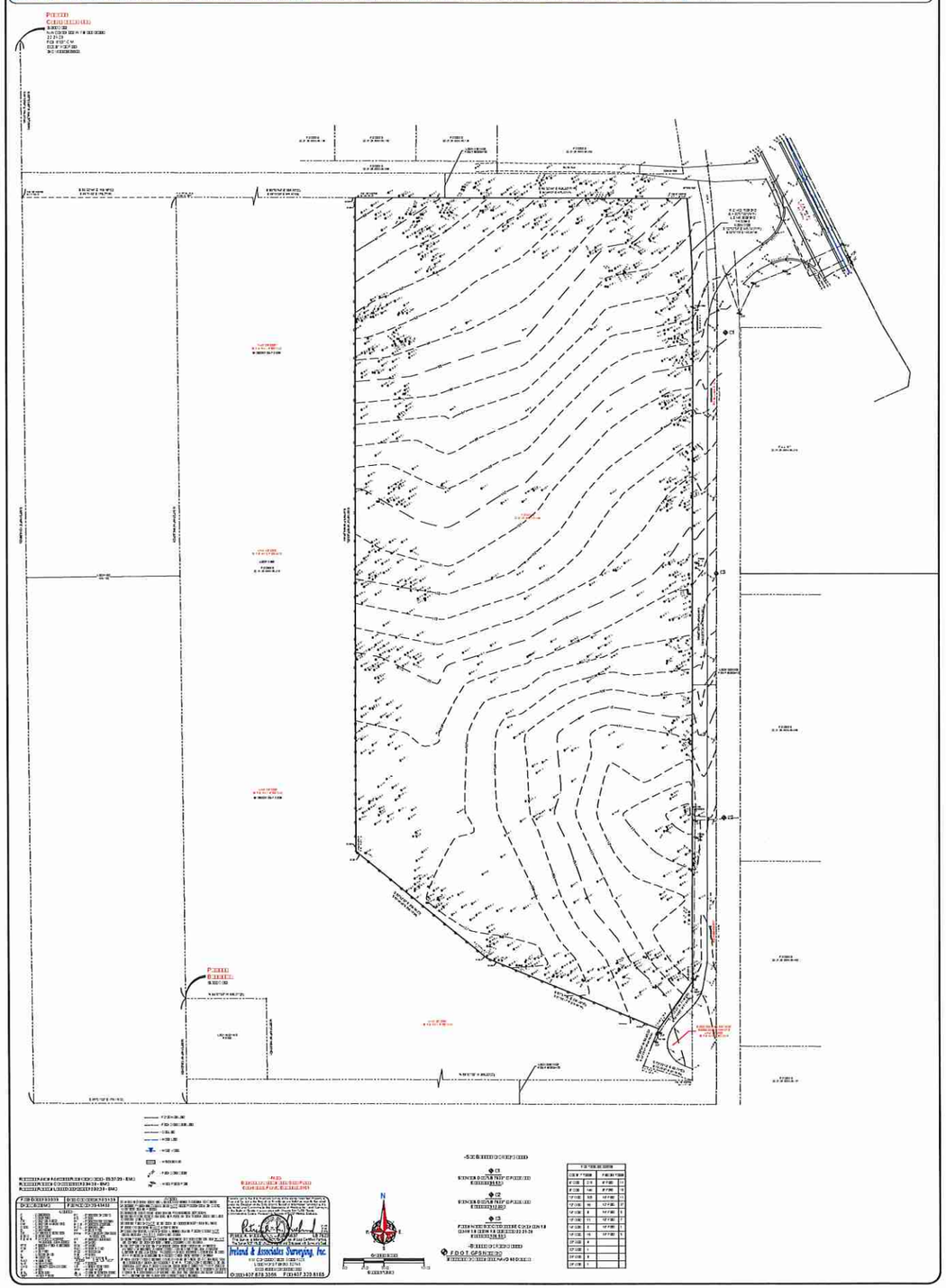
Commence at the Northwest corner of the Southwest 1/4 of Section 22, Township 21 South, Range 28 East, thence run South 00°31'48" East, 1314.96 feet; thence run South 89°51'02" East, 189.19 feet; thence run North 00°31'48" West, 130.01 [illegible] Point of Beginning.

Thence Continue North 00°31'48" West, 990.69 feet; thence run South 89°52'44" East, 684.59 feet; thence run South 00°09'14" West, 807.93 feet; thence run South 50°42'32" East, 209.04 feet; thence run South 67°37'06" East, 230 ft; thence run South 22°22'54" West, 50.00 feet; thence run South 73°23'12" East, 62.70 feet; thence run North 89°51'02" West, 988.53 feet; thence run North 00°31'48" West, 100.01 feet; thence run North 89°51'02" West, 100.01 feet to the Point of Beginning.

FOR [illegible]

[illegible] CLARCONA ROAD, WINTER GARDEN, FLORIDA 34787

CERTIFIED TO: DA SPACE STORAGE CLARCONA LLC; WARREN & GRANT P.A.



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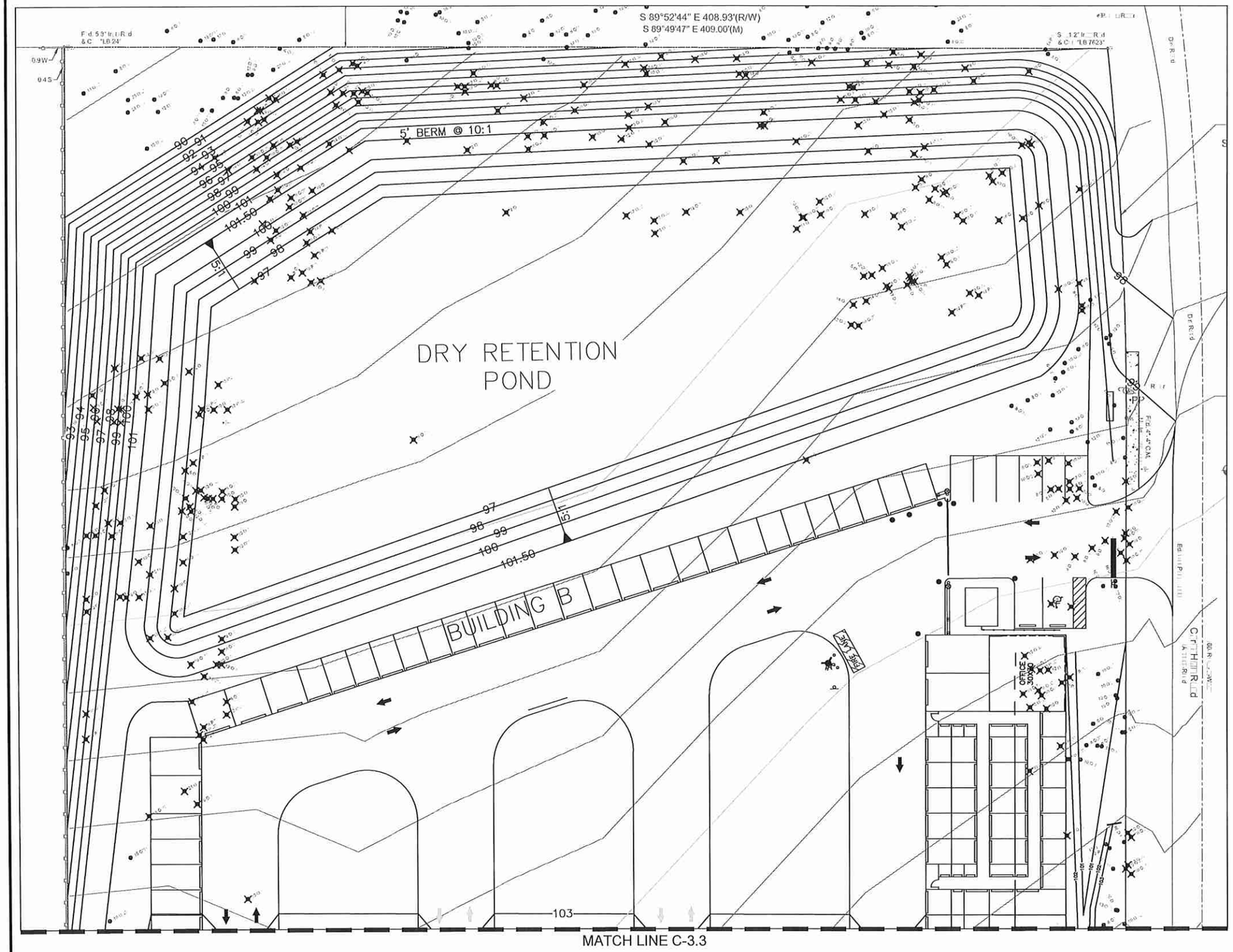

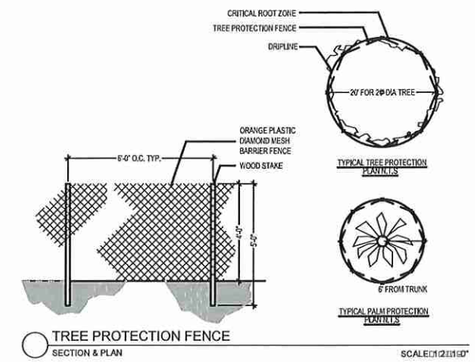

TREE PROTECTION FENCE
SECTION & PLAN

SCALE: 1/2" = 1'-0"

LEGEND

223 = TREE REFERENCE NUMBER (TYPICAL, EXAMPLE ONLY)
20X34 OAK = 20" DIAMETER OF TRUNK & 34" DIAMETER OF CANOPY (EXAMPLE ONLY, TRUNK & CANOPY DIAMETERS VARY)
227 = TREE REFERENCE NUMBER (TYPICAL, EXAMPLE ONLY)
20 OAK = 20" DIAMETER TRUNK (EXAMPLE ONLY, DIAMETERS VARY)

= PINE TREE
= OAK TREE
= TREE TO BE REMOVED
= HISTORIC TREE
= TREE TO BE PROTECTED
= TREE PROTECTION AREA

N
W E
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GRAPHIC SCALE

30 0 10 20 40

(IN FEET)
1 inch = 20 ft.

RCE Consultants
Engineering Real Solutions

CORAL □ILLS SEL□STORA□E
TREE MITI□ATION PLAN
APOP□A, □L

NO:	DATE:	REVISION / ISSUE DATE:	BY:

RCE CONSULTANTS, LLC
6□7 Ar□ren Drl□
Alta□lonte S□ln□□ □□□370□
Phone No□407□252□□33
LARR□□D RCECONSULTANTS.NET

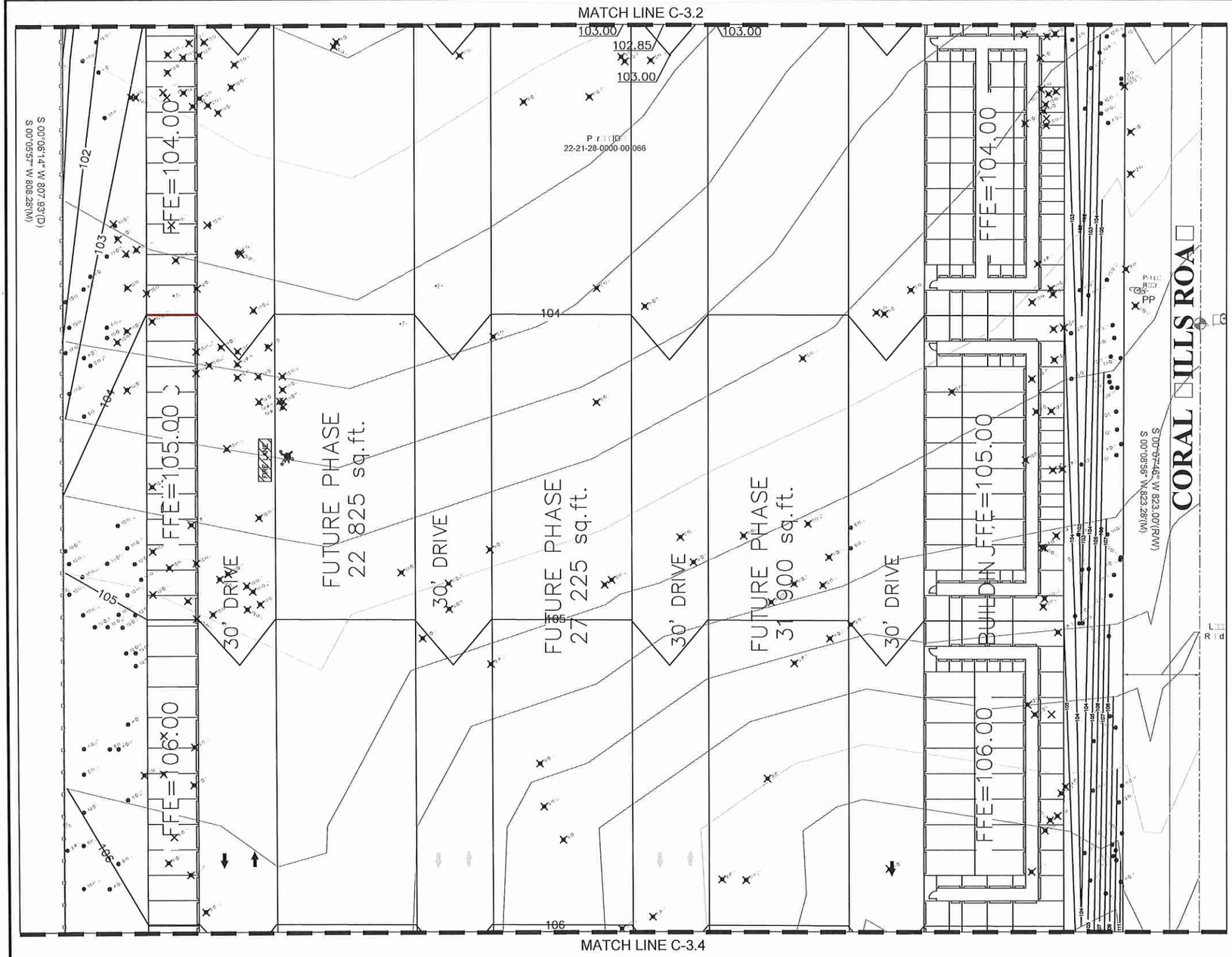
En□ineer of Record
5/28/2020

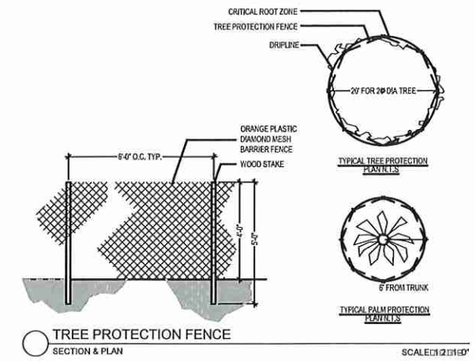
Laurence Pollner
856974

RCE CONSULTANTS, LLC
Certificate of Authorization 29307

PROJECT #: 33.2019
DRAWN:LMP CHECKED: LMP
DATE: MARCH 2020
SHEET: TM□□
SCALE: 1"=20'
TREE MITI□ATION PLAN

DocuSign Envelope ID: 07DB5A53-8A4C-4B52-91C7-64651329AE69





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- = TREE TO BE PROTECTED
- = TREE PROTECTION AREA

N
W E
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GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
1 inch = 20 ft.

RCE Consultants
Engineering Real Solutions

CORAL HILLS SELF STORAGE
TREE MITIGATION PLAN
APOPKA, FL

NO:	DATE:	REVISION / ISSUE DATE:	BY:

RCE CONSULTANTS, LLC
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Altamonte Springs, FL 32701
Phone No. (407) 352-1633
LARRY@RCECONSULTANTS.NET

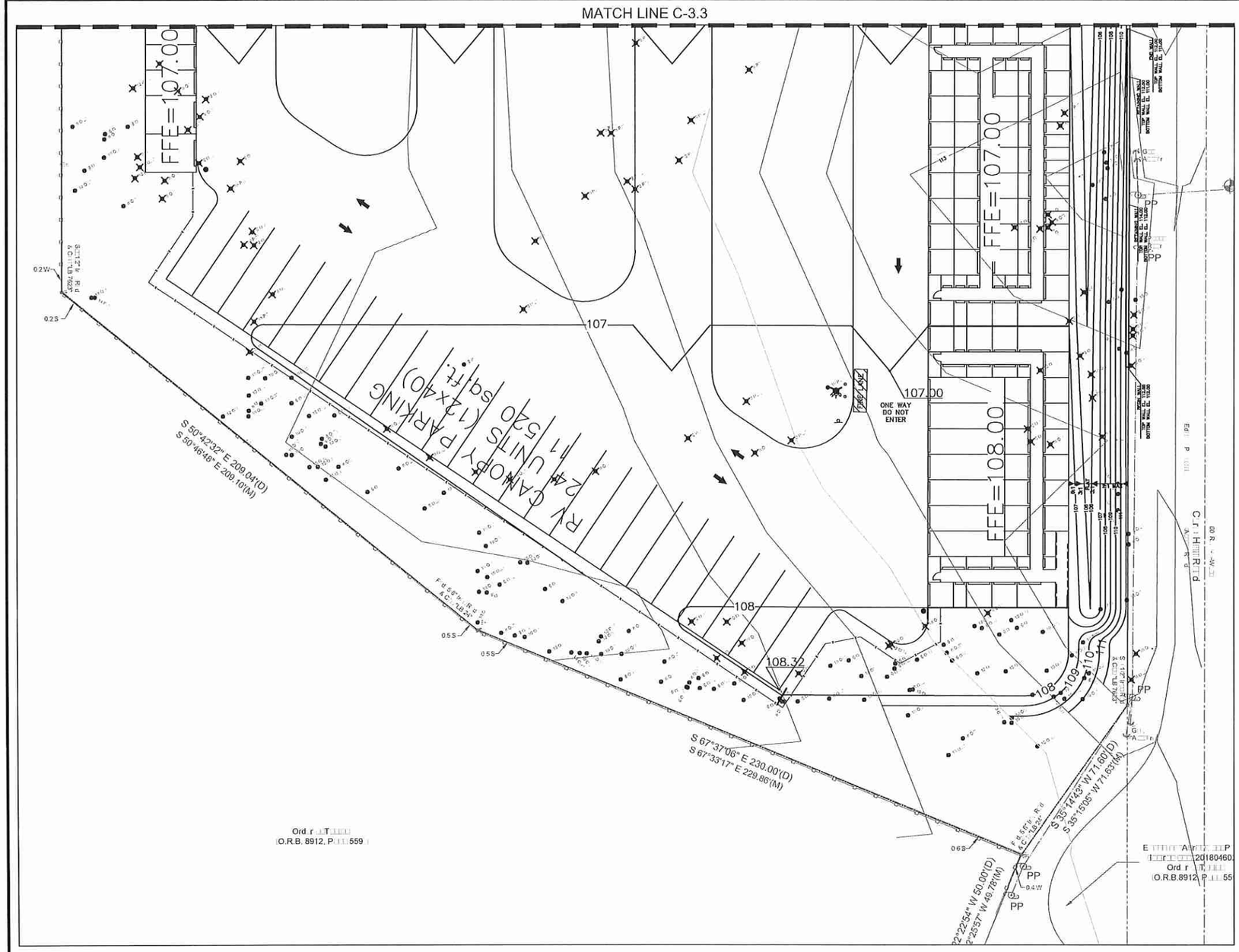
Engineer of Record
5/28/2020

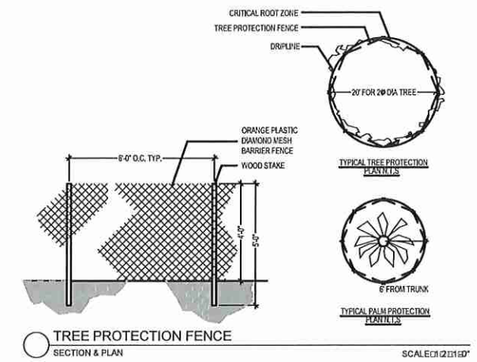
Laurence Pollner
#56974

RCE CONSULTANTS, LLC
Certificate of Authorization 27307

PROJECT #: 33.2019
DRAWN: LMP CHECKED: LMP
DATE: MARCH 2020
SCALE: 1"=20'
SHEET: TM-1
TREE MITIGATION PLAN

DocuSign Envelope ID: 07DB5A53-8A4C-4B52-91C7-64651329AE69





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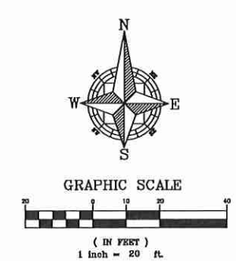

RCE Consultants
Engineering Real Solutions

CORAL □ILLS SEL□STORA□E
TREE MITI□ATION PLAN
APOP□A, □L

NO:	DATE:	REVISION / ISSUE DATE:	BY:

RCE CONSULTANTS, LLC
6□7 Ar□ern Cr□□
Alta□onte S□rin□ □L □□37□□
Phone No□407□251□833
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En□ineer of Record
5/28/2020
Laurence Pollner
#56974
RCE CONSULTANTS, LLC
Certificate of Authorization 29307

PROJECT #: 33.2019
DRAWN: LMP CHECKED: LMP
DATE: MARCH 2020
SHEET: TM□□
SCALE: 1"=20'
TREE MITI□ATION PLAN

DocuSign Envelope ID: 07D85A53-8A4C-4B52-91C7-64651328AE89

Trees to Remain		
Tree No.	DBH	Type
42	6	Oak
43	6	Oak
44	10	Oak
45	8	Oak
60	12	Oak
61	8	Oak
62	8	Oak
63	12	Oak
65	10	Oak
66	6	Oak
67	6	Oak
68	8	Oak
71	8	Oak
111	12	Oak
112	6	Oak
113	8	Oak
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214	10	Oak
215	10	Oak
216	6	Oak
217	10	Oak
218	10	Oak
219	10	Oak
220	10	Oak
221	10	Oak
222	10	Oak
223	12	Oak
225	10	Oak
226	8	Oak
227	6	Oak
228	8	Oak
229	6	Oak
231	6	Oak
232	6	Oak
233	6	Oak
234	6	Oak
235	6	Oak
236	6	Oak
240	10	Oak
241	10	Oak
243	6	Oak
244	6	Oak
245	6	Oak
246	6	Oak
248	10	Oak
249	6	Oak
250	6	Oak
251	18	Oak
252	15	Oak
253	6	Oak
255	6	Oak
256	6	Oak
257	6	Oak
258	10	Oak
259	10	Oak
260	6	Oak
265	15	Oak
266	6	Oak
267	12	Oak
268	12	Oak
269	6	Oak
271	6	Oak
272	10	Oak
273	10	Oak
274	10	Oak
275	10	Oak
276	10	Oak
277	6	Oak
278	10	Oak
279	10	Oak
280	10	Oak
281	10	Oak
282	10	Oak
283	10	Oak
284	10	Oak
285	10	Oak
301	12	Oak
302	10	Oak
303	10	Oak
305	10	Oak
306	6	Oak
307	10	Oak
308	10	Oak
309	10	Oak
310	10	Oak
311	10	Oak
312	6	Oak
313	10	Oak
314	18	Oak
315	15	Oak
316	15	Oak
317	6	Oak
318	8	Oak
319	12	Oak
320	15	Oak
321	6	Oak
322	6	Oak
323	6	Oak
325	8	Oak
326	8	Oak
328	12	Oak
350	10	Oak
351	10	Oak
352	10	Oak
353	10	Oak
354	10	Oak
355	10	Oak
356	10	Oak
357	10	Oak
358	10	Oak
359	10	Oak
360	10	Oak
361	10	Oak
362	10	Oak
363	10	Oak
364	10	Oak
365	10	Oak
366	10	Oak
367	10	Oak
368	10	Oak
413	10	Oak
414	12	Oak
415	12	Oak
416	10	Oak
417	10	Oak
418	10	Oak
419	10	Oak
420	10	Oak
422	6	Oak
423	6	Oak
424	8	Oak
425	10	Oak
432	8	Oak
433	8	Oak
434	8	Oak
435	6	Oak
436	8	Oak
437	8	Oak
438	12	Oak
440	10	Oak
455	12	Oak
456	10	Oak
458	10	Oak
459	6	Oak
460	6	Oak
461	6	Oak
462	6	Oak
463	6	Oak
464	6	Oak
465	10	Oak
466	10	Oak
519	12	Oak
520	10	Oak
521	10	Oak
522	10	Oak
523	10	Oak
524	10	Oak
525	10	Oak
526	15	Oak
534	10	Oak
535	18	Oak
536	6	Oak
538	10	Oak
539	15	Oak
577	10	Oak
578	10	Oak
579	12	Oak
581	10	Oak
582	10	Oak
583	12	Oak
584	8	Oak
585	6	Oak
586	10	Oak
587	10	Oak
590	10	Oak
591	10	Oak
592	10	Oak
594	10	Oak
598	10	Oak
599	10	Oak
600	10	Oak
601	10	Oak
623	10	Oak
624	6	Oak
625	6	Oak
626	6	Oak
627	10	Oak
628	10	Oak
629	10	Oak
630	10	Oak
631	10	Oak
647	10	Oak
648	10	Oak
649	10	Oak
650	10	Oak
727	8	Oak
728	6	Oak
731	10	Oak
732	10	Oak
733	10	Oak
748	6	Oak
751	8	Oak
757	10	Oak
761	10	Oak
762	6	Oak
763	15	Oak
765	12	Oak
766	6	Oak
767	12	Oak
768	10	Oak
769	10	Oak
770	6	Oak
771	8	Oak
772	8	Oak
773	6	Oak
774	8	Oak
775	12	Oak
776	10	Oak
777	8	Oak
778	12	Oak
830	8	Oak
875	8	Oak
878	8	Oak
879	6	Oak
887	10	Oak
890	6	Oak
937	14	Oak
941	10	Oak
955	10	Oak
975	10	Oak
1011	6	Oak
1012	20	Oak
1019	12	Oak
1020	8	Oak
1029	10	Oak
1030	6	Oak
1035	8	Oak
1036	10	Oak
1038	8	Oak
1041	12	Oak
1042	12	Oak
1043	10	Oak
1044	20	Oak
1045	24	Oak
1046	8	Oak
1047	14	Oak
TOTAL	2644	Oak
46	12	Pine
64	14	Pine
108	8	Pine
109	8	Pine
110	14	Pine
224	10	Pine
428	12	Pine
429	12	Pine
537	12	Pine
580	12	Pine
593	12	Pine
780	12	Pine
831	14	Pine
TOTAL	152	Pine

RCE Consultants
Engineering Real Solutions

CORAL □ILLS SEL□STORA□E
TREE MITI□ATION PLAN
APOP□A, □L

NO:	DATE:	REVISION / ISSUE DATE:	BY:

RCE CONSULTANTS, LLC
427 Ar□ore □rive
Alta□onte S□rin□s, □L 32701
Phone No407□5175533
LARR□□ RCECONSULTANTS.NET

En□ineer of Record
5/28/2020
Lawrence Pollner
#56974
RCE CONSULTANTS, LLC
Certificate of Authorization 29307

PROJECT #: 33.2019
DRAWN:LMP CHECKED: LMP
DATE: MARCH 2020
SHEET: TM□□
SCALE: N/A
TREE MITI□ATION PLAN

DocuSign Envelope ID: 07DB5A53-9A4C-4B52-91C7-64651329AE89

Trees to be Removed

Tree No.	DBH	Type
51	10	Oak
52	10	Oak
53	6	Oak
54	6	Oak
55	6	Oak
69	8	Oak
70	8	Oak
74	6	Oak
75	6	Oak
77	8	Oak
78	6	Oak
79	6	Oak
80	6	Oak
81	8	Oak
82	6	Oak
84	6	Oak
85	8	Oak
86	8	Oak
120	6	Oak
121	6	Oak
122	6	Oak
123	6	Oak
124	6	Oak
125	6	Oak
126	6	Oak
127	6	Oak
128	6	Oak
129	6	Oak
130	6	Oak
131	6	Oak
132	6	Oak
137	6	Oak
138	6	Oak
139	6	Oak
140	8	Oak
141	6	Oak
142	12	Oak
146	8	Oak
147	10	Oak
153	6	Oak
155	12	Oak
156	8	Oak
157	12	Oak
165	15	Oak
166	8	Oak
168	6	Oak
169	8	Oak
170	8	Oak
171	8	Oak
173	8	Oak
174	8	Oak
175	8	Oak
176	12	Oak
177	10	Oak
179	6	Oak
180	8	Oak
181	8	Oak
186	8	Oak
187	8	Oak
188	10	Oak

190	10	Oak
191	8	Oak
196	10	Oak
230	6	Oak
237	10	Oak
238	10	Oak
239	10	Oak
242	6	Oak
247	6	Oak
254	12	Oak
261	18	Oak
262	6	Oak
263	6	Oak
264	6	Oak
270	6	Oak
324	8	Oak
327	8	Oak
329	10	Oak
331	10	Oak
332	6	Oak
333	8	Oak
336	8	Oak
339	6	Oak
340	6	Oak
369	10	Oak
370	10	Oak
371	10	Oak
372	10	Oak
373	10	Oak
375	10	Oak
376	10	Oak
377	10	Oak
378	10	Oak
379	10	Oak
381	10	Oak
382	10	Oak
383	10	Oak
384	10	Oak
385	10	Oak
386	10	Oak
387	6	Oak
388	6	Oak
389	6	Oak
390	6	Oak
392	6	Oak
393	6	Oak
394	6	Oak
395	6	Oak
396	6	Oak
397	6	Oak
398	6	Oak
400	6	Oak
401	6	Oak
402	6	Oak
403	6	Oak
404	6	Oak
405	6	Oak
406	6	Oak
407	6	Oak
408	6	Oak
409	18	Oak
412	18	Oak

426	10	Oak
427	8	Oak
430	6	Oak
439	10	Oak
441	8	Oak
442	8	Oak
445	12	Oak
446	8	Oak
457	10	Oak
467	10	Oak
468	10	Oak
469	10	Oak
470	10	Oak
471	10	Oak
472	10	Oak
473	10	Oak
474	10	Oak
475	10	Oak
476	10	Oak
477	10	Oak
478	10	Oak
480	10	Oak
482	12	Oak
483	6	Oak
484	10	Oak
485	10	Oak
486	10	Oak
488	10	Oak
489	10	Oak
490	10	Oak
491	10	Oak
492	10	Oak
493	12	Oak
494	12	Oak
496	10	Oak
497	10	Oak
498	10	Oak
502	6	Oak
503	6	Oak
504	6	Oak
505	6	Oak
506	6	Oak
507	6	Oak
508	6	Oak
509	6	Oak
510	6	Oak
511	10	Oak
512	10	Oak
514	12	Oak
515	10	Oak
516	10	Oak
517	10	Oak
518	10	Oak
540	10	Oak
541	10	Oak
542	10	Oak
543	10	Oak
544	10	Oak
545	10	Oak
546	10	Oak
547	10	Oak
548	10	Oak

549	10	Oak
550	10	Oak
551	10	Oak
552	10	Oak
553	6	Oak
554	10	Oak
555	10	Oak
556	10	Oak
557	15	Oak
558	6	Oak
559	6	Oak
560	6	Oak
561	6	Oak
562	6	Oak
563	6	Oak
564	6	Oak
565	6	Oak
566	6	Oak
567	6	Oak
568	6	Oak
569	6	Oak
570	10	Oak
571	10	Oak
572	10	Oak
573	10	Oak
574	10	Oak
575	10	Oak
576	10	Oak
588	10	Oak
589	10	Oak
595	10	Oak
596	10	Oak
597	10	Oak
607	10	Oak
608	10	Oak
609	10	Oak
610	10	Oak
611	10	Oak
612	10	Oak
613	6	Oak
614	6	Oak
616	12	Oak
620	10	Oak
621	10	Oak
622	10	Oak
633	6	Oak
634	6	Oak
651	10	Oak
652	10	Oak
653	10	Oak
654	10	Oak
655	6	Oak
656	6	Oak
657	6	Oak
658	6	Oak
659	6	Oak
660	8	Oak
661	8	Oak
662	8	Oak
663	12	Oak
664	12	Oak
665	12	Oak

667	6	Oak
669	10	Oak
672	10	Oak
673	10	Oak
674	10	Oak
675	10	Oak
676	10	Oak
677	6	Oak
678	6	Oak
679	8	Oak
680	12	Oak
681	10	Oak
682	6	Oak
684	6	Oak
685	6	Oak
686	6	Oak
691	10	Oak
692	6	Oak
695	10	Oak
696	12	Oak
697	12	Oak
698	10	Oak
699	24	Oak
700	16	Oak
701	8	Oak
702	12	Oak
703	12	Oak
704	8	Oak
705	10	Oak
706	10	Oak
707	10	Oak
709	16	Oak
710	6	Oak
711	10	Oak
712	10	Oak
713	12	Oak
714	6	Oak
715	8	Oak
716	6	Oak
717	8	Oak
718	6	Oak
719	8	Oak
720	8	Oak
721	8	Oak
722	10	Oak
723	15	Oak
725	10	Oak
726	10	Oak
729	6	Oak
730	6	Oak
734	10	Oak
735	10	Oak
737	8	Oak
739	10	Oak
740	10	Oak
741	10	Oak
742	6	Oak
743	6	Oak
744	8	Oak
745	6	Oak
746	10	Oak
747	10	Oak

749	10	Oak
750	10	Oak
752	10	Oak
753	10	Oak
754	8	Oak
755	8	Oak
756	12	Oak
758	6	Oak
759	8	Oak
760	10	Oak
764	10	Oak
779	10	Oak
781	8	Oak
782	28	Oak
783	10	Oak
786	8	Oak
787	6	Oak
789	10	Oak
790	8	Oak
791	10	Oak
792	18	Oak
793	8	Oak
794	6	Oak
795	10	Oak
796	6	Oak
797	6	Oak
798	22	Oak
799	8	Oak
800	12	Oak
801	10	Oak
802	12	Oak
803	8	Oak
804	14	Oak
805	14	Oak
806	10	Oak
807	12	Oak
808	6	Oak
809	10	Oak
810	6	Oak
811	24	Oak
812	10	Oak
813	6	Oak
814	10	Oak
815	8	Oak
816	8	Oak
817	8	Oak
818	8	Oak
819	8	Oak
820	8	Oak
821	8	Oak
823	8	Oak
824	8	Oak
825	6	Oak
826	10	Oak
827	6	Oak
828	8	Oak
829	10	Oak
853	8	Oak
855	10	Oak
856	10	Oak
858	6	Oak
859	8	Oak

860	18	Oak
861	10	Oak
862	6	Oak
866	8	Oak
869	8	Oak
870	10	Oak
871	8	Oak
872	8	Oak
873	8	Oak
874	6	Oak
877	8	Oak
881	6	Oak
882	8	Oak
884	10	Oak
885	10	Oak
891	6	Oak
892	10	Oak
893	10	Oak
894	14	Oak
898	8	Oak
899	8	Oak
900	24	Oak
903	14	Oak
904	10	Oak
905	14	Oak
906	10	Oak
907	10	Oak
908	10	Oak
910	12	Oak
911	12	Oak
913	8	Oak
914	10	Oak
919	10	Oak
920	10	Oak
921	10	Oak
922	10	Oak
923	8	Oak
924	8	Oak
925	18	Oak
926	8	Oak
927	8	Oak
928	8	Oak
930	12	Oak
931	12	Oak
934	10	Oak
935	10	Oak
936	10	Oak
942	8	Oak
943	12	Oak
944	8	Oak
945	8	Oak
946	8	Oak
948	8	Oak
949	12	Oak
950	12	Oak
951	8	Oak
954	12	Oak
957	12	Oak
958	12	Oak
959	8	Oak
961	10	Oak
976	12	Oak

977	12	Oak
978	12	Oak
979	10	Oak
980	8	Oak
981	10	Oak
982	10	Oak
983	14	Oak
984	8	Oak
987	6	Oak
988	10	Oak
990	8	Oak
991	6	Oak
992	6	Oak
993	6	Oak
994	10	Oak
995	6	Oak
996	10	Oak
997	10	Oak
998	8	Oak
999	6	Oak
1000	12	Oak
1001	6	Oak
1002	8	Oak
1003	6	Oak
1004	10	Oak
1005	12	Oak
1006	10	Oak
1007	12	Oak
1013	6	Oak
1014	8	Oak
1015	10	Oak
1016	10	Oak
1017	10	Oak
1021	10	Oak
1022	6	Oak
1023	6	Oak
1024	6	Oak
1025	12	Oak
1026	6	Oak
1027	10	Oak
1031	12	Oak
1032	10	Oak
1033	12	Oak
1037	10	Oak
1039	12	Oak
TOTAL	4295	Oak
47	18	Pine
48	18	Pine
72	12	Pine
73	12	Pine
76	12	Pine
83	15	Pine
87	12	Pine
88	15	Pine
89	8	Pine
90	8	Pine
91	8	Pine
92	8	Pine
93	8	Pine
94	8	Pine
95	8	Pine
96	10	Pine

97	6	Pine
98	6	Pine
99	6	Pine
133	6	Pine
134	8	Pine
135	8	Pine
136	8	Pine
158	12	Pine
304	15	Pine
330	8	Pine
334	6	Pine
335	6	Pine
337	6	Pine
338	10	Pine
374	15	Pine
380	10	Pine
391	6	Pine
399	6	Pine
410	6	Pine
411	18	Pine
431	12	Pine
481	15	Pine
487	10	Pine
495	12	Pine
499	12	Pine
513	12	Pine
615	10	Pine
617	8	Pine
618	18	Pine
619	18	Pine
632	10	Pine
666	10	Pine
668	15	Pine
670	12	Pine
683	12	Pine
687	12	Pine
688	8	Pine
689	8	Pine
690	12	Pine
693	10	Pine
694	12	Pine
708	12	Pine
724	15	Pine
738	10	Pine
784	12	Pine
785	12	Pine
788	12	Pine
822	14	Pine
854	14	Pine
857	16	Pine
985	12	Pine
986	6	Pine
989	10	Pine
TOTAL	745	Pine

RCE Consultants
Engineering Real Solutions

CORAL HILLS SELF STORAGE
TREE MITIGATION PLAN
APOPKA, FL

NO:	DATE:	REVISION / ISSUE DATE:	BY:

RCE CONSULTANTS, LLC
6□7 Ar□ern □ri□e
Alta□onte S□rin□□ □□3270□
Phone No□407□352□1633
LARR□□RCECONSULTANTS.NET

Engineer of Record
5/28/2020
Laurence Poliner
#56974
RCE CONSULTANTS, LLC
Certificate of Authorization 29307

PROJECT #: 33.2019
DRAWN: LMP CHECKED: LMP
DATE: MARCH 2020
SHEET: TM□□
SCALE: N/A
TREE MITIGATION PLAN

DocuSign Envelope ID: 07D85A53-9A4C-4B52-91C7-64651329AE89

Off Site Trees		
Tree No.	DBH	Type
843	10	Oak
844	6	Oak
845	12	Oak
846	6	Oak
847	6	Oak
848	8	Oak
849	24	Oak
850	8	Oak
851	12	Oak
852	12	Oak
863	6	Oak
864	8	Oak
865	6	Oak
867	6	Oak
868	10	Oak
876	6	Oak
880	12	Oak
883	20	Oak
886	6	Oak
888	12	Oak
889	12	Oak
895	12	Oak
896	8	Oak
897	10	Oak
901	10	Oak
902	10	Oak
909	12	Oak
912	18	Oak
915	18	Oak
916	10	Oak
917	12	Oak
918	12	Oak
929	12	Oak
932	12	Oak
933	10	Oak
938	6	Oak
939	10	Oak
940	8	Oak
947	8	Oak
952	10	Oak
953	8	Oak
956	10	Oak
960	12	Oak
970	20	Oak
971	18	Oak
972	10	Oak
973	18	Oak
974	10	Oak
1008	12	Oak
1009	18	Oak
1010	8	Oak
1018	8	Oak
1028	12	Oak
1034	18	Oak
1040	8	Oak
TOTAL	606	Oak

RCE Consultants
Engineering Real Solutions

CORAL □ILLS SEL□STORA□E
TREE MITI□ATION PLAN
APOP□A, □L

NO:	DATE:	REVISION / ISSUE DATE:	BY:

RCE CONSULTANTS, LLC
617 Ar□ern □ri□
Alta□onte S□ring□□□32701□
Phone No□407□352□1833
LARR□D RCECONSULTANTS.NET

En□neer of Record
5/28/2020

Laurence Pollner
#56974

RCE CONSULTANTS, LLC
Certificate of Authorization 29307

PROJECT #: 33.2019
DRAWN:LMP CHECKED: LMP
DATE: MARCH 2020
SHEET: TM□□
SCALE: N/A
TREE MITI□ATION PLAN

CITY OF APOPKA
PLANNING COMMISSION

X	PUBLIC HEARING	MEETING OF:	June 9, 2020
	SITE PLAN	FROM:	Community Development
	SPECIAL REPORTS	EXHIBITS:	Vicinity Map
X	OTHER: Plat		Aerial Map
			Hidden Lake Res. FDP

SUBJECT: **HIDDEN LAKE RESRVE SUBDIVISION - PLAT**

REQUEST: **RECOMMEND APPROVAL OF THE PLAT OF HIDDEN LAKE RESERVE SUBDIVISION**

SUMMARY:

OWNER:	TGINF, LLC
APPLICANT:	M/I Homes of Orlando, LLC c/o David Brown
ENGINEER:	Madden, Moorhead and Stokes, Inc., c/o Chadwyck H. Moorhead, P.E.
LOCATION:	501 Old Dixie Highway
PARCEL ID NUMBER:	09-21-28-0000-00-006
FUTURE LAND USE:	Medium Low Density Residential (0 – 7.5 du/ac)
ZONING:	RMF (Residential Multi-Family)
EXISTING USE:	Vacant
PROPOSED USE:	92 Townhome Units
TRACT SIZE:	13.57 +/- acres (developable area); 15.60 +/- acres total
LAND DEVELOPMENT CODE:	1993

DISTRIBUTION

Mayor Nelson	Finance Director	Public Services Director
Commissioners	HR Director	Recreation Director
City Administrator	IT Director	City Clerk
Community Development Director	Police Chief	Fire Chief

RELATIONSHIP TO ADJACENT PROPERTIES:

Direction	***Future Land Use***	***Zoning***	***Present Use***
North (City)	Commercial	PUD	Multi-Family Development/Marden Ridge Apartments
East (City)	Commercial	C-C (Community Commercial)	Vacant
South (State)	Public Right-of-Way (ROW)	ROW	S.R. 414
West (State)	ROW	ROW	S.R. 451

PROJECT SUMMARY: This is a request to approve the Hidden Lake Reserve - Plat, which proposes the subdivision of the parcel into 92 townhome lots, as well as, associated open space/right-of-way/recreation/buffer/conservation/stormwater/lift station tracts.

STORMWATER: Tract P-1 is intended to serve as the stormwater pond for the development. Based on the review of the City Engineer, the stormwater pond design meets the City's Land Development Code requirements.

PUBLIC HEARING SCHEDULE:
June 3, 2020 - City Council (1:30 P.M.)
June 9, 2020 - Planning Commission (5:30 pm)
June 17, 2020 - City Council (7:00 pm)

RECOMMENDATION ACTION:

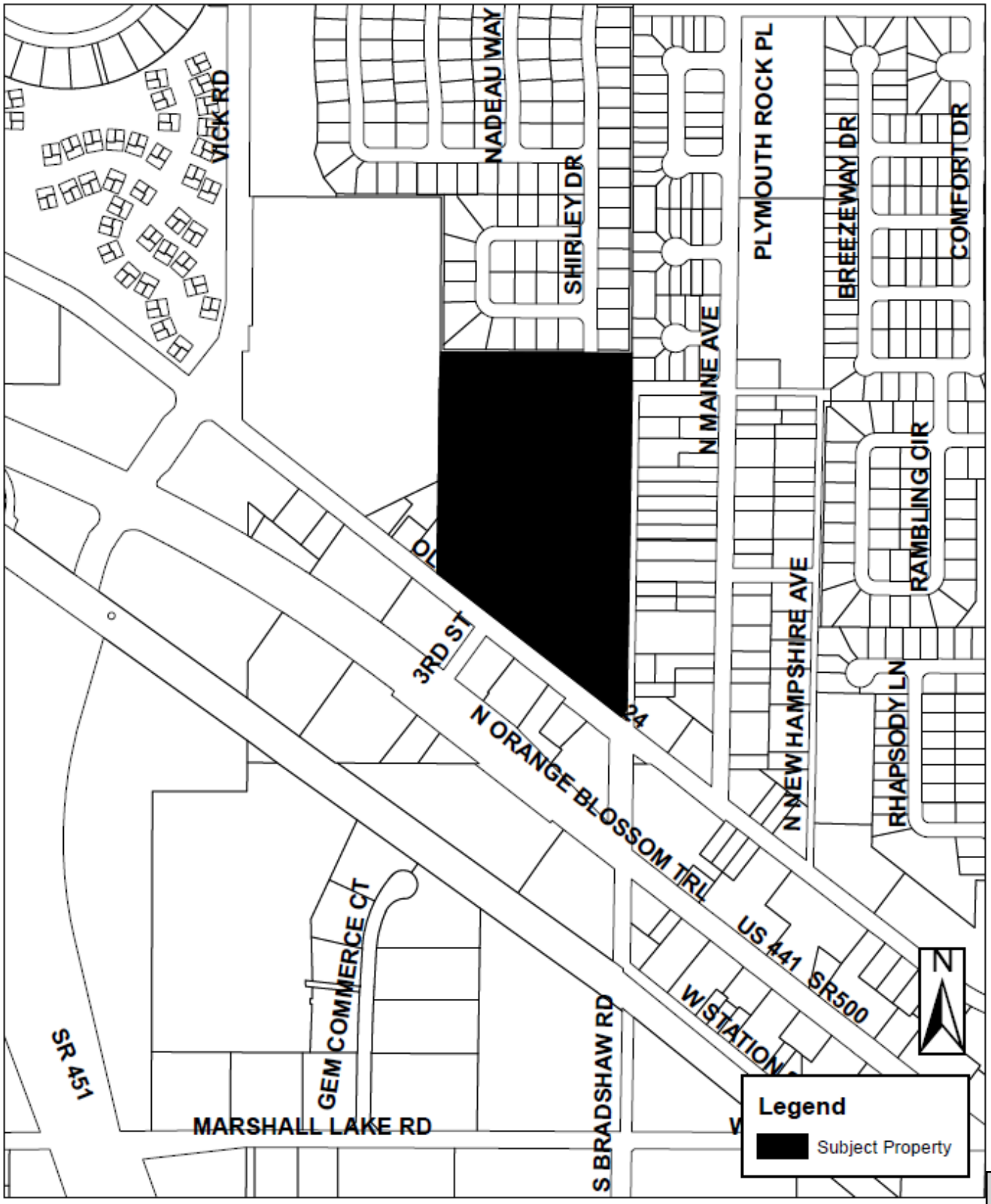
The **Development Review Committee** recommends approval of the Hidden Lake Reserve Subdivision – Plat, finding it consistent with the Land Development Code and Final Development Plan, subject to the findings of this staff report.

Recommended Motion: Find the Hidden Lake Reserve Subdivision – Plat consistent with the Land Development Code and Final Development Plan and recommend approval of the Plat, subject to the findings of this staff report.

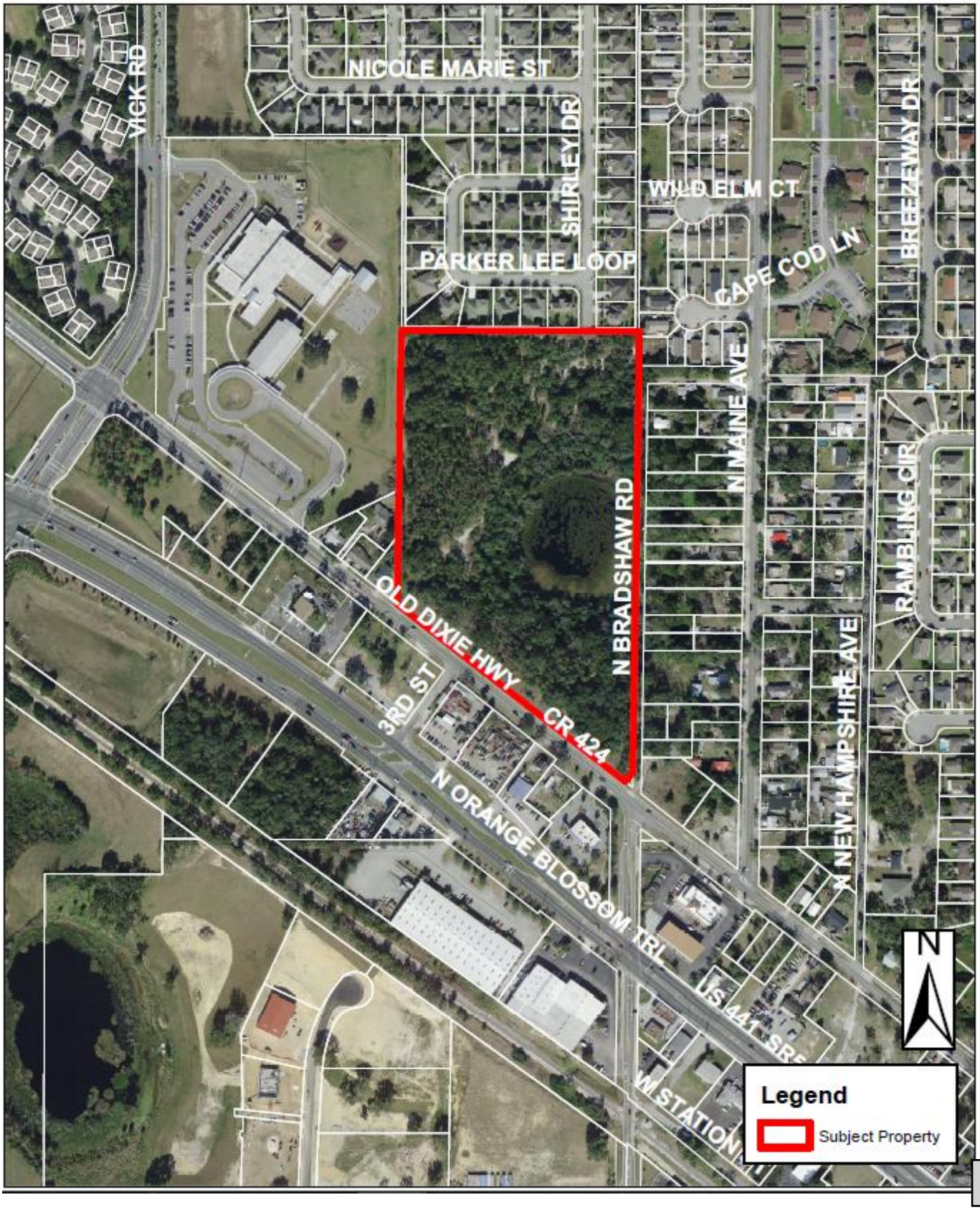
Planning Commission role: The role of the Planning Commission for this development application is to advise the City Council to approve or deny the Plat based on consistency with the Comprehensive Plan and Land Development Code.

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.

VICINITY MAP



AERIAL MAP


NICOLE MARIE ST
VICK RD
SHIRLEY DR
WILD ELM CT
PARKER LEE LOOP
CAPE COD LN
BREEZEWAY DR
N MAINE AVE
RAMBLING CIR
N BRADSHAW RD
OLD DIXIE HWY
CR 424
3RD ST
N NEW HAMPSHIRE AVE
N ORANGE BLOSSOM TRL
US 441 SR
W STATION
N
Legend
Subject Property

HIDDEN LAKE RESERVE

A PORTION OF SECTIONS 4 AND 9, TOWNSHIP 21 SOUTH, RANGE 28 EAST, ORANGE COUNTY, FLORIDA, CITY OF APOPKA

PLAT BOOK_____ PAGE _____

LEGAL DESCRIPTION:

A PARCEL OF LAND LYING IN SECTIONS 4 AND 9, TOWNSHIP 21 SOUTH, RANGE 28 EAST, ORANGE COUNTY, FLORIDA, DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTHWEST CORNER OF SECTION 4, TOWNSHIP 21 SOUTH, RANGE 28 EAST, ORANGE COUNTY, FLORIDA; THENCE RUN SOUTH 89°49'34" EAST, ALONG THE SOUTH LINE OF SAID SECTION 4 A DISTANCE OF 667.50 FEET TO THE SOUTHEAST CORNER OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SAID SECTION 4, AND THE POINT OF BEGINNING; THENCE RUN NORTH 00°14'21" EAST ALONG THE EAST LINE OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SAID SECTION 4 A DISTANCE OF 122.09 FEET TO THE SOUTH LINE OF CLAYTON ESTATES OF THE PLAT THEREOF AS RECORDED IN MAP BOOK 68, PAGES 23 THROUGH 26 OF THE PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA; THENCE RUN SOUTH 89°42'37" EAST ALONG SAID SOUTH LINE OF CLAYTON ESTATES A DISTANCE OF 667.40 FEET TO THE EAST LINE OF THE SOUTHEAST 1/4 OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SAID SECTION 4 AND THE WEST LINE OF MAINE AVENUE VILLAS WEST OF THE PLAT THEREOF AS RECORDED IN MAP BOOK 13, PAGES 7 THROUGH 8 OF THE PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA; THENCE RUN SOUTH 00°11'19" WEST ALONG SAID EAST AND WEST LINE A DISTANCE OF 120.74 FEET TO THE NORTHEAST CORNER OF THE NORTHWEST 1/4 OF THE NORTHWEST 1/4 OF SAID SECTION 9; THENCE RUN SOUTH 00°53'22" WEST ALONG THE EAST LINE OF THE NORTHWEST 1/4 OF THE NORTHWEST 1/4 OF SAID SECTION 9 AND THE WEST LINE OF NEW ENGLAND HEIGHTS OF THE PLAT THEREOF AS RECORDED IN PLAT BOOK L, PAGE 19 OF THE PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA A DISTANCE OF 1099.15 FEET; THENCE DEPARTING SAID EAST AND WEST LINE RUN SOUTH 38°01'20" WEST A DISTANCE OF 46.02 FEET TO THE NORTH RIGHT OF WAY LINE OF STATE ROAD 424 – OLD DIXIE HIGHWAY AS RECORDED IN PLAT BOOK M, PAGE 106 OF THE PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA; THENCE RUN NORTH 51°58'40" WEST, ALONG SAID NORTH RIGHT OF WAY LINE A DISTANCE OF 797.30 FEET; THENCE RUN NORTH 00°31'55" EAST A DISTANCE OF 646.21 FEET TO THE POINT OF BEGINNING.

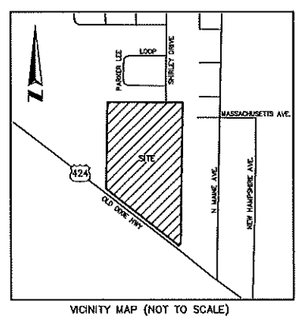
CONTAINING: 15.60 ACRES, MORE OR LESS

SURVEYOR'S NOTES:

1. BEARINGS SHOWN HEREON ARE ASSUMED BASED ON THE SOUTH LINE OF SECTION 4, TOWNSHIP 21 SOUTH, RANGE 28 EAST AS BEING S89°49'34"E. FOR ANGULAR DESIGNATION ONLY.
2. ALL LOT LINES INTERSECTING CURVES ARE RADIAL, UNLESS OTHERWISE NOTED NON-RADIAL (NR).
3. ALL PLATTED UTILITY EASEMENTS SHALL ALSO BE EASEMENTS FOR THE CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION OF CABLE TELEVISION AND DATA SERVICES; PROVIDED, HOWEVER, NO SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION OF CABLE TELEVISION SERVICES SHALL INTERFERE WITH THE FACILITIES AND SERVICES OF AN ELECTRIC, TELEPHONE, GAS, OR OTHER PUBLIC UTILITY. IN THE EVENT A CABLE TELEVISION COMPANY DAMAGES THE FACILITIES OF A PUBLIC UTILITY, IT SHALL BE SOLELY RESPONSIBLE FOR THE DAMAGES. THIS SECTION SHALL NOT APPLY TO THOSE PRIVATE EASEMENTS GRANTED TO OR OBTAINED BY A PARTICULAR ELECTRIC, TELEPHONE, GAS, OR OTHER PUBLIC UTILITY. SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION SHALL COMPLY WITH THE NATIONAL ELECTRICAL SAFETY CODE AS ADOPTED BY THE FLORIDA PUBLIC SERVICE COMMISSION.
4. TRACTS OS-1, OS-4, OS-5, OS-6, OS-9, OS-10 AND OS-11 ARE OPEN SPACE TRACTS AND SHALL BE OWNED AND MAINTAINED BY THE HIDDEN LAKE RESERVE HOME OWNERS ASSOCIATION (THE ASSOCIATION).
5. TRACTS R-1 AND R-2 ARE RECREATION TRACTS AND SHALL BE OWNED AND MAINTAINED BY THE ASSOCIATION.
6. TRACT RW-1 IS A RIGHT OF WAY TRACT AND SHALL BE OWNED AND MAINTAINED BY THE ASSOCIATION.
7. TRACTS P-1 AND P-2 ARE STORM WATER TRACTS AND SHALL BE OWNED AND MAINTAINED BY THE ASSOCIATION.
8. TRACTS B-1 AND B-2 ARE BUFFER TRACTS AND SHALL BE OWNED AND MAINTAINED BY THE ASSOCIATION.
9. TRACT C-1 (CONSERVATION TRACT) SHALL BE OWNED BY THE ASSOCIATION WITH DEVELOPMENT RIGHTS DEDICATED TO ORANGE COUNTY, FLORIDA. NO CONSTRUCTION, CLEARING, GRADING OR ALTERATION IS PERMITTED WITHOUT PRIOR APPROVAL OF ORANGE COUNTY, FLORIDA AND/OR ALL OTHER APPLICABLE JURISDICTIONAL AGENCIES.
10. WALL EASEMENTS SHOWN HEREON ARE DEDICATED TO THE ASSOCIATION AND WILL BE MAINTAINED IN ACCORDANCE WITH THE DECLARATION.
11. DRAINAGE EASEMENTS SHOWN HEREON ARE DEDICATED TO THE ASSOCIATION AND WILL BE MAINTAINED IN ACCORDANCE WITH THE DECLARATION.
12. TRACT LS-1, LIFT STATION, WILL BE OWNED AND MAINTAINED BY THE CITY OF APOPKA, FLORIDA.

LEGEND:

P.C.	POINT OF CURVATURE
P.T.	POINT OF TANGENCY
P.I.	POINT OF INTERSECTION
R.P.	RADIUS POINT
L.B.	LICENSED BUSINESS
W.E.	WALL EASEMENT
U.E.	UTILITY EASEMENT
LLC	LIMITED LIABILITY COMPANY
	CHANGE OF DIRECTION ALONG RIGHT-OF-WAY LINES
NT	NON-TANGENT
NR	NON-RADIAL
D.E.	DRAINAGE EASEMENT
℄	CENTERLINE
CCR #	CERTIFIED CORNER RECORD NUMBER
■	SET 4" X 4" CONCRETE MONUMENT LB 6723 PERMANENT REFERENCE MONUMENT (P.R.M.) RECOVERED 4" X 4" CONCRETE
⊡	MONUMENT LB 6723 (TYPICAL) PERMANENT REFERENCE MONUMENT (P.R.M.)
⊗	SET NAIL & DISK LB 6723 PERMANENT CONTROL POINT (P.C.P.)



VICINITY MAP (NOT TO SCALE)

ALLEN & COMPANY
Professional Surveyors & Mappers
16 EAST PLANT STREET
WINTER GARDEN, FLORIDA 34787
(407) 654-5355

SHEET INDEX
SHEET 1 of 3 – legal description, dedication, Surveyor's notes & legend
SHEET 2 thru 3 of 3 – boundary information and lot and tract geometry

CERTIFICATE OF REVIEW BY REVIEWING SURVEYOR

Pursuant to Section 177.081, Florida Statutes, I have reviewed this plat for conformity to Chapter 177 Part 1 of the Florida Statutes and that said plat complies with the technical requirements of that chapter; provided however, that my review does not include field verification of any of the coordinates, points or measurements shown on this plat.

Signed:_____ Date_____

Printed Name: Ralph A. Nieto, P.S.M.
Registration Number 6025
Nieto Whittaker Surveying, LLC.

NOTICE: THIS PLAT, AS RECORDED IN ITS GRAPHIC FORM, IS THE OFFICIAL DEPICTION OF THE SUBDIVIDED LANDS DESCRIBED HEREIN AND WILL IN NO CIRCUMSTANCES BE SUPPLANTED IN AUTHORITY BY ANY OTHER GRAPHIC OR DIGITAL FORM OF THE PLAT. THERE MAY BE ADDITIONAL RESTRICTIONS THAT ARE NOT RECORDED ON THIS PLAT THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY.

QUALIFICATION STATEMENT OF SURVEYOR AND MAPPER

KNOW ALL MEN BY THESE PRESENTS, that I the undersigned, being a licensed surveyor and mapper, do hereby certify that on _____, completed the survey of the lands as shown in the foregoing plat or plan: that said plat is a true and correct representation of the lands surveyed and platted and was prepared under my direction and supervision; that permanent reference monuments have been placed as shown thereon; and this plat complies with all the survey requirements of Chapter 177, Florida Statutes; and that said land is located in Orange County, Florida.

By: _____ Date: _____

James L. Rickman P.S.M. # 5633
Allen & Company
Licensed Business # 6723
16 East Plant Street
Winter Garden, Florida 34787

HIDDEN LAKE RESERVE
DEDICATION

THIS is to certify that the undersigned, M/I Homes of Orlando, LLC, a Florida Limited Liability Company, hereafter referred to as "Owner" is the lawful owner of the lands described in the caption hereon, and that it has caused the same to be surveyed, and this plat, made in accordance with said survey, is hereby adopted as the true and correct plat of said lands.

The Owner hereby dedicates Utility easements to the perpetual use of the public.

IN WITNESS WHEREOF, the undersigned M/I Homes of Orlando, LLC, a Florida Limited Liability Company has caused these presents to be executed and acknowledged by its undersigned Officer thereunto duly authorized on this _____ day of _____ 2020.

By: M/I Homes of Orlando, LLC, a Florida Limited Liability Company

By: _____
Printed Name: _____
Title: _____

Signed and sealed in the presence of: _____

Printed Name of Witness: _____

_____

Printed Name of Witness: _____

STATE OF FLORIDA
COUNTY OF ORANGE

THIS IS TO CERTIFY, that on_____, before me an officer duly authorized to take acknowledgements in the state and county aforesaid by means of ( ) physical presence or ( ) online notarization, _____of M/I Homes of Orlando, LLC a Florida Limited Liability Company, incorporated under the laws of the state of Florida he/she is personally known to me or has produced the following identification_____and he/she did/did not take an oath that he/she is the person described in and who executed the foregoing dedication and severally acknowledged the execution thereof to be his/her free act and deed as such officer thereunto duly authorized; that the official seal of said limited liability company is duly affixed thereto; and that said Dedication is the act and deed of said limited liability company.

IN WITNESS WHEREOF, I have hereunto set my hand and seal on the above date.

WITNESS my hand and official seal this ____ day of_____2020.

Notary Public _____
Commission Expires:_____
Commission Number:_____
Printed Name:_____

CERTIFICATE OF APPROVAL BY APOPKA PLANNING COMMISSION

Examined and Approved _____
Chairman Date

CERTIFICATE OF APPROVAL BY CITY ENGINEER

Examined and Approved _____
Richard Earp Date

CERTIFICATE OF APPROVAL BY ZONING DIRECTOR

Examined and Approved _____
Zoning Director Date

CERTIFICATE OF APPROVAL BY MUNICIPALITY

THIS IS TO CERTIFY, that on_____ the foregoing plat was approved by the Municipality

_____
Mayor

Attest: _____
City Clerk

CERTIFICATE OF COUNTY COMPTROLLER

I HEREBY CERTIFY, that the foregoing plat was recorded in the Orange County Official Records

on _____ as Doc.# _____

County Comptroller in and for Orange County, Florida.

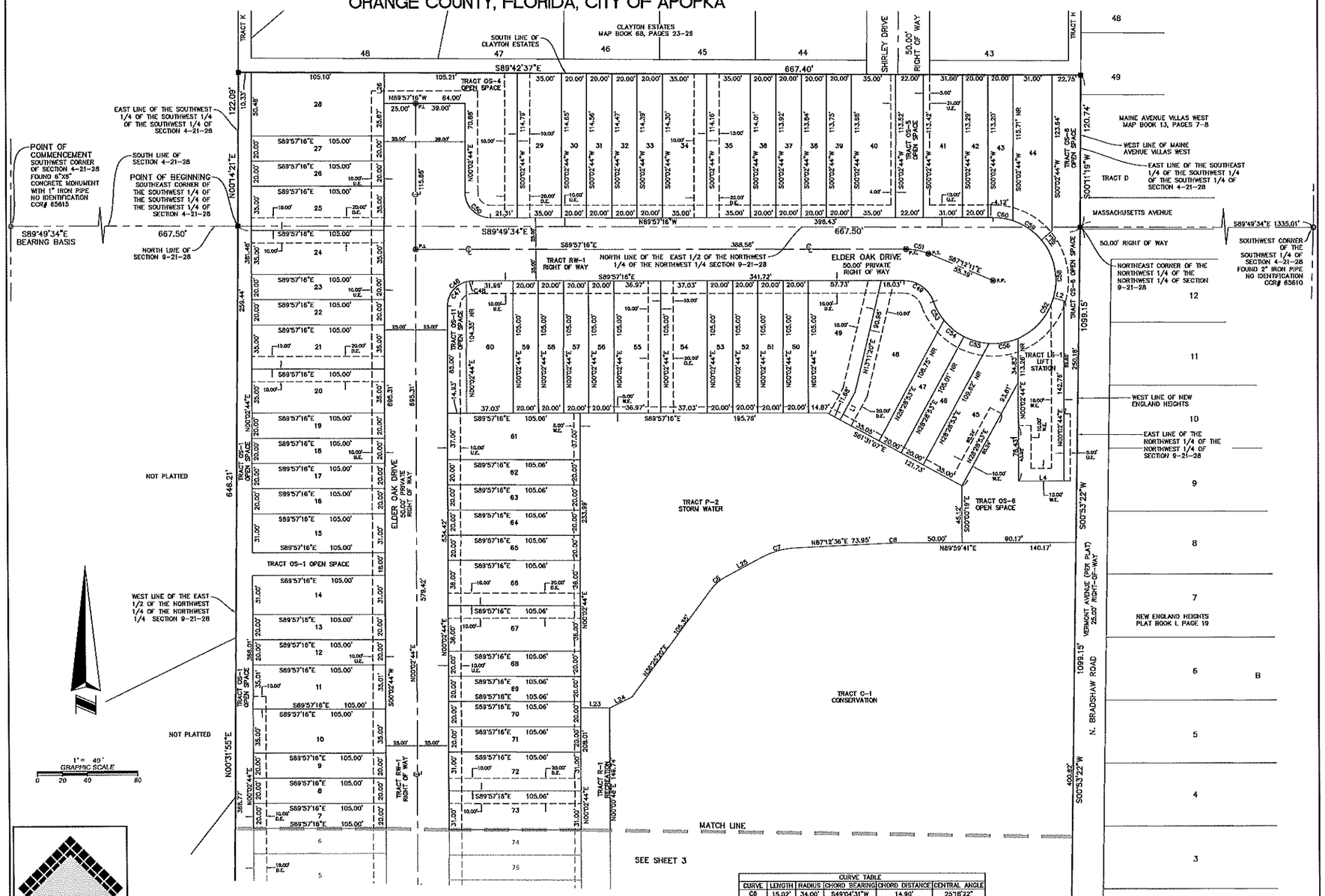
By_____

HIDDEN LAKE RESERVE

A PORTION OF SECTIONS 4 AND 9, TOWNSHIP 21 SOUTH, RANGE 28 EAST, ORANGE COUNTY, FLORIDA, CITY OF APOPKA

SHEET 2 OF 3

PLAT BOOK____ PAGE____



LINE TABLE		
LINE	BEARING	LENGTH
L1	N28°26'53"E	25.00'
L2	N73°50'12"W	8.65'
L3	S49°21'54"W	11.21'
L4	S89°59'41"W	38.34'
L23	N88°57'16"W	22.90'
L24	N83°14'02"E	20.14'
L26	N61°43'42"E	33.86'
L28	S90°17'23"W	24.36'
L31	S44°59'41"W	7.07'
L32	S44°59'41"W	21.33'
L33	S45°00'19"E	10.00'
L34	N44°59'41"E	24.13'

CURVE TABLE					
CURVE	LENGTH	RADIUS	CHORD BEARING	CHORD DISTANCE	CENTRAL ANGLE
C6	15.02'	34.00'	S49°04'31"W	14.90'	25°18'22"
C7	26.24'	59.00'	S74°28'09"W	26.02'	25°28'54"
C8	9.51'	1202.43'	N87°12'38"E	9.51'	00°27'11"
C46	31.42'	20.00'	S45°00'44"W	28.28'	90°00'00"
C47	28.29'	20.00'	S37°42'08"W	24.44'	75°18'48"
C48	5.13'	20.00'	S82°42'08"W	5.11'	14°41'12"
C49	30.77'	25.00'	N54°41'24"W	28.87'	70°31'44"
C50	31.42'	20.00'	S44°57'16"E	28.28'	90°00'00"
C51	18.27'	46.00'	N78°34'44"W	18.15'	22°45'05"
C52	218.63'	50.00'	N35°18'36"E	81.65'	250°31'44"
C53	17.24'	50.00'	S20°18'15"E	17.16'	19°45'26"
C54	20.49'	50.00'	S50°55'22"E	20.35'	23°28'47"
C55	20.67'	50.00'	S74°30'25"E	20.53'	23°41'18"
C56	23.73'	50.00'	N79°59'16"E	23.62'	27°19'20"
C57	43.78'	50.00'	N41°14'42"E	42.39'	50°09'48"
C58	48.65'	50.00'	N11°49'25"W	46.93'	55°58'27"
C59	27.59'	50.00'	N55°37'15"W	27.24'	31°37'12"
C60	16.16'	50.00'	N80°41'33"W	16.09'	18°31'25"

ALLEN & COMPANY
Professional Surveyors & Mappers
16 EAST PLANT STREET
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(407) 654-5355

SHEET INDEX
SHEET 1 of 3 – legal description, dedication, Surveyor's notes & legend
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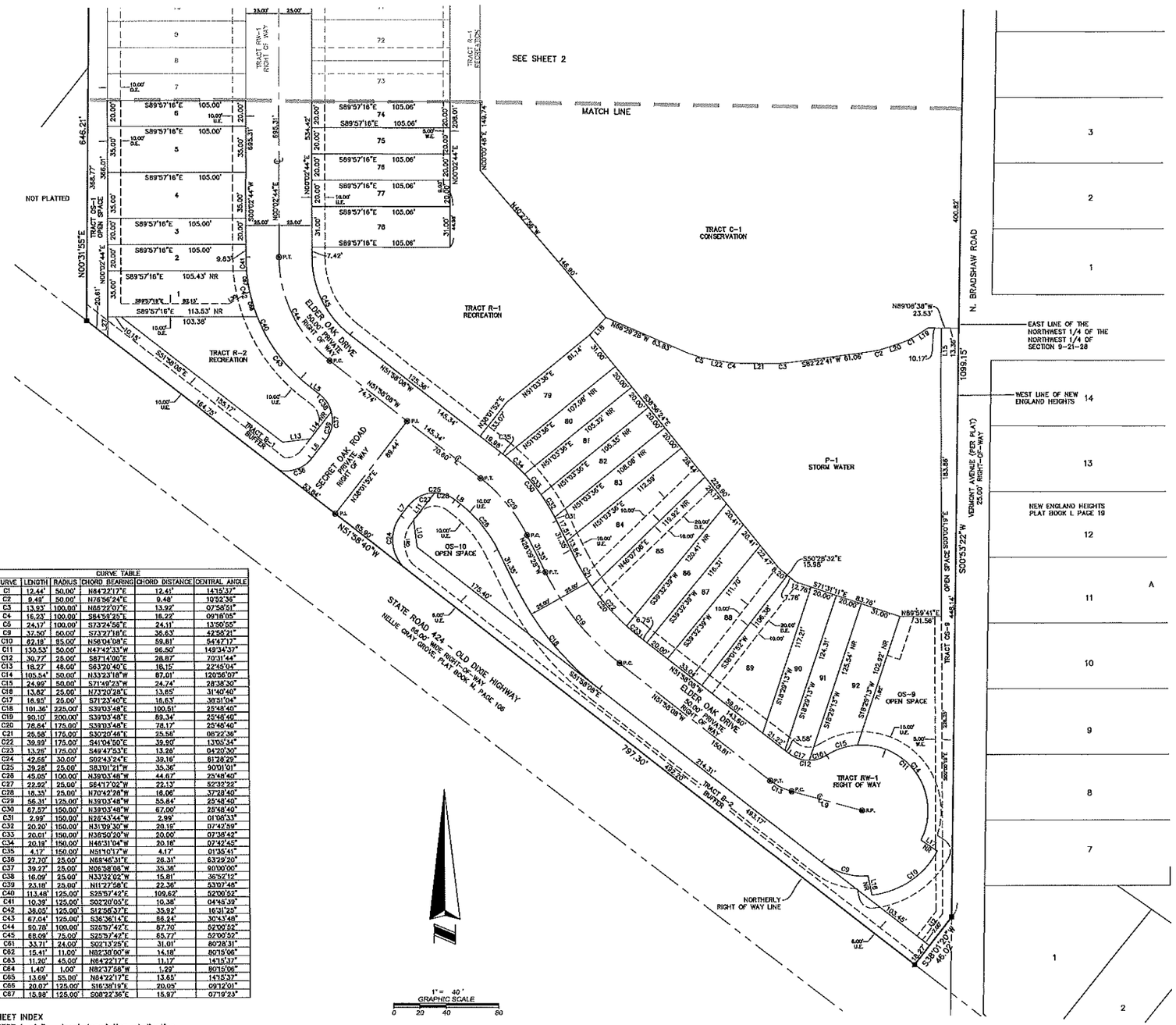
HIDDEN LAKE RESERVE

A PORTION OF SECTIONS 4 AND 9, TOWNSHIP 21 SOUTH, RANGE 28 EAST, ORANGE COUNTY, FLORIDA, CITY OF APOPKA

PLAT BOOK_____ PAGE_____



LINE TABLE		
LINE	BEARING	LENGTH
L5	N51°58'06"W	9.74'
L6	N38°01'52"E	17.07'
L7	N38°00'51"E	9.76'
L8	S51°58'06"E	5.27'
L9	N74°43'12"W	55.39'
L10	N06°58'08"W	21.12'
L11	N38°01'52"E	25.88'
L12	S38°01'52"W	25.46'
L13	N88°01'52"E	21.12'
L14	N38°01'52"E	26.14'
L15	S00°53'22"W	35.67'
L16	S11°50'00"E	15.08'
L17	N58°01'43"W	15.08'
L18	N43°19'20"E	18.08'
L19	S57°14'29"W	10.84'
L20	S71°30'06"W	14.25'
L21	N89°36'28"W	22.87'
L22	N80°20'23"W	7.14'
L27	N00°00'00"E	15.43'
L28	S42°30'27"E	11.46'
L29	N42°30'27"W	14.42'
L30	N59°31'51"E	18.13'

CURVE TABLE					
CURVE	LENGTH	RADIUS	CHORD BEARING	CHORD DISTANCE	CENTRAL ANGLE
C1	12.44'	50.00'	N84°22'17"E	12.41'	14°15'37"
C2	9.48'	50.00'	N78°36'24"E	9.48'	10°22'36"
C3	13.93'	100.00'	N85°22'07"E	13.92'	07°58'51"
C4	16.23'	100.00'	S84°59'25"E	16.22'	09°18'05"
C5	24.17'	100.00'	S73°24'58"E	24.11'	13°50'55"
C6	37.56'	50.00'	S73°27'18"E	36.63'	42°58'21"
C10	62.18'	85.00'	N56°04'08"E	59.81'	54°47'17"
C11	130.53'	50.00'	N47°42'33"W	96.50'	149°34'37"
C12	30.77'	25.00'	S87°14'00"E	28.87'	70°31'44"
C13	18.27'	48.00'	S63°20'40"E	18.15'	22°45'04"
C14	105.54'	50.00'	N33°23'18"W	87.01'	120°56'07"
C15	24.99'	50.00'	S71°49'23"W	24.74'	28°38'30"
C16	13.82'	25.00'	N73°20'28"E	13.65'	31°40'40"
C17	16.85'	25.00'	S71°23'40"E	16.53'	38°31'04"
C18	101.36'	225.00'	S39°03'48"E	100.51'	25°48'40"
C19	90.10'	200.00'	S39°03'48"E	89.34'	25°48'40"
C20	78.84'	175.00'	S39°03'48"E	78.17'	25°48'40"
C21	26.58'	175.00'	S30°20'46"E	25.56'	08°22'36"
C22	39.59'	175.00'	S41°04'50"E	39.50'	13°33'44"
C23	13.26'	175.00'	S49°47'53"E	13.26'	04°20'30"
C24	42.68'	30.00'	S02°43'24"E	39.16'	81°28'29"
C25	39.28'	25.00'	S83°01'21"W	35.36'	90°01'01"
C26	45.00'	100.00'	N39°03'48"W	44.67'	25°48'40"
C27	22.99'	25.00'	S84°17'02"W	22.13'	52°32'22"
C28	16.35'	25.00'	N70°42'28"W	16.06'	37°28'40"
C29	56.31'	125.00'	N39°03'48"W	55.84'	25°48'40"
C30	67.57'	150.00'	N39°03'48"W	67.00'	25°48'40"
C31	2.99'	150.00'	N26°43'44"W	2.99'	01°08'33"
C32	20.20'	150.00'	N31°09'30"W	20.18'	07°42'59"
C33	20.01'	150.00'	N38°50'20"W	20.00'	07°38'42"
C34	20.18'	150.00'	N46°51'04"W	20.18'	07°42'45"
C35	4.17'	150.00'	N51°10'17"W	4.17'	01°35'41"
C36	27.70'	25.00'	N69°46'31"E	26.31'	63°29'20"
C37	39.27'	25.00'	N06°58'08"W	35.36'	90°00'00"
C38	16.09'	25.00'	N33°32'02"W	15.81'	36°52'12"
C39	23.18'	25.00'	N11°27'58"E	22.36'	53°07'48"
C40	113.48'	125.00'	S25°57'42"E	109.62'	52°00'52"
C41	10.39'	125.00'	S02°20'05"E	10.38'	04°45'39"
C42	36.05'	125.00'	S12°56'37"E	35.92'	16°21'25"
C43	67.04'	125.00'	S38°36'14"E	66.24'	30°43'48"
C44	90.78'	100.00'	S25°57'42"E	87.70'	52°00'52"
C45	68.09'	75.00'	S25°57'42"E	65.77'	52°00'52"
C61	33.71'	24.00'	S02°13'25"E	31.01'	80°28'31"
C62	15.41'	11.00'	N82°38'00"W	14.18'	80°15'06"
C63	11.20'	45.00'	N84°22'17"E	11.17'	14°15'37"
C64	1.40'	1.00'	N82°37'58"W	1.29'	80°15'06"
C65	13.69'	55.00'	N84°22'17"E	13.65'	14°15'37"
C66	20.07'	125.00'	S16°38'19"E	20.05'	09°12'01"
C67	15.98'	125.00'	S08°22'36"E	15.97'	07°19'23"

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SHEET INDEX
SHEET 1 of 3 – legal description, dedication, Surveyor's notes & legend
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FINAL DEVELOPMENT PLAN ⚠1

FOR

HIDDEN LAKE RESERVE

PARCELS: 09-21-28-0000-00-006

SECTION 9, TOWNSHIP 21 SOUTH, RANGE 28 EAST

501 OLD DIXIE HIGHWAY

CITY OF APOPKA, FLORIDA

FOR

M/I HOMES OF ORLANDO, LLC

400 INTERNATIONAL PKWY, SUITE 470

LAKE MARY, FLORIDA 32746

PHONE: (407) 531-5100

LEGAL DESCRIPTION:

A PARCEL OF LAND LYING IN SECTIONS 4 AND 9, TOWNSHIP 21 SOUTH, RANGE 28 EAST, ORANGE COUNTY, FLORIDA, DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTHWEST CORNER OF SECTION 4, TOWNSHIP 21 SOUTH, RANGE 28 EAST, ORANGE COUNTY, FLORIDA; THENCE RUN S89°58'13"E, ALONG THE SOUTH LINE OF SAID SECTION 4, A DISTANCE OF 667.39 FEET TO THE SOUTHEAST CORNER OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SAID SECTION 4, AND THE POINT OF BEGINNING; THENCE RUN N00°02'44"E ALONG THE EAST LINE OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SAID SECTION 4, A DISTANCE OF 122.09 FEET; THENCE RUN S89°54'14"E, A DISTANCE OF 667.28 FEET; THENCE RUN S00°00'19"E, A DISTANCE OF 1239.25 FEET; THENCE RUN S38°01'52"W, A DISTANCE OF 46.02 FEET TO THE NORTH RIGHT-OF-WAY LINE OF STATE ROAD 424 – DIXIE HIGHWAY; THENCE RUN N51°58'08"W, ALONG SAID NORTH RIGHT-OF-WAY LINE, A DISTANCE OF 612.09 FEET; THENCE RUN N00°02'44"E, A DISTANCE OF 654.21 FEET TO THE POINT OF BEGINNING.

CONTAINING 15.878 ACRES MORE OR LESS (AS CALCULATED PER SURVEYOR'S BOUNDARY).

⚠2 VARIANCES

VAR18-06: APPROVED WITH THE CONDITION THAT THE MASONRY WALL IS EXTENDED TO THE END OF THE TOWNHOME LINE ON THE SOUTHEAST PORTION OF THE PROPERTY.

INDEX OF SHEETS

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I-001	IRRIGATION DETAILS AND SCHEDULE
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MADDEN

MOORHEAD & STOKES, LLC

CIVIL ENGINEERS

431 E. HORATIO AVENUE, SUITE 260
MAITLAND, FLORIDA 32751
PHONE (407) 629-8330
FAX (407) 629-8336

PROJECT TEAM MEMBERS:

DEVELOPER:
M/I HOMES OF ORLANDO, LLC
400 INTERNATIONAL PARKWAY, SUITE 470
LAKE MARY, FL 32746
PHONE: (407) 531-5177
CONTACT: DAVE BROWN

ENGINEER:
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431 E HORATIO AVENUE, SUITE 260
MAITLAND, FL 32751
PHONE: (407) 629-8330
CONTACT: DAVID STOKES, P.E.

OWNER:
TGNIF, LLC
307 BELOIT AVENUE
WINTER PARK, FL 34789
PHONE: (407) 531-5177
CONTACT: DAVE BROWN

ENVIRONMENTAL:
BIO-TECH CONSULTING, INC.
3025 E SOUTH STREET
ORLANDO, FL 32803
PHONE: (407) 894-5969
CONTACT: MORGAN CLARK

SURVEYOR:
ALLEN & COMPANY, INC.
16 E. PLANT STREET
WINTER GARDEN, FL 34787
PHONE: (407) 654-5355
CONTACT: JAMES RICKMAN, P.S.M.

GEOTECHNICAL:
UNIVERSAL ENGINEERING SCIENCES
3532 MAGGIE BLVD.
ORLANDO, FL 32811
PHONE: (407) 423-0504
CONTACT: RICARDO KIRIAKIDIS, PE

UTILITY PROVIDERS:

WATER:
CITY OF APOPKA
120 E. MAIN STREET
APOPKA, FL 32704
PHONE: (407) 703-1731

RECLAIMED WATER:
CITY OF APOPKA
120 E. MAIN STREET
APOPKA, FL 32704
PHONE: (407) 703-1731

WASTE WATER:
CITY OF APOPKA
120 E. MAIN STREET
APOPKA, FL 32704
PHONE: (407) 703-1731

SOLID WASTE:
CITY OF APOPKA
120 E. MAIN STREET
APOPKA, FL 32704
PHONE: (407) 703-1731

PHONE
CENTURY LINK
33 NORTH MAIN STREET
WINTER GARDEN, FL 34787
PHONE: (407) 814-5351
CONTACT: DAVID BYRNES

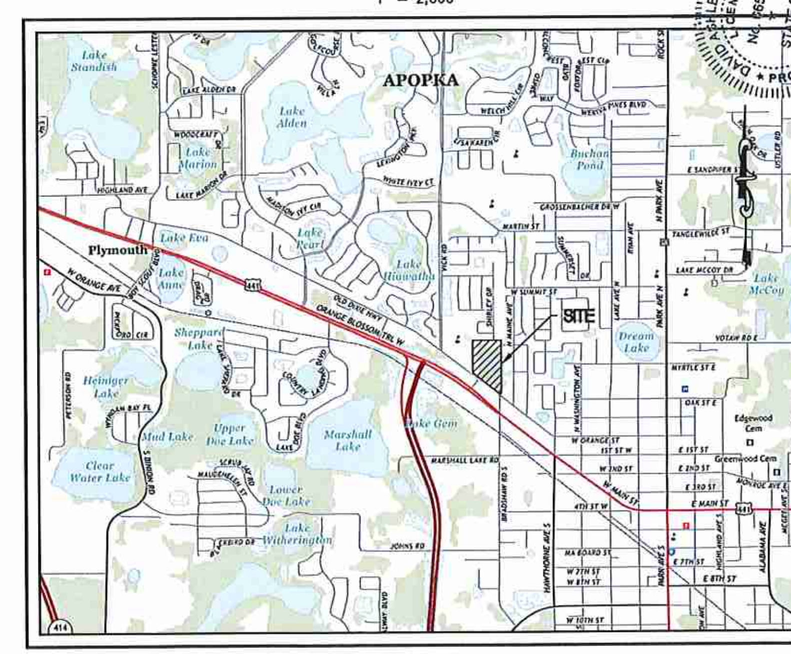
CABLE:
SPECTRUM COMMUNITY SOLUTIONS
2251 LUCIEN WAY
MAITLAND, FL 32751
PHONE: (407) 215-8346
CONTACT: MONICA SANCHEZ-AYERS

POWER:
DUKE ENERGY
275 PONKAN ROAD
APOPKA, FL 32712
PHONE: (407) 938-6690
CONTACT: ROD RODRIGUEZ

GAS:
LAKE APOPKA NATURAL GAS
1320 WINTER GARDEN VINELAND RD.
WINTER GARDEN, FL 34787
PHONE: (407) 656-2734 EXT. 104
CONTACT: EVERETT HOLMES

VICINITY MAP

1" = 2,000'

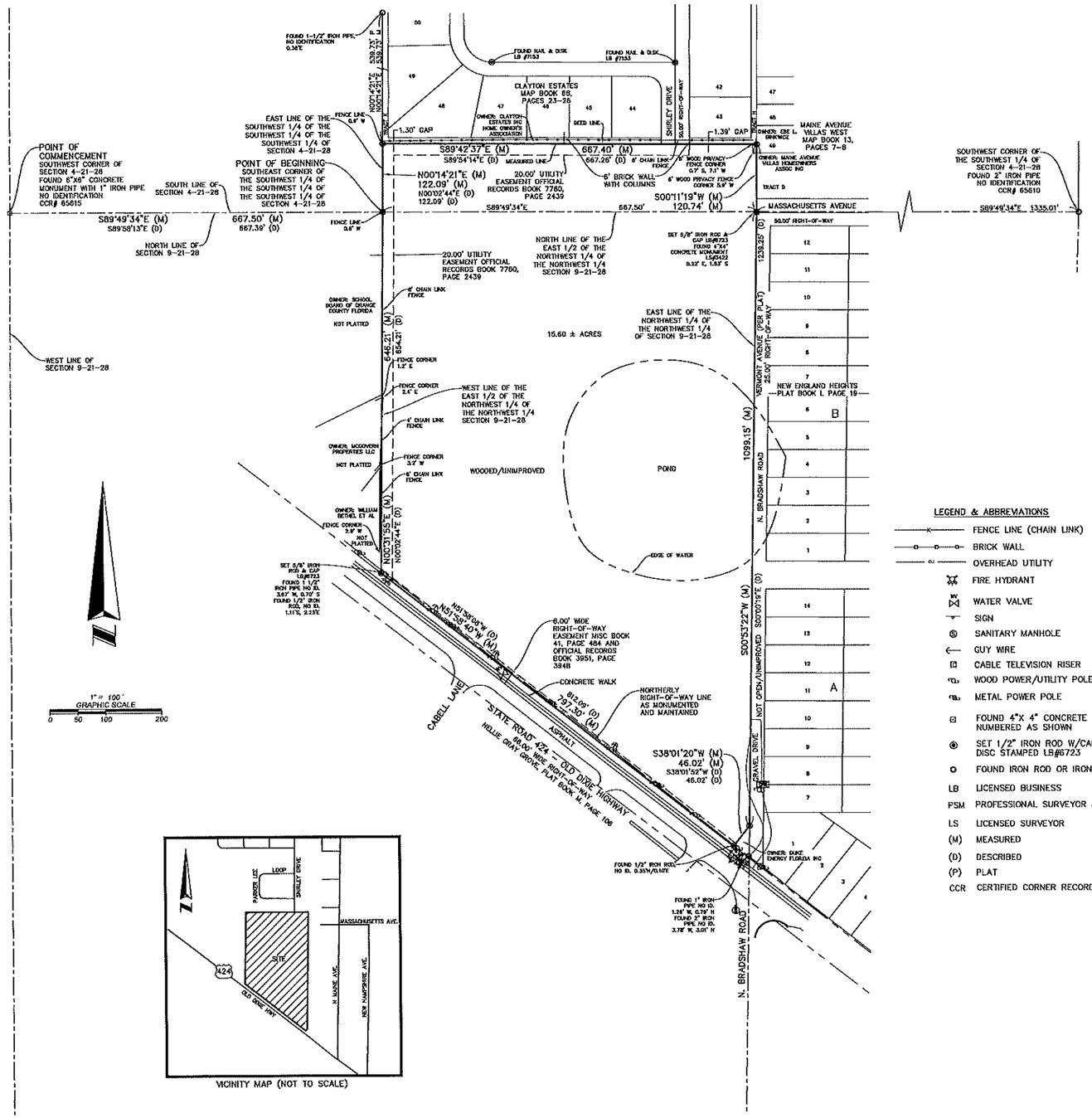


DAVID ASHLEY STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER

CERTIFICATE OF AUTHORIZATION NO. EB-0007723

HIDDEN LAKES RESERVE (JOB NO. 19039)

17039\eng\final\17039-c001-cv.dwg



VICINITY MAP (NOT TO SCALE)

LEGEND & ABBREVIATIONS

- FENCE LINE (CHAIN LINK)
- BRICK WALL
- OVERHEAD UTILITY
- FIRE HYDRANT
- WATER VALVE
- SIGN
- SANITARY MANHOLE
- GUY WIRE
- CABLE TELEVISION RISER
- WOOD POWER/UTILITY POLE
- METAL POWER POLE
- FOUND 4"X 4" CONCRETE MONUMENT NUMBERED AS SHOWN
- SET 1/2" IRON ROD W/CAP OR NAIL WITH DISC STAMPED LB#6723
- FOUND IRON ROD OR IRON PIPE AS SHOWN
- LB LICENSED BUSINESS
- PSM PROFESSIONAL SURVEYOR & MAPPER
- LS LICENSED SURVEYOR
- (M) MEASURED
- (D) DESCRIBED
- (P) PLAT
- CCR CERTIFIED CORNER RECORD

LEGAL DESCRIPTION:

A PARCEL OF LAND LYING IN SECTIONS 4 AND 9, TOWNSHIP 21 SOUTH, RANGE 28 EAST, ORANGE COUNTY, FLORIDA, DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTHWEST CORNER OF SECTION 4, TOWNSHIP 21 SOUTH, RANGE 28 EAST, ORANGE COUNTY, FLORIDA; THENCE RUN SOUTH 89°58'13" EAST, ALONG THE SOUTH LINE OF SAID SECTION 4, A DISTANCE OF 667.39 FEET TO THE SOUTHEAST CORNER OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SAID SECTION 4, AND THE POINT OF BEGINNING; THENCE RUN NORTH 00°02'44" EAST ALONG THE EAST LINE OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SAID SECTION 4, A DISTANCE OF 122.09 FEET; THENCE RUN SOUTH 89°54'14" EAST, DISTANCE OF 667.28 FEET; THENCE RUN SOUTH 00°00'19" EAST, A DISTANCE OF 1239.25 FEET; THENCE RUN SOUTH 38°01'52" WEST, A DISTANCE OF 46.02 FEET TO THE NORTH RIGHT OF WAY LINE OF STATE ROAD 424 – DIXIE HIGHWAY; THENCE RUN NORTH 51°58'08" WEST, ALONG SAID NORTH RIGHT OF WAY LINE, A DISTANCE OF 812.09 FEET; THENCE RUN NORTH 00°02'44" EAST, A DISTANCE OF 654.21 FEET TO THE POINT OF BEGINNING.

SURVEYOR'S NOTES:

1. BEARINGS SHOWN HEREON ARE ASSUMED BASED ON THE SOUTH LINE OF SECTION 4, TOWNSHIP 21 SOUTH, RANGE 28 EAST AS BEING S89°49'34"E. FOR ANGULAR DESIGNATION ONLY.
2. THE LEGAL DESCRIPTION HEREON IS IN ACCORD WITH THE DESCRIPTION FURNISHED BY THE CLIENT.
3. 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.
4. 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.
5. 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.
6. THIS SURVEY IS NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.
7. 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.
8. 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.
9. SUBJECT PROPERTY SHOWN HEREON IS IN ZONE X, DEFINED AS AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% CHANCE FLOODPLAIN, ACCORDING TO FLOOD INSURANCE RATE MAP (FIRM) PANEL NUMBER 12095C0120F, MAP DATE 9/25/2009.
10. ACCORDING TO ORANGE COUNTY THERE ARE NO RECORDS THAT DEFINE THE RIGHT-OF-WAY FOR STATE ROAD 424. THE RIGHT-OF-WAY IS BASED ON A BOND BOOK DEFINED AS A 66.00' RIGHT-OF-WAY WIDTH AND IT'S LOCATION IS DEFINED BY THE LOCATION OF THE EXISTING ROAD.
11. ADJOINING PROPERTY INFORMATION WAS OBTAINED FROM THE ORANGE COUNTY PROPERTY APPRAISERS PUBLIC ACCESS SYSTEM.
12. NO EVIDENCE OF RECENT EARTHWORK, BUILDING CONSTRUCTION OR BUILDING ADDITIONS WAS OBSERVED WHILE CONDUCTING THE FIELD WORK.

    LAST DATE IN FIELD: JANUARY 7, 2019
13. WE HAVE EXAMINED THE FURNISHED COMMITMENT TO INSURE TITLE, COMMITMENT NO. 7550859, PREPARED BY FIDELITY NATIONAL TITLE INSURANCE COMPANY, EFFECTIVE DATE APRIL 1, 2019 AT 5:00 P.M. THOSE INSTRUMENTS INCLUDED IN "SCHEDULE B-II", OF THE COMMITMENT HAVE BEEN EXAMINED AND ARE REFLECTED HEREON TO THE EXTENT THEY AFFECT THE LANDS SURVEYED.

EXCEPTIONS AS THEY APPEAR IN THE ABOVE REFERENCED COMMITMENT TO INSURE TITLE

5. EASEMENT IN FAVOR OF FLORIDA PUBLIC SERVICE COMPANY, A FLORIDA CORPORATION, RECORDED APRIL 12, 1926 IN MISCELLANEOUS BOOK 41, PAGE 484; AS AFFECTED BY AGREEMENT FOR PARTIAL RELEASE OF EASEMENT, RECORDED JANUARY 20, 1988 IN OFFICIAL RECORDS BOOK 3951, PAGE 3948, PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA. AFFECTS THE SUBJECT PROPERTY AND IS SHOWN HEREON.
6. ACCESS AND UTILITY EASEMENT AGREEMENT BY AND BETWEEN TGINF, L.L.C., A SOUTH CAROLINA LIMITED LIABILITY COMPANY, AND CLAYTON ESTATES, LLC, A FLORIDA LIMITED LIABILITY COMPANY, RECORDED JANUARY 14, 2005 IN OFFICIAL RECORDS BOOK 7780, PAGE 2439, PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA. AFFECTS THE SUBJECT PROPERTY AND IS SHOWN HEREON.
7. TERMS AND CONDITIONS OF THAT CERTAIN SCHOOL MITIGATION AGREEMENT FOR CAPACITY ENHANCEMENT, RECORDED MARCH 22, 2018 AS OFFICIAL RECORDS DOCUMENT NO. 20180166790, PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA. AFFECTS THE SUBJECT PROPERTY BUT CANNOT BE SHOWN, BLANKET IN NATURE.

CERTIFICATION:

TO: TGINF, L.L.C., A SOUTH CAROLINA LIMITED LIABILITY COMPANY; M/I HOMES OF ORLANDO, LLC, A FLORIDA LIMITED LIABILITY COMPANY; HOLLAND & KNIGHT LLP; WINDERWEEDLE, HAINES, WARD & WOODMAN, P.A. AND FIDELITY NATIONAL TITLE INSURANCE COMPANY.

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE ACCORDANCE WITH THE 2016 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, 6(a), 6(b), 7(a), 7(b1), 7(c), 8, 9, 13, 16 AND 19 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON JANUARY 7, 2019.

DATE:

JAMES L. RICKMAN PSM #5633 ALLEN & COMPANY

ALLEN & COMPANY
Professional Surveyors & Mappers
16 EAST PLANT STREET
WINTER GARDEN, FLORIDA 34787
407 654-5355 *FAX 407 654-5356
admin@allen-company.com

ALTA/NSPS LAND TITLE BOUNDARY SURVEY OF HIDDEN LAKES RESERVE

501 OLD DIXIE HIGHWAY
SECTIONS 4 & 9, TOWNSHIP 21 SOUTH, RANGE 28 EAST
APOPKA, ORANGE COUNTY, FLORIDA

FOR: M/I HOMES, LLC.

DATE	REVISIONS

JOB # 20192265
DATE: 5/5/19
SCALE: 1"=100'
CALC BY: BRH/SEJ
FIELD BY: JK
DRAWN BY: BRH
CHECKED BY: SEJ

SHEET 1 OF 1

Drawing name: L:\2019\20192265\dwg\20192265.dwg SHEET 1

SCALE 1" = 50'

GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.

BOUNDARY & TOPOGRAPHIC SURVEY

LEGAL DESCRIPTION:

A parcel of land lying in Sections 4 and 9, Township 21 South, Range 28 East, Orange County, Florida,
described as follows:

Commence at the Southwest corner of Section 4, Township 21 South, Range 28 East, Orange County, Florida; thence run S89°58'13"E, along the South line of said Section 4, a distance of 667.39 feet to the Southeast corner of the Southwest 1/4 of the Southwest 1/4 of the Southwest 1/4 of said Section 4, and the point of beginning; thence run N00°02'44"E along the East line of the Southwest 1/4 of the Southwest 1/4 of the Southwest 1/4 of said Section 4, a distance of 122.09 feet; thence run S89°54'14"E, a distance of 667.28 feet; thence run S00°00'19"E, a distance of 1239.25 feet; thence run S38°01'52"W, a distance of 46.02 feet to the North right-of-way line of State Road 424 – Dixie Highway; thence run N51°58'08"W, along said North right-of-way line, a distance of 812.09 feet; thence run N00°02'44"E, a distance of 654.21 feet to the point of beginning.

NOTES:

- BEARINGS BASED ON THE SOUTH LINE OF SECTION 4-21-28 AS BEING S89°58'13"E.
- ELEVATIONS BASED ON ORANGE COUNTY BENCHMARK No. S1361009, A 3" ORANGE COUNTY CONTROL DISC ON TOP OF CURB INLET AT THE NORTH SIDE OF US 441, 106.26' SW OF TRAFFIC SIGNAL POLE AT EAST SIDE OF RAMP TO S.R. 429. ELEVATION=140.434', NAVD 1988 DATUM.
- NO UNDERGROUND UTILITIES, UNDERGROUND CONCRETE FOUNDATIONS OR UNDERGROUND SIGN BASES WERE LOCATED.

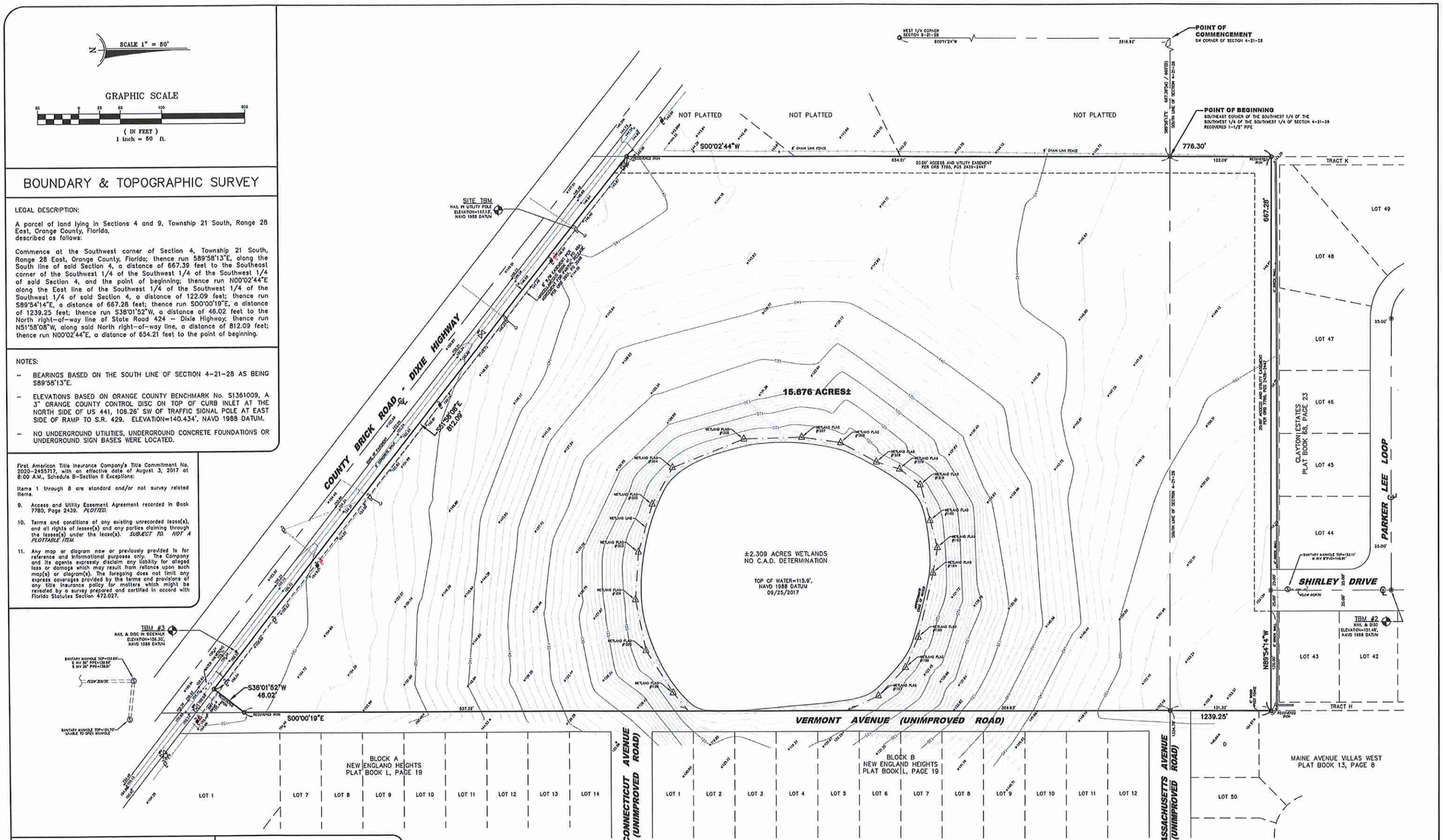
First American Title Insurance Company's Title Commitment No. 2020-2455717, with an effective date of August 3, 2017 at 8:00 A.M., Schedule B-Section II Exceptions:

Items 1 through 8 are standard and/or not survey related items.

9. Access and Utility Easement Agreement recorded in Book 7780, Page 2439. *PLOTTED.*

10. Terms and conditions of any existing unrecorded lease(s), and all rights of lessee(s) and any parties claiming through the lessee(s) under the lease(s). *SUBJECT TO. NOT A PLOTTABLE ITEM.*

11. Any map or diagram now or previously provided is for reference and informational purposes only. The Company and its agents expressly disclaim any liability for alleged loss or damage which may result from reliance upon such map(s) or diagram(s). The foregoing does not limit any express coverages provided by the terms and provisions of any title insurance policy for matters which might be revealed by a survey prepared and certified in accord with Florida Statutes Section 472.027.



LEGEND

- FIRE HYDRANT
- ELECTRICAL BOX
- GUY ANCHOR
- SIGN
- WOOD UTILITY POLE
- METAL UTILITY POLE
- ORIGINAL WOOD UTILITY POLE REPLACED WITH METAL UTILITY POLE TOP OF POLE CUT OFF – NO WIRES CONNECTED TO POLE
- WATER VALVE
- –O/H– OVERHEAD UTILITY LINE

WETLAND LINE TABLE		
LINE	BEARING	LENGTH
L1	S49°37'58"W	28.94'
L2	S57°18'07"W	60.44'
L3	S78°18'00"W	62.52'
L4	N86°10'38"W	57.55'
L5	N73°38'58"W	60.20'
L6	N60°50'44"W	50.45'
L7	N21°44'52"W	92.82'
L8	N01°32'28"W	69.62'
L9	N08°13'32"E	47.34'
L10	N28°21'58"E	46.88'

WETLAND LINE TABLE		
LINE	BEARING	LENGTH
L11	N16°38'58"E	29.25'
L12	N36°53'00"E	31.33'
L13	N74°40'08"E	44.84'
L14	N75°02'13"E	33.47'
L15	S80°10'50"E	31.05'
L16	S76°32'24"E	79.53'
L17	S67°02'51"E	39.77'
L18	S46°18'00"E	47.33'
L19	S25°22'45"E	41.98'
L20	S00°00'19"E	191.04'

SURVEY PREPARED IN ACCORDANCE WITH THE STANDARD OF PRACTICE PER F.S. 5-J-17 F.A.C.

JAMES R. SHANNON JR., P.L.S. #4671
NOT VALID WITHOUT THE SIGNATURE AND THE ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER

REVISED: 12/5/17-UTILITY POLES

SHANNON SURVEYING, INC.
499 NORTH S.R. 434 – SUITE 2045
ALTAMONTE SPRINGS, FLORIDA, 32714
(407) 774-8372 LB # 6898

DATE OF SURVEY: 09/25/2017
FIELD BY: DJ SCALE: 1" = 50'
FILE NUMBER: 04-21-28 OLD DIXIE

ABBREVIATIONS

A

A	AREA
AB	ANCHOR BOLT
ABD	ABANDON(ED)
AC	ACRE(S)
AC-FT	ACRE FOOT/FEET
ACP	ASBESTOS CEMENT PIPE
ADDL	ADDITIONAL
ADT	AVERAGE DAILY TRAFFIC
AL	ALUMINUM
ALT	ALTERNATE
AM	BEFORE NOON
AMP	AMPERE(S)
APPROX	APPROXIMATE
ARV	AIR RELEASE VALVE
ARVV	AIR RELEASE VACUUM VALVE
ASPH	ASPHALT
ASSY	ASSEMBLY
AVE	AVENUE
AVG	AVERAGE
AZ	AZIMUTH

B

BFP	BACKFLOW PREVENTER
BL	BASELINE
BLDG	BUILDING
BLVD	BOULEVARD
BM	BENCH MARK
BND	BOUNDARY
BO	BLOWOFF
BOC	BACK OF CURB
BOT	BOTTOM
BRG	BEARING
BS	BOTTOM OF SLOPE
BV	BUTTERFLY VALVE

C

CAP	CAPACITY
CB	CATCH BASIN
CC	CENTER TO CENTER
CEM	CEMENT
CF	CUBIC FEET
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
C&G	CURB AND GUTTER
CI	CAST IRON
CIP	CAST IRON PIPE
CJ	CONSTRUCTION JOINT
C/L	CENTER LINE
CLP	CONCRETE LIGHT POLE
CLR	CLEAR/CLEARANCE
CLS	CLASS
CM	CONCRETE MONUMENT
CMP	CORRUGATED METAL PIPE
CMPA	CORRUGATED METAL PIPE ARCH
CND	CONDUIT
CO.	COUNTY
CO	CLEANOUT
COL	COLUMN
COMP	COMPLETE
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCT(ION)
CONT	CONTINUOUS
COORD	COORDINATE(S)
COR	CORNER
CPLG	COUPLING
CPP	CONCRETE POWER POLE
CS	CONTROL STRUCTURE
CTG	COATING
CTR	CENTER
CTV	CABLE TELEVISION
CULV	CULVERT
CY	CUBIC YARD
CYL	CYLINDER

D

DBL	DOUBLE
DEG OR °	DEGREE
DEFL	DEFLECT(ION)
DEPT	DEPARTMENT
DET	DETAIL
DHWL	DESIGN HIGH WATER LEVEL
DI	DUCTILE IRON
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIP	DUCTILE IRON PIPE
DISCH	DISCHARGE
DIST	DISTANCE
DMH	DROP MANHOLE
DN	DOWN
DRN	DRAIN
DWG	DRAWING
DWY	DRIVEWAY

E

E	EAST
EA	EACH
EC	EDGE OF CONCRETE
ED	ENERGY DISSIPATOR
EF	EACH FACE
EFF	EFFLUENT
EG	EXISTING GRADE
E/L	EASEMENT LINE
ELB	ELBOW
ELEC	ELECTRIC
ELEV	ELEVATION
ELLIP	ELLIPSE/ELLIPTICAL
ENC	ENCASEMENT
ENG	ENGINEER(ING)
EOP	EDGE OF PAVEMENT
EQ	EQUAL/EQUATION
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ESMT	EASEMENT
EST	ESTIMATE
EW	EACH WAY
EWL	ENDWALL
EXC	EXCAVATE/EXCAVATION
EXIST	EXISTING
EXP	EXPAND/EXPANSION
EXT	EXTEND/EXTENSION

F

F&C	FRAME AND COVER
FD	FLOOR DRAIN
FDN	FOUNDATION
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION
FF	FINISHED FLOOR
FG	FINISHED GRADE
FH	FIRE HYDRANT
F&I	FURNISH AND INSTALL
FIG	FIGURE
FIN	FINISHED
FIT	FITTING
FL	FENCE LINE
FLR	FLOOR
FLEX	FLEXIBLE
FLG	FLANGE
FM	FORCE MAIN
FND	FOUND
FPH	FEET PER HOUR
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FT	FEET/FOOT
FTG	FOOTING

G

GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GM	GAS MAIN
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GPS	GALLONS PER SECOND
GR	GUARD RAIL
GRD	GROUND/GRADE
GSP	GALVANIZED STEEL PIPE
GV	GATE VALVE
GV&B	GATE VALVE AND BOX
GW	GUY WIRE
GWT	GROUND WATER TABLE

H

HB	HOSE BIBB
HDPE	HIGH DENSITY POLYETHYLENE
HDW	HARDWARE
HOA	HOME OWNERS ASSOCIATION
HORIZ	HORIZONTAL
HP	HORSEPOWER
HR	HOUR
HT	HEIGHT
HW	HEADWALL
HWL	HIGH WATER LEVEL
HWY	HIGHWAY
HYD	HYDRAULIC

I

I-4	INTERSTATE HIGHWAY
IA	INTERSECTION ANGLE
ID	INSIDE DIAMETER
IF	INSIDE FACE
IN	INCHES
INL	INLET
INS	INSERT
INST	INSTALL
IP	IRON PIPE
IR	IRON ROD
INT	INTERSECT/INTERSECTION
INV	INVERT

J

JB	JUNCTION BOX
JCT	JUNCTION
JST	JOIST
JT	JOINT

L

L	LENGTH
LAT	LATITUDE
LATL	LATERAL
LB	POUND
LF	LINEAR FEET/FOOT
LG	LONG
LIM	LIMIT(S)
LP	LIGHT POLE
LONG	LONG
LT	LEFT
LWL	LOW WATER LEVEL

M

MAINT	MAINTENANCE
MATL	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
ME	MITERED END
MFR	MANUFACTURER
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MHC	MANHOLE COVER
MHWL	MEAN HIGH WATER LEVEL
MIN	MINIMUM
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MLP	METAL LIGHT POLE
MLWL	MEAN LOW WATER LEVEL
MON	MONUMENT
MPH	MILES PER HOUR
MSL	MEAN SEA LEVEL
MTG	MOUNTING

N

NAWTH	NORTH
N	NORTH
NA	NOT APPLICABLE
N&C	NAIL AND CAP
NE	NORTHEAST
NG	NATURAL GROUND
NIC	NOT IN CONTRACT
NO OR #	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
NW	NORTHWEST
NWL	NORMAL WATER LEVEL

O

OC	ON CENTER
OD	OUTSIDE DIAMETER
OE	OR EQUAL
OPNG	OPENING
OPP	OPPOSITE
ORCP	OVAL REINFORCED CONCRETE PIPE
OS	OUTFALL STRUCTURE
OVFL	OVERFLOW
OVHD	OVERHEAD

P

PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PEP	POLYETHYLENE PIPE
PFGP	PROFILE GRADE POINT
PI	POINT OF INTERSECTION
P/L	PROPERTY LINE
POB	POINT OF BEGINNING
POJ	PUSH ON JOINT
PP	POWER POLE
PR	PHONE RISER
PRC	POINT OF REVERSE CURVATURE
PRESS	PRESSURE
PROJ	PROJECT
PROP	PROPOSED
PRVC	POINT OF REVERSE VERTICAL CURVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PWR	POWER

Q

Q	FLOW RATE

R

R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
RD	ROAD
RDY	ROADWAY
RED	REDUCER
REF	REFERENCE
REINF	REINFORCE(D)
REQD	REQUIRED
REV	REVISE/REVISION
RPM	REVOLUTIONS PER MINUTE
RR	RAILROAD
RT	RIGHT
RV	RELIEF VALVE
R/W	RIGHT-OF-WAY
RWM	REUSE WATER MAIN

S

S	SOUTH
SAN	SANITARY SEWER
SB	SPLASH BLOCK
SCH	SCHEDULE
SD	SIDE DRAIN
SDN	SHELF DRAIN
SE	SOUTHEAST
SEC	SECONDS
SECT	SECTION
SH	SHEET
SHGWT	SEASONAL HIGH GROUND WATER TABLE
SIM	SIMILAR
S/L	SETBACK LINE
SL	SLOPE
SM	SHEET METAL
SPEC	SPECIFICATION(S)
SQ	SQUARE
SQ IN	SQUARE INCH(ES)
SQ FT	SQUARE FOOT/FEET
SQ YD	SQUARE YARD(S)
SR	STATE ROAD
SS	STAINLESS STEEL
ST	STREET
STA	STATION
STD	STANDARD
STL	STEEL
STR	STRUCTURE
STS	STORM SEWER
SUP	SUPPORT
SUSP	SUSPEND/SUSPENSION
SVC	SERVICE
SW	SOUTHWEST
SWK	SIDEWALK
SYM	SYMBOL(S)
SYMM	SYMMETRICAL
SYS	SYSTEM

T

T	TANGENT
TB	TURFBLOCK
T&B	TOP AND BOTTOM
TBM	TEMPORARY BENCH MARK
TC	TIME OF CONCENTRATION
TD	TRENCH DRAIN
TDH	TOTAL DYNAMIC HEAD
TECH	TECHNICIAN/TECHNICAL
TEMP	TEMPORARY
TL	TERMINAL LAMPHOLE
TOB	TOP OF BANK
TOC	TOP OF CURB
TOS	TOE OF SLOPE
TOT	TOTAL
TS	TOP OF SLOPE
TWP	TOWNSHIP
TYP	TYPICAL

U

UD	UNDERDRAIN
UG	UNDERGROUND
UON	UNLESS OTHERWISE NOTED
UTC	UNDERGROUND TELEPHONE CABLE

V

VB	VALVE BOX
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VPC	VERTICAL POINT OF CURVE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY

W

W	WEST
W/	WITH
WM	WATER MAIN
W/O	WITHOUT
WP	WATER/WEATHER PROOF
WPP	WOOD POWER POLE
WS	WATER SURFACE
WSWT	WET SEASON WATER TABLE
WT	WEIGHT
WV	WATER VALVE
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH

Y

YD	YARD
YR	YEAR

MISC

&	AND
@	AT
Δ	DELTA

EXISTING SYMBOLS

LINES

- CENTER LINE
- WIRE FENCE
- CHAIN LINK FENCE
- WOOD FENCE
- GUARDRAIL
- EXISTING PLATS
- RETAINING WALL
- R/W — RIGHT-OF-WAY LINE
- SHORELINE
- SWALE
- BUILDING LINE
- 81 / 80 — CONTOURS
- RAILROAD TRACKS
- GAS — GAS MAIN
- UE — UNDERGROUND ELECTRIC
- UGT — UNDERGROUND TELEPHONE
- OVERHEAD ELECTRIC
- OVERHEAD TELEPHONE
- CTV — UNDERGROUND CABLE TELEVISION
- EASEMENT

SANITARY

- SANITARY SEWER LINE
- CLEANOUT
- EX. FM — FORCE MAIN
- MANHOLE

WATER & REUSE WATER

- EX. WM — WATER MAIN DIP PIPE
- EX. RM — REUSE WATER MAIN
- BFP — BACKFLOW PREVENTOR
- WV — WATER VALVE
- FIRE HYDRANT
- WATER METER

STORM DRAIN

- STORM SEWER
- MANHOLE
- MITERED END
- STORM INLET
- FDOT TYPE 6 INLET
- FDOT TYPE 1 INLET
- FDOT TYPE 2 INLET
- FDOT TYPE 3 INLET
- FDOT TYPE 4 INLET
- FDOT TYPE 5 INLET

HIGHWAY & UTILITIES

- BENCHMARK
- RECOVERED 4x4 CM
- SET 4x4 CM
- SET IRON ROD
- RECOVERED IRON ROD
- CONCRETE
- 520 — COUNTY ROADS
- 95 — INTERSTATE ROADS
- 50 — STATE ROADS
- WOOD AND/OR METAL LIGHT POLE
- CONCRETE LIGHT POLE
- YARD LIGHT
- MISCELLANEOUS SIGN
- 16 15 21 22 — SECTION CORNER
- EDGE OF PAVEMENT W/O CURB
- EDGE OF PAVEMENT W/CURB
- GUY POLE
- WOOD UTILITY POLE
- CONCRETE UTILITY POLE
- ELECTRIC MANHOLE
- TELEPHONE MANHOLE
- TELEPHONE RISER
- ELECTRIC BOX / TRANSFORMER
- WELL
- MONITORING WELL
- DUMPSTER
- RR CROSSING SIGN
- RR CROSSING GATE
- TRAFFIC SIGNAL POLE
- SATELLITE DISH
- GUY WIRE
- HANDICAP PARKING
- 99.50 — SPOT ELEVATION
- BRICK PAVERS
- DIRT ROAD
- 8" MAPLE TREE
- 8" OAK TREE
- 8" PINE TREE
- 8" PALM TREE
- 8" MISC. TREE

PROPOSED SYMBOLS

LINES

- BOUNDARY
- CONSERVATION SETBACK
- CENTER LINE
- CHAIN LINK FENCE
- 81 / 80 — CONTOUR
- EASEMENT
- FENCE
- GUARDRAIL
- LOT LINE
- P/L — PROPERTY LINE
- RETAINING WALL
- R/W — RIGHT-OF-WAY LINE
- SETBACK LINE
- SHORELINE
- SWALE
- TREE LINE

STORM DRAIN

- 100 LF STS 24 HDPE @ 0.20% — 100 LINEAR FEET STORM PIPE 24" HIGH DENSITY POLYETHELENE PIPE @ 0.20%
- UNDERDRAIN 6" HDPE PIPE
- DRAINAGE FLOW DIRECTION
- FDOT INLET TYPE 1
- FDOT INLET TYPE 2
- FDOT INLET TYPE 3
- FDOT INLET TYPE 4
- FDOT INLET TYPE 5
- FDOT INLET TYPE 6
- MANHOLE
- MITERED END SECTION
- SLOPE DIRECTION ARROW FOR POND SIDE SLOPE
- 000.00 — SPOT ELEVATION
- STORM INLET

SANITARY

- 100 LF SAN 8 PVC 0.40% — 100 LINEAR FEET SANITARY 8" PVC PIPE @ 0.40% SLOPE
- CLEANOUT
- DOUBLE SANITARY SERVICE
- FM — FORCE MAIN PVC PIPE
- MANHOLE

WATER & REUSE WATER

- WM — WATER MAIN DIP PIIPE
- 11 1/2° BEND
- 22 1/2° BEND
- 45° BEND
- 90° BEND
- TEE
- CROSS
- CHECK VALVE
- DOUBLE DETECTOR CHECK VALVE
- DOUBLE WATER SERVICE
- GATE VALVE
- FIRE HYDRANT
- M — METER
- REDUCER
- BLOWOFF
- BACKFLOW PREVENTER
- SP 2 — SAMPLE POINT
- UNDERDRAIN CEANOUT
- RWM — RECLAIM WATER MAIN
- DOUBLE REUSE WATER SERVICE

HIGHWAY & UTILITIES

- BOUND CORNER
- CONCRETE
- 520 — COUNTY ROADS
- 901 / 24 — DETAIL REFERENCE
- DUMPSTER PAD
- FF=98.76 TYPE A — FINISHED FLOOR ELEVATION W/ FHA LOT TYPE
- GUY POLE
- HANDICAP PARKING
- 95 — INTERSTATE ROADS
- LIGHT POLE
- SIGNS
- 16 15 21 22 — SECTION CORNER
- 50 — STATE ROADS
- SILT FENCE
- TRAFFIC FLOW PAVEMENT MARKING
- UTILITY POLE
- BLDG OR STRUCTURE
- TYPE F CURB & GUTTER
- MIAMI CURB
- 901 / 24 — CROSS SECTION DETAIL

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

SYMBOLS AND ABREVIATIONS
FOR
HIDDEN LAKE RESERVE
CITY OF APOPKA FLORIDA

M/I HOMES OF ORLANDO, LLC
400 INTERNATIONAL PKWY, SUITE 470
LAKE MARY, FL 32746
(407) 531-5100

DAVID ASHLEY STOKES, LICENSE No. 66527, STATE OF FLORIDA, PROFESSIONAL ENGINEER
ENGINEER
CERTIFICATE OF AUTHORIZATION No. EB-0007723

	DATE	REVISIONS
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		

JOB #: 19039
DATE: 11/16/18
SCALE: N.T.S.
DESIGNED BY: WZ
DRAWN BY: WZ
APPROVED BY: DS

C002

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LEGEND

R-3 — ZONING
RES. MEDIUM - LOW (CITY OF APOPKA) — FUTURE LAND USE
GOVERNING JURISDICTION

FEMA NOTE

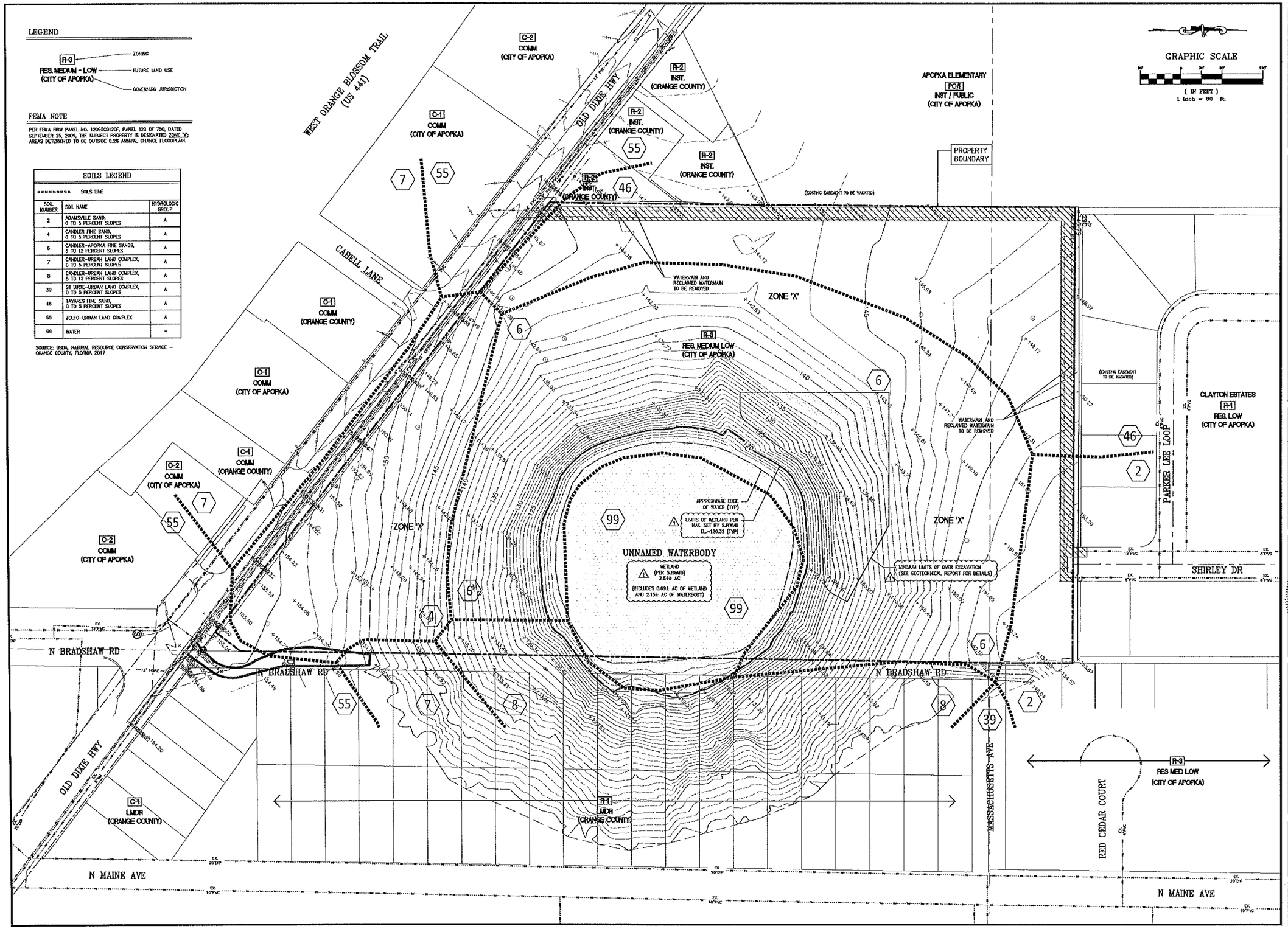
PER FEMA FIRM PANEL NO. 12095C0120F, PANEL 120 OF 750, DATED SEPTEMBER 25, 2009, THE SUBJECT PROPERTY IS DESIGNATED ZONE "X" AREAS DETERMINED TO BE OUTSIDE 0.2% ANNUAL CHANCE FLOODPLAIN.

SOILS LEGEND

SOILS LINE

SOIL NUMBER	SOIL NAME	HYDROLOGIC GROUP
2	ADAMSVILLE SAND, 0 TO 5 PERCENT SLOPES	A
4	CANDLER FINE SAND, 0 TO 5 PERCENT SLOPES	A
6	CANDLER-APOPKA FINE SANDS, 5 TO 12 PERCENT SLOPES	A
7	CANDLER-URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES	A
8	CANDLER-URBAN LAND COMPLEX, 5 TO 12 PERCENT SLOPES	A
39	ST LUCIE-URBAN LAND COMPLEX, 0 TO 5 PERCENT SLOPES	A
46	TAVARES FINE SAND, 0 TO 5 PERCENT SLOPES	A
55	ZOLFO-URBAN LAND COMPLEX	A
99	WATER	-

SOURCE: USDA, NATURAL RESOURCE CONSERVATION SERVICE – ORANGE COUNTY, FLORIDA 2017



MADDEN
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 280
Maitland, Florida 32751
(407) 629-8330

EXISTING CONDITIONS PLAN
FOR
HIDDEN LAKE RESERVE
CITY OF APOPKA FLORIDA

M/I HOMES OF ORLANDO, LLC
400 INTERNATIONAL PKWY, SUITE 470
LAKE MARY, FL 32746
(407) 531-5100

ENGINEER: ASHLEY STOKES
LICENSE No. 66527
STATE OF FLORIDA
PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION No. EB-0007723

	DATE	REVISIONS
1	05/01/20	REVISED PER DISTRICT COMMENTS
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		

JOB #	19039
DATE:	11/16/18
SCALE:	1" = 60'
DESIGNED BY:	WZ
DRAWN BY:	WZ
APPROVED BY:	DS

C003

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GENERAL NOTES

1. ALL CONSTRUCTION WORK SHALL BE IN ACCORDANCE WITH THE LATEST LOCAL AGENCY DETAILS, THE FDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED IN 1991 BY THE STATE OF FLORIDA, AND ALL SUPPLEMENTS THERETO, AND THE FDOT "DESIGN STANDARDS", WHICHEVER IS MORE STRINGENT.

2. ALL FDOT DESIGN INDICES ARE HEREBY INCORPORATED AS PLAN REFERENCES HEREIN. CONTRACTOR IS RESPONSIBLE FOR OBTAINING COMPLETE COPIES OF ALL APPLICABLE INDEX DRAWINGS AND CONSTRUCTING ALL WORKS IN CONFORMANCE WITH THE FDOT DESIGN STANDARDS, LATEST EDITION.

3. THE LOCATIONS OF EXISTING UTILITIES SUCH AS WATER MAINS, SEWER MAINS, GAS LINES, ETC., AS SHOWN ON THE PLANS, WITH THE EXCEPTION OF THE LOCATIONS OF EXISTING UTILITIES AT ALL POINTS OF CONNECTION TO AND AT ALL AREAS OF CONFLICT WITH UTILITY PROVIDER MAINS, WHICH HAVE BEEN FIELD VERIFIED, HAVE BEEN DETERMINED FROM THE BEST AVAILABLE INFORMATION AND ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. HOWEVER, THE ENGINEER AND OWNER DO NOT ASSUME RESPONSIBILITY FOR THE SIZES AND LOCATIONS SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF THE SIZE AND LOCATION OF ALL EXISTING UTILITIES SHOWN AND NOT SHOWN ON THESE PLANS.

4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR(S) TO ENSURE THAT ALL REQUIRED PERMITS ARE OBTAINED AND ARE IN HAND AT THE JOB SITE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. CONTRACTOR SHALL ABIDE BY ALL CONDITIONS CONTAINED THEREIN. PERMITS INCLUDED (BUT NOT NECESSARILY LIMITED TO) ARE:
   - ACOE NATIONWIDE OR INDIVIDUAL DREDGE AND FILL
   - FDEP WATER DISTRIBUTION
   - FDEP SANITARY SEWER COLLECTION AND TRANSMISSION
   - FDEP REUSE
   - FDEP DREDGE AND FILL
   - FDEP NPDES GENERIC PERMIT FOR STORMWATERDISCHARGE FROM LARGE AND SMALL CONSTRUCTION ACTIVITIES
   - FDOT DRIVEWAY CONNECTION
   - FDOT UTILITY
   - FDOT STORMWATER DISCHARGE CONNECTION
   - FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION PERMIT FOR IMPACTS TO PROTECTED SPECIES
   - LOCAL RIGHT OF WAY USE
   - LOCAL UNDERGROUND UTILITIES
   - WATER MANAGEMENT DISTRICT CONSUMPTIVE USE FOR CONSTRUCTION DEWATERING (CUP)
   - WATER MANAGEMENT DISTRICT ENVIRONMENTAL RESOURCE PERMIT (ERP)

5. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL SETBACKS AND EASEMENTS BEFORE BEGINNING CONSTRUCTION.

6. BENCHMARKS AND OTHER REFERENCE POINTS SHALL BE CAREFULLY MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. IF DISTURBED OR DESTROYED, THESE POINTS SHALL BE REPLACED BY A LICENSED FLORIDA PROFESSIONAL LAND SURVEYOR (P.L.S.) AT CONTRACTOR'S EXPENSE.

7. DIFFERING SITE CONDITIONS FROM THAT WHICH IS REPRESENTED HEREON, WHETHER ABOVE, ON, OR BELOW THE SURFACE OF THE GROUND, SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER AND OWNER IN WRITING. NO CLAIM FOR EXPENSES INCURRED BY THE CONTRACTOR DUE TO DIFFERING SITE CONDITIONS WILL BE ALLOWED IF CONTRACTOR FAILS TO PROVIDE THE REQUIRED WRITTEN NOTIFICATION OF SUCH CONDITIONS TO THE ENGINEER AND OWNER.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEMOLITION AND REMOVAL OF ALL EXISTING STRUCTURES, ETC., UNLESS OTHERWISE NOTED. ALL SOIL STRIPPINGS AND ANY UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THE CONTRACTOR UNLESS OTHERWISE DIRECTED BY THE OWNER.

9. THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES AND UTILITIES NOTED TO REMAIN FROM DAMAGE OR DISPLACEMENT DURING CONSTRUCTION. IN THE EVENT OBSTRUCTIONS ARE ENCOUNTERED, THE CONTRACTOR SHALL PROMPTLY NOTIFY THE ENGINEER AND THE UTILITY COMPANY. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS INCURRED TO REPAIR DAMAGE OR CORRECT DISPLACEMENT.

10. CONTRACTOR SHALL BE EXTREMELY CAUTIOUS WHEN WORKING NEAR TREES WHICH ARE TO BE SAVED, WHETHER SHOWN IN THE PLANS OR DESIGNATED IN THE FIELD. CONTRACTOR SHALL BECOME FAMILIAR WITH AND CONFORM WITH ALL TREE PROTECTION/PRESERVATION PROVISIONS OF THE PRELIMINARY SUBDIVISION PLAN / DEVELOPMENT PLAN AND LOCAL GOVERNMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT AND MITIGATION COSTS FOR ANY TREES REMOVED THAT WERE DESIGNATED TO BE PRESERVED.

11. WHEN DETAILS ARE PROVIDED, CONTRACTOR SHALL CONSTRUCT JOB PER SPECIFIC DETAILS, AND NOT BY SCALING FROM THESE PLANS.

12. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ANY REQUIRED TRAFFIC CONTROL PLANS. ALL WORK SHALL BE EXECUTED UNDER THE ESTABLISHED PLAN AND FDOT AND LOCAL AGENCY APPROVED PROCEDURES.

13. THE CONTRACTOR SHALL RESTORE OFF SITE CONSTRUCTION AREAS TO EQUAL OR BETTER CONDITION THAN EXISTED PRIOR TO COMMENCEMENT OF CONSTRUCTION.

14. AS-BUILT DRAWINGS SHALL BE KEPT BY THE CONTRACTOR AND SUBMITTED TO THE PROJECT ENGINEER UPON PROJECT COMPLETION.

15. CONTRACTOR SHALL COMPLY WITH ALL LOCAL AGENCY REQUIREMENTS FOR INSPECTION AND TESTING.

16. ALL NEW UTILITIES AND UPGRADED UTILITIES PROVIDED TO OR ON THE SITE MUST BE INSTALLED UNDERGROUND.

17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE RESTORATION OF ANY TRAFFIC SIGNAL EQUIPMENT INCLUDING BUT NOT LIMITED TO FIBER LOOP SENSORS PULL BOXES, CONDUIT TRAFFIC SIGNALS, AND CABINETS. ANY ITEMS DAMAGED BY THE CONTRACTOR WILL BE RESTORED TO THEIR ORIGINAL CONDITIONS UNLESS OTHERWISE AGREED UPON BY THE COUNTY TRAFFIC ENGINEER.

18. ALL CONSTRUCTION MUST BE IN ACCORDANCE WITH UTILITY PROVIDER'S STANDARDS AND CONSTRUCTION SPECIFICATIONS, LATEST EDITION.

19. CONTRACTOR SHALL NOTIFY ALL APPROPRIATE UTILITY COMPANIES OF PROPOSED START OF WORK IN ACCORDANCE WITH THEIR STANDARD REQUIREMENTS; INCLUDING BUT NOT LIMITED TO, WATER, RECLAIMED WATER, SEWER, POWER, TELEPHONE, GAS AND CABLE TV COMPANIES.

20. PRIOR TO COMMENCEMENT, CONTRACTOR SHALL PROVIDE ENGINEER WITH CONSTRUCTION SCHEDULE FOR VARIOUS SITE WORK ELEMENTS SO THAT PERIODIC SITE VISITS MAY BE COORDINATED TO ENSURE TIMELY CERTIFICATION OF COMPLETION TO AGENCIES AND AVOID DELAYS IN ISSUANCE OF CERTIFICATES OF OCCUPANCY/COMPLETION.

21. ALL RECOMMENDATIONS AND REQUIREMENTS OF INSPECTION PERSONNEL OTHER THAN OWNER/OWNER'S REPRESENTATIVE SHALL BE REPORTED TO ENGINEER/OWNER/OWNER'S REPRESENTATIVE PRIOR TO IMPLEMENTATION. COMPENSATION WILL NOT BE ALLOWED FOR WORK THAT IS NOT AUTHORIZED BY ENGINEER/OWNER/OWNER'S REPRESENTATIVE.

22. CONTRACTOR SHALL CONFIRM COMPATIBILITY OF PIPE SLOPES AND INVERTS DURING SHOP DRAWING AND MATERIALS ORDERING PHASE OF PROJECT AND ADVISE ENGINEER OF ANY DISCREPANCIES.

23. NO EXISTING MATERIAL SHALL BE USED IN NEW CONSTRUCTION UNLESS APPROVED DURING THE SHOP DRAWING APPROVAL PROCESS BY ENGINEER/OWNER/OWNER'S REPRESENTATIVE IN WRITING.

24. CONTRACTOR SHALL STAKE ALL IMPROVEMENTS USING THE PLAT(S), ROAD CENTERLINE GEOMETRY, AND BUILDING COORDINATES PROVIDED IN THESE PLANS. CONTRACTOR SHALL CONFIRM WITH THE ENGINEER THAT THE PLAT IS CURRENT PRIOR TO CONSTRUCTION.

25. CONTRACTOR SHALL CONFIRM THE BUILDING DIMENSIONS SHOWN HEREIN WITH THOSE IN THE FINAL ARCHITECTURAL DRAWINGS PRIOR TO STAKEOUT. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO COMPLETELY STAKE AND CHECK ALL IMPROVEMENTS TO ENSURE ADEQUATE POSITIONING, BOTH HORIZONTAL AND VERTICAL, INCLUDING MINIMUM BUILDING SETBACKS PRIOR TO THE INSTALLATION OF ANY IMPROVEMENT.

PAVING AND DRAINAGE

1. THE CONTRACTOR SHALL CONSTRUCT PAVEMENT IN ACCORDANCE WITH TYPICAL PAVEMENT SECTIONS AND LOCAL AGENCY SPECIFICATIONS. THE FINISHED PAVEMENT GRADES SHALL CONFORM TO THOSE SPECIFIED ON THE GRADING PLAN AND PLAN AND PROFILE PLAN(S).

2. FLORIDA LAW (F.S. 553.851 PROTECTION OF UNDERGROUND PIPELINES) MANDATES THAT "NO EXCAVATOR SHALL COMMENCE OR PERFORM ANY EXCAVATION IN ANY PUBLIC OR PRIVATE STREET, ALLEY, RIGHT-OF-WAY DEDICATED TO THE PUBLIC USE, OR GAS UTILITY EASEMENT WITHOUT FIRST OBTAINING INFORMATION CONCERNING THE POSSIBLE LOCATION OF GAS PIPELINES IN THE AREA OF THE PROPOSED EXCAVATION." THIS INCLUDES ANY OPERATION UTILIZING HAND TOOLS OR POWER TOOLS WHICH MOVES OR REMOVES ANY STRUCTURE, EARTH, ROCK, OR OTHER MASS OF MATERIAL BY SUCH METHODS AS DIGGING, BACKFILLING, DEMOLITION, GRADING, DITCHING, DRILLING, BORING AND CABLE PLOWING. THE EXCAVATOR MUST NOTIFY THE GAS UTILITY A MINIMUM OF 48 HOURS AND A MAXIMUM OF 5 DAYS PRIOR TO EXCAVATING (EXCLUDING SATURDAYS, SUNDAYS, AND LEGAL HOLIDAYS).

3. EXCAVATION, PAVING, AND STORM SEWER WORK SHALL BE DONE IN ACCORDANCE WITH FDOT "STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION", LATEST EDITION, AND LOCAL AGENCY SPECIFICATIONS.

4. UNLESS OTHERWISE NOTED, GRADE TO MEET EXISTING ELEVATIONS AT PROPERTY LINES. CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE OF THE SITE TO THE RETENTION PONDS AS SHOWN BY PROPOSED GRADES AND FLOW ARROWS.

5. DURING CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE ADEQUATE DRAINAGE AND PROPER SOIL EROSION CONTROL MEASURES FOR PROTECTION OF ALL DRAINAGE AND SEWER STRUCTURES AND AT ALL ADJACENT LANDS AND ROADS.

6. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY AND ALL GEOTECHNICAL REPORTS PREPARED FOR THE SITE. GEOTECHNICAL RECOMMENDATIONS ARE NOT THE RESPONSIBILITY OF ENGINEER. ENGINEER HAS RELIED ON THE GEOTECHNICAL REPORT(S) IN PREPARATION OF THE DRAWINGS. ANY CONFLICT BETWEEN INFORMATION WITHIN THE REPORT AND THESE DRAWINGS SHALL BE REPORTED TO ENGINEER/OWNER /OWNER'S REPRESENTATIVE. ENGINEER ASSUMES NO RESPONSIBILITY FOR THE CORRECTNESS, COMPLETENESS, OR ACCURACY OF GEOTECHNICAL INFORMATION.

7. THE SITE SHALL BE CLEARED OF ALL TREES EXCEPT THOSE WHICH ARE DESIGNATED TO BE SAVED OR RELOCATED. BEFORE CONSTRUCTION, THE CONTRACTOR SHALL MEET AT THE SITE WITH THE OWNER. AT THIS TIME, ANY TREES TO BE SAVED SHALL BE POINTED OUT AND TAGGED. THESE TREES SHALL BE PROTECTED FROM DAMAGE.

8. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE SUPERVISING ENGINEER IF A PAVEMENT OR FOUNDATION STAKE IS DISTURBED.

9. THE CONTRACTOR SHALL INSTALL DROP CURBS AND HANDICAP RAMPS AT ALL INTERSECTIONS OF THE SIDEWALK WITH THE PROPOSED PAVEMENT, UNLESS OTHERWISE SPECIFIED.

10. FOR HORIZONTAL AND VERTICAL CLEARANCES BETWEEN STORM PIPES AND WATER MAINS/SERVICES, SEE WATER NOTES ON THIS SHEET AND FDEP SEPARATION TABLE ON UTILITY PLAN.

11. ALL PUBLIC STORM PIPE MATERIALS SHALL BE REINFORCED CONCRETE PIPE (RCP) ASTM C-76 CLASS III, UNLESS OTHERWISE SPECIFIED. LIFTING HOLES ARE PROHIBITED.

12. ALL PRIVATE STORM PIPE MATERIALS SHALL BE AS FOLLOWS:
    - 12.1. DIAMETERS LESS THAN OR EQUAL TO 12-INCH SHALL BE HIGH DENSITY POLYETHYLENE (HDPE) PIPE
    - 12.2. DIAMETERS GREATER THAN OR EQUAL TO 15-INCH SHALL BE HIGH PERFORMANCE POLYPROPYLENE (HP) PIPE.

13. MINIMUM COVER OVER ALL PIPE SHALL BE 30-INCHES FROM TOP OF PIPE TO FINISHED GRADE, UNLESS OTHERWISE NOTED.

14. ALL STORM SYSTEM MANHOLE AND INLET STRUCTURES SHALL BE PRECAST CONCRETE.

15. THE CONTRACTOR SHALL USE CONCRETE WITH A MINIMUM 28 DAY STRENGTH OF 3,000 P.S.I.

16. ALL SIDEWALK WIDTHS SHALL BE AS NOTED ON THE SITE PLAN AND SHALL HAVE 1-INCH DEEP CONTRACTION JOINTS EVERY 5-FEET AND AN EXPANSION JOINT EVERY 20-FEET (MINIMUM). MAXIMUM SIDEWALK CROSS SLOPES SHALL BE 2.00% AND MAXIMUM SIDEWALK RUNNING SLOPES SHALL BE 5.00% EXCEPT AT RAMP LOCATIONS. MAXIMUM RAMP SLOPES SHALL BE 8.33%.

17. PROVIDE FDOT TYPE III SILT FENCE ALONG THE PROPERTY LINES AND PHASE LINES AS WELL AS ANY CONSTRUCTION WITHIN OTHER PHASES AS DEEMED NECESSARY.

18. ALL TEST REPORTS GENERATED BY A TESTING FIRM ARE TO HAVE COPIES SENT DIRECTLY TO THE LOCAL AGENCY AS SOON AS THEY ARE GENERATED. CLEARANCE FROM THE LOCAL AGENCY SHALL BE RECEIVED PRIOR TO PAVING.

19. THE BASE COURSE SHALL NOT BE CONSTRUCTED UNTIL AFTER SUBGRADE CONSTRUCTION HAS BEEN COMPLETED AND REQUIRED SUBGRADE TEST RESULTS HAVE BEEN SUBMITTED TO AND APPROVED BY THE LOCAL AGENCY'S ENGINEER.

20. THE FINISHED BASE COURSE SHALL BE PRIMED WITHOUT DELAY, PROTECTED FROM HEAVY TRAFFIC, AND CONTINUOUSLY MAINTAINED FREE OF DAMAGE UNTIL THE WEARING SURFACE IS APPLIED. ALL BAD AREAS SHALL BE CUT OUT AND REPLACED PRIOR TO APPLYING WEARING SURFACE.

21. ASSUMING ACCEPTABLE CURING, THE WEARING SURFACE SHALL BE APPLIED NO SOONER THAN SEVEN (7) DAYS AND NO LATER THAN THIRTY (30) DAYS AFTER BASE COMPLETION.

22. ALL CONCRETE PIPE JOINTS SHALL BE WRAPPED IN FILTER FABRIC.

23. ROADWAY MARKING, STRIPING, SIGNS, AND OTHER TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" (MUTCD), INCLUDING SUBSEQUENT REVISIONS AND ADDENDUMS, AS PUBLISHED BY THE USDOT FEDERAL HIGHWAY ADMINISTRATION AS WELL AS FDOT AND LOCAL AGENCY STANDARDS AND SPECIFICATIONS.

24. REGULATORY SIGNS AND MARKINGS SHALL BE IN PLACE PRIOR TO FINAL INSPECTION OF PAVING AND DRAINAGE IMPROVEMENTS.

25. PAVEMENT RETURN RADII SHALL BE MEASURED TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

26. POND SLOPES AND BERMS SHALL BE SODDED TO TWO (2) FEET BELOW THE NORMAL WATER LINE (N.W.L.). IN THE CASE OF DRY BOTTOM PONDS, THE BOTTOM WILL BE SEEDED AND MULCHED UNLESS OTHERWISE SPECIFIED.

27. ALL PRECAST DRAINAGE STRUCTURES TO HAVE STEEL FRAME GRATE. ALL STRUCTURES IN PAVED AREAS TO HAVE STEEL RECTILINEAR GRATES WITH H-20 LOADING.

28. CONTRACTOR SHALL NOT COMPACT, STABILIZE, OR CONSTRUCT BASE COURSE WITHIN LANDSCAPE ISLANDS, TRACTS OR MEDIANS. WHERE SUCH TREATMENT DOES OCCUR, IT SHALL BE REMOVED AND REPLACED WITH SUITABLE PLANTING SOILS ACCEPTABLE TO LANDSCAPE ARCHITECT.

29. YARD DRAINS SHALL BE NYLOPLAST INLINE DRAINS AND DRAIN BASINS, OR APPROVED EQUAL, WITH CAST IRON GRATES AND WATERTIGHT ADAPTER CONNECTIONS. DOMED GRATES SHALL BE PROVIDED IN NON-SODDED AREAS.

30. ALL FIRE HYDRANT LOCATIONS SHALL BE MARKED BY PLACING BLUE REFLECTIVE PAVEMENT MARKERS IN THE CENTER OF THE NEAREST TRAVEL LANE.

31. MINIMUM LONGITUDINAL SLOPE OF CURB SHALL BE 0.30% UNLESS SPECIFIED OTHERWISE.

32. FINISHED FLOOR ELEVATION SHALL BE 8" INCHES ABOVE DESIGN FINISHED GRADE AT OUTSIDE PERIMETER OF BUILDINGS EXCEPT AT ENTRIES AND WHERE OTHERWISE SHOWN.

33. CONTRACTOR SHALL REMOVE ALL MUCK DEPOSITS IN CONSTRUCTION AREAS AND AREAS TO BE FILLED. SEE GEOTECHNICAL REPORT.

34. DRAINAGE MANHOLES AND INLETS (NOT INCLUDING CONTROL STRUCTURES) IN THE PLANS ARE IDENTIFIED BY TOP TYPE ONLY. CONTRACTOR SHALL PROVIDE STANDARD DITCH BOTTOM INLET TOPS AND TYPE 'J' OR 'P' STRUCTURE BOTTOMS, SIZED AS REQUIRED TO ACCOMMODATE PIPE SIZES AND ORIENTATIONS SHOWN. SHOP DRAWINGS SHALL BE SUBMITTED WHICH CLEARLY REPRESENT SUCH DATA.

35. CONTRACTOR SHALL STABILIZE AND PROTECT ALL END WALL, MITERED END SECTION, FLARED END SECTION, ETC. STRUCTURES THROUGHOUT THE PROJECT UNTIL THE BANK SLOPES OF THE RECEIVING WATER BODY ARE STABILIZED AND ACCEPTED BY OWNER.

SANITARY SEWER

1. ROOF DRAINS, FOUNDATION DRAINS OR OTHER STORM WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.

2. GRAVITY SEWER PIPE SHALL BE SDR35 PVC AND SHALL MEET ASTM D3034, UNLESS OTHERWISE SPECIFIED.

3. ALL SANITARY SERVICE LATERALS SHALL BE 6-INCH DIAMETER PVC AND SHALL END WITH A CLEAN OUT.

4. ALL SANITARY SEWER PIPE SHALL BE COLORED GREEN.

5. ALL SANITARY SEWER MANHOLES SHALL HAVE A MINIMUM DIAMETER OF 48-INCHES AND A MINIMUM ACCESS DIAMETER OF 22-INCHES.

6. MINIMUM COVER OVER ALL PIPE SHALL BE 36-INCHES FROM TOP OF PIPE TO FINISHED GRADE, UNLESS OTHERWISE NOTED.

7. FOR HORIZONTAL AND VERTICAL CLEARANCES BETWEEN SANITARY SEWER MAINS/ LATERALS AND WATER MAINS/SERVICES, SEE WATER NOTES ON THIS SHEET AND FDEP SEPARATION TABLE ON UTILITY PLAN.

8. WHERE SOIL REPORT INDICATES THE POSSIBILITY OF UNSUITABLE MATERIAL IN THE VICINITY OF SANITARY LINES, THE CONTRACTOR SHALL DETERMINE THE NATURE AND EXTENT OF THIS UNSUITABLE MATERIAL, PREPARE TRENCH, AND INSTALL THE SEWER LINE IN ACCORDANCE WITH ASTM D-2321. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE ENGINEER OF THIS UNSUITABLE MATERIAL.

9. THE CONTRACTOR SHALL BE REQUIRED TO PERFORM INFILTRATION OR EXFILTRATION TEST, WHICHEVER IS APPLICABLE. INFILTRATION SHALL NOT EXCEED 50 GALLONS PER DAY PER INCH OF DIAMETER PER MILE OF LENGTH, OR THE COMPUTED EQUIVALENT FOR SHORTER LENGTHS OF TIME. THE CONTRACTOR SHALL MEET ALL REQUIREMENTS, CODES, AND ORDINANCES OF THE WASTEWATER TRANSMISSION AUTHORITY INCLUDING ADVANCED NOTIFICATION PRIOR TO CONSTRUCTION AND TESTING.

10. MADDEN, MOORHEAD & STOKES, INC. SHALL BE NOTIFIED A MINIMUM OF FIVE (5) FULL WORKING DAYS PRIOR TO CONSTRUCTION AND TESTING OF THE SANITARY SEWER, PHONE (407)-629-8330.

11. THE CONTRACTOR SHALL SUPPLY COMPLETE "AS-BUILT" INFORMATION RELATIVE TO INVERTS, RIM ELEVATIONS, LOCATION OF MANHOLES AND LENGTHS OF PIPE. LATERALS SHALL BE LOCATED FROM THE CENTERLINE OF THE NEAREST DOWNSTREAM MANHOLE. THE INFORMATION SHALL BE SUBMITTED ON LEGIBLY MARKED-UP PRINTS TO THE ENGINEER WITHIN TWO (2) WEEKS OF COMPLETION OF SEWER CONSTRUCTION.

12. CONTRACTOR SHALL RECEIVE SEWER CERTIFICATION PRIOR TO PLACEMENT OF BASE COURSE.

13. MINIMUM SLOPE ON ALL SANITARY SEWER GRAVITY MAINS SHALL BE IN ACCORDANCE WITH UTILITY PROVIDER'S STANDARDS AND CONSTRUCTION SPECIFICATIONS, LATEST EDITION.

14. ALL SANITARY SERVICE LOCATIONS SHALL BE MARKED BY CUTTING AN "S" INTO THE CURB.

15. MARK RESIDENTIAL LATERALS WITH 6-FOOT HIGH PIECE OF 2"x4" PLANK PAINTED GREEN WITH LOT NUMBER CLEARLY MARKED AND AN 'S' IMPRESSED IN THE CURB.

16. AIR RELEASE VALVES SHALL BE REQUIRED AT ALL HIGH POINTS ALONG THE FORCE MAIN.

17. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT AN EVEN TRANSITION IS MAINTAINED WHERE ASPHALT PAVING ABUTS MANHOLE/VALVE COVERS IN PAVED AREAS. AT EACH OF THESE LOCATIONS THE CONTRACTOR SHALL POUR AN 8-INCH THICK CONCRETE APRON AROUND THE MANHOLE/VALVE COVER A MINIMUM OF 4'x4' AT MANHOLES, AND 2'x2' AT VALVE COVERS LEVEL WITH THE FINAL LIFT OF ASPHALT.

18. PIPE LENGTHS SHOWN REPRESENT SCALED DISTANCES BETWEEN MANHOLE CENTERLINE.

19. INVERTS OF SANITARY SERVICE LATERALS AT THEIR CONNECTION TO SANITARY MANHOLES SHALL BE NO MORE THAN ONE (1) FOOT ABOVE THE MANHOLE INVERT.

20. PRIOR TO PAVING, CONTRACTOR SHALL VERIFY THE AS-BUILT SANITARY SEWER PIPE SLOPES. MINIMUM SLOPES SHALL BE IN ACCORDANCE WITH THE GREATER OF FDEP OR THE UTILITY PROVIDER'S MINIMUM CRITERIA. ANY LINE NOT MEETING MINIMUM SLOPES SHALL BE RELAYED BY CONTRACTOR TO MEET THE MINIMUM SLOPE REQUIREMENT AT NO ADDITIONAL COST.

21. MANHOLE LIFT HOLES AND GRADE ADJUSTMENT RINGS SHALL BE SEALED WITH NON-SHRINKING MORTAR OR OTHER APPROPRIATE MATERIAL.

22. INLET AND OUTLET PIPES SHALL BE JOINED TO THE MANHOLE WITH A GASKETED FLEXIBLE WATER-TIGHT CONNECTION OR ANOTHER WATER-TIGHT CONNECTION ARRANGEMENT THAT ALLOWS DIFFERENTIAL SETTLEMENT OF THE PIPE AND MANHOLE WALL.

23. WATER-TIGHT MANHOLE COVERS SHALL BE USED WHEREVER THE MANHOLE TOPS MAY BE FLOODED BY STREET RUNOFF OF HIGH WATER.

WATER

1. ALL MATERIALS AND CONSTRUCTION REQUIREMENTS FOR THE FIRE SERVICE, WATER LINES, CHECK VALVES, BACKFLOW PREVENTERS, GATE VALVES, ETC., SHALL BE IN ACCORDANCE WITH LOCAL AGENCY STANDARD DETAILS AND CONSTRUCTION SPECIFICATIONS.

2. ALL CONSTRUCTION AND MATERIALS SHALL BE IN COMPLIANCE WITH AWWA STANDARDS AND IN ACCORDANCE WITH LOCAL AGENCY STANDARDS.

3. ALL PUBLIC WATER SYSTEM COMPONENTS, EXCLUDING FIRE HYDRANTS, THAT WILL BE INSTALLED UNDER THIS PROJECT AND THAT WILL COME INTO CONTACT WITH DRINKING WATER WILL CONFORM TO NSF INTERNATIONAL STANDARD 61 AND WILL BE MARKED WITH THE NSF SEAL OF APPROVAL.

4. CONTRACTOR SHALL VERIFY SIZE AND TYPE OF EXISTING MAIN PRIOR TO ORDERING TAPPING MATERIALS FOR TIE-INS.

5. SITE CONTRACTOR SHALL COORDINATE AND VERIFY ALL UTILITY SERVICES WITH FINAL ARCHITECTURAL DRAWINGS AND BUILDING CONTRACTOR, PRIOR TO INSTALLATION.

6. SITE UTILITY WORK SHALL TERMINATE 5-FEET FROM BUILDINGS UNLESS OTHERWISE STATED.

7. MINIMUM COVER OVER ALL PIPE SHALL BE 36-INCHES FROM TOP OF PIPE TO FINISHED GRADE, UNLESS OTHERWISE NOTED.

8. THE WATER MAIN SHALL BE LOCATED ABOVE THE STORMWATER AND SANITARY MAINS AT CONFLICTS, WHERE POSSIBLE.

9. VERTICAL SEPARATION BETWEEN UNDERGROUND POTABLE WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS, AND RECLAIMED WATER PIPELINES
   - 9.1. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY- OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
   - 9.2. NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.

10. HORIZONTAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS, RECLAIMED WATER PIPELINES, AND ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS
    - 10.1. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
    - 10.2. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER.
    - 10.3. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY- OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.
    - 10.4. NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST TEN FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM" AS DEFINED IN SECTION 381.0065(2), F.S., AND RULE 64E-6.002, F.A.C.

11. AT THE UTILITY CROSSINGS DESCRIBED IN NOTES 8 AND 9 ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSING, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY-OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610 F.A.C.

12. WATER LINES 2-INCHES, OR LESS, IN DIAMETER SHALL BE POLYETHYLENE TUBING.

13. WATER LINES 4-INCH TO 12-INCH IN DIAMETER SHALL BE NSF LOGO PVC PIPE CONFORMING TO AWWA C-900 AND BE DR-18.

14. ALL FITTINGS SHALL BE DUCTILE IRON (D.I.) OR GRAY IRON MECHANICAL JOINTS WITH A MINIMUM PRESSURE RATING OF 250 P.S.I. CONFORMING TO ANSI A-21.10 / AWWA C-110, OR D.I. COMPACT FITTINGS FOR DIAMETERS 4-INCH TO 12-INCH CONFORMING TO ANSI A-21.53 / AWWA C-153.

15. FROM THE POINT OF SERVICE (P.O.S.) FORWARD AS DESIGNATED BY F.S. 633, FIRE SUPPLY PIPE SHALL BE DR-14 AND TESTED AT 200 PSI FOR TWO HOURS.

16. GATE VALVES SHALL CONFORM TO AWWA C-509-87, WITH WRENCH NUT EXTENSION STEMS AND OTHER APPURTENANCES AS REQUIRED AND SHALL BE IRON BODY, FULL BRONZE MOUNTED, DOUBLE DISK, PARALLEL SEAT, NON-RISING STEM VALVES WITH O-RING SEALS AND END CONNECTIONS AS CALLED FOR ON THE PLANS. ALL TEES, CAPS, PLUGS, BENDS, VALVES, ETC., SHALL BE PROVIDED WITH GRIP RING RESTRAINTS.

17. ALL NON-METALLIC WATER MAINS SHALL BE INSTALLED WITH A CONTINUOUS, INSULATED 10 GAUGE COPPER WIRE INSTALLED DIRECTLY ON TOP OF THE PIPE FOR LOCATION PURPOSES. IN ADDITION, ALL PVC WATER MAINS SHALL BE A SOLID BLUE COLOR. ALL LETTERING SHALL APPEAR LEGIBLY ON PIPE AND SHALL RUN THE ENTIRE LENGTH OF THE PIPE. LETTERING SHALL READ AS IS ACCEPTABLE FOR THE INTENDED USE.

18. SERVICE MAINS FOR FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 24, LATEST EDITION.

19. NEW FIRE HYDRANTS SHALL BE INSTALLED SO THAT 5-1/4" INCH PORT IS FACING THE ROADWAY BY WHICH IT IS ACCESSED. HYDRANTS SHALL BE POSITIONED NOT MORE THAN 5 FEET AWAY FROM THE CURB OR BERM OF THE ROADWAY.

20. HYDROSTATIC TESTING AND THE DISINFECTION OF THE WATER DISTRIBUTION SYSTEM SHALL BE DONE IN ACCORDANCE WITH AWWA STANDARDS. HYDROSTATIC TESTING TO BE DONE IN ACCORDANCE WITH AWWA C-600 FOR DUCTILE IRON PIPE AND C-605 FOR PVC PIPE. DISINFECTING AND BACTERIOLOGICAL EVALUATION TO BE DONE IN ACCORDANCE WITH AWWA C-651 AND RULE 62-555.340 F.A.C.

21. THE CONTRACTOR SHALL SUPPLY COMPLETE AS-BUILT INFORMATION RELATIVE TO LOCATION AND ELEVATION OF ALL WATER LINES AND SERVICES. THE INFORMATION SHALL BE SUBMITTED ON LEGIBLY MARKED-UP PRINTS TO THE ENGINEER WITHIN TWO (2) WEEKS OF THE COMPLETION OF THE WATER LINE CONSTRUCTION.

22. CONTRACTOR SHALL COORDINATE ALL UTILITIES SYSTEMS TEST SCHEDULING TO ALLOW ENGINEER'S ATTENDANCE PROVIDING MINIMUM NOTICE OF FIVE (5) WORKING DAYS. CONTRACTOR'S FAILURE TO PROPERLY NOTIFY ENGINEER MAY RESULT IN RETESTING AT ENGINEER'S OPTION AND AT CONTRACTOR'S EXPENSE.

23. NEW HYDRANTS SHALL BE TESTED AND IN PROPER WORKING ORDER WITH OUTILITY PROVIDERMENTATION SUPPLIED TO THE FIRE MARSHAL PRIOR TO ANY COMBUSTIBLE CONSTRUCTION. (I.E. FIRE FLOW TEST SHALL BE PERFORMED)

24. DEFLECTIONS AT PIPE JOINTS SHALL NOT EXCEED THE LESSOR OF THOSE RECOMMENDED BY THE PIPE MANUFACTURER OR UTILITY PROVIDER'S CONSTRUCTION SPECIFICATIONS.

25. ALL PIPE AND PIPE FITTINGS INSTALLED UNDER THIS PROJECT SHALL BE COLOR CODED IN ACCORDANCE WITH SUB PARAGRAPH 62-555.320(21)(B)3, F.A.C. USING BLUE AS A PREDOMINANT COLOR. ALL DUCTILE IRON WATER MAINS SHALL BE MARKED WITH A CONTINUOUS STRIPE LOCATED WITHIN THE TOP 90 DEGREES OF THE PIPE. SAID STRIPE SHALL BE A MINIMUM 2 INCHES IN WIDTH AND SHALL BE BLUE IN COLOR. BACKFILL SHALL NOT BE PLACED FOR 30 MINUTES FOLLOWING PAINT APPLICATION. FOR PIPE WITH AN INTERNAL DIAMETER OF 24" OR GREATER, TAPE OR PAINT SHALL BE APPLIED IN CONTINUOUS LINES A LONG EACH SIDE OF THE PIPE AS WELL AS ALONG THE TOP OF THE PIPE.

26. MARK RESIDENTIAL SERVICES WITH 6-FOOT HIGH PIECE OF 2"x4" PLANK PAINTED BLUE WITH LOT NUMBER CLEARLY MARKED AND A 'W' IMPRESSED IN THE CURB. IT IS THE INTENT THAT EVERY LOT IS PROVIDED WITH A WATER SERVICE; THEREFORE IT IS THE CONTRACTOR'S RESPONSIBILITY TO INSTALL A WATER SERVICE TO EACH LOT.

27. PIPE MATERIALS:
    PVC – ALL PIPE, PIPE FITTINGS, PIPE JOINT PACKING AND JOINTING MATERIALS, VALVES, FIRE HYDRANTS, AND METERS INSTALLED UNDER THIS PROJECT SHALL CONFORM TO APPLICABLE AWWA STANDARDS AND SHALL BE MANUFACTURED IN ACCORDANCE WITH AWWA STANDARD C900, LATEST EDITION. PVC SHALL BE MANUFACTURED IN ACCORDANCE WITH AWWA STANDARD C900. THE PVC SHALL HAVE A MINIMUM WORKING PRESSURE OF 150 P.S.I. AND SHALL HAVE A DIMENSION RATIO (DR) OF 18. PIPE SHALL BE THE SAME O.D. AS DUCTILE IRON PIPE.
    PVC JOINT – SHALL BE IN ACCORDANCE WITH ASTM D3139.
    DUCTILE IRON – SHALL CONFORM TO ANSI/AWWA C150/C151. A MINIMUM OF CLASS 50 PIPE SHALL BE SUPPLIED.
    DUCTILE IRON JOINT – SHALL BE IN ACCORDANCE WITH ANSI A21.11 AND AWWA C111.
    SERVICES – SHALL BE IN ACCORDANCE WITH AWWA C901/C800 STANDARDS FOR POLYETHYLENE TUBING, CLASS 160.

28. WATER MAIN CONNECTION SHALL BE MADE UNDER THE SUPERVISION OF THE UTILITY PROVIDER. ALL VALVES SHALL BE OPERATED BY UTILITY PROVIDER PERSONNEL ONLY.

29. ALL PIPE AND PIPE FITTINGS INSTALLED UNDER THIS PROJECT SHALL CONTAIN NO MORE THAN 8.0% LEAD, AND ANY SOLDER OR FLUX USED IN THIS PROJECT SHALL CONTAIN NO MORE THAN 0.2% LEAD.

30. NEW OR ALTERED FIRE HYDRANT LEADS SHALL HAVE A MINIMUM INSIDE DIAMETER OF 6-INCH AND SHALL INCLUDE AN AUXILIARY VALVE.

31. A CONTINUOUS AND UNIFORM BEDDING WILL BE PROVIDED IN TRENCHES FOR UNDERGROUND PIPE INSTALLED UNDER THIS PROJECT; BACKFILL MATERIAL WILL BE TAMPED IN LAYERS AROUND UNDERGROUND PIPE INSTALLED UNDER THIS PROJECT AND TO A SUFFICIENT HEIGHT ABOVE THE PIPE TO ADEQUATELY SUPPORT AND PROTECT THE PIPE; AND UNSUITABLY SIZED STONES (AS DESCRIBED IN APPLICABLE AWWA STANDARDS OR MANUFACTURERS' RECOMMENDED INSTALLATION PROCEDURES) FOUND IN TRENCHES WILL BE REMOVED FOR A DEPTH OF A LEAST SIX INCHES BELOW THE BOTTOM OF UNDERGROUND PIPE INSTALLED UNDER THIS PROJECT.

32. CONTRACTOR SHALL NOT ACTIVATE WATER SERVICE UNTIL FDEP HAS CLEARED THE SYSTEM FOR USE AND THE CLEARANCE LETTER HAS BEEN RECEIVED BY THE OWNER.

33. ENGINEER RESERVES THE RIGHT TO WITHHOLD AUTHORIZATION OF PAYMENT FOR ANY PORTION OF THE UTILITIES PIPE WORK WHICH HAS NOT BEEN TESTED, OBSERVED BY ENGINEER, AND REPORTED TO CONFORM TO PROJECT SPECIFICATIONS.

RECLAIMED WATER

1. POLYVINYL CHLORIDE PLASTIC PIPE (PVC) 4-INCH THROUGH 12-INCH SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI/AWWA C900 (LATEST EDITION) AND SHALL HAVE A MINIMUM WORKING PRESSURE OF 150 PSI AND HAVE A DR (DIMENSION RATIO) OF 18. PIPE SHALL BE PURPLE AND LABELED "RECLAIMED WATER" OR "NON POTABLE WATER" PROMINENTLY ON EACH PIPE JOINT. JOINTS SHALL BE OF THE PUSH-ON TYPE AND COUPLINGS SHALL CONFORM TO ASTM D3139 DR18 PIPE.

2. DUCTILE IRON PIPE (DIP) SHALL BE STANDARD PRESSURE CLASS 350 IN SIZES 4-INCH THROUGH 12-INCH AND CONFORM TO ANSI/AWWA C150/A21.50 (LATEST EDITION). ALL DUCTILE IRON PIPE SHALL HAVE CEMENT MORTAR LINING AS SPECIFIED IN ANSI/AWWA C104/A21.4 (LATEST EDITION). PIPE JOINTS SHALL BE OF THE PUSH-ON RUBBER GASKET TYPE CONFORMING TO ANSI/AWWA C111/A21.11 (LATEST EDITION).

3. PIPE SIZES GREATER THAN 12" IN BOTH PVC AND DUCTILE IRON SHALL BE SEPARATELY SPECIFIED ON THE PLANS; WITH THICKNESS CLASSES TO BE SHOWN BASED ON WORKING PRESSURES, PIPE DEPTH AND TRENCH CONDITIONS.

4. COMPACT FITTINGS FOR DUCTILE IRON PIPE AND PVC C900 PIPE SHALL BE DUCTILE IRON AND SHALL CONFORM TO ANSI/AWWA C153/A21.53 (LATEST EDITION) AND SHALL BE CEMENT LINED IN CONFORMANCE WITH ANSI/AWWA C104/A21.4 (LATEST EDITION). 350 PSI MINIMUM PRESSURE RATING.

5. GATE VALVES SHALL BE RESILIENT SEAT AND SHALL CONFORM TO ANSI/AWWA C509 (LATEST EDITION) WITH 2-INCH SQUARE WRENCH NUT, EXTENSION STEMS AND OTHER APPURTENANCES AS REQUIRED. MANUFACTURER'S CERTIFICATION OF THE VALVES' COMPLIANCE WITH AWWA C509 (LATEST EDITION) AND TESTS LISTED THEREIN WILL BE REQUIRED. VALVES SHALL BE CLOW, MUELLER, KENNEDY, M&H, AMERICAN DARLING, OR APPROVED EQUAL.

6. VALVE BOX PADS SHALL BE 18"x18"x4" THICK CONCRETE WITH FOUR (4) REINFORCING BARS. PAD IS TO BE SET AT FINISH GRADE.

7. UNDERGROUND VALVE IDENTIFICATION (UVI) MARKERS SHALL BE PROVIDED AT EACH VALVE LOCATION. MARKERS SHALL BE 3-INCH DIAMETER AND 1/8-INCH THICK SOLID HARD BRASS WITH 1/4-INCH ROD ANCHOR WITH "TAMPER-PROOF" HOOK END. SURFACE SHALL BE ENGRAVED WITH 1/4-INCH TO 3/8-INCH CAPITAL LETTERS APPROXIMATELY .015-INCH DEEP – HAND PUNCHED LETTERS NOT ACCEPTABLE. FOR MARKER TEXT, REFER TO UNDERGROUND VALVE MARKER DETAIL. SURFACE GROUND SMOOTH AND EPOXY COATED TO PREVENT TARNISHING. MARKERS ARE TO BE WAGCO MARKERS, OR APPROVED EQUAL.

8. BUTTERFLY VALVES SHALL MEET OR EXCEED THE DESIGN STRENGTH TESTING AND PERFORMANCE REQUIREMENTS OF AWWA C504 (LATEST EDITION), CLASS 150. VALVES SHALL BE DUCTILE IRON, RESILIENT SEAT, AND BE MANUFACTURED BY KENNEDY, MUELLER, M&H, AMERICAN DARLING, OR APPROVED EQUAL. BUTTERFLY VALVES TO BE USED FOR SIZES GREATER THAN 12-INCH.

9. AIR RELEASE VALVES SHALL BE PLACED AT HIGH POINTS OF THE TRANSMISSION MAIN TO PERMIT ESCAPE OF TRAPPED AIR. THE VALVE SIZE, LOCATION, AND METHOD OF INSTALLATION SHALL BE INDICATED ON THE DRAWINGS, OR AS DIRECTED BY THE ENGINEER. AIR RELEASE VALVES SHALL BE VALMATIC OR APPROVED EQUAL.

10. VALVE BOXES ON BURIED RECLAIMED WATER SHALL BE ADJUSTABLE, CAST IRON CONSTRUCTION, WITH A MINIMUM INTERIOR DIAMETER OF 5-INCH WITH COVERS CAST WITH THE INSCRIPTION IN LEGIBLE LETTERING ON THE TOP: RECLAIMED WATER. BOXES SHALL BE SUITABLE FOR THE APPLICABLE SURFACE LOADING AND VALVE SIZE, AND SHALL BE MANUFACTURED BY MUELLER COMPANY, MODEL 10364, OR APPROVED EQUAL.

11. PIPE INSTALLATION OF PVC RECLAIMED WATER MAIN SHALL BE IN CONFORMANCE WITH ASTM D2774 (LATEST EDITION). INSTALLATION OF DUCTILE IRON PIPE RECLAIMED WATER MAIN SHALL BE IN CONFORMANCE WITH AWWA C600 (LATEST EDITION).

12. RECLAIMED WATER SYSTEM PIPES SHALL BE INSTALLED SO AS TO GIVE A MINIMUM HORIZONTAL SEPARATION OF 5-FEET (CENTER OF PIPE TO CENTER OF PIPE) FROM POTABLE WATER LINES AND MINIMUM 3-FOOT SEPARATION FROM OUTSIDE WALL TO OUTSIDE WALL AS WELL AS 18-INCH VERTICAL SEPARATION. IN THE CASE OF A CONFLICT WHERE THESE SEPARATIONS CANNOT BE MAINTAINED THE REUSE MAIN SHALL BE UPGRADED TO DIP.

13. COMPACTED BACKFILL SHALL BE TO 98% MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180 UNDER ALL PAVEMENTS WITH 12-INCH MAXIMUM LIFT THICKNESS. OTHER COMPACTION OF BACKFILL SHALL BE TO 95% MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180 WITH 12-INCH MAXIMUM LIFT THICKNESS. SEE PIPE TRENCHING DETAILS.

14. MINIMUM COVER OVER ALL PIPE SHALL BE 36-INCHES FROM TOP OF PIPE TO FINISHED GRADE, UNLESS OTHERWISE NOTED.

15. INDICATOR TAPE SHALL BE BURIED IN THE RECLAIMED WATER MAIN TRENCH 18-INCH DIRECTLY ABOVE THE MAIN. A CONTINUOUS COPPER DETECTOR WIRE SHALL BE ATTACHED AS SHOWN ON THE PIPE DETECTOR WIRE MARKER DETAIL. INDICATOR TAPE SHALL CALL OUT THAT A RECLAIMED OR NON POTABLE SYSTEM IS BELOW. PIPE SHALL BE COLOR CODED PURPLE IN ADDITION TO MARKINGS. SIGNS IN ENGLISH, SPANISH, AND INTERNATIONAL SYMBOLS SHALL BE INSTALLED NOTING THAT NO DRINKING IS ALLOWED. CONTINUITY CHECK WILL BE PERFORMED AND MUST BE ACCEPTABLE.

16. ALLOWABLE LEAKAGE FOR PVC PRESSURE MAINS WILL BE IN ACCORDANCE WITH AWWA M23.

17. THE CONTRACTOR SHALL PROVIDE AT HIS OWN EXPENSE ALL NECESSARY TEST PUMPING EQUIPMENT, WATER, WATER METERS, PRESSURE GAUGES, AND OTHER EQUIPMENT, MATERIAL AND FACILITIES REQUIRED FOR ALL HYDROSTATIC AND LEAKAGE TESTING. CONTRACTOR SHALL CONTACT LOCAL AGENCY, UTILITY PROVIDER, AND ENGINEER IN WRITTEN FORM, FORTY-EIGHT (48) HOURS IN ADVANCE OF PROPOSED TESTING. THE CONTRACTOR SHALL PERFORM SATISFACTORY PRETESTING PRIOR TO NOTIFICATION. NO TESTING WILL BE SCHEDULED ON A MONDAY OR FRIDAY.

18. THE RECLAIMED WATER SYSTEM SHALL BE TESTED FOR LEAKAGE AT 150 PSI FOR TWO (2) HOURS PER UTILITY PROVIDER STANDARDS.

19. ALL RECLAIMED WATER PIPES SHALL BE INSTALLED USING WATER PIPE CRITERIA. MAINS SHALL BE CLASS 52 D.I. PIPE. IF 24-INCHES TO 30-INCHES OF COVER IS PROVIDED AND CLASS 51 IF 30-INCHES TO 36-INCHES OF COVER IS PROVIDED.

20. SIGNS SHALL BE POSTED IN THE VICINITY OF PUBLIC RECLAIMED WATER RECLAIMED WATER IRRIGATION SYSTEMS, ADVISING THE PUBLIC THAT RECLAIMED WATER IS PRACTICED.

FIRE

PLANS SHALL BE IN ACCORDANCE WITH
THE 6TH EDITION OF THE FLORIDA FIRE PREVENTION
CODE;
NFPA 101, 2015 EDITION
NFPA 1, 2015 EDITION
NFPA 14, 2013 EDITION
NFPA 24, 2013 EDITION
NFPA 13, 2013 EDITION

DEMOLITION NOTES

1. EXISTING UNDERGROUND UTILITIES, UNLESS OTHERWISE NOTED, MAY BE CAPPED/PLUGGED AND ABANDONED IN PLACE EXCEPT WITHIN 30 FT. OF BUILDING. CAPPED AND PLUGGED PIPE ENDS SHALL BE ENCASED IN CONCRETE, 6" MINIMUM THICKNESS AROUND PIPE. MANHOLE BASES MAY BE LEFT IN PLACE PROVIDED THAT PIPE OPENINGS ARE PLUGGED AND REMAINING BASES ARE FILLED WITH CONCRETE 6" MINIMUM ABOVE HIGHEST INVERT.

2. CONTRACTOR SHALL BE KNOWLEDGEABLE OF THE CONSTRUCTION DOCUMENTS AND BE RESPONSIBLE FOR PROTECTING ANY EXISTING FACILITY SO DESIGNATED OR DESIGNATED TO BE UTILIZED IN THE WORK.

3. CONTRACTOR SHALL REMOVE ALL FOUNDATIONS, CONCRETE SLABS, AND UNDERGROUND STRUCTURES EXISTING ON THE SITE AT THE TIME OF BIDDING UNLESS OTHERWISE DIRECTED.

4. CONTRACTOR SHALL COORDINATE WITH APPLICABLE UTILITY COMPANIES AND BE RESPONSIBLE FOR THE TERMINATION, CAPPING-OFF AND REMOVAL OF ALL UNDERGROUND AND ABOVE-GROUND UTILITY SERVICES EXISTING AT THE TIME OF BIDDING UNLESS DIRECTED TO BID OTHERWISE.

5. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING AND DISPOSING ALL WASTE MATERIALS CONSISTENT WITH ALL RULES AND REGULATIONS APPLICABLE TO THE SPECIFIC MATERIAL FOUND.

SPECIAL PURPOSE

1. THE EXISTENCE AND LOCATION OF ANY OVERHEAD OR UNDERGROUND UTILITY LINES, PIPES, OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A RESEARCH OF THE AVAILABLE RECORDS. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO SAME. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING NEAR OVERHEAD UTILITIES SO AS TO SAFELY PROTECT ALL PERSONNEL AND EQUIPMENT AND SHALL BE RESPONSIBLE FOR ALL COST AND LIABILITY IN CONNECTION THEREWITH.

2. EXTERIOR RESIDENTIAL HOME'S ARCHITECTURAL DESIGN SHALL COMPLY WITH THE CITY'S DEVELOPMENT DESIGN GUIDELINES. HOME ELEVATIONS MUST BE APPROVED BY THE COMMUNITY DEVELOPMENT DEPARTMENT PRIOR TO ISSUANCE OF ANY MODEL HOME OR RESIDENTIAL HOME BUILDING PERMIT.

FFWCC NOTE:

A LETTER SHALL BE OBTAINED FROM THE FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION (FFWCC) REGARDING WILDLIFE MANAGEMENT PLAN, PRIOR TO ANY CONSTRUCTION ACTIVITIES OCCURRING ON SITE.

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
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GENERAL NOTES
FOR
HIDDEN LAKE RESERVE
CITY OF APOPKA
FLORIDA

M/I HOMES OF ORLANDO, LLC
400 INTERNATIONAL PKWY, SUITE 470
LAKE MARY, FL 32746
(407) 531-5100

ENGINEER
DAVID ... STOKES
LICENSE
No. 66527
STATE OF FLORIDA
PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION NO. EB-0007723

	DATE	REVISIONS
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JOB # 19039
DATE: 11/16/18
SCALE: N/A
DESIGNED BY: WZ
DRAWN BY: WZ
APPROVED BY: DS

C004

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OWNERSHIP / MAINTENANCE

RIGHT-OF-WAY TRACT WITH OVERLAYING UTILITY EASEMENT	PUBLIC / PRIVATE	TO BE OWNED AND MAINTAINED BY HOMEOWNERS ASSOCIATION. UTILITIES WITHIN THE TRACT TO BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION WITH A DEDICATION UTILITY EASEMENT TO THE CITY OF APOPKA FOR MAINTANANCE PURPOSES.
POND TRACTS	PRIVATE	TO BE OWNED AND MAINTAINED BY HOMEOWNERS ASSOCIATION
DRAINAGE EASEMENTS	PRIVATE	TO BE OWNED AND MAINTAINED BY HOMEOWNERS ASSOCIATION
WALL ACCESS EASEMENTS	PRIVATE	TO BE OWNED AND MAINTAINED BY HOMEOWNERS ASSOCIATION
PEDESTRIAN CROSS ACCESS EASEMENT	PRIVATE	TO BE OWNED AND MAINTAINED BY HOMEOWNERS ASSOCIATION
PRIVATE LOTS AND TRACTS WITH OVERLAYING UTILITY EASEMENTS	PUBLIC / PRIVATE	TO BE OWNED AND MAINTAINED BY PRIVATE OWNER OR HOMEOWNERS ASSOCIATION. UTILITIES WITHIN THE LOT OR TRACT TO BE OWNED AND MAINTAINED BY THE CITY OF APOPKA WITH A DEDICATION UTILITY EASEMENT TO THE CITY OF APOPKA FOR MAINTANANCE PURPOSES.
UTILITY EASEMENTS ADJACENT TO RIGHT-OF-WAY TRACT	PUBLIC / PRIVATE	TO BE DEDICATED TO THE CITY OF APOPKA, HOA AND/OR OTHER PRIVATE UTILITY COMPANIES. UTILITIES WITHIN THE EASEMENTS MAY BE OWNED AND MAINTAINED BY THE CITY OF APOPKA AND/OR OTHER PRIVATE ENTITIES.
WATER AND RECLAIMED WATER	PUBLIC	TO BE OWNED AND MAINTAINED BY CITY OF APOPKA
SANITARY SEWER AND FORCEMAIN	PUBLIC	TO BE OWNED AND MAINTAINED BY CITY OF APOPKA
BUFFER TRACTS	PRIVATE	TO BE OWNED AND MAINTAINED BY HOMEOWNERS ASSOCIATION
LIFT STATION TRACT	PUBLIC	TO BE OWNED AND MAINTAINED BY CITY OF APOPKA
RECREATION TRACTS	PRIVATE	TO BE OWNED AND MAINTAINED BY HOMEOWNERS ASSOCIATION
OPEN SPACE TRACTS	PRIVATE	TO BE OWNED AND MAINTAINED BY HOMEOWNERS ASSOCIATION
SIDEWALKS IN RIGHT-OF-WAY	PRIVATE	TO BE OWNED AND MAINTAINED BY HOMEOWNERS ASSOCIATION
WETLAND AND UPLAND BUFFER AREAS (CONSERVATION EASEMENTS)	PRIVATE	TO BE OWNED AND MAINTAINED BY HOMEOWNERS ASSOCIATION

UTILITY PROVIDERS

POTABLE WATER SERVICE	CITY OF APOPKA UTILITIES
RECLAIMED WATER SERVICE	CITY OF APOPKA UTILITIES
WASTEWATER SERVICE	CITY OF APOPKA UTILITIES
ELECTRIC SERVICE	DUKE ENERGY
SOLID WASTE	CITY OF APOPKA
CABLE	SPECTRUM
NATURAL GAS	LAKE APOPKA NATURAL GAS
FIRE PROTECTION	CITY OF APOPKA

TRACT IDENTIFICATION TABLE

TRACT	USE	PHASE	OWNERSHIP	MAINTENACE	AREA (ACREAGE)
B-1	BUFFER	1	H.O.A.	H.O.A.	0.09
B-2	BUFFER	1	H.O.A.	H.O.A.	0.22
C-1	CONSERVATION	1	H.O.A.	H.O.A.	3.13
LS-1	LIFT-STATION	1	CITY OF APOPKA	CITY OF APOPKA	0.11
OS-1	OPEN SPACE	1	H.O.A.	H.O.A.	0.13
OS-2	OPEN SPACE	1	H.O.A.	H.O.A.	0.05
OS-3	OPEN SPACE	1	H.O.A.	H.O.A.	0.10
OS-4	OPEN SPACE	1	H.O.A.	H.O.A.	0.14
OS-5	OPEN SPACE	1	H.O.A.	H.O.A.	0.06
OS-6	OPEN SPACE	1	H.O.A.	H.O.A.	0.34
OS-7	OPEN SPACE	1	H.O.A.	H.O.A.	0.13
OS-8	OPEN SPACE	1	H.O.A.	H.O.A.	0.11
OS-9	OPEN SPACE	1	H.O.A.	H.O.A.	0.19
OS-10	OPEN SPACE	1	H.O.A.	H.O.A.	0.10
OS-11	OPEN SPACE	1	H.O.A.	H.O.A.	0.03
P-1	STORMWATER POND	1	H.O.A.	H.O.A.	0.81
P-2	STORMWATER POND	1	H.O.A.	H.O.A.	0.91
R-1	RECREATION	1	H.O.A.	H.O.A.	0.60
R-2	RECREATION	1	H.O.A.	H.O.A.	0.16
ROW-1	RIGHT-OF-WAY	1	H.O.A.	H.O.A.	2.47
				SUBTOTAL:	9.68
SINGLE-FAMILY ATTACHED LOTS		1	-	-	5.92
				SUBTOTAL:	5.92
				GROSS LAND AREA:	15.60

RECREATION AREA CALCULATIONS (1)(2)

RECREATION AREA REQUIRED = THE EQUIVALENT OF 2½ LOTS FOR SINGLE-FAMILY = (2.5 x 2,310SF)

PHASE 1	92 UNITS =	5,775 SF =	0.13
		TOTAL RECREATION REQUIRED:	0.13

RECREATION AREA PROVIDED

PHASE	TRACT ID	AREA PROVIDED
1	R-1	0.60
	R-2	0.16
	TOTAL RECREATION PROVIDED:	0.76

(1) ALL UNITS ARE ACRES.
(2) PER LAND DEVELOPMENT CODE, ARTICLE II, SECTION 2.02.01.

OPEN SPACE CALCULATIONS (1)

OPEN SPACE REQUIRED

GROSS LAND AREA x 30% = REQUIRED OPEN SPACE =	4.68
TOTAL OPEN SPACE REQUIRED:	4.68

OPEN SPACE PROVIDED

PHASE	TRACTS		AREA PROVIDED
1	BUFFERYARDS AND STORMWATER PONDS (MAX. 25% OF REQ. OPEN SPACE)		1.17
	C-1	CONSRVATION	3.13
	OS-1	OPEN SPACE	0.13
	OS-2	OPEN SPACE	0.05
	OS-3	OPEN SPACE	0.10
	OS-4	OPEN SPACE	0.14
	OS-5	OPEN SPACE	0.06
	OS-6	OPEN SPACE	0.14
	OS-7	OPEN SPACE	0.13
	OS-8	OPEN SPACE	0.11
	OS-9	OPEN SPACE	0.19
	OS-10	OPEN SPACE	0.10
	OS-11	OPEN SPACE	0.03
	R-1	RECREATION	0.60
	R-2	RECREATION	0.16
	TOTAL OPEN SPACE PROVIDED:		6.34

(1) ALL UNITS ARE ACRES.

DEVELOPMENT INFORMATION

FUTURE LAND USE	RESIDENTIAL MEDIUM LOW
ZONING	RESIDENTIAL MULTIPLE-FAMILY DISTRICT (R-3)
GROSS LAND AREA	15.60 ACRES
GROSS PHASE AREA	15.60 ACRES
WETLANDS TO BE PRESERVED	3.13 ACRES
NET DEVELOPABLE AREA	12.47 ACRES
PROPOSED UNITS FOR THIS PSP	92 UNITS
RESIDENTIAL DENSITY (ALLOWED)	UP TO 7.5 DU/AC
GROSS RESIDENTIAL DENSITY	5.90 DU/AC
NET RESIDENTIAL DENSITY	7.38 DU/AC

RESIDENTIAL DEVELOPMENT STANDARDS

SINGLE-FAMILY, ATTACHED (TOWNHOMES)	
GROSS PHASE AREA	15.60 ACRES
WETLANDS TO BE PRESERVED	3.13 ACRES
DEVELOPABLE AREA	12.47 ACRES
NUMBER OF UNITS	92
RESIDENTIAL DENSITY (ALLOWED)	UP TO 7.5 DU/AC
NET RESIDENTIAL DENSITY (PROPOSED)	7.38 DU/AC
MIN. SITE AREA (1)	1.00 ACRES
MIN. SITE AREA (PROPOSED)	15.60 ACRES
MIN. LOT WIDTH (1)	NONE
MIN. LOT WIDTH (PROPOSED PER LOT)	20'
MIN. LOT DEPTH (PROPOSED PER LOT)	105'
MIN. BUILDING SEPARATION (2)(3)	20'
MIN. LIVING AREA (1)	1,350 SF
MAX BUILDING HEIGHT (1)	35'
SETBACKS (feet) (3)(5)	
FROM PROPERTY BOUNDARY	25'
FROM NATURAL SURFACE WATERBODY OR WETLAND EDGE	50'
FRONT PRIMARY (4)	25'
REAR PRIMARY (4)	25'
SIDE (2)	0', 10' END UNIT
CORNER SIDE	25'
ACCESSORY STRUCTURES	SEE NOTE (5) BELOW

(1) PER LAND DEVELOPMENT CODE, ARTICLE II, SECTION 2.02.07
(2) 20' BETWEEN STRUCTURES.
(3) PER LAND DEVELOPMENT CODE, ARTICLE II, SECTION 2.02.07 (G)(3)
(4) DISTANCE BETWEEN BUILDINGS: 50' FRONT TO FRONT AND 50' REAR TO REAR.
(5) ACCESSORY STRUCTURE SETBACKS SHALL COMPLY WITH LAND DEVELOPMENT CODE, ARTICLE VII, SECTION 7.01.00.

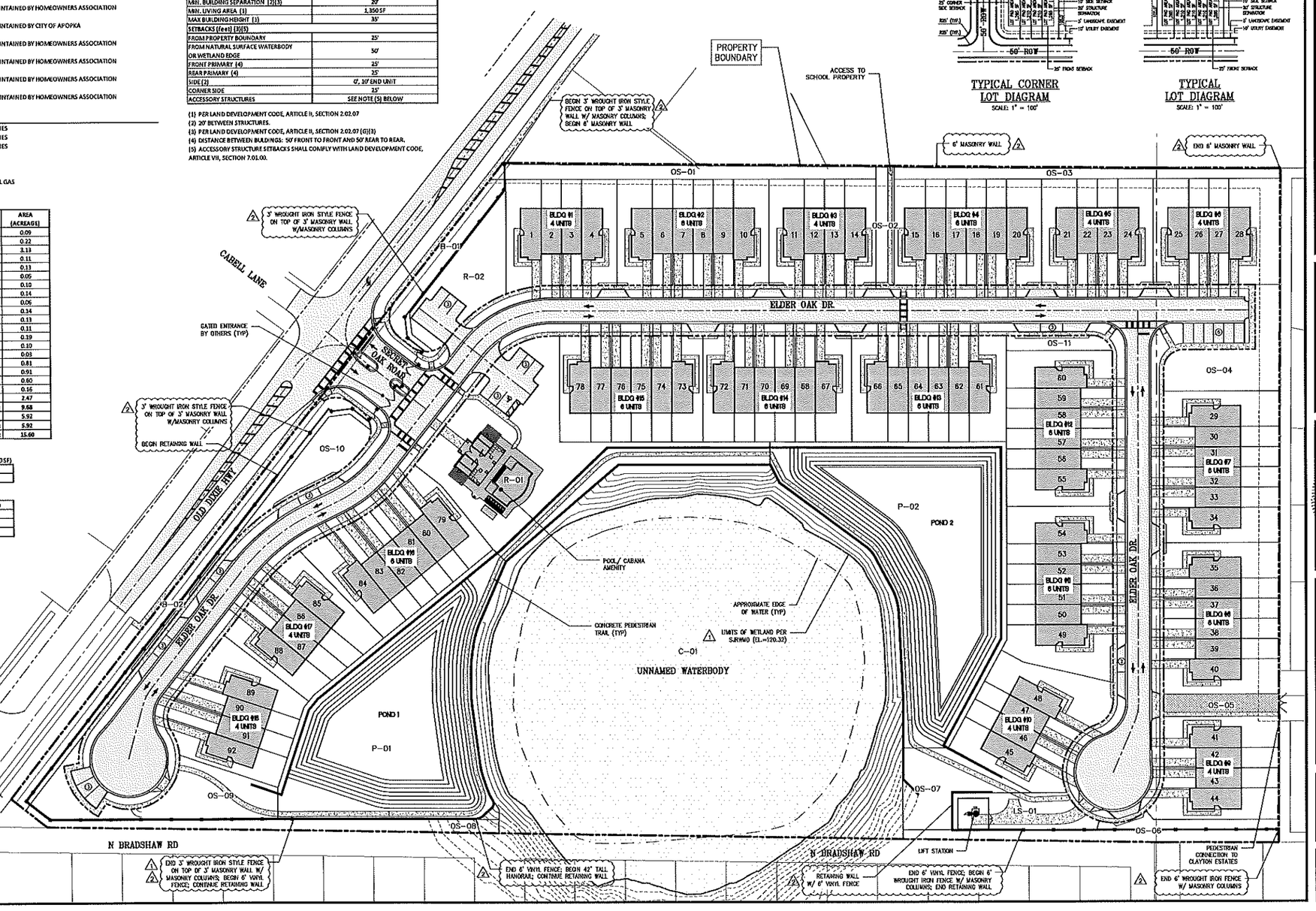
PARKING CALCULATIONS

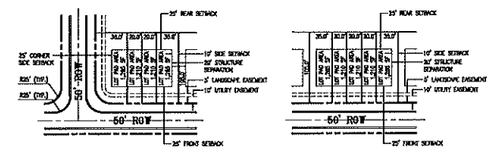
REQUIRED PARKING					PROVIDED PARKING			
PHASE	USE	NUMBER OF UNITS	SPACES REQUIRED PER UNIT	TOTAL REQUIRED	SPACES PROVIDED PER UNIT	UNIT PARKING	GUEST PARKING	TOTAL PROVIDED
1	SINGLE-FAMILY, ATTACHED (TOWNHOMES)	92	2	184	2	184	41	225

1. PARKING REQUIRED AT 2 SPACES PER UNIT PER LDC SECTION 2.02.07 (I)(1).
2. ALL TOWNHOMES HAVE A MIN. 1 CAR GARAGE AND MIN. DRIVEWAY LENGTH OF 25 FT TO PROVIDE 2 SPACES PER UNIT.

TRAFFIC GENERATION, BASED ON ITE TRIP GENERATION 9TH EDITION

Phase	ITE Code	Land Use	Number of Dwelling Units	DAILY		PM PEAK HOUR			
				Weekday Trips Per Unit	Total Generated Daily Trips	PM Peak Hour Trips Per Unit	Total Generated PM Hour Trips	PM In	PM Out
1	230	SINGLE-FAMILY (TOWNHOUSES, ATTACHED)	92	5.81	535	0.52	48	32	16
		TOTAL:	92	-	535	-	48	32	16





GRAPHIC SCALE
(IN FEET)
1 inch = 50 ft.

MADDEN
CIVIL ENGINEERS
431 E. Horatio Avenue
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(407) 629-8330

OVERALL SITE PLAN FOR HIDDEN LAKE RESERVE

CITY OF APOPKA, FLORIDA

M/I HOMES OF ORLANDO, LLC
400 INTERNATIONAL PKWY, SUITE 470
LAKE MARY, FL 32746
(407) 531-5100

DONALD W. SHARPE & ASSOCIATES, INC.
CERTIFICATE OF AUTHORIZATION NO. EB-0007723

DATE	REVISIONS
12/20/20	REVISED PER DISTRICT COMMENTS
04/07/20	REVISED WALL/FENCE TYPES

JOB # 19039
DATE: 11/16/18
SCALE: 1" = 50'
DESIGNED BY: WZ
DRAWN BY: WZ
APPROVED BY: DS

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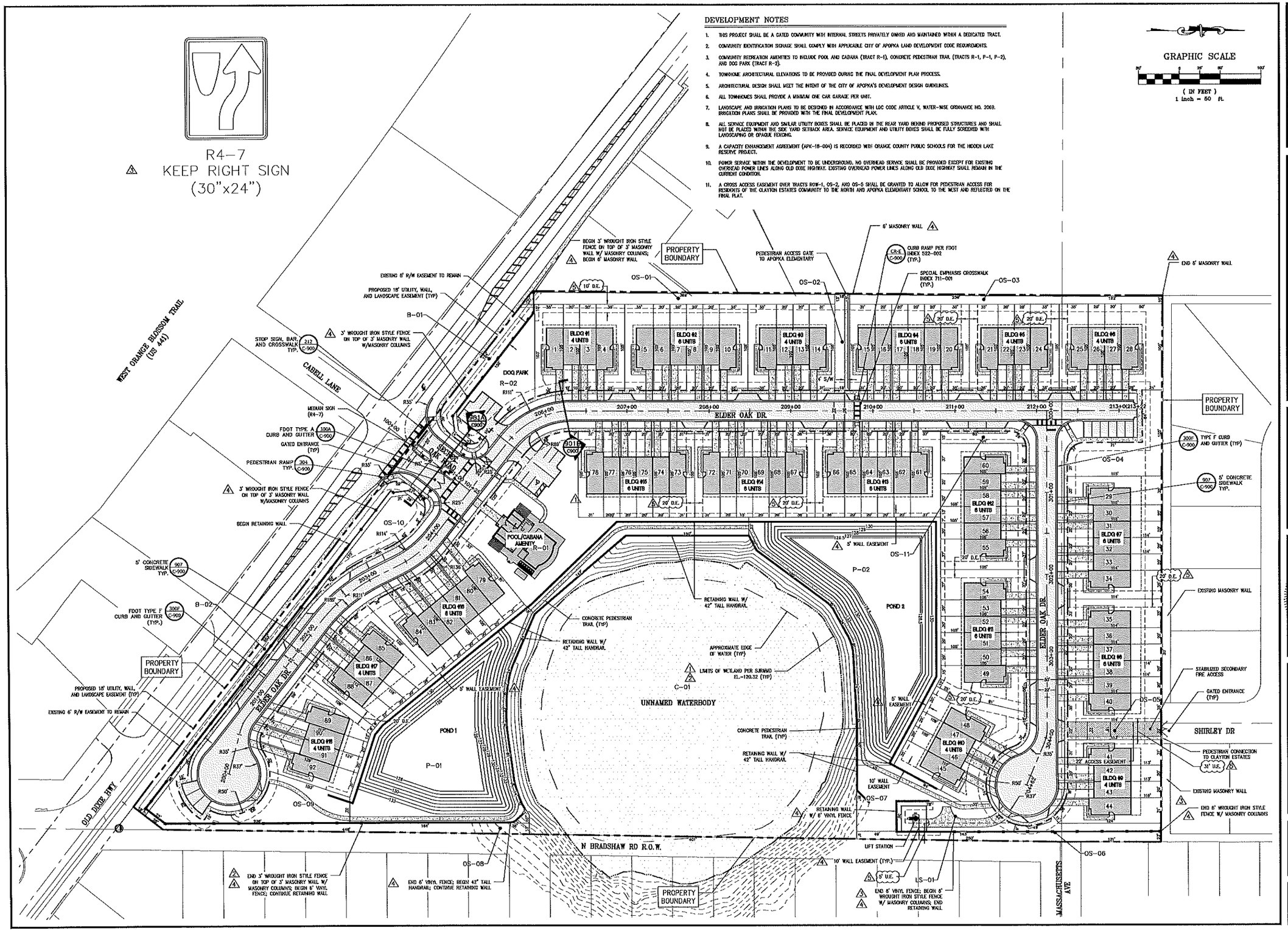
DEVELOPMENT NOTES

1. THIS PROJECT SHALL BE A GATED COMMUNITY WITH INTERNAL STREETS PRIVATELY OWNED AND MAINTAINED WITHIN A DEDICATED TRACT.
2. COMMUNITY IDENTIFICATION SIGNAGE SHALL COMPLY WITH APPLICABLE CITY OF APOPKA LAND DEVELOPMENT CODE REQUIREMENTS.
3. COMMUNITY RECREATION AMENITIES TO INCLUDE POOL AND CABANA (TRACT R-1), CONCRETE PEDESTRIAN TRAIL (TRACTS R-1, P-1, P-2), AND DOG PARK (TRACT R-2).
4. TOWNHOME ARCHITECTURAL ELEVATIONS TO BE PROVIDED DURING THE FINAL DEVELOPMENT PLAN PROCESS.
5. ARCHITECTURAL DESIGN SHALL MEET THE INTENT OF THE CITY OF APOPKA'S DEVELOPMENT DESIGN GUIDELINES.
6. ALL TOWNHOMES SHALL PROVIDE A MINIMUM ONE CAR GARAGE PER UNIT.
7. LANDSCAPE AND IRRIGATION PLANS TO BE DESIGNED IN ACCORDANCE WITH LDC CODE ARTICLE V, WATER-WISE ORDINANCE NO. 2069. IRRIGATION PLANS SHALL BE PROVIDED WITH THE FINAL DEVELOPMENT PLAN.
8. ALL SERVICE EQUIPMENT AND SIMILAR UTILITY BOXES SHALL BE PLACED IN THE REAR YARD BEHIND PROPOSED STRUCTURES AND SHALL NOT BE PLACED WITHIN THE SIDE YARD SETBACK AREA. SERVICE EQUIPMENT AND UTILITY BOXES SHALL BE FULLY SCREENED WITH LANDSCAPING OR OPAQUE FENCING.
9. A CAPACITY ENHANCEMENT AGREEMENT (APK-18-004) IS RECORDED WITH ORANGE COUNTY PUBLIC SCHOOLS FOR THE HIDDEN LAKE RESERVE PROJECT.
10. POWER SERVICE WITHIN THE DEVELOPMENT TO BE UNDERGROUND. NO OVERHEAD SERVICE SHALL BE PROVIDED EXCEPT FOR EXISTING OVERHEAD POWER LINES ALONG OLD DIXIE HIGHWAY. EXISTING OVERHEAD POWER LINES ALONG OLD DIXIE HIGHWAY SHALL REMAIN IN THE CURRENT CONDITION.
11. A CROSS ACCESS EASEMENT OVER TRACTS ROW-1, OS-2, AND OS-5 SHALL BE GRANTED TO ALLOW FOR PEDESTRIAN ACCESS FOR RESIDENTS OF THE CLAYTON ESTATES COMMUNITY TO THE NORTH AND APOPKA ELEMENTARY SCHOOL TO THE WEST AND REFLECTED ON THE FINAL PLAT.

GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.



MADDEN
GOODHART, STOKES, LLC
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431 E. Horatio Avenue
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(407) 629-8330

SITE PLAN FOR HIDDEN LAKE RESERVE

CITY OF APOPKA FLORIDA

M/I HOMES OF ORLANDO, LLC
400 INTERNATIONAL PKWY, SUITE 470
LAKE MARY, FL 32746
(407) 531-5100

ENGINEERING CERTIFICATE OF AUTHORIZATION No. EB-0007733
DANIEL STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
DATE: May 5, 2020
Managing Member

DATE	REVISIONS
07/29/19	REVISED WETLAND LINE
09/13/19	REVISED PER DISTRICT COMMENTS
10/17/19	REVISED PER STAFF COMMENTS
03/27/20	REVISED PER STAFF COMMENTS
05/05/20	REVISED PER CITY COMMENTS

JOB #	19039
DATE:	11/16/18
SCALE:	1" = 50'
DESIGNED BY:	WZ
DRAWN BY:	WZ
APPROVED BY:	DS

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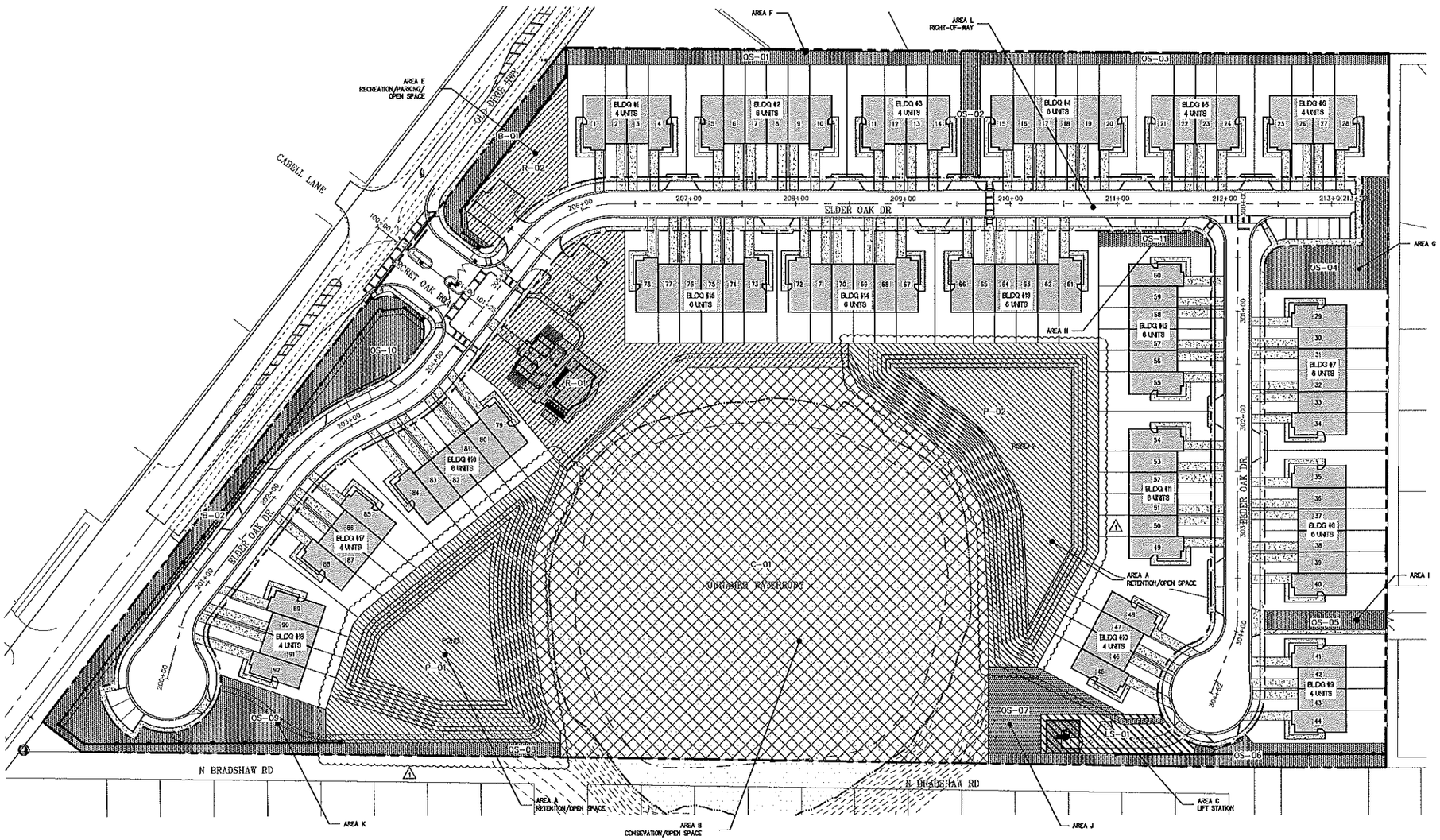

OPEN SPACE HATCHING LEGEND

- OPEN SPACE
- CLUBHOUSE/RECREATIONAL/ PARKING/OPEN SPACE
- RETENTION POND/OPEN SPACE
- LIFT STATION/OPEN SPACE
- CONSERVATION/OPEN SPACE

SITE AREA TABLE:

AREA ID	DESCRIPTION	AREA	
A	RETENTION/OPEN SPACE	1.72 AC.	(11.03%)
B	CONSERVATION/OPEN SPACE	3.13 AC.	(20.06%)
C	LIFT STATION	0.11 AC.	(0.71%)
D	CLUBHOUSE/RECREATION/PARKING/OPEN SPACE	0.60 AC.	(3.85%)
E	RECREATION/PARKING/OPEN SPACE	0.16 AC.	(1.03%)
F	OPEN SPACE	0.37 AC.	(2.37%)
G	OPEN SPACE	0.14 AC.	(0.90%)
H	OPEN SPACE	0.03 AC.	(0.19%)
I	OPEN SPACE	0.05 AC.	(0.32%)
J	OPEN SPACE	0.26 AC.	(1.67%)
K	OPEN SPACE	0.61 AC.	(3.91%)
L	RIGHT-OF-WAY	2.47 AC.	(15.83%)
	BUILDINGS	5.95 AC.	(38.13%)
	TOTAL	15.60 AC.	(100.00%)

OPEN SPACE CALCULATIONS:

REQUIRED OPEN SPACE: (TOTAL AREA X 25%) 6.90 AC. X 0.30 = 2.07 ACRES

OPEN SPACE PROVIDED:

DESCRIPTION:	TYPE A
RETENTION (AREA A):	1.72 AC.
OPEN SPACE (AREA F, G, H, I, J, K):	1.46 AC.
RECREATION AREA (AREA D, E):	0.76 AC.
TOTAL OPEN SPACE:	3.94 AC.

MADDEN
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AMENITY/OPEN SPACE PLAN
FOR
HIDDEN LAKE RESERVE
CITY OF APOPKA FLORIDA

M/I HOMES OF ORLANDO, LLC
400 INTERNATIONAL PKWY, SUITE 470
LAKE MARY, FL 32746
(407) 531-5100

ENGINEER: CHRISTOPHER STOKES
LICENSE No. 66527
STATE OF FLORIDA
PROFESSIONAL ENGINEER
DATE: 04/07/2020
CERTIFICATE OF AUTHORIZATION No. EB-0007723

	DATE	REVISIONS
1	02/07/20	REVISED PER CITY COMMENTS
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JOB # 19039
DATE: 11/16/18
SCALE: 1" = 50'
DESIGNED BY: WZ
DRAWN BY: WZ
APPROVED BY: DS

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GRAPHIC SCALE

(IN FEET)
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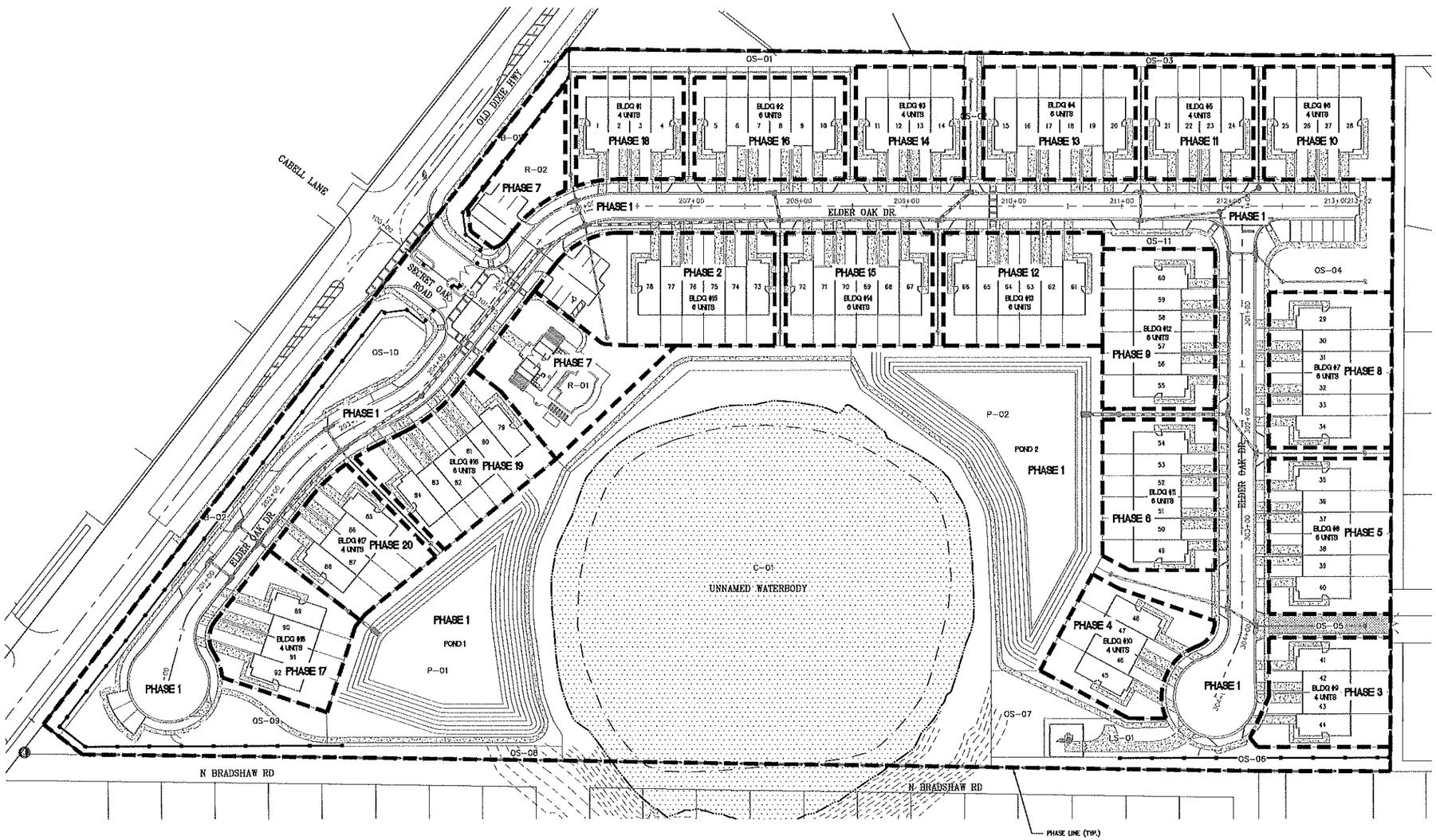

PHASING NOTES:

OFF-SITE IMPROVEMENTS:
- 1ST LIFT OF ASPHALT AND TEMPORARY PAINTED STRIPING TO BE COMPLETED WITH PHASE 1 CERTIFICATE OF OCCUPANCY.
- 2ND LIFT OF ASPHALT AND FINAL STRIPING TO BE COMPLETED WITH FINAL CERTIFICATE OF OCCUPANCY.

ON-SITE IMPROVEMENTS:
- STORMWATER PONDS, LIFT STATION, COMPACTOR, AND ACCESS TO OLD DIXIE HWY TO BE COMPLETED WITH PHASE 1 CERTIFICATE OF OCCUPANCY.

BUILDING SEQUENCE SCHEDULE:

ANTICIPATED BUILDING CONSTRUCTION WILL BE COMPLETED WITHIN 24 MONTHS FROM THE ISSUANCE OF THE CO FOR THE FIRST BUILDING (PHASE 2).

THE AMENITY CENTER CONSTRUCTION WILL BE COMPLETED PRIOR TO THE CO OF BLDG 7 (PHASE 8).

MODEL UNITS:

LOTS 77 AND 78 WILL BE MODEL UNITS.

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
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PHASING PLAN FOR HIDDEN LAKE RESERVE

CITY OF APOPKA, FLORIDA

M/I HOMES OF ORLANDO, LLC
400 INTERNATIONAL PKWY, SUITE 470
LAKE MARY, FL 32746
(407) 531-5100

ENGINEER: MARK E. STOKES * LICENSE NUMBER * No. 66527 * STATE OF FLORIDA * PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION No. EB-0007725

	DATE	REVISIONS
1	10/07/20	ADDED SHEET FOR CITY COMMENTS
2		
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JOB # 19039
DATE: 11/16/18
SCALE: 1" = 50'
DESIGNED BY: WZ
DRAWN BY: WZ
APPROVED BY: DS

C103

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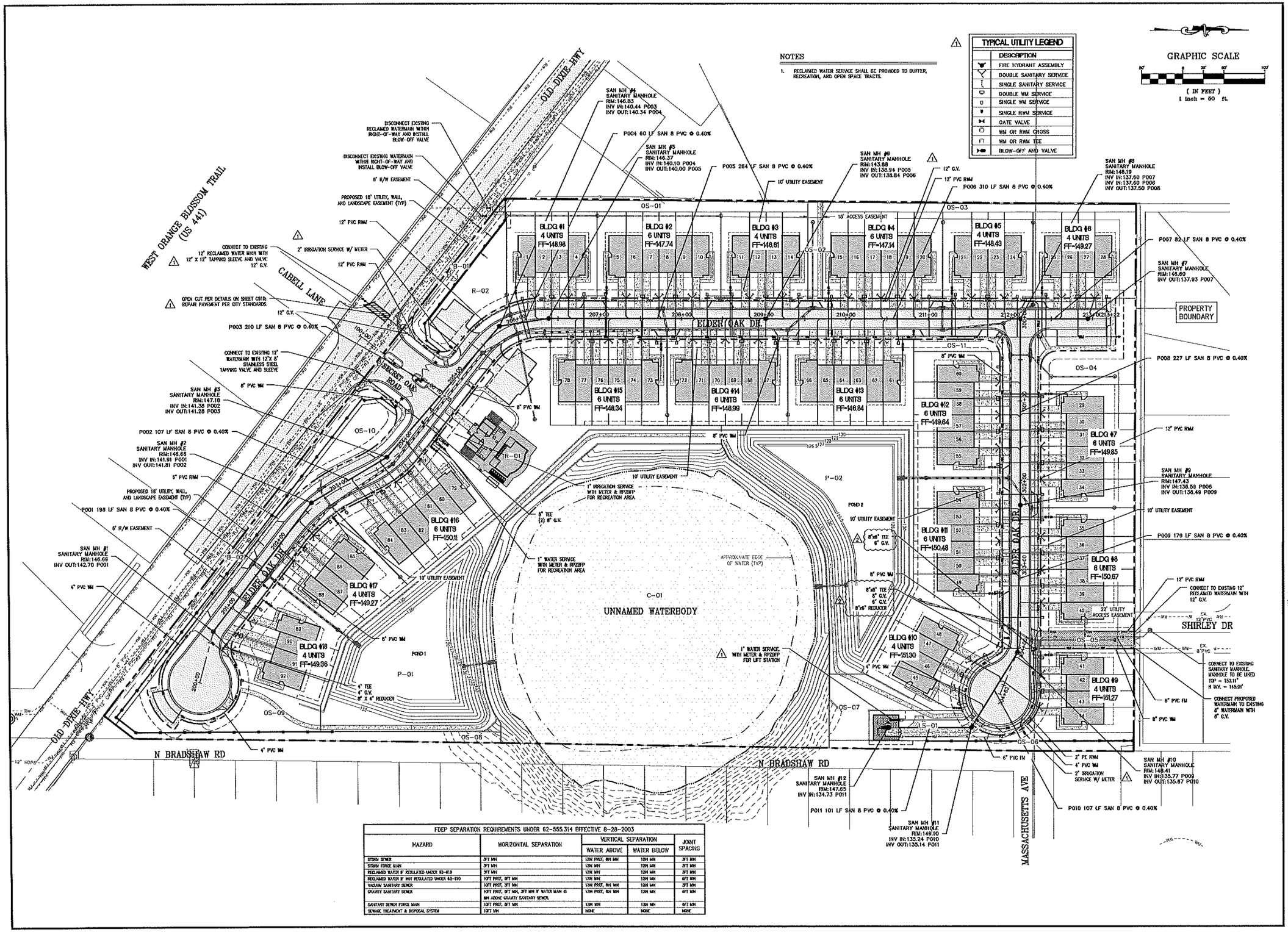

NOTES

1. RECLAIMED WATER SERVICE SHALL BE PROVIDED TO BUFFER, RECREATION, AND OPEN SPACE TRACTS.

TYPICAL UTILITY LEGEND	
	DESCRIPTION
	FIRE HYDRANT ASSEMBLY
	DOUBLE SANITARY SERVICE
	SINGLE SANITARY SERVICE
	DOUBLE WM SERVICE
	SINGLE WM SERVICE
	SINGLE RWM SERVICE
	GATE VALVE
	WM OR RWM CROSS
	WM OR RWM TEE
	BLOW-OFF AND VALVE

FDEP SEPARATION REQUIREMENTS UNDER 62-555.314 EFFECTIVE 8-28-2003

HAZARD	HORIZONTAL SEPARATION	VERTICAL SEPARATION		JOINT SPACING
		WATER ABOVE	WATER BELOW	
STORM SEWER	3FT MIN	12IN PREF, 6IN MIN	12IN MIN	3FT MIN
STORM FORCE MAIN	3FT MIN	12IN MIN	12IN MIN	3FT MIN
RECLAIMED WATER IF REGULATED UNDER 62-610	3FT MIN	12IN MIN	12IN MIN	3FT MIN
RECLAIMED WATER IF NOT REGULATED UNDER 62-610	10FT PREF, 6FT MIN	12IN MIN	12IN MIN	6FT MIN
VACUUM SANITARY SEWER	10FT PREF, 3FT MIN	12IN PREF, 6IN MIN	12IN MIN	3FT MIN
GRAVITY SANITARY SEWER	10FT PREF, 6FT MIN, 3FT MIN IF WATER MAIN IS 6IN ABOVE GRAVITY SANITARY SEWER.	12IN PREF, 6IN MIN	12IN MIN	6FT MIN
SANITARY SEWER FORCE MAIN	10FT PREF, 6FT MIN	12IN MIN	12IN MIN	6FT MIN
SEWAGE TREATMENT & DISPOSAL SYSTEM	10FT MIN	NONE	NONE	NONE

MADDEN MOORHEAD & STOKES LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

UTILITY PLAN FOR HIDDEN LAKE RESERVE

CITY OF APOPKA, FLORIDA

M/I HOMES OF ORLANDO, LLC
400 INTERNATIONAL PKWY, SUITE 470
LAKE MARY, FL 32746
(407) 531-5100

ENGINEER: DANIEL STOKES * LICENSE No. 66527 * STATE OF FLORIDA * PROFESSIONAL ENGINEER
DATE SIGNED: 04/13/2020
CERTIFICATE OF AUTHORIZATION No. EB-0007723

DATE	REVISIONS
12/07/20	REVISED PER CITY COMMENTS
02/12/20	REVISED PER GC REVIEW

JOB # 19039
DATE: 11/16/18
SCALE: 1" = 50'
DESIGNED BY: YVZ
DRAWN BY: YVZ
APPROVED BY: DS

C200

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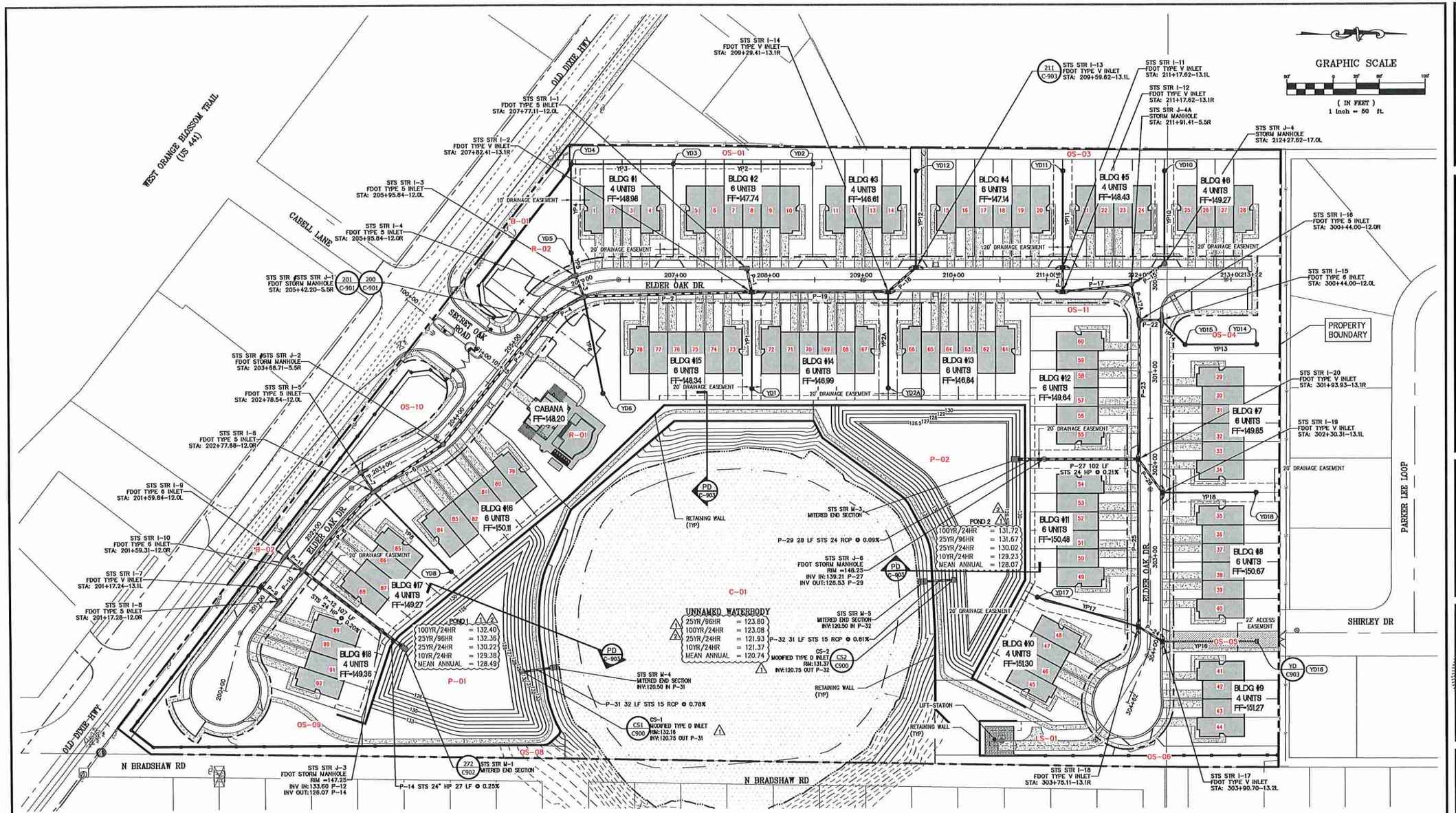

STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
YD1	RIM = 146.00 INV OUT = 136.42 YP1
YD2	RIM = 145.50 INV OUT = 140.47 YP2
YD3	RIM = 146.85 INV IN = 138.97 YP2 INV OUT = 138.97 YP3
YD4	RIM = 147.75 INV IN = 137.87 YP3 INV OUT = 137.87 YP4
YD5	RIM = 147.00 INV IN = 136.91 YP4 INV OUT = 136.91 YP5
YD6	RIM = 146.00 INV OUT = 135.74 YP6
YD8	RIM = 148.25 INV OUT = 135.25 YP8
YD10	RIM = 147.25 INV OUT = 141.33 YP10

STRUCTURE TABLE	
STRUCTURE NAME:	DETAILS:
YD11	RIM = 146.25 INV OUT = 141.29 YP11
YD12	RIM = 144.75 INV OUT = 137.13 YP12
YD14	RIM = 147.50 INV OUT = 141.22 YP13
YD15	RIM = 146.75 INV IN = 140.45 YP13 INV OUT = 140.45 YP14
YD16	RIM = 152.85 INV OUT = 141.25 YP16
YD17	RIM = 146.25 INV OUT = 141.26 YP17
YD18	RIM = 148.50 INV OUT = 140.61 YP18

Pipe Table				
NAME	SIZE	LENGTH	SLOPE	MATERIAL
YP2	12"	150.00'	1.00%	HP
YP3	12"	110.00'	1.00%	HP
YP4	12"	96.03'	1.00%	HP
YP1	12"	104.44'	1.01%	HP
YP12	12"	104.37'	1.02%	HP
YP11	12"	104.37'	1.02%	HP
YP10	12"	100.38'	1.00%	HP
YP17	12"	113.80'	1.01%	HP

Pipe Table				
NAME	SIZE	LENGTH	SLOPE	MATERIAL
YP18	12"	101.03'	1.01%	HP
YP13	12"	77.29'	1.00%	HP
YP14	12"	36.64'	1.01%	HP
YP16	12"	101.87'	1.01%	HP
YP8	12"	120.58'	1.00%	HP
YP5	12"	25.06'	1.00%	HP
YP6	12"	106.77'	1.00%	HP

△2 REVISED POND GRADING TO PROVIDE A 5' FLAT AREA AT THE WALL BASE.

MADDEN MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

DRAINAGE PLAN FOR HIDDEN LAKE RESERVE

CITY OF APOPKA, FLORIDA

M/I HOMES OF ORLANDO, LLC
400 INTERNATIONAL PKWY, SUITE 470
LAKE MARY, FL 32746
(407) 531-5100

ENGINEER: CHRISTOPHER J. STOKES, No. 66527, STATE OF FLORIDA, PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION NO. EB-0007723

1	02/03/20	REVISED PER DISTRICT COMMENTS
2	02/19/20	REVISED PER CITY COMMENTS
3		
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DATE	REVISIONS	

JOB # 19039
DATE: 11/16/18
SCALE: 1" = 50'
DESIGNED BY: WZ
DRAWN BY: WZ
APPROVED BY: DS

C300

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MATCH LINE. SEE SHEET C-401

GRAPHIC SCALE

(IN FEET)
1 inch = 30' ft.

UNNAMED WATERBODY

25YR/96HR	= 123.80
100YR/24HR	= 123.08
25YR/24HR	= 121.93
10YR/24HR	= 121.37
MEAN ANNUAL	= 120.74

POND 1

100YR/24HR	= 132.40
25YR/96HR	= 132.36
25YR/24HR	= 130.22
10YR/24HR	= 129.38
MEAN ANNUAL	= 128.49

BLDG #15
6 UNITS
FF=148.34

BLDG #1
4 UNITS
FF=148.98

CABANA
FF=148.20

BLDG #16
6 UNITS
FF=150.11

BLDG #17
4 UNITS
FF=149.27

BLDG #18
4 UNITS
FF=149.36

UNITS OF WETLAND PER S.R.W.M.D.
EL.=120.32 (TYP.)

APPROXIMATE EDGE OF WATER
EL.=115.90 (TYP.)

RETAINING WALL W/ 42" HANDRAIL TO BE DESIGNED & PERMITTED BY OTHERS (TYP.)

BEGIN RETAINING WALL (BY OTHERS)

SEVEN OAK ROAD

OLD DIXIE HWY

ELDER OAK DR

TYPICAL SECTION C N.T.S.

TYPICAL SECTION D N.T.S.

TYPICAL SECTION F N.T.S.

TYPICAL SECTION G N.T.S.

2 ADDED FLOW ARROWS

3 REVISED GRADING BETWEEN BOTTOM OF LOWER WALL AND WETLAND

REVISED POND GRADES AT BASE OF WALL

MADDEN
MODERN LAND & STORM TECH
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

GRADING PLAN
FOR
HIDDEN LAKE RESERVE
CITY OF APOPKA
FLORIDA

M/I HOMES OF ORLANDO, LLC
400 INTERNATIONAL PKWY. SUITE 470
LAKE MARY, FL 32746
(407) 531-5100

ENGINEER: ASHLEY STOKES
LICENSE No. 66527
STATE OF FLORIDA
PROFESSIONAL ENGINEER
DATE: April 9, 2020
CERTIFICATE OF AUTHORIZATION No. EB-0007722

DATE	REVISIONS
1 12/31/19	REVISED FOR DISTRICT COMMENTS
2 02/27/20	REVISED FOR CITY COMMENTS
3 04/07/20	REVISED FOR CITY COMMENTS
4	
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JOB # 19039
DATE: 11/16/18
SCALE: 1"=30'
DESIGNED BY: WZ
DRAWN BY: WZ
APPROVED BY: DS

C400

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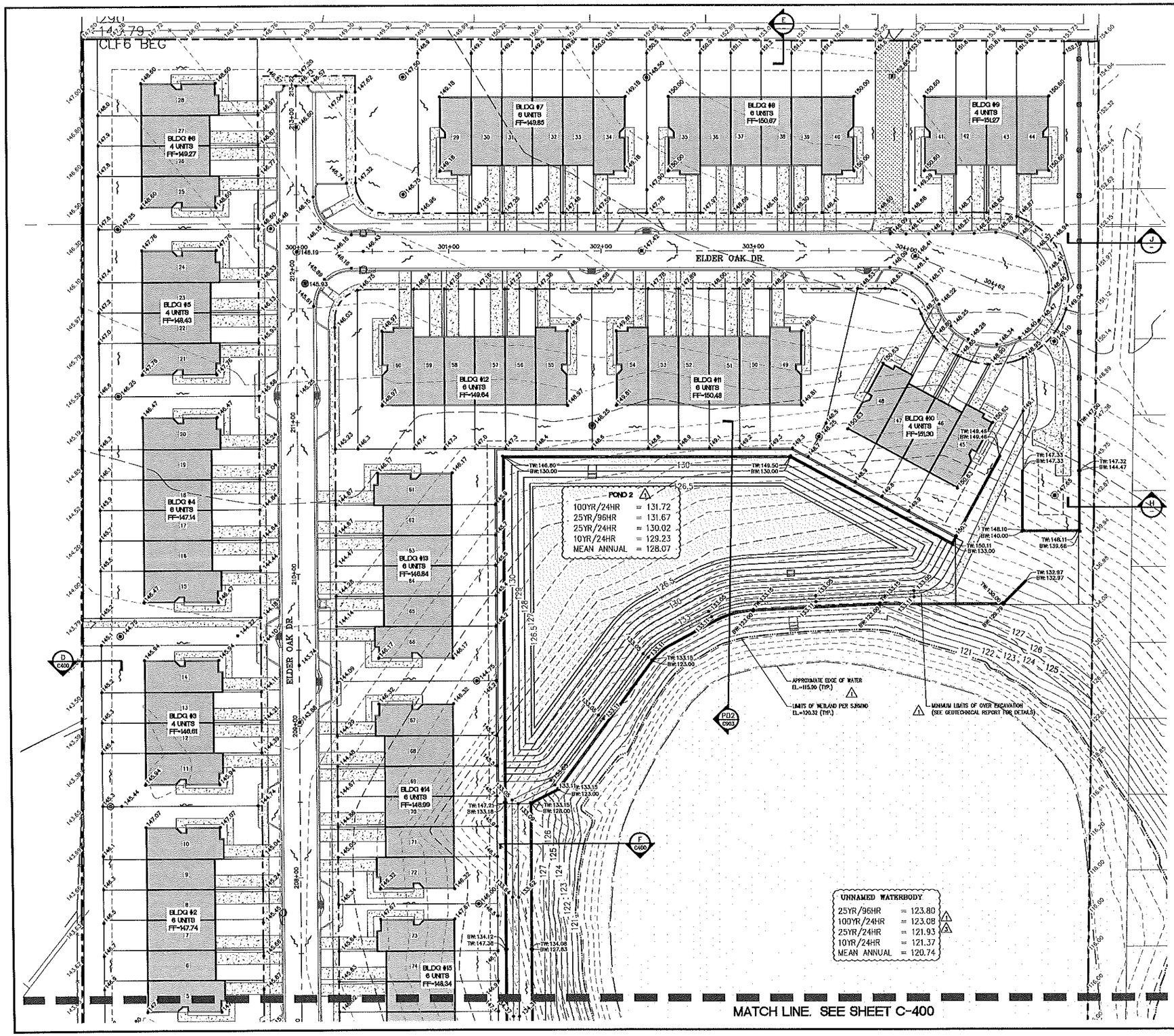

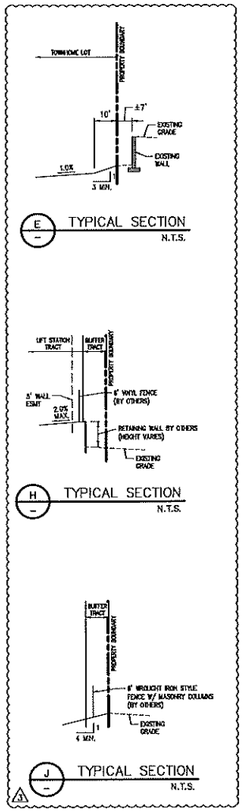

ADDED FLOW ARROWS

REVISED GRADING BETWEEN BOTTOM OF LOWER WALL AND WETLAND

REVISED POND GRADES AT BASE OF WALL

MADDEN MOORHEAD & STOKES, INC.
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

GRADING PLAN FOR HIDDEN LAKE RESERVE

CITY OF APOPKA FLORIDA

N/I HOMES OF ORLANDO, LLC
400 INTERNATIONAL PKWY, SUITE 470
LAKE MARY, FL 32746
(407) 531-5100

ENGINEER: DAVID C. SHALEY STOKES
No. 58527
STATE OF FLORIDA
PROFESSIONAL ENGINEER
DATE OF SIGNATURE: 04/20/2020
CERTIFICATE OF AUTHORIZATION No. EB-0007715

NO.	DATE	REVISIONS
1	12/07/20	REVISED PER DISTRICT COMMENTS
2	02/02/20	REVISED PER CITY COMMENTS
3	04/07/20	REVISED PER CITY COMMENTS
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JOB #	19039
DATE:	11/16/18
SCALE:	1"=30'
DESIGNED BY:	WZ
DRAWN BY:	WZ
APPROVED BY:	DS

C401

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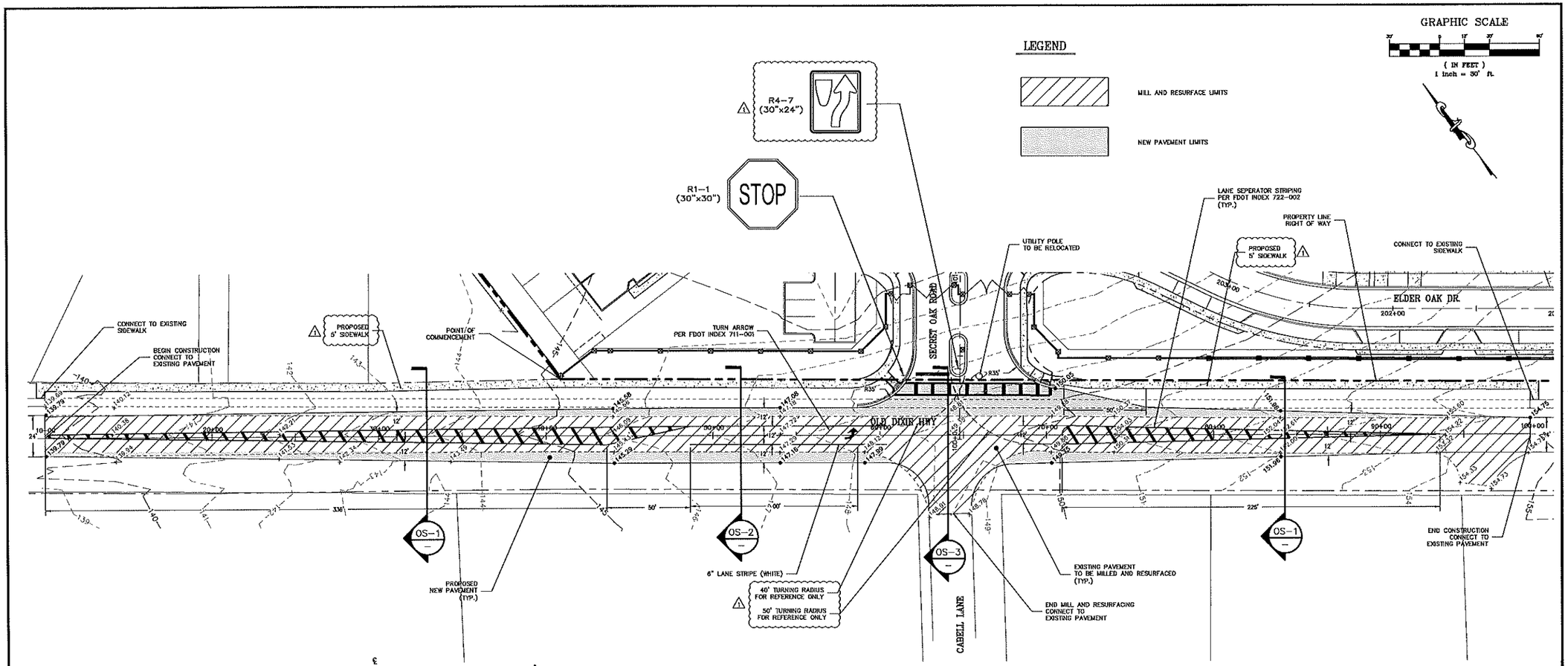
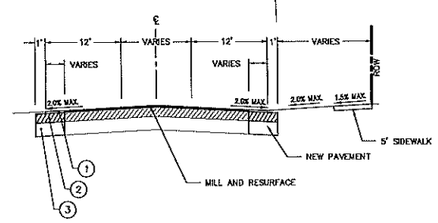
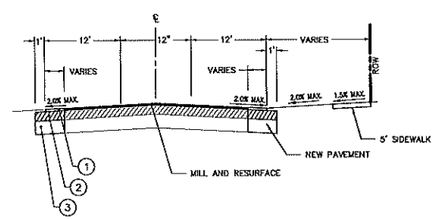




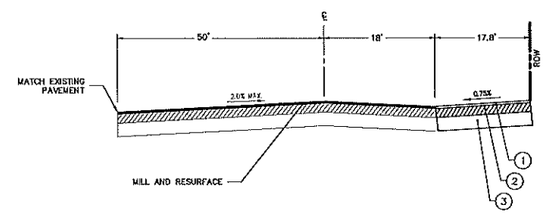
OS-1 TYPICAL PAVEMENT SECTION
NOT TO SCALE



OS-2 TYPICAL PAVEMENT SECTION
NOT TO SCALE

HEAVY DUTY PAVEMENT SECTION SPECIFICATIONS

1. 2" TYPE SP-9.5 STRUCTURAL COURSE (1 LIFT)
2. 8" LIMEROCK BASE COMPACTED TO 98% MAX DENSITY PER ASTM D1557 AND LBR 100 OR 8" CRUSHED CONCRETE BASE COMPACTED TO 98% MAX DENSITY PER ASTM D1557 AND LBR 150.
3. 12" STABILIZED SUBGRADE, COMPACTED TO 98% MAX DENSITY PER ASTM D1557, LBR 40



O-S3 TYPICAL PAVEMENT SECTION
NOT TO SCALE

NOTES:

1. SAW CUT AND REMOVE EXISTING SHOULDER PAVEMENT PRIOR TO NEW CONSTRUCTION.
2. ALL STRIPING AND MARKING TO BE INSTALLED PER 2020/2021 FDOT STANDARD PLANS INDEX NOS. 711-001, 711-002.
3. INSTALL SOD AT ALL AREAS DISTURBED BY CONSTRUCTION AND 2' (MIN). STRIP ALONG EDGE OF PAVEMENT.
4. ALL SIDEWALKS, RAMPS AND CROSSWALKS SHALL BE CONSTRUCTED ACCORDINLY TO CURRENT ADA REQUIREMENTS.
5. MAX SLOPE IN SWALE AREAS IS 4:1.

MADDEN
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431 E. Horatio Avenue
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OFFSITE IMPROVEMENTS FOR HIDDEN LAKE RESERVE

CITY OF APOPKA FLORIDA

M/I HOMES OF ORLANDO, LLC
400 INTERNATIONAL PKWY, SUITE 470
LAKE MARY, FL 32746
(407) 531-5100

ENGINEER: CHARLES STOKES
LICENSE No. 66527
STATE OF FLORIDA
PROFESSIONAL ENGINEER
DATE OF SIGNATURE: 04/07/20
CERTIFICATE OF AUTHORIZATION NO. EB-0007723

	DATE	REVISIONS
1	02/07/20	REVISED PER CITY COMMENTS
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JOB # 19039
DATE: 11/16/18
SCALE: 1" = 30'
DESIGNED BY: WZ
DRAWN BY: WZ
APPROVED BY: CS

C500

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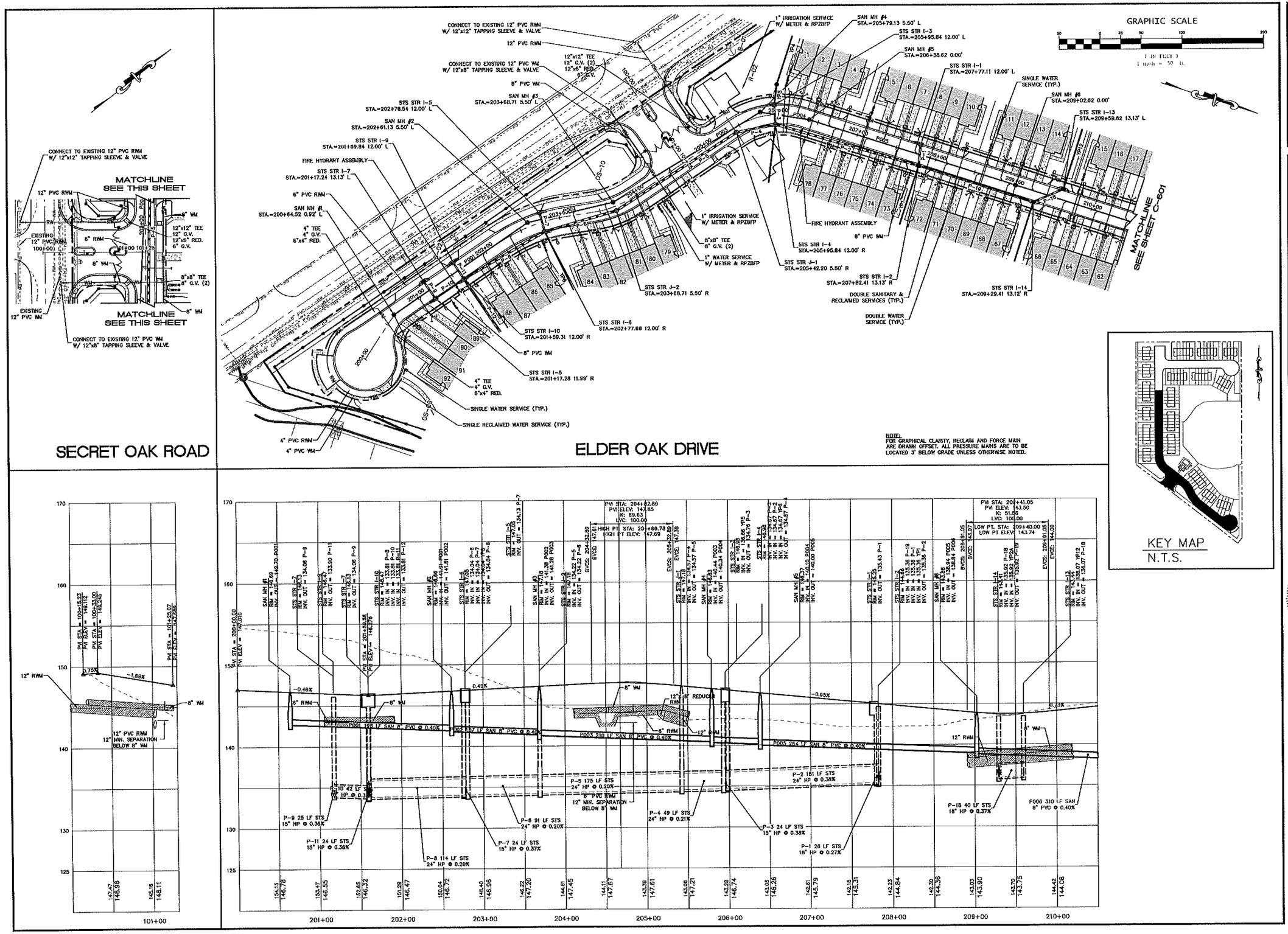

MADDEN
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

PLAN AND PROFILE
FOR
HIDDEN LAKE RESERVE
CITY OF APOPKA FLORIDA

M/I HOMES OF ORLANDO, LLC
400 INTERNATIONAL PKWY, SUITE 470
LAKE MARY, FL 32746
(407) 531-5100

ENGINEERING CERTIFICATE OF AUTHORIZATION NO. EB-0007723

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	DATE	REVISIONS

JOB #	19039
DATE:	11/16/18
SCALE:	1" = 50'
DESIGNED BY:	WZ
DRAWN BY:	WZ
APPROVED BY:	DS

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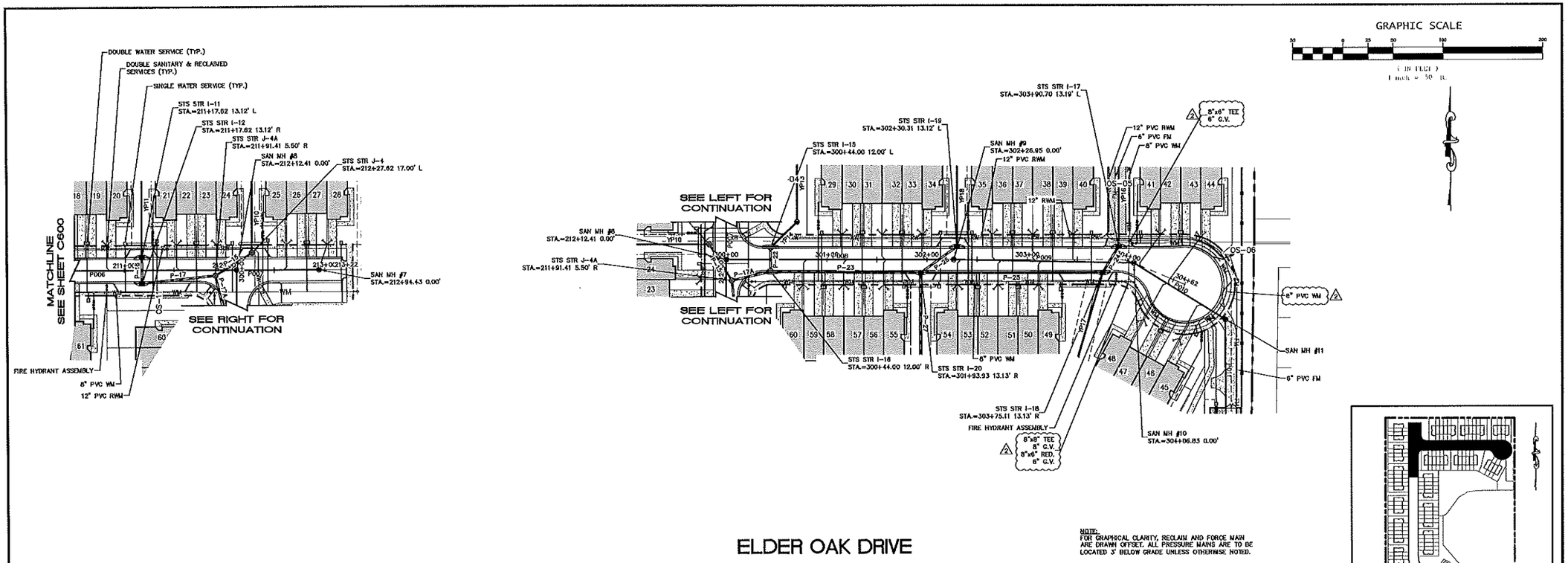
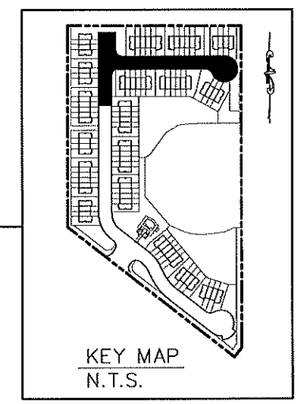
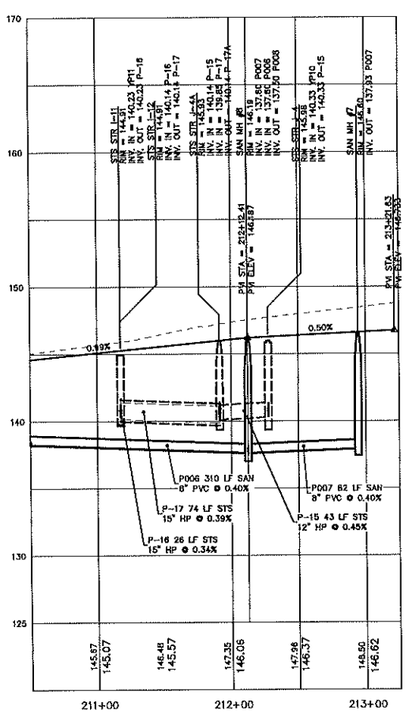
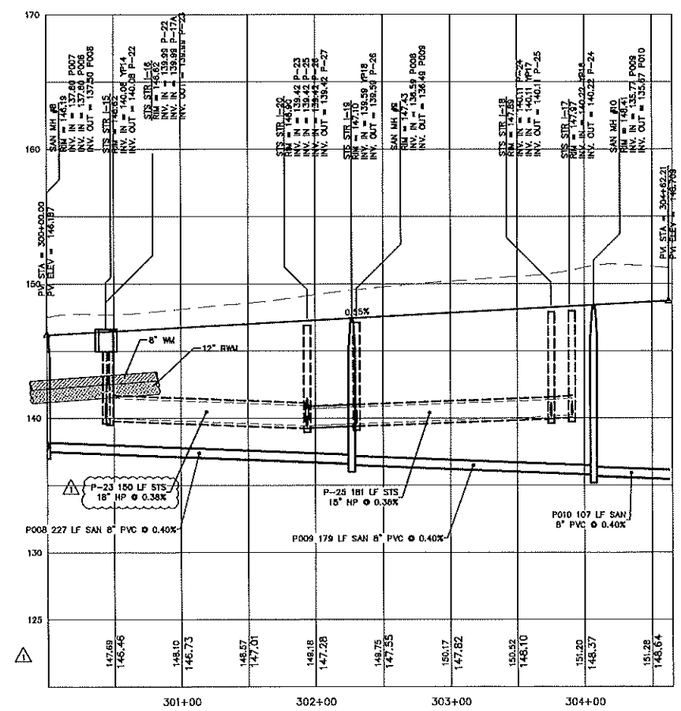


NOTE:
FOR GRAPHICAL CLARITY, RECLAIM AND FORCE MAIN ARE DRAWN OFFSET. ALL PRESSURE MAINS ARE TO BE LOCATED 3' BELOW GRADE UNLESS OTHERWISE NOTED.







MADDEN
MOODHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
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Maitland, Florida 32751
(407) 629-8330

PLAN AND PROFILE FOR HIDDEN LAKE RESERVE

CITY OF APOPKA FLORIDA

M/I HOMES OF ORLANDO, LLC
400 INTERNATIONAL PKWY, SUITE 470
LAKE MARY, FL 32746
(407) 531-5100

ENGINEERING CERTIFICATE OF AUTHORIZATION NO. EB-0007223

	DATE	REVISIONS
1	10/07/20	REVISED PER CITY COMMENTS
2	10/13/20	REVISED PER QC REVIEW
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JOB # 19039
DATE: 11/16/18
SCALE: 1" = 50'
DESIGNED BY: WZ
DRAWN BY: WZ
APPROVED BY: DS

C601

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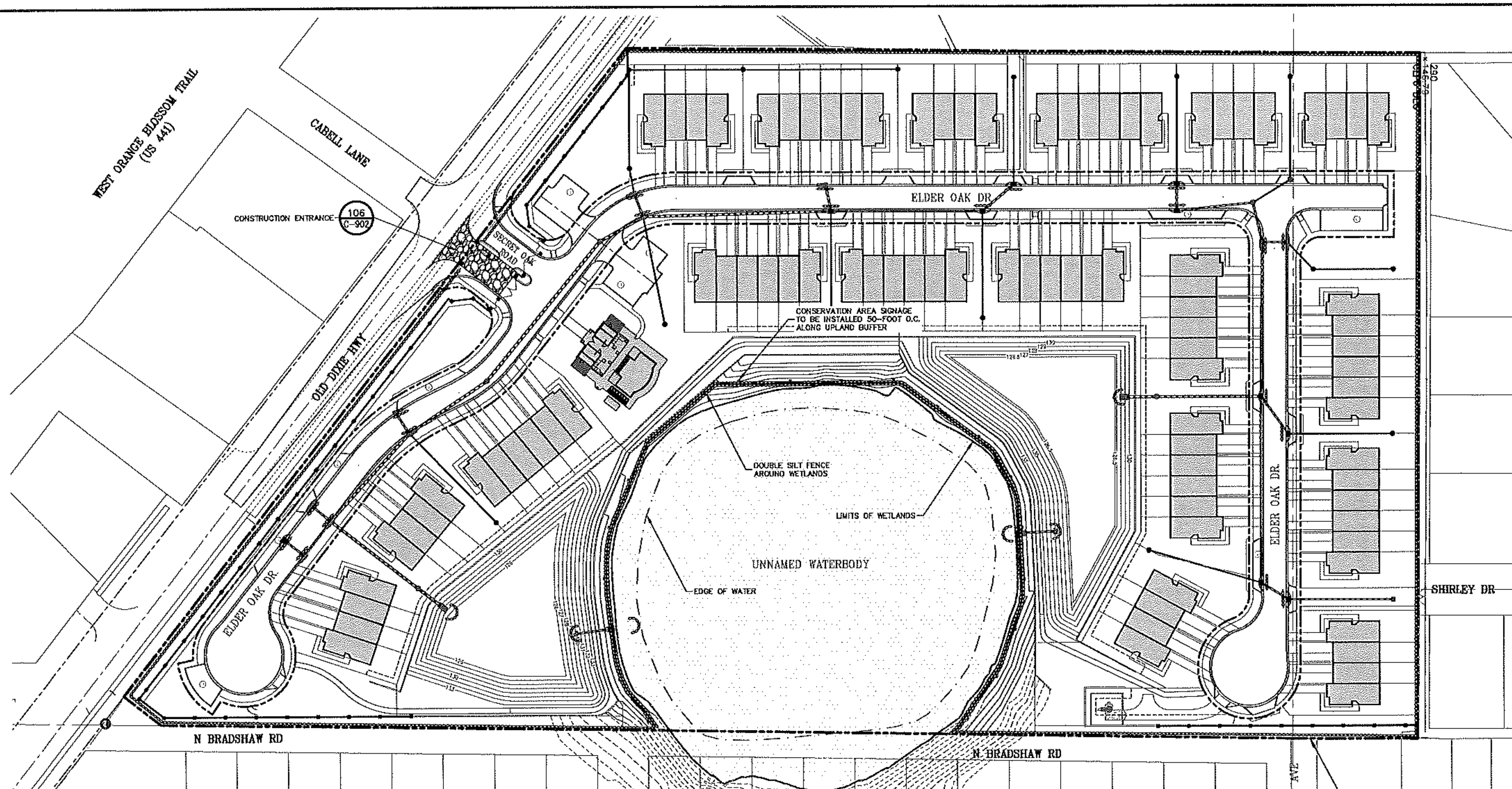

GRAPHIC SCALE

(IN FEET)
1 inch = 60' ft.

CERTIFICATION FOR CONTRACTORS AND SUB-CONTRACTORS

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND TERMS AND CONDITIONS OF THE GENERIC STORMWATER PERMIT ISSUED PURSUANT TO SECTION 403.0885, F.S., THAT AUTHORIZES THE STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION.

NAME: SIGNATURE: DATE:

ADDRESS: TELEPHONE:

I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND TERMS AND CONDITIONS OF THE GENERIC STORMWATER PERMIT ISSUED PURSUANT TO SECTION 403.0885, F.S., THAT AUTHORIZES THE STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION.

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NAME: SIGNATURE: DATE:

ADDRESS: TELEPHONE:

STORMWATER POLLUTION PREVENTION NOTES:

1. THE CONTRACTOR SHALL EXECUTE ALL MEASURES NECESSARY TO LIMIT THE TRANSPORT OF SEDIMENTS OUTSIDE THE LIMITS OF THE PROJECTTO THE VOLUME AND AMOUNT THAT ARE EXISTING PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THIS CONDITION WILL BE SATISFIED FOR THE TOTAL ANTICIPATED CONSTRUCTION PERIOD. PROVISION MUST BE MADE TO PRESERVE THE INTEGRITY GRADING PATTERNS, ETC. REQUIRED TO MEET THIS PROVISION THROUGHOUT THE LIFE OF THE CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE SILT BARRIERS, TEMPORARY GRASSING, ETC. AS REQUIRED TO FULLY COMPLY WITH THE INTENT OF THIS SPECIFICATION.
2. NO EXCAVATED MATERIAL SHALL BE STOCKPILED IN SUCH A MANNER AS TO DIRECT RUNOFF DIRECTLY OFF THE PROJECT SITE OR INTO ANY ADJACENT WATER BODY OR STORMWATER COLLECTION FACILITY.
3. THE SURFACE AREA OF OPEN, RAW ERODIBLE SOIL EXPOSED BY CLEARING AND GRUBBING OPERATIONS OR EXCAVATION AND FILLING OPERATIONS SHALL BE CONTROLLED, SO THAT THIS OPERATION WILL NOT SIGNIFICANTLY AFFECT OFF-SITE DEPOSIT OF SEDIMENTS.
4. INLETS AND CATCH BASINS SHALL BE PROTECTED FROM SEDIMENT LADEN STORMWATER RUNOFF UNTIL THE COMPLETION OF ALL CONSTRUCTION OPERATIONS THAT MAY CONTRIBUTE SEDIMENT TO THE INLET.
5. AREAS OPENED BY CONSTRUCTION OPERATIONS THAT ARE NOT ANTICIPATED TO BE DRESSED OR RECEIVE FINAL GRASSING TREATMENT WITH IN THIRTY DAYS SHALL BE SEEDED WITH A QUICK GROWING GRASS SPECIES WHICH WILL PROVIDE AN EARLY COVER, DURING THE SEASON IN WHICH IT IS PLANTED. TEMPORARY SEEDING SHALL BE CONTROLLED SO AS TO NOT ALTER OR COMPETE WITH PERMANENT GRASSING. THE RATE OF SEEDING SHALL BE 30 POUNDS PER ACRE.
6. THE SEEDED OR SEEDED AND MULCHED AREA(S) SHALL BE ROLLED AND WATERED AS REQUIRED TO ASSURE OPTIMUM GROWING CONDITIONS FOR THE ESTABLISHMENT OF A GOOD GRASS COVER.
7. IF AFTER 14 DAYS, THE TEMPORARY GRASSES AREAS HAVE NOT ATTAINED A MINIMUM OF 75% GOOD GRASS COVER, THE AREA WILL BE REWORKED AND ADDITIONAL SEED APPLIED TO ESTABLISH THE DESIRED VEGETATION COVER.
8. ALL FEATURES OF THE PROJECT SHALL BE CONSTRUCTED TO PREVENT EROSION AND SEDIMENT AND SHALL BE MAINTAINED DURING THE LIFE OF THE CONSTRUCTION SO AS TO FUNCTION PROPERLY WITHOUT THE TRANSPORT OF SEDIMENTS OUTSIDE THE LIMITS OF THE PROJECT.
9. ALL DISTURBED AREAS OUTSIDE THE EXCAVATION AND FILL LIMITS WILL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THEIR CONDITION PRIOR TO CONSTRUCTION.
10. THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTENANCE OF ALL NEWLY PLANTED GRASSES OR VEGETATION AND RETENTION/DETENTION FACILITIES UNTIL THE WORK HAS BEEN ACCEPTED BY THE CITY.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF EMBANKMENTS AND SHALL REPLACE ANY PORTION, WHICH IN THE OPINION OF THE ENGINEER, HAS BECOME DISPLACED DUE TO EROSION OR DUE TO CARELESSNESS OR NEGLIGENCE ON THE PART OF THE CONTRACTOR.
12. THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS CONTROLLING POLLUTION OF THE ENVIRONMENT. MEASURES SHALL BE TAKEN BY THE CONTRACTOR TO CONTROL EROSION AND SEDIMENT RUNOFF FROM THE SITE DURING CONSTRUCTION. SUCH METHODS SHALL BE IN ACCORDANCE WITH THE CURRENT FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS.
13. ABSOLUTLEY NO WORK WILL BE ALLOWED WITHIN ANY CONSERVATION AREA, BUFFER AREA, MITIGATION AREA OR DESIGNATED WETLAND AREA UNLESS SO SPECIFICALLY DESCRIBED BY THE PLANS AND GRANTED BY REASON OF PERMIT FROM THE GOVERNMENTAL ENTITY HAVING JURISDICTION OVER SAID AREA.
14. PRIOR TO CLEARING AND GRUBBING, THE LIMITS OF WETLANDS, BUFFERS WETLANDS, BUFFERS AND MITIGATION AREAS SHALL BE CLEARLY MARKED ALONG THE PROPOSED RIGHT OF WAY LINE TO PROTECT THESE AREAS FROM ENCROACHMENT FROM CONSTRUCTION ACTIVITIES.
15. ALL FILL EMBANKMENT AND GRADED AREAS SHALL BE PROTECTED AGAINST EROSION BY METHODS STATED IN SECTION 104, F.D.O.T. STANDARD SPECIFICATIONS FOR BRIDGE AND ROAD CONSTRUCTION. SIDE SLOPE MAY BE SEED AND MULCHED, PROVIDED THAT THE MULCH MATERIAL IS DISC HARROWED AND THE SIDE SLOPES ARE NEITHER GREATER THAN 3:1 NOR PART OF A DRAINAGE CONVEYANCE.
16. REFER TO POND DETAIL SHEETS FOR EROSION CONTROL MEASURES AT POND OUTFALLS.
17. EROSION CONTROL AT ALL INLET DRAINAGE STRUCTURES DURING CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH FDOT INDEX NO. 102.
18. INSPECTIONS ON EROSION CONTROL MEASURES WILL BE PERFORMED BY THE CONTRACTOR ONCE PER WEEK AND WITHIN 24 HOURS AFTER 1/4 INCH OF RAINFALL. THE INSPECTIONS MUST BE LOGGED BY THE CONTRACTOR AND KEPT WITH THE APPROVED PLANS AND SWPPP.
19. GRAVEL CONSTRUCTION ENTRANCES SHALL BE PROVIDED TO MINIMIZE EXPORT OF ONSITE DIRT. IF GRAVEL IS NOT ALLOWED, THE CONSTRUCTION ENTRANCES SHALL BE SWEPT PERIODICALLY AND LOGGED BY THE CONTRACTOR.

EROSION CONTROL:

THE CONTRACTOR SHALL PERFORM EROSION CONTROL MEASURES IN ACCORDANCE WITH CITY OF APOPKA AND THE S.J.R.W.M.D., DETAILS CONTAINED IN THE PLANS, THE FOLLOWING NOTES AND AS DIRECTED BY THE ENGINEER.

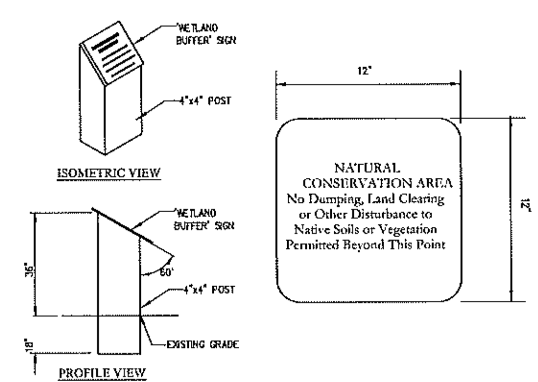
A. TEMPORARY EROSION CONTROL

1. STOCKPILING MATERIAL. NO EXCAVATING MATERIAL SHALL BE STOCKPILED IN SUCH A MANNER AS TO DIRECT RUNOFF DIRECTLY OFF THE PROJECT SITE OR INTO ANY ADJACENT WATERBODY OR STORMWATER COLLECTION FACILITY.
2. INLET PROTECTION – INLETS AND CATCH BASINS SHALL BE PROTECTED FROM SEDIMENT- LADEN STORM RUNOFF DIRECTLY OFF THE PROJECT SITE OR INTO ANY ADJACENT WATERBODY OR STORMWATER COLLECTION FACILITY.
3. TEMPORARY SEEDING / STRIP SODDING – AREAS OPENED BY CONSTRUCTION OPERATIONS AND THAT ARE NOT ANTICIPATED TO BE DRESSED AND RECEIVE FINAL GRASSING TREATMENT WITHIN THIRTY DAYS SHALL BE STRIP-SODDED ALONG ALL DEDICATED ROW's. THIS WILL PREVENT SEDIMENT RUNOFF FROM INDIVIDUAL LOTS INTO THE ROW AND DRAINAGE SYSTEMS, AND WILL NOT LATER COMPETE WITH THE PERMANENT LOT GRASSING.
4. TEMPORARY SEEDING AND MULCHING – SLOPES STEEPER THAN 6:1 THAT FALL WITHIN THE CATEGORY ESTABLISHED IN NOTE 3 ABOVE SHALL ADDITIONALLY RECEIVE MULCHING OF APPROXIMATELY 2 INCHES LOOSE MEASURE OF MULCH MATERIAL CUT INTO THE SOIL OF THE SEEDED AREA TO A DEPTH OF 4 INCHES.
5. TEMPORARY GRASSING – THE SEEDED OR THE SEEDED AND MULCHED AREA(S) SHALL BE ROLLED AND WATERED AS REQUIRED TO ASSURE OPTIMUM GROWING CONDITIONS FOR THE ESTABLISHMENT OF A GOOD GRASS COVER.
6. TEMPORARY REGRASSING – IF AFTER FOURTEEN DAYS, THE TEMPORARY GRASSED AREAS HAVE NOT ATTAINED A MINIMUM OF 75% GOOD GRASS COVER THE AREA WILL BE REWORKED AND ADDITIONAL SEED APPLIED SUFFICIENT TO ESTABLISH THE DESIRED VEGETATION COVER.
7. THE CONTRACTOR SHALL PLACE HAY BALES AROUND ALL EXISTING AND NEWLY CONSTRUCTED INLETS TO CONTROL EROSION DURING CONSTRUCTION.
8. MAINTENANCE – ALL FEATURES OF THE PROJECT DESIGNED AND CONSTRUCTED TO PREVENT EROSION AND SEDIMENT SHALL BE MAINTAINED DURING THE LIFE OF THE CONSTRUCTION SO AS TO FUNCTION AS THEY WERE ORIGINALLY DESIGNED AND CONSTRUCTED.

B. PERMANENT EROSION CONTROL

THE EROSION CONTROL FACILITIES OF THE PROJECT SHOULD BE DESIGNED TO MINIMIZE THE IMPACT ON OFF-SITE FACILITIES. ALL STORMWATER DISCHARGE FROM THE PROJECT LIMITS SHALL BE ROUTED THROUGH DETENTION BASINS TO TRAP SUSPENDED SEDIMENTS AND DISCHARGE FACILITIES FROM THESE BASINS SHALL BE PROVIDED WITH A SKIMMER DEVICE TO TRAP FLOATABLE DEBRIS.

1. PERMANENT SEEDING – ALL AREAS WHICH HAVE BEEN DISTURBED BY THE CONSTRUCTION WILL, AS A MINIMUM, BE FERTILIZED AND SEEDED.
2. PERMANENT SEEDING AND MULCHING – SLOPES OF 6:1 TO 4:1 INCLUSIVE WILL BE MULCHED WITH A UNIFORM THICKNESS OF APPROXIMATELY TWO INCHES, LOOSE MEASURE, OF MULCH MATERIAL INCORPORATED INTO THE SOIL BY DISKING TO A DEPTH OF FOUR INCHES.
3. PERMANENT SODDING – ALL RETENTION/DETENTION BASINS SHALL BE SODDED WITHIN THEIR LIMITS. ALL EXPOSED AREAS WITHIN PUBLIC RIGHT-OF-WAYS WILL BE SOLID SODDED. OTHER AREAS WITH AREAS WITH SLOPES STEEPER THAN 4:1 WILL BE SODDED.
4. STRIP SODDING – STRIP SOD SHALL BE PLACED ADJACENT TO ALL CURBS, WALKS AND PAVEMENTS.
5. REGRASSING – ALL GRASSED AREAS WILL BE MAINTAINED TO ASSURE A GOOD STAND AND SUFFICIENT GROUND COVER TO MINIMIZE EROSION. IF, AFTER 60 DAYS AN ADEQUATE GROUND COVER HAS NOT BEEN ESTABLISHED, THE AREA WILL BE REGRASSED.
6. ADDITIONAL FERTILIZATION – GRASSED AREAS NOT ACCEPTED WITHIN 90 DAYS OF THEIR COMPLETION SHALL BE FERTILIZED.
7. FOR ADDITIONAL SODDING REQUIREMENTS, REFER TO THE LANDSCAPE PLANS.



420 — TYPICAL CONSERVATIONAREE SIGN
N.T.S.

MADDEN
MOOREHEAD & STOKES LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

EROSION CONTROL PLAN
FOR
HIDDEN LAKE RESERVE
CITY OF APOPKA FLORIDA

M/I HOMES OF ORLANDO, LLC
400 INTERNATIONAL PKWY, SUITE 470
LAKE MARY, FL 32746
(407) 531-5100

DAVID ASHLEY STOKES * LICENSE No. 66527 * STATE OF FLORIDA * PROFESSIONAL ENGINEER
ENGINEER: DAVID ASHLEY STOKES, P.E. No. 66527
CERTIFICATE OF AUTHORIZATION NO. EB-0007723

	DATE	REVISIONS
1		
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JOB #: 19039
DATE: 11/16/18
SCALE: 1" = 60'
DESIGNED BY: WZ
DRAWN BY: WZ
APPROVED BY: DS

C700

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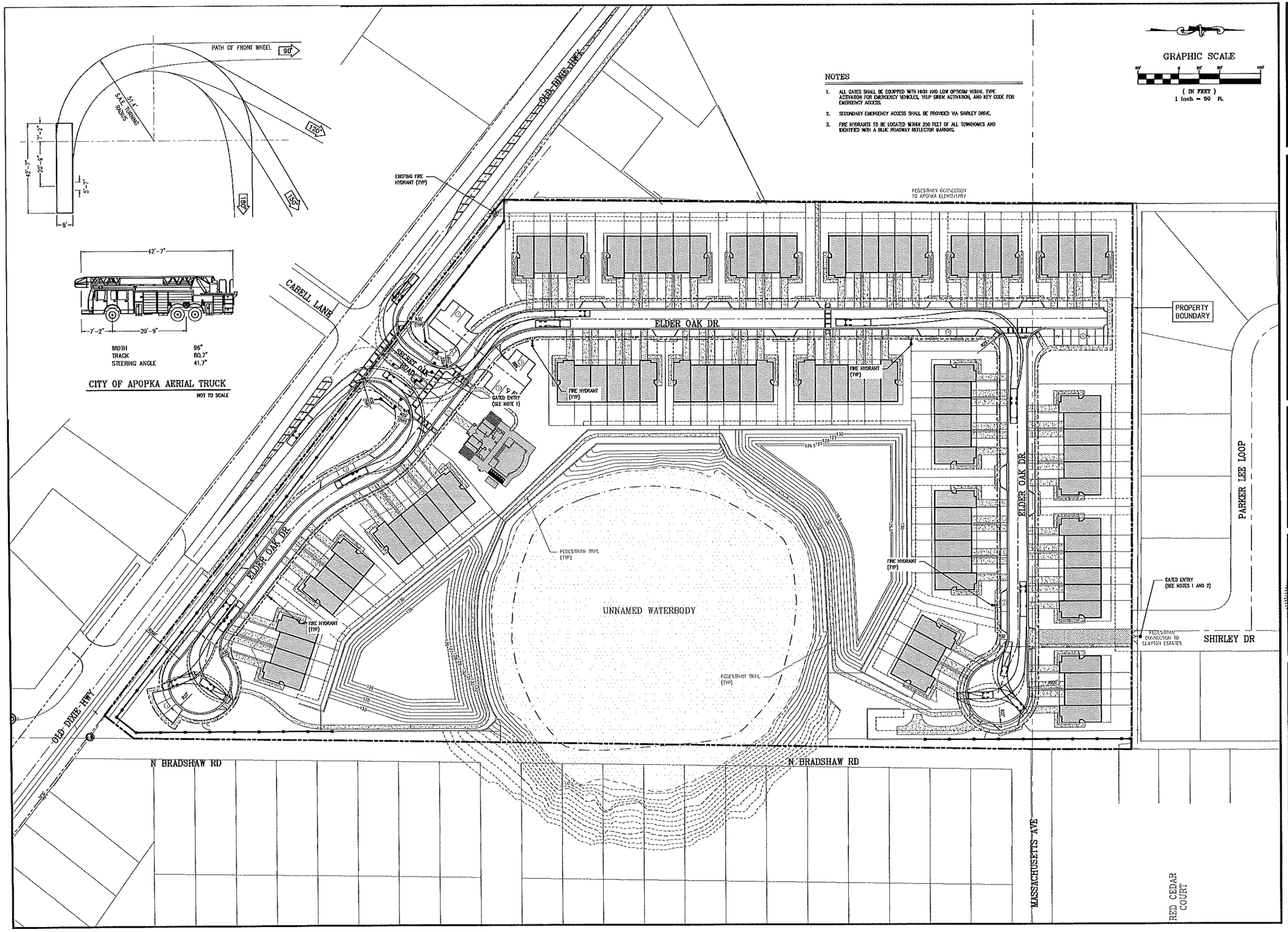

MADDEN
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VEHICULAR CIRCULATION PLAN
FOR
HIDDEN LAKE RESERVE
CITY OF APOPKA
FLORIDA

M/I HOMES OF ORLANDO, LLC
400 INTERNATIONAL PKWY, SUITE 470
LAKE MARY, FL 32746
(407) 531-5100

ENGINEER: DAVID A. STOKES LICENSE No. 68527 STATE OF FLORIDA PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION No. EB-0007723

	DATE	REVISIONS
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JOB # 19039
DATE: 11/18/18
SCALE: 1" = 50'
DESIGNED BY: WZ
DRAWN BY: WZ
APPROVED BY: DS

C800

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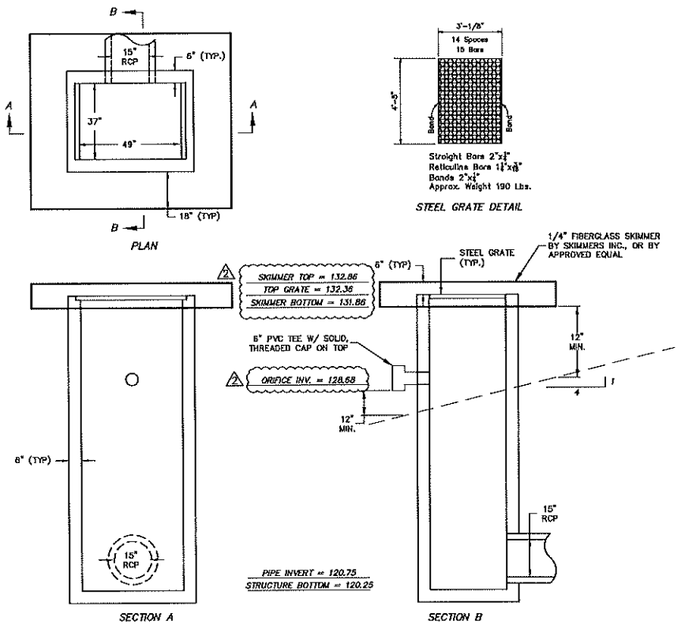
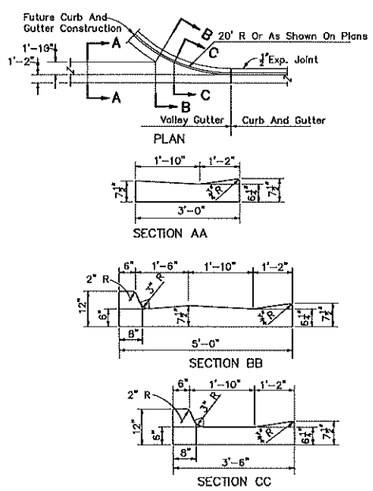


CS1 CONTROL STRUCTURES CS-1 (MODIFIED TYPE D INLET)
N.T.S.



300V VALLEY GUTTER DETAIL
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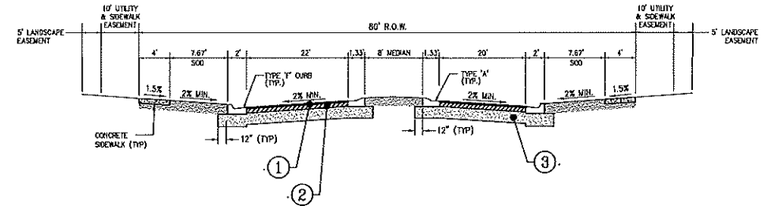

901A TYPICAL 80' RIGHT OF WAY SECTION
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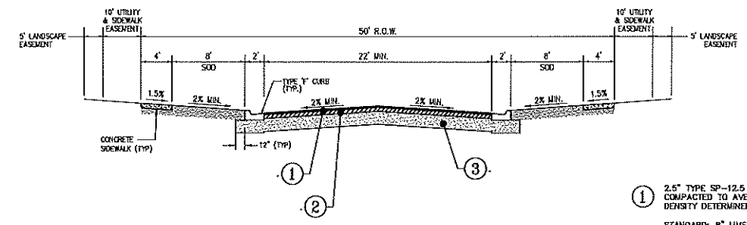
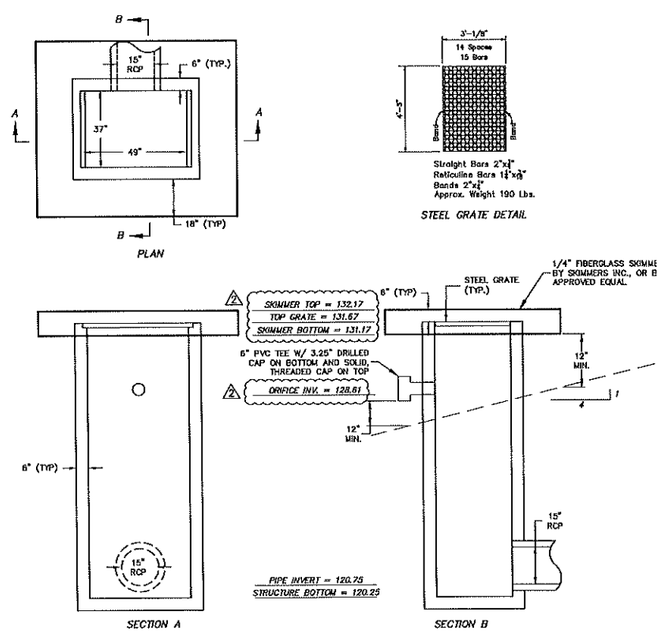
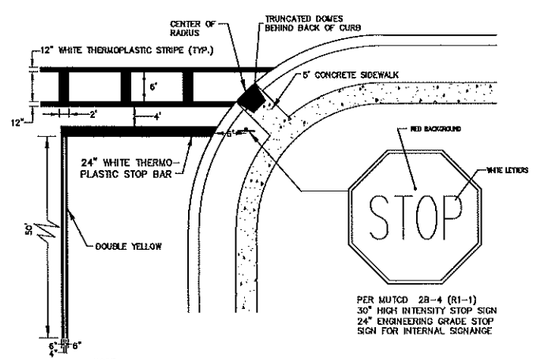


901B TYPICAL 50' RIGHT OF WAY SECTION
N.T.S.

1. 2.5" TYPE SP-12.5 AND TYPE SP-9.5 STRUCTURAL COURSE COMPACTED TO AVERAGE FIELD DENSITY OF 93% OF THE MAX. DENSITY DETERMINED BY SPECIFIC GRAVITY METHODS.
2. STANDARD: 8" LIMEROCK BASE COMPACTED TO 98% MODIFIED PROCTOR MAX. DRY DENSITY PER ASTM D1557 AND LBR 100. ALTERNATE: 8" CRUSHED CONCRETE BASE COMPACTED TO 98% MAX DENSITY PER ASTM D1557 AND LBR 150.
3. 12" STABILIZED SUBGRADE, COMPACTED TO 98% MODIFIED PROCTOR MAX. DRY DENSITY PER ASTM D1557, LBR 40

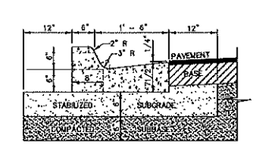


CS2 CONTROL STRUCTURES CS-2 (MODIFIED TYPE D INLET)
N.T.S.

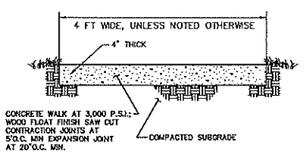


NOTE:
RAMPS RUNS SHALL HAVE A TACTILE SURFACE. RAMP LANDINGS ADJOINING VEHICULAR WAYS SHALL HAVE A TACTILE SURFACE 36" WIDE BORDERING THE VEHICULAR WAY.

212 STOP SIGN, BAR AND CROSSWALK
N.T.S.



300F F.D.O.T. TYPE F CURB
N.T.S.



907 CONCRETE WALK
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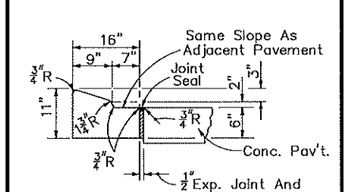
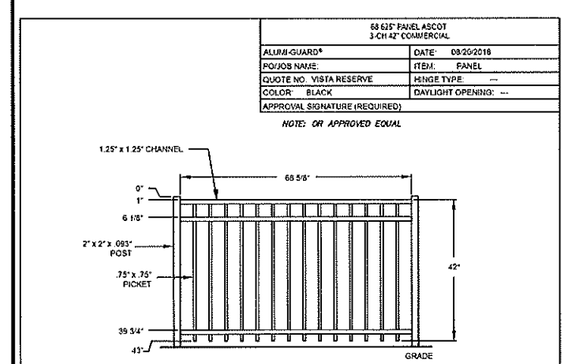


300A F.D.O.T. TYPE A CURB
N.T.S.



FNC RETAINING WALL FENCE DETAIL
N.T.S.

MADDEN
MOSHER, STOKES, JONES LLC
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Suite 260
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(407) 629-8330

CONSTRUCTION DETAILS FOR HIDDEN LAKE RESERVE

CITY OF APOPKA FLORIDA

M/I HOMES OF ORLANDO, LLC
402 INTERNATIONAL PKWY, SUITE 470
LAKE MARY, FL 32746
(407) 531-5100

ENGINEER: DARRELL SHELBY STOKES * No. 66527 * STATE OF FLORIDA * PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION No. EB-0007723

	DATE	REVISIONS
1	09/03/20	REVISED PER DISTRICT COMMENTS
2	10/15/20	REVISED PER CITY COMMENTS
3		
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JOB #	19039
DATE:	11/16/18
SCALE:	N.T.S.
DESIGNED BY:	WZ
DRAWN BY:	WZ
APPROVED BY:	DS

C900

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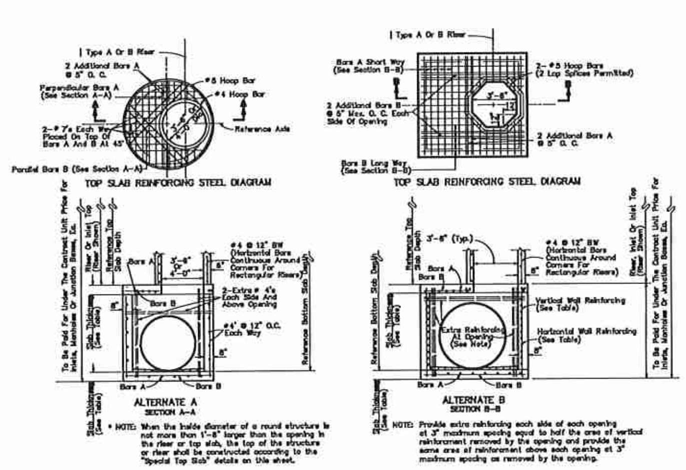
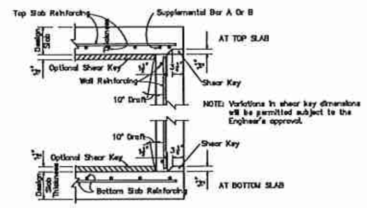
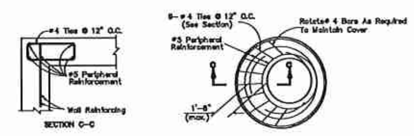


* NOTE: When the inside diameter of a round structure is not more than 1'-8" larger than the opening in the riser or top slab, the top of the structure or riser shall be constructed according to the "Special Top Slab" details on this sheet.

NOTE: Provide extra reinforcing each side of each opening at 3" maximum spacing equal to half the area of vertical reinforcement removed by the opening and provide the same area of reinforcement above each opening at 3" maximum spacing as removed by the opening.



SLAB TO WALL DETAILS FOR PRECAST ALTERNATE



SPECIAL TOP SLAB*

GENERAL NOTES

1. Standard structure bottoms 4'-0" diameter and smaller (Alt. A) and 3'-6" square (Alt. B) are designated Type P. Larger standard structure bottoms are designated Type J. Risers are permitted for all structures.
2. Walls of circular structures (Alternate A) constructed in place may be of non-reinforced concrete or brick or reinforced concrete. Precast and rectangular structures (Alternate B) shall be constructed of reinforced concrete only.
3. Wall thickness and reinforcement are for either reinforced cast-in-place or precast concrete units except that precast circular units may be furnished with walls in accordance with either A.S.T.M. C-478 (up to 96" diameter) or A.S.T.M. C-76, Class ~~~, B Wall, modified where the elliptical steel cage area is placed in the center one-third of the wall.
4. Top and floor slab thickness and reinforcement are for precast and cast in place construction. Top and floor slabs shall be of Class ~~~ concrete. Concrete as specified in A.S.T.M. C-478 (4000 psi) may be used in lieu of Class ~~ and Class ~~ concrete in precast items manufactured in plants which are under the "Standard Operating Procedures" for the inspection of precast drainage products.
5. All reinforcement shall be A.S.T.M. A615, Grade 60 or 65 KSI welded wire fabric, either smooth or deformed.
6. Structure bottoms may be used in conjunction with curb inlet tops Types 1, 2, 3, 4, 5, 6, 9, and 10, and any manhole or junction box unless otherwise shown in the plans or other standard drawings. Alt. B structure bottoms may be used in conjunction with curb inlet Types 7 & 8, or any ditch bottom inlet unless otherwise shown in the plans or other standard drawings.
7. Rectangular structures may be rotated as directed by the Engineer in order to facilitate connections between the structure walls and storm sewer pipes.
8. Except when ACI hooks are specifically required, embedment hooks in the top and bottom slabs may be replaced with straight embedments or peripheral reinforcement in accordance with the reinforcement detail shown under "Rebar Straight End Embedment Or Peripheral Reinforcement In Lieu of ACI Standard Hooks For Top And Bottom Slabs", Index No. 201, Sheet 3 of 6.
9. All steel bars shall have 1½" minimum cover unless otherwise shown. Horizontal steel in rectangular structures shall be lapped a minimum of 24 bar diameters at corners.
10. The corner fillets shown are necessary for rectangular structures used with circular risers and inlet throats and used on skew with rectangular risers, inlet and inlet throats. Fillets will be required in lieu of the bottom slab of the Alt. B riser when used with the Alt. A box. Each fillet shall be reinforced with 2- 5 bars.
11. Inlet throats, riser or manhole tops shall be secured to structures as shown on Index No. 201.
12. Structures with depths over 14' are to be checked for flotation by designer of project drainage.
13. Units larger than specified standard may be substituted at the contractor's option when these units will not cause or increase the severity of utility conflicts. Such larger units shall be furnished at no additional cost to the Department. Larger Alternate A units cannot replace Alternate B units without approval of the Engineer. This note applies to this index only.
14. For manhole and junction box tops, for frames and covers, and, for supplementary details see Index No. 201.

SLAB DESIGNS – SQUARE AND RECTANGULAR STRUCTURES
(ALL SLABS 8" THICK – REINFORCING PARALLEL TO SHORT WAY AND LONG WAY)

SHORT-WAY SLAB DEPTH	SHORT-WAY SCHEDULE	LONG-WAY SLAB DEPTH	LONG-WAY SCHEDULE
SIZE: 3'-0" UNLIMITED			
≥0.5'< 29'	B	≥0.5'-40'	B
29'-40'	C		
SIZE: 4'-0" UNLIMITED			
≥0.5'< 19'	B	≥0.5'< 34'	B
19'< 29'	C	34'-40'	C
29'-40'	D		
SIZE: 5'10'			
≥0.5'< 3'	C	≥0.5'< 3'	C
3'< 19'	B	3'< 19'	B
19'< 28'	C	19'< 28'	C
28'< 38'	D	28'< 38'	D
38'-40'	F	38'-40'	F
SIZE: 5'/0'			
≥0.5'< 3'	C	≥0.5'< 3'	C
3'< 18'	B	3'< 20'	B
18'< 24'	C	20'< 29'	C
24'< 34'	D	29'-40'	D
34'-40'	F		
SIZE: 5'17'			
≥0.5'< 3'	C	≥0.5'< 3'	C
3'< 14'	B	3'< 22'	B
14'< 21'	C	22'< 33'	C
21'< 39'	D	33'-40'	D
39'-40'	F		
SIZE: 5'18'			
≥0.5'< 3'	C	≥0.5'< 39'	B
3'< 8'	B	39'-40'	C
8'< 17'	C		
17'< 23'	D		
23'-40'	F		
SIZE: 5'19'			
≥0.5'< 3'	C	≥0.5'< 32'	B
3'< 8'	B	32'-40'	C
8'< 17'	C		
17'< 23'	D		
23'-40'	F		

SHORT-WAY SLAB DEPTH	SHORT-WAY SCHEDULE	LONG-WAY SLAB DEPTH	LONG-WAY SCHEDULE
SIZE: 6'14'			
≥0.5'< 3'	D	≥0.5'< 3'	D
3'< 4'	C	3'< 4'	C
4'< 14'	B	4'< 14'	B
14'< 21'	C	14'< 21'	C
21'< 28'	D	21'< 28'	D
28'-40'	F	28'-40'	F
SIZE: 6'17'			
≥0.5'< 3'	D	≥0.5'< 3'	D
3'< 4'	C	3'< 4'	C
4'< 12'	B	4'< 15'	B
12'< 19'	C	15'< 21'	C
19'< 26'	D	21'< 30'	D
26'-40'	F	30'-40'	F
SIZE: 6'16'			
≥0.5'< 3'	D	≥0.5'< 3'	D
3'< 4'	C	3'< 4'	C
4'< 7'	B	4'< 16'	B
7'< 16'	C	16'< 23'	C
16'< 23'	D	23'< 32'	D
23'-40'	F	32'-40'	F
SIZE: 6'19'			
≥0.5'< 3'	D	≥0.5'< 3'	D
3'< 15'	C	3'< 4'	C
15'< 21'	D	4'< 18'	B
21'< 27'	E	18'< 27'	C
27'-40'	G	27'< 37'	D
		37'-40'	E
SIZE: 7'17'			
≥0.5'< 3'	E	≥0.5'< 3'	E
3'< 4'	D	3'< 4'	D
4'< 16'	C	4'< 16'	C
16'< 22'	D	16'< 22'	D
22'< 28'	E	22'< 28'	E
28'-40'	G	28'-40'	G
SIZE: 7'18'			
≥0.5'< 3'	E	≥0.5'< 3'	E
3'< 4'	D	3'< 4'	D
4'< 15'	C	4'< 17'	C
15'< 21'	D	17'< 23'	D
21'< 27'	E	23'< 29'	E
27'-40'	G	29'-40'	G
SIZE: 7'19'			
≥0.5'< 3'	E	≥0.5'< 3'	E
3'< 4'	D	3'< 4'	D
4'< 12'	C	4'< 18'	C
12'< 18'	D	18'< 24'	D
18'< 24'	E	24'< 32'	E
24'-40'	G	32'-40'	G

SHORT-WAY SLAB DEPTH	SHORT-WAY SCHEDULE	LONG-WAY SLAB DEPTH	LONG-WAY SCHEDULE
SIZE: 8'18'			
≥0.5'< 3'	D	≥0.5'< 3'	D
3'< 4'	C	3'< 4'	C
4'< 9'	B	4'< 9'	B
9'< 17'	C	9'< 17'	C
17'< 31'	D	17'< 31'	D
31'-40'	G	31'-40'	G
SIZE: 8'19'			
≥0.5'< 3'	D	≥0.5'< 3'	E
3'< 4'	C	3'< 4'	D
4'< 16'	B	4'< 18'	C
16'< 22'	C	18'< 25'	D
22'< 29'	D	25'< 32'	F
29'-40'	F	32'-40'	G
SIZE: 9'19'			
≥0.5'< 3'	F	≥0.5'< 3'	F
3'< 14'	C	3'< 14'	C
14'< 20'	D	14'< 20'	D
20'< 28'	E	20'< 28'	E
28'-40'	G	28'-40'	G

WALL DESIGNS – RECTANGULAR STRUCTURES

VERTICAL REINFORCING WALL DEPTH	VERTICAL REINFORCING SCHEDULE	HORIZONTAL REINFORCING WALL DEPTH	HORIZONTAL REINFORCING SCHEDULE
SIZE: 3'-0"			
≥1.17'-40'	A	≥1.17'-40'	B
SIZE: 4'-0"			
≥1.17'-40'	A	≥1.17'-40'	B
SIZE: 5'-0"			
≥1.17'-40'	A	≥1.17'< 33'	B
		33'-40'	C
SIZE: 6'-0"			
≥1.17'-40'	A	≥1.17'< 22'	B
		22'-40'	C
SIZE: 7'-0"			
≥1.17'-40'	A	≥1.17'< 15'	B
		15'< 25'	C
		25'-40'	D
SIZE: 8'-0"			
≥1.17'-40'	A	≥1.17'< 11'	B
		11'< 19'	C
		19'< 29'	D
		29'-40'	F
SIZE: 9'-0"			
≥1.17'-40'	A	≥1.17'< 15'	C
		15'< 22'	D
		22'-40'	F

SLAB DESIGNS – ROUND STRUCTURES

SLAB DEPTH	SLAB THICKNESS	REINFORCING (2 WAYS) SCHEDULE
SIZE: 3'-0"		
≥0.5'-40'	8"	C
SIZE: 4'-0"		
≥0.5'-40'	8"	C
SIZE: 5'-0"		
≥0.5'< 30'	8"	C
30'-40'	8"	D
SIZE: 6'-0"		
≥0.5'< 8'	8"	B
8'< 15'	8"	C
15'< 30'	8"	D
30'< 37'	8"	E
37'-40'	8"	G
SIZE: 8'-0"		
≥0.5'< 9'	10"	C
9'< 15'	10"	D
15'< 23'	10"	E
23'< 33'	12"	E
33'-40'	12"	G
SIZE: 10'-0"		
≥0.5'< 6'	10"	C
6'< 11'	10"	D
11'< 17'	10"	E
17'< 23'	12"	E
23'-40'	12"	G
SIZE: 12'-0"		
≥0.5'< 6'	12"	C
6'< 11'	12"	D
11'< 18'	12"	E
18'< 20'	14"	E
20'-40'	14"	G

GENERAL NOTES

1. Slab reinforcement is appropriate for top, intermediate, and bottom slabs.
2. Slab depth is measured from finished grade to top of slab.
3. Wall design depth is measured to the top of the bottom slab for boxes and to the top of the intermediate slab for risers.
4. Wall height is the distance between top of lower slab to bottom of upper slab.

REINFORCING SCHEDULE

SCHEDULE	GRADE 60 STEEL OR 65 KSI (WIRE FABRIC) in²/ft
A	0.20
B	0.24
C	0.37
D	0.53
E	0.73
F	1.06
G	1.43

NOTE ALL INLET GRATES SHALL BE CHAINED DOWN

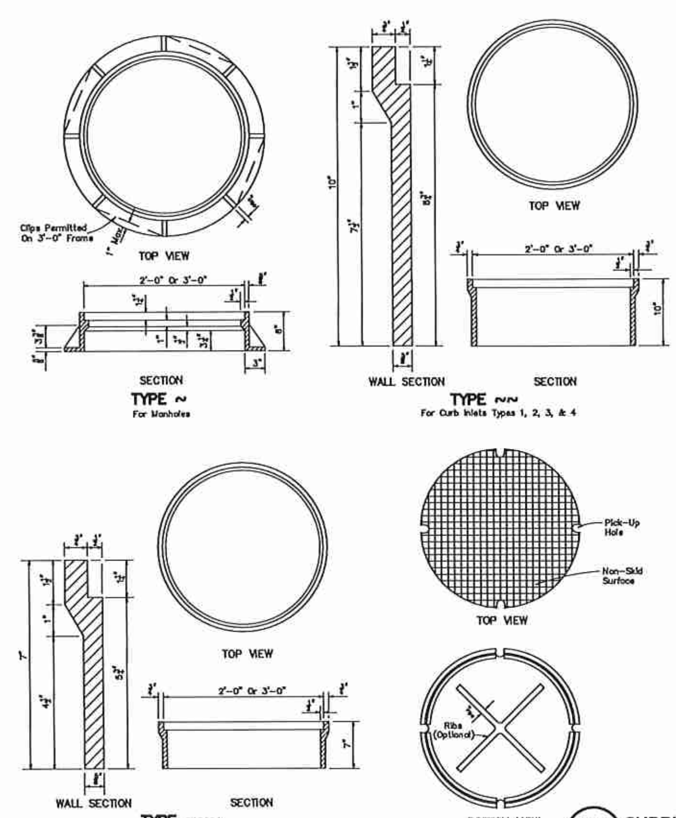
200 STRUCTURE BOTTOMS TYPE J AND P
N.T.S.

Segmental Retaining Wall Operations & Maintenance Guide

The Segmental Retaining Wall (SRW) is constructed of concrete masonry units, geogrid soil reinforcement fabric, and compacted backfill. The structure's performance is sensitive to any post-construction activities that may damage components, increase loading conditions, and/or reduce overall stability. The following list is intended to provide guidelines for the proper care of an SRW.

1. The area behind the wall that contains geogrid soil reinforcement (reinforced zone) is the primary structural component of the wall system. Do not, under any circumstances, excavate through, drill through, or otherwise damage this reinforcement fabric without written approval of the design engineer of record.
2. The drain line at the base of the wall (if required and installed) should be stubbed out to daylight or for final connection to storm drainage systems by others. Ensure that all connections are made to proper drain outlets and that any drain outlets to daylight are not buried.
3. The Keystone wall is normally constructed over a crushed stone base. No digging or excavation shall be done within 3 feet (0.9m) horizontally from bottom face of wall or to such depth that would compromise the integrity of the wall foundation.
4. All water must be diverted away from the base of wall to avoid erosion and undermining of the foundation after installation. Otherwise, toe protection such as riprap is required. This includes temporary site grading during construction and final site grading.
5. Landscape watering and surface drainage above the wall should be designed in consultation with the civil and geotechnical engineer and performed in such a way as to avoid standing water, water cascading over the wall, and infiltration (saturation) of the reinforced zone.
6. Do not increase the height of the existing wall as constructed with more block units without the written approval of the design engineer of record.
7. Do not add a slope or increase the steepness of a back slope beyond what was considered in the original grading plan and wall design without written approval of the design engineer of record.
8. Do not add additional surcharges within a lateral distance of twice the overall height of the structure(s) without written approval of the design engineer of record or unless considered in the original wall design. This would include fences, sound walls, landscaping walls, swimming pools, buildings, garages, etc.
9. Do not operate heavy equipment within four feet of top of wall face. The surcharge from equipment weight can push the upper wall units out resulting in misalignment.
10. Segmental retaining walls are flexible structures (vs. rigid as in CMU walls) and may experience some post- construction movement. All structures (i.e. sidewalks, pavements, curbs, trash enclosures, utility lines, etc.) should be designed to handle some ground movement and not be connected directly to the wall units.
11. The retaining walls should be periodically inspected to verify that drainage measures are functioning properly, and that erosion has not occurred along the top, ends, or bottom of the wall. Any unanticipated movement or deflection of the wall system should be noted and evaluated by a qualified engineer.
12. Over time the wall face may begin to show a white flaky material and may especially be noticeable post-construction. This material is called efflorescence. Efflorescence occurs when moisture evaporates from the wall face, and the naturally occurring soluble salts and bases, or the calcium carbonite (calcium hydroxide in the cement mixes with carbon dioxide in the air) is left on the face. This efflorescence is only an aesthetic concern and will not affect the structural performance of the wall. Efflorescence can typically be removed by dry brushing followed by flushing with clean water. In tougher cases power washing with clean water mixed with muriatic acid solution will also aid in the removal of efflorescence.

△1



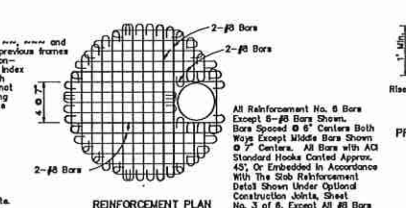
CAST IRON FRAMES

NOTES (FRAMES, AND COVER)

1. The 212 lb. cover is to be used for all frames Types ~, ~~, ~~~ and the 2-Piece Cover, and is the replacement cover for all previous frames with ½" deep seats (traffic type). The 185 lb. cover (non-traffic type), 1984 Roadway and Traffic Design Standards Index No. 201, is the replacement cover for existing frames with deep seats. Installation of frames with deep seats is not permitted. The 185 lb. covers are to be placed in existing deep seated frames only when specifically called for in the plans or as specifically directed by the Engineer.

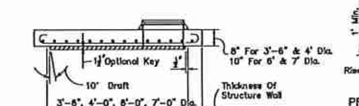
NOTES (TOPS)

1. Manhole top Type 7 slabs shall be of Class ~~ concrete. Concrete as specified in ASTM C-478 may be used for precast units; see General Note No. 3.
2. Manhole top Type 7 slabs may be of cast-in-place or precast construction. The optional key is for precast tops and in lieu of dowels. Frame and slab openings are to be omitted when top is used over a junction box. Frames can be adjusted with from one to six courses of brick.
3. Manhole top Type 8 may be of cast-in-place or precast concrete construction or brick construction. For concrete construction, the concrete and steel reinforcement shall be the same as the supporting wall unit. An eccentric cone may be used.
4. Manhole tops shall be secured to structures by optional construction joints as shown on Sheet 3 of 6.



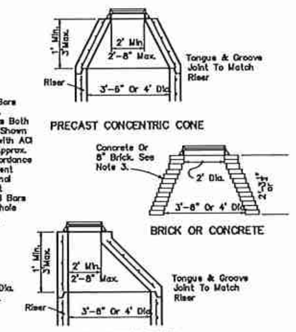
REINFORCEMENT PLAN

All Reinforcement No. 6 Bars Except 6-#8 Bars Shown. Bars Spaced @ 6" Centers Both Ways Except Middle Bars Shown @ 7" Centers. All Bars with ACI Standard Hooks Canted Approx. 45°, Or Embedded In Accordance With The Slab Reinforcement Detail Shown Under Optional Construction Joints, Sheet No. 3 of 6, Except All #8 Bars And #8 Bars Around Manhole Opening Shall Be Hooked.



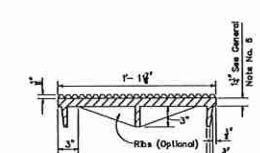
SECTION

TYPE 7-T (TRAFFIC) (H-20)



TYPE 8 MANHOLES

MANHOLE TOPS

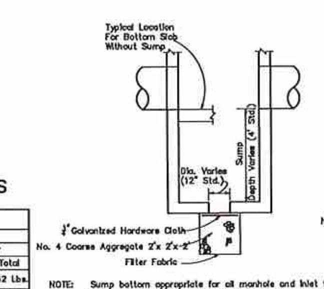


SECTION

COVER FOR ALL FRAMES

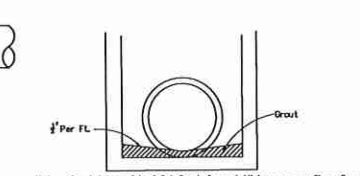
Frame Type	2' OPENING Frame	2' OPENING Cover (Std.)	3' OPENING Frame	3' OPENING 2-Piece Cover: Cover	2-Piece Cover: Ring	2-Piece Cover: Total
~	126 Lbs.	212 Lbs.	220 Lbs.	212 Lbs.	250 Lbs.	462 Lbs.
~~	134 Lbs.	212 Lbs.	260 Lbs.	212 Lbs.	250 Lbs.	462 Lbs.
~~	98 Lbs.	212 Lbs.	220 Lbs.	212 Lbs.	250 Lbs.	462 Lbs.

WEIGHT OF CASTINGS



NOTE: Sump bottom appropriate for all manhole and inlet types. Cost for sump bottom to be included in the contract unit price for inlet or manhole.

SUMP BOTTOM



Note: Grout to consist of 3:1 Sand-Cement Mixture or any Class Concrete.
FOR ALL STRUCTURES UNLESS EXCLUDED BY SPECIAL DETAIL

DRAINAGE STRUCTURE INVERT

NOTE ALL INLET GRATES SHALL BE CHAINED DOWN

201 SUPPLEMENTARY DETAILS FOR MANHOLES AND INLETS
N.T.S.

MADDEN
MOORHEAD & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

CONSTRUCTION DETAILS
FOR
HIDDEN LAKE RESERVE
CITY OF APOPKA FLORIDA

M/I HOMES OF ORLANDO, LLC
400 INTERNATIONAL PKWY, SUITE 470
LAKE MARY, FL 32746
(407) 531-5100

DAVID ASHLEY STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION NO. EB-0007723

No.	DATE	REVISIONS
1	03/20/20	REVISED PER CITY COMMENTS
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		

JOB #: 19039
DATE: 11/16/18
SCALE: N.T.S.
DESIGNED BY: WZ
DRAWN BY: WZ
APPROVED BY: DS

C901

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STATE OF FLORIDA E&SC DESIGNER & REVIEWER MANUAL; LATEST EDITION: JULY 2013

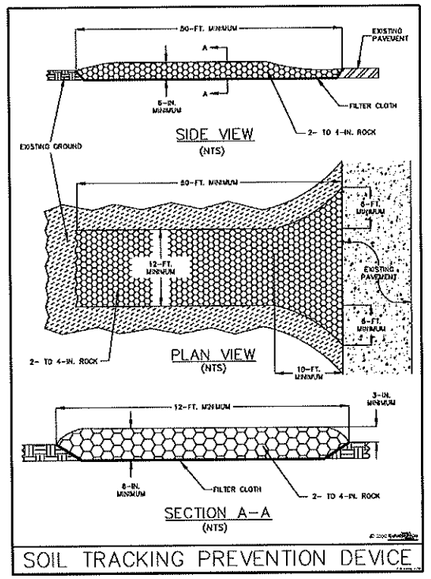


Figure V-19: Illustration of a Soil Tracking Prevention Device

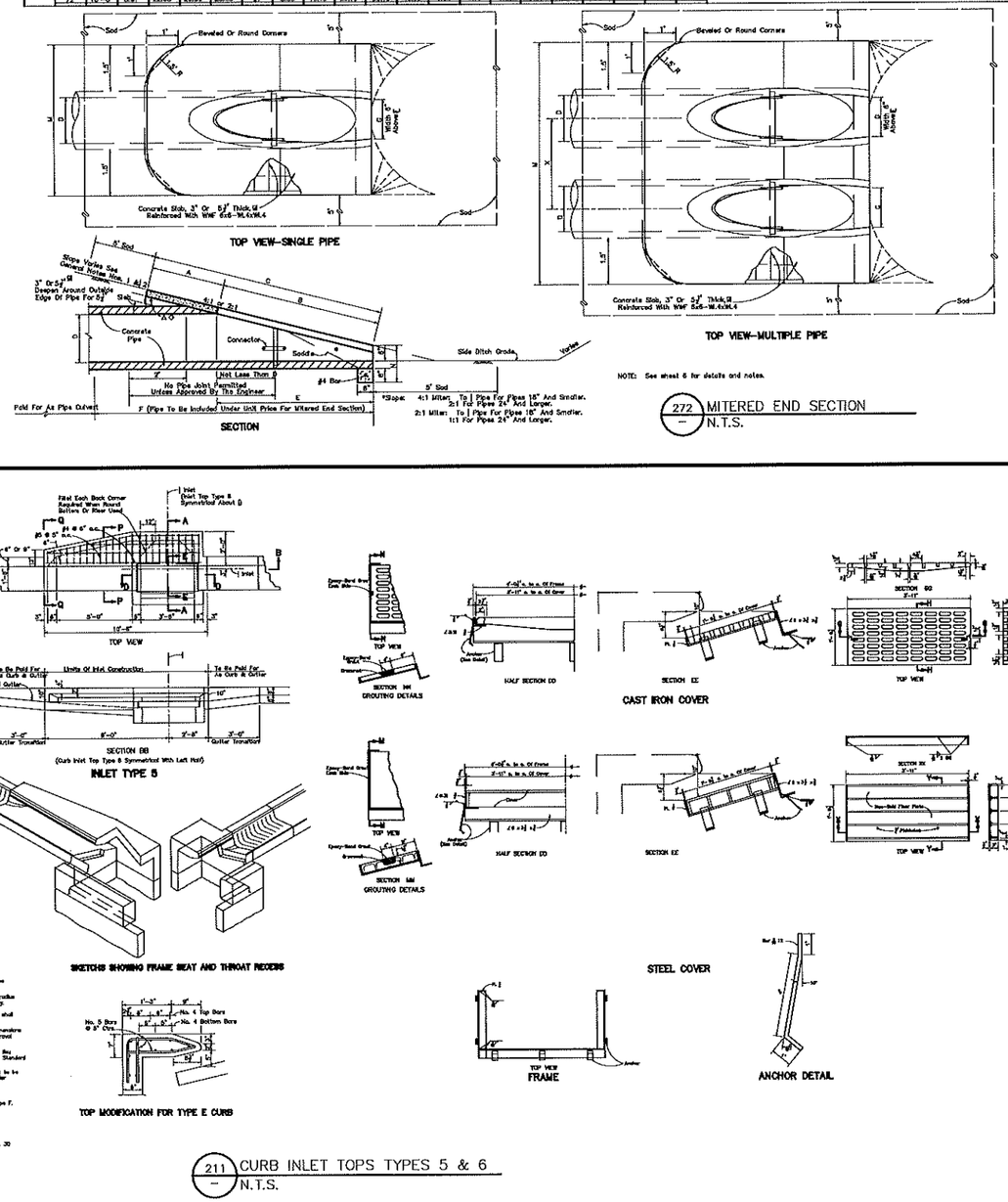
	D	X	A	B	C	E	F	G	N Single Pipe	N Double Pipe	N Triple Pipe	N Quad. Pipe	N	5" Concrete Slab (CY) Single Pipe	5" Concrete Slab (CY) Double Pipe	5" Concrete Slab (CY) Triple Pipe	5" Concrete Slab (CY) Quad. Pipe	Sodding (SQ. YDS.) Single Pipe	Sodding (SQ. YDS.) Double Pipe	Sodding (SQ. YDS.) Triple Pipe	Sodding (SQ. YDS.) Quad. Pipe
2:1 Slope	15"	2'-7"	1.92'	2.18'	4.10'	2.00'	6"	1.33'	4.83'	7.21'	9.79'	12.37'	.19'	0.38	0.56	0.77	0.98	21	24	27	30
	18"	2'-10"	1.67'	2.17'	4.71'	2.25'	6"	1.41'	4.92'	7.33'	10.06'	12.79'	.21'	0.41	0.63	0.87	1.09	22	25	28	31
	24"	3'-2"	2.00'	3.00'	5.91'	2.58'	7"	1.73'	5.92'	8.92'	12.31'	15.70'	.25'	0.62	0.93	1.23	1.53	23	27	32	36
	30"	3'-7"	2.16'	4.25'	7.10'	2.90'	8"	2.00'	6.66'	10.33'	14.25'	18.83'	.29'	0.68	1.06	1.50	1.91	25	31	36	42
	36"	4'-0"	2.33'	5.00'	8.69'	3.33'	9"	2.24'	7.41'	11.75'	16.83'	21.92'	.32'	0.83	1.29	1.76	2.22	27	33	40	46
	42"	5'-0"	2.50'	7.01'	9.92'	3.58'	10"	2.45'	7.60'	12.23'	19.21'	26.19'	.36'	0.97	1.60	2.23	2.87	30	37	45	52
	48"	6'-0"	2.83'	8.34'	10.74'	4.08'	12"	2.83'	7.83'	14.08'	21.33'	28.58'	.42'	1.13	2.01	2.89	3.81	32	41	50	59
	54"	7'-0"	3.00'	9.41'	11.68'	4.58'	12"	2.83'	8.43'	15.08'	23.73'	32.42'	.46'	1.31	2.44	3.58	4.72	34	45	57	68
	60"	8'-0"	3.33'	10.58'	13.18'	5.00'	12"	3.00'	9.00'	17.00'	26.00'	34.92'	.50'	1.51	2.89	4.28	5.68	36	49	63	76
	66"	9'-0"	3.71'	11.83'	13.70'	10.50'	12"	3.16'	9.58'	18.75'	27.92'	37.08'	.54'	1.88	3.72	5.56	7.41	38	53	68	83
	72"	10'-0"	3.87'	13.97'	15.67'	11.58'	18"	3.32'	10.16'	20.16'	30.16'	40.16'	.58'	1.88	3.72	5.56	7.41	40	57	73	90
4:1 Slope	15"	2'-7"	2.27'	4.09'	6.36'	4.00'	6"	1.33'	4.83'	7.01'	9.79'	12.37'	.19'	0.37	0.67	1.15	1.44	23	28	29	32
	18"	2'-10"	2.50'	4.17'	7.48'	5.00'	6"	1.41'	4.92'	7.13'	10.06'	12.92'	.21'	0.88	0.92	1.31	1.65	25	28	31	35
	24"	3'-2"	2.75'	5.00'	9.91'	7.00/A	7"	1.73'	5.92'	8.92'	12.31'	15.70'	.25'	0.83	1.40	1.79	2.22	28	33	38	39
	30"	4'-0"	2.79'	6.25'	11.69'	8.83'	8"	2.00'	6.66'	10.33'	14.25'	18.83'	.29'	1.10	1.74	2.38	3.05	31	38	41	46
	36"	4'-7"	3.00'	7.50'	13.18'	11.00'	9"	2.24'	7.41'	11.75'	16.83'	21.92'	.32'	1.32	2.31	3.08	3.85	33	40	46	52
	42"	5'-7"	3.25'	8.75'	14.42'	13.83'	10"	2.45'	7.60'	12.23'	19.21'	26.19'	.36'	1.88	2.75	3.81	4.86	36	43	51	58
	48"	6'-7"	3.42'	10.42'	15.83'	16.83'	12"	2.83'	7.83'	14.08'	21.33'	28.58'	.42'	1.80	3.00	4.23	5.47	41	48	56	63
	54"	7'-7"	3.58'	12.50'	20.60'	20.00'	12"	2.83'	8.43'	15.08'	23.73'	32.42'	.46'	2.15	3.83	5.77	7.58	44	53	61	69
	60"	8'-7"	3.75'	14.58'	23.18'	18.83'	12"	3.00'	9.00'	17.00'	26.00'	34.92'	.50'	2.45	4.68	6.87	9.07	47	56	66	75
	66"	9'-7"	3.93'	17.23'	25.35'	21.83'	12"	3.16'	9.58'	18.75'	27.92'	37.08'	.54'	2.88	5.54	8.18	10.84	49	59	69	80
	72"	10'-7"	4.08'	22.58'	28.02'	25.00'	27"	3.30'	10.16'	20.16'	30.16'	40.16'	.58'	3.18	6.07	8.96	12.46	52	63	74	85

DIMENSIONS AND QUANTITIES

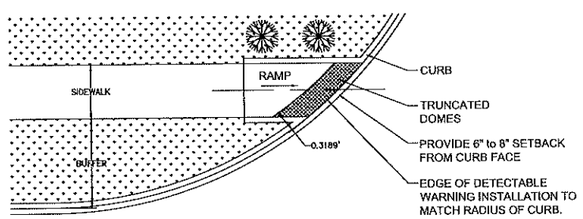
See General Note No. 3.
See Sheet 5 Of 6 For 3" Slab Quantities

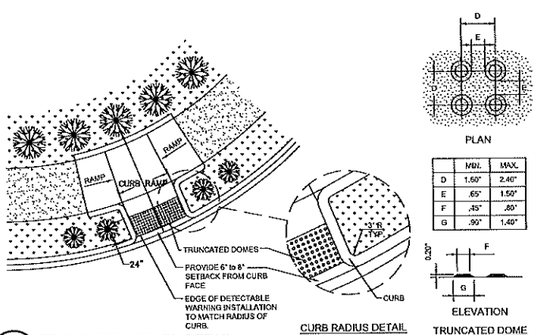
	E
A & A'	0.625' Dimensions permitted to allow use of 8' standard pipe lengths.
◇ 10.67'	◇ 10.12' Dimensions permitted to allow use of 12' standard pipe lengths.

△◇ Concrete slab shall be deepened to form bridge across crown of pipe. See section below.



272 MITERED END SECTION
N.T.S.





	MIN.	MAX.
D	1.60"	2.40"
E	.65"	1.50"
F	.35"	.80"
G	.90"	1.40"

TD TRUNCATED DOME DETAIL
N.T.S.

Curb Ramp with Detectable Warnings

Truncated domes and all related installed surfaces to be installed according to manufacturers specifications. All detectable warning surface installations shall be at minimum, at least as wide as the surrounding pedestrian surfaces.

As manufactured by Vanguard ADA Systems of America, or equivalent.
www.VanguardAdaInc.com

211 CURB INLET TOPS TYPES 5 & 6
N.T.S.

MADDEN
MOORE & STOKES, INC.
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

CONSTRUCTION DETAILS
FOR
HIDDEN LAKE RESERVE
CITY OF APOPKA
FLORIDA

M/I HOMES OF ORLANDO, LLC
400 INTERNATIONAL PKWY, SUITE 470
LAKE MARY, FL 32746
(407) 531-5100

ENGINEER: ASHLEY STOKES
No. 66527
STATE OF FLORIDA
PROFESSIONAL ENGINEER
DATE SIGNED 11/16/18
CERTIFICATE OF AUTHORIZATION NO. EB-0007723

NO.	DATE	REVISIONS

JOB # 19039
DATE: 11/16/18
SCALE: N.T.S.
DESIGNED BY: WZ
DRAWN BY: WZ
APPROVED BY: DS

C902

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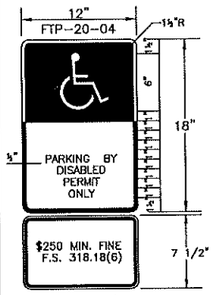
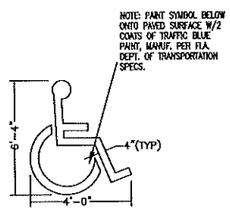
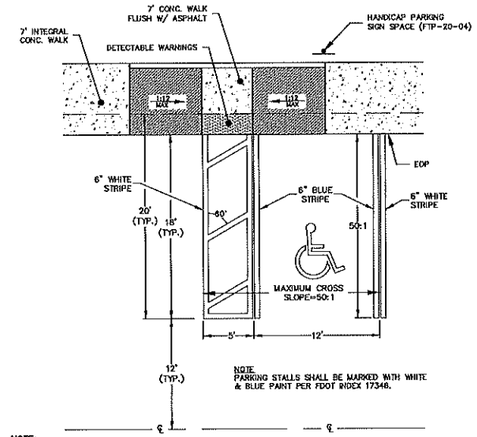


NOTE: (HANDICAP SIGN ONLY)

1. ALL LETTERS SHALL BE BLACK AND SHALL CONFORM TO FDOT "DESIGN STANDARDS".
2. TOP PORTION OF SIGN SHALL HAVE REFLECTORIZED (ENGINEERING GRADE) BLUE BACKGROUND WITH WHITE REFLECTORIZED LEGEND AND BORDER.
3. BOTTOM PORTION OF SIGN SHALL HAVE A REFLECTORIZED (ENGINEERING GRADE) WHITE BACKGROUND WITH BLACK BORDER.
4. ONE SIGN REQUIRED FOR EACH PARKING SPACE.
5. BOTTOM OF SIGN SHALL BE 7' ABOVE GROUND IN ACCORDANCE WITH FDOT "DESIGN STANDARDS".



950 / – HANDICAP PARKING MARKING DETAILS
N.T.S.



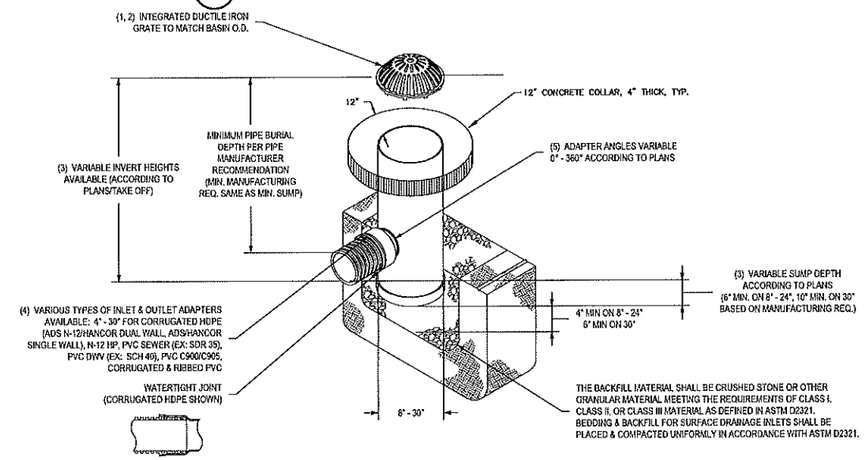
NOTE:
PARKING STALLS SHALL BE MARKED WITH WHITE & BLUE PAINT PER FDOT INDEX 17346.

NOTE:

1. ACCESSIBILITY:
   A. IN ACCORDANCE WITH THE FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION, 4.1.3 SECTION (1). DATED OCT. 1997 AT LEAST ONE ACCESSIBLE ROUTE COMPLYING WITH 4.3 SHALL CONNECT ACCESSIBLE BUILDING OR FACILITY ENTRANCES WITH ALL ACCESSIBLE SPACES AND ELEMENTS WITHIN THE BUILDING OR FACILITY. DOORS ACCESSING THE BUILDING MUST BE DEPICTED ON SITE PLAN. RAMP DETAILS WITH SLOPE INFORMATION SHALL BE DEPICTED ON SITE PLAN.
   B. THE LOCATION OF HANDICAPPED PARKING STALLS, LOADING ZONES, SIDEWALKS AND RAMPS ON SITE SHALL MEET CHAPTER 316.1955 OF THE FLORIDA ACCESSIBILITY CODE; RAMPS SHALL NOT EXCEED 12:1 SLOPES PARKING SPACE AND AISLE SHALL NOT EXCEED 50:1 CROSS-SLOPE. (TLO 11-16-98) 12-11-98

818 / ST1 HANDICAP RAMP AND PARKING STALL DETAIL
N.T.S.

YD / – NYLOPLAST DRAIN BASIN WITH DOME GRATE



1 - 8" - 30" DOME GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 - 8" & 12" DOME GRATES FIT ONTO THE DRAIN BASINS WITH THE USE OF A PVC BODY TOP. SEE DRAWING NO. 7001-110-045.
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065.
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER (4" - 24").
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.
6 - 8" - 30" DOME GRATES HAVE NO LOAD RATING.

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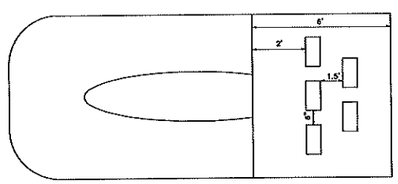
DRAWN BY	EBC	MATERIAL	
DATE	03-25-10		
REVISED BY	NKH	PROJECT NO/NAME	
DATE	03-11-16		
DWG SIZE	A	SCALE 1:40	SHEET 1 OF 1

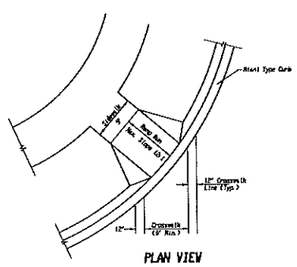
Nyloplast
3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2443
FAX (770) 932-2499
www.nyloplast-us.com

TITLE: DRAIN BASIN WITH DOME GRATE QUICK SPEC INSTALLATION DETAIL

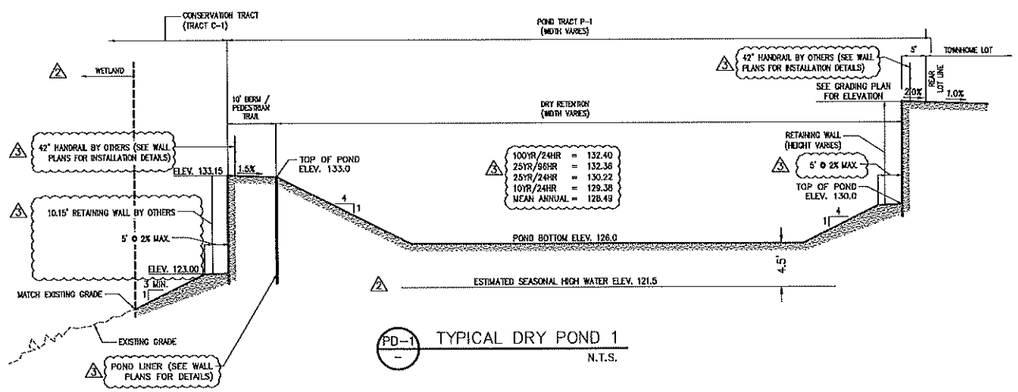
DWG NO. 7001-110-597 REV D



272A / – ENERGY DISSIPATOR
N.T.S.

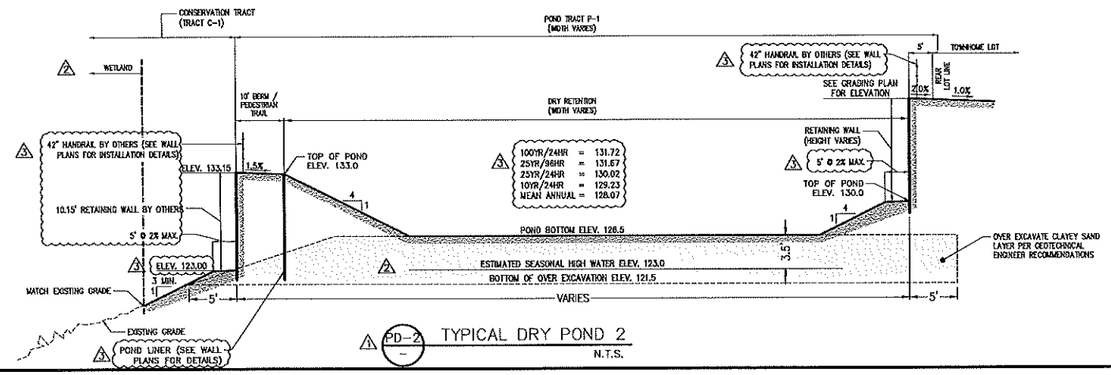


304 / – RAMPS FOR PEDESTRIAN TRAFFIC
N.T.S.



PD-1 / – TYPICAL DRY POND 1
N.T.S.

POND NOTES:
1. BACKFILL SHALL CONSIST OF CLEAN IN-SITU SANDS EXHIBITING A HYDRAULIC CONDUCTIVITY OF 30 FT/DAY (MIN.) WITH NO MORE THAN 5% FINES PASSING #200 SIEVE.
2. POND FILL MATERIAL SHALL BE CLEAN AND FREE OF DEBRIS.



PD-2 / – TYPICAL DRY POND 2
N.T.S.

MADDEN MOORHEAD & STOKES LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

CONSTRUCTION DETAILS
FOR
HIDDEN LAKE RESERVE
CITY OF APOPKA FLORIDA

M/I HOMES OF ORLANDO, LLC
400 INTERNATIONAL PKWY, SUITE 470
LAKE MARY, FL 32746
(407) 531-5100

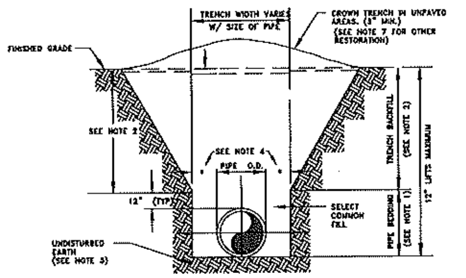
ENGINEERING CERTIFICATE OF AUTHORIZATION NO. EB-0007733
DAVID ASHLIE STOKES LICENSE No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER

DATE	REVISIONS
12/03/20	REVISED PER DISTRICT COMMENTS
02/07/20	REVISED PER CITY COMMENTS
04/07/20	REVISED PER CITY COMMENTS

JOB #	19039
DATE:	11/16/18
SCALE:	N.T.S.
DESIGNED BY:	WZ
DRAWN BY:	WZ
APPROVED BY:	DS

C903

H:\Jobs\17039\Eng\Plat\17039-C903-DT.dwg April 8, 2020 11:41 AM

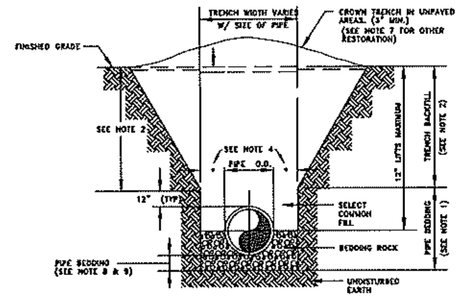


NOTES:

1. PIPE BEDDING: SELECT COMMON FILL COMPACTED TO 98% UNDER PAVEMENT OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
2. TRENCH BACKFILL: COMMON FILL COMPACTED TO 98% UNDER PAVEMENT OF THE MAXIMUM DENSITY AS TO AASHTO T-180.
3. PIPE BEDDING UTILIZING SELECT COMMON FILL OR BEDDING ROCK IN ACCORDANCE WITH TYPE A BEDDING AND TRENCHING DETAIL MAY BE REQUIRED AS DIRECTED BY THE CITY.
4. (*): 15" MAX. FOR PIPE DIAMETERS LESS THAN 24", AND 24" FOR PIPE DIAMETER 24" AND LARGER.
5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
6. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
7. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES.
8. SURFACE RESTORATION WITHIN CITY RIGHT-OF-WAY, SHALL COMPLY WITH REQUIREMENTS OF RIGHT-OF-WAY UTILIZATION REGULATIONS.
9. ALL UNPAVED DISTURBED AREAS SHALL BE SODDED TO MATCH ADJACENT DOMINATE GRASS SPECIES.

TYPE "B" BEDDING AND OPEN-CUT DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 100

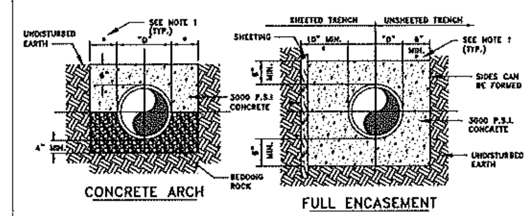


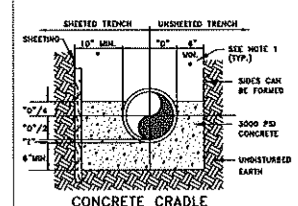
NOTES:

1. PIPE BEDDING: SELECT COMMON FILL COMPACTED TO 98% UNDER PAVEMENT OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
2. TRENCH BACKFILL: COMMON FILL COMPACTED TO 98% UNDER PAVEMENT OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
3. USE OF TYPE A BEDDING TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CITY.
4. (*): 15" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX. FOR PIPE DIAMETER 24" AND LARGER.
5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
6. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
7. GRAVITY SEWERS SHALL UTILIZE TYPE A BEDDING IF REQUIRED BY THE CITY. BEDDING DEPTH SHALL BE 4" MINIMUM FOR PIPE DIAMETER LESS THAN 15" AND 6" MINIMUM FOR PIPE DIAMETER 16" AND LARGER.
8. DEPTH FOR REMOVAL OF UNSUITABLE MATERIAL SHALL GOVERN DEPTH OF BEDDING ROCK BELOW THE PIPE. THE CITY SHALL DETERMINE IN THE FIELD IF REMOVAL OF UNSUITABLE MATERIAL IS REQUIRED TO REACH A SUITABLE FOUNDATION.
9. ALL UNPAVED DISTURBED AREAS SHALL BE SODDED TO MATCH ADJACENT DOMINATE GRASS SPECIES.
10. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF THE GOVERNING AGENCIES. SURFACE RESTORATION WITHIN CITY RIGHT-OF-WAY, SHALL COMPLY WITH REQUIREMENTS OF RIGHT-OF-WAY UTILIZATION REGULATIONS.

TYPE "A" BEDDING AND OPEN-CUT DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 101





NOTES:

1. (*): 15" MAX. FOR PIPE DIAMETER LESS THAN 24", AND 24" MAX. FOR PIPE DIAMETER 24" AND OVER. FOR CONCRETE ARCH, THE MIN. WIDTH SHALL BE EQUAL TO OUTSIDE DIAMETER OF PIPE.
2. "D" REFERS TO THE DIAMETER OF THE PIPE.
3. "T" REFERS TO THE THICKNESS OF THE PIPE.
4. THE NEED FOR CONCRETE ARCH HALF ENCASEMENT OR FULL ENCASEMENT TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE CITY.
5. ENDS OF ENCASEMENT SHALL BE FORMED, AND LOCATIONS SHALL BE INDICATED ON RECORD DRAWINGS.

CONCRETE ARCH AND ENCASEMENT DETAILS

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 102

MINIMUM LENGTH (FT) TO BE RESTRAINED ON EACH SIDE OF FITTING(S). *

	PIPE SIZE										
	6"	8"	10"	12"	16"	18"	20"	24"	30"	36"	48"
90° BEND	33	43	51	60							
45° BEND	14	18	22	25							
22-1/2° BEND	7	9	11	12							
11-1/4° BEND	4	5	6	6							
TEE**	1	7	24	44							
REDUCER (ONE SIZE SMALLER)		41	39	40							
DEAD END	74	96	115	136							

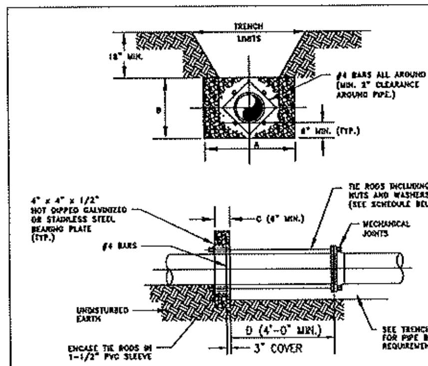
* ONLY RESTRAIN BRANCH PIPE FOR TEES. ONLY RESTRAIN LARGER PIPE FOR REDUCERS
** LENGTH ALONG RUN ASSUMED TO BE 18'

NOTES:

1. FITTINGS SHALL BE DUCTILE IRON RESTRAINED JOINT TYPE. FM FITTINGS TO BE LINED WITH PROTECTO 401.
2. INSTALL FULL LENGTHS OF PIPE WITH TOTAL LENGTH CONTAINING ONLY RESTRAINED JOINTS EQUAL TO OR GREATER THAN LENGTH SHOWN IN TABLE.
3. WHERE TWO OR MORE FITTINGS ARE TOGETHER, USE FITTING WHICH YIELDS GREATEST LENGTH OF RESTRAINED PIPE.
4. IN LINE VALVES AND THROUGH RUN OF TEES OUTSIDE LIMITS OF RESTRAINED JOINTS FROM OTHER FITTINGS NEED NOT BE RESTRAINED UNLESS OTHERWISE INDICATED.
5. LENGTHS SHOWN IN THE TABLE HAVE BEEN CALCULATED IN ACCORDANCE WITH THE PROCEDURE OUTLINED IN "THRUST RESTRAINT DESIGN FOR DUCTILE IRON PIPE" AS PUBLISHED BY DIPRA, FOR PVC WITH THE FOLLOWING ASSUMPTIONS:
   TYPE OF PIPE: PVC
   WORKING PRESSURE: 150 P.S.I.**   ** FM = 100 P.S.I. / WM OR RWM = 150 P.S.I.
   SOIL DESIGNATION: SM(SAND SILT)
   LAYING CONDITIONS: 3
6. FOR PIPE ENCASED IN POLYETHYLENE INCREASE THE GIVEN VALUE BY A FACTOR OF 1.5.
7. VALUES NOT LISTED IN THE TABLE TO BE COMPLETED BY THE ENGINEER.

RESTRAINED PIPE TABLE (PVC)

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 105



NOTES:

1. ADDITIONAL REINFORCEMENTS SHALL BE AS SPECIFIED BY THE ENGINEER.
2. MINIMUM COMPRESSIVE STRENGTH FOR CONCRETE SHALL BE 2500 P.S.I.
3. BEDDING, BACKFILL, AND COMPACTION SHALL BE AS SPECIFIED ELSEWHERE IN THE STANDARD DRAWINGS.
4. ALL FORM BOARDS SHALL BE REMOVED PRIOR TO BACKFILL.
5. NO ALLOWANCE SHALL BE MADE FOR FRICTION BETWEEN THE PIPE WALL AND THE THRUST COLLAR.
6. DESIGN PRESSURE: 150 P.S.I.

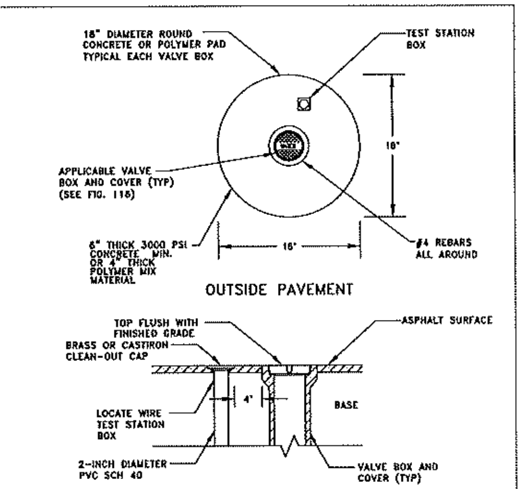
SCHEDULE OF DIMENSIONS AND MATERIALS *

PIPE SIZE (INCHES)	DIMENSIONS (FT.)				TIE RODS REQ'D	
	A	B	C	D	DIA.	NO.
[illegible]	[illegible]	[illegible]	1.0		3/4	2
[illegible]	[illegible]	[illegible]	1.0		3/4	2
10	[illegible]	[illegible]	1.0		3/4	4
12	[illegible]	[illegible]	1.0		3/4	4
16	[illegible]	[illegible]	[illegible]		3/4	4
20	[illegible]	[illegible]	[illegible]		3/4	6
24	[illegible]	[illegible]	[illegible]		3/4	[illegible]

NOTE: THRUST BLOCK AREAS TO BE COMPUTED ON BASIS OF ....2,000.... LBS. PER SQ. FT. SOIL RESISTANT BEARING. (1,500 MIN) SEE NOTE 1
* TO BE COMPLETED BY ENGINEER.

WATER MAIN THRUST COLLAR DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 107



VALVE IDENTIFICATION TAG TO BE INSTALLED BY CITY & PAID FOR BY DEVELOPER

VALVE BOX

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 109

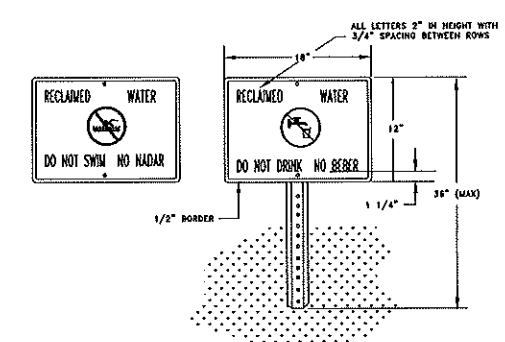
MINIMUM PRESSURE RATING

PSI	DI FITTINGS		PIPE MATERIAL*			GATE VALVE**		FORCEMAIN*	
	≤24"	>24"	PVC	DI	HDPE	≤12"	>12"	PVC	HDPE
100								●	●
150			●		●		●		
200						●			
250		●		●					
350	●								

* PVC SHALL HAVE A MAXIMUM DIMENSION RATIO (DR) OF 18 AND HDPE SHALL BE MAX DR11. FORCEMAIN: PVC SHALL BE MAX DR18 UNLESS DESIGN REQUIRES OTHERWISE AND HDPE SHALL BE MAX DR17.
** BUTTERFLY VALVES SHALL BE CLASS 150B

PIPE AND APPURTENANCES PRESSURE RATING

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JAUARY 2014	FIG. 110



NOTES:

1. HEIGHT OF SIGN WILL DEPEND ON LOCATION AND SURROUNDING LANDSCAPE PLANT TYPES. IN ALL CASES, THE SIGN SHALL BE VISIBLE TO THE PUBLIC.
2. BACKGROUND SHALL BE WHITE. LETTERS AND FIGURES SHALL BE BLACK. PROHIBITIVE SYMBOL SHALL BE RED.
3. ENGINEERING GRADE REFLECTIVE MATERIALS SHALL BE USED.
4. POST SHALL BE U CHANNEL 12 FT. 2 LB. HOT ROLLED HIGH TENSILE RAIL OR BILLET STEEL, HOT DIP GALVANIZED PER ASTM A-123.
5. MOUNTING HARDWARE SHALL BE STAINLESS STEEL.
6. SIGNS SHALL BE PLACED BY THE CONTRACTOR IN ACCORDANCE WITH THE CITY APPROVED ENGINEERING PLANS AND/OR AS APPROVED BY PUBLIC SERVICES DEPARTMENT.

RECLAIMED WATER ADVISORY SIGN

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 115

MADDEN MOORHEAD & STOKES LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

CITY OF APOPKA DETAILS
FOR
HIDDEN LAKE RESERVE
CITY OF APOPKA FLORIDA

M/I HOMES OF ORLANDO, LLC
400 INTERNATIONAL PKWY, SUITE 470
LAKE MARY, FL 32746
(407) 531-5100

DAVID ASHLEY STOKES * LICENSE No. 66527 * STATE OF FLORIDA * PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION NO. EB-0007723

	DATE	REVISIONS
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		

JOB # 19039
DATE: 11/16/18
SCALE: N.T.S.
DESIGNED BY: WZ
DRAWN BY: WZ
APPROVED BY: DS

C910

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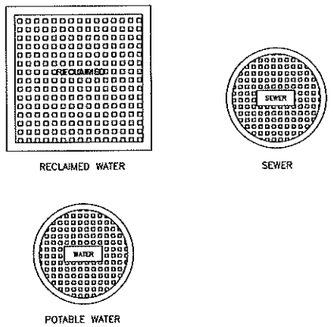
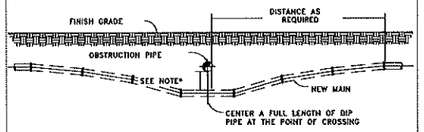


TYPICAL VALVE BOX COVER DETAILS

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 116



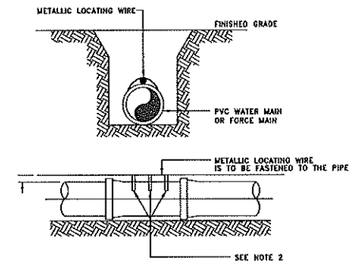
NOTES:

1. 18" MINIMUM CLEARANCE FOR WATER, SEWER AND RECLAIMED WATER MAIN CROSSINGS
2. 12" MINIMUM CLEARANCE REQUIRED FOR OTHER TYPE UTILITY CROSSINGS.
3. SEE ENCASEMENT DETAIL IF MINIMUM CLEARANCE CANNOT BE OBTAINED.

* CONSTRUCT UNIFORM PIPE DEFLECTION NOT TO EXCEED 75% OF MANUFACTURER RECOMMENDED MAXIMUM DEFLECTION PER PIPE JOINT

UTILITY CROSSING PIPE DEFLECTION DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 117

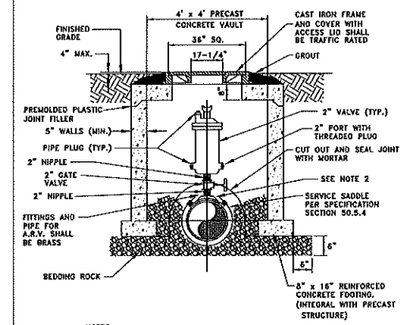


NOTES:

1. PVC PIPE SHALL REQUIRE INSULATED METALLIC LOCATING WIRE (10 AWG-SOLID CCS REINFORCED TRACER WIRE-INSULATED 30 MIL HDPE – 30 VOLT MFG. BY COPPERHEAD INDUSTRIES, LLC OR EQUAL) CAPABLE OF DETECTION BY A CABLE LOCATOR.
2. SHALL BE BURIED DIRECTLY ABOVE THE CENTERLINE OF THE PIPE AND ATTACHED WITH DUCT TAPE OR NYLON STRAPS AT 3 LOCATIONS PER JOINT. LOCATING WIRE SHALL TERMINATE AT THE TEST STATION BOX AS SHOWN IN FIG. 109.
3. BE CAPABLE OF EXTENDING 12" ABOVE TOP OF TEST STATION BOX IN SUCH A MANNER SO AS NOT TO INTERFERE WITH VALVE OPERATION.
4. SPLICES SHOULD BE MADE USING STANDARDS AND PRODUCTS DESIGNED FOR DIRECT BURIAL CONDUCTORS.
5. WIRE INSULATION SHALL BE COLOR CODED FOR THE TYPE OF PIPE BEING INSTALLED.

PVC PIPE LOCATING WIRE DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 118

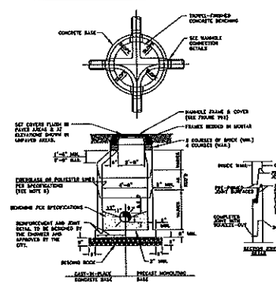


NOTES:

1. ABOVE DETAIL IS BASED ON 2 INCH COMBINATION AIR/VACUUM RELEASE VALVE. CHANGE PIPE AND FITTINGS ACCORDINGLY FOR OTHER VALVE SIZES AND TYPES. VALVE SIZES TO BE DETERMINED BY THE ENGINEER AND APPROVED BY THE CITY PRIOR TO INSTALLATION.
2. THE MINIMUM DIMENSION FROM TOP OF PIPE TO FINISHED GRADE SHALL BE 4.0 FEET.
3. ALL STRUCTURES TO BE TRAFFIC BEARING RATED.

AIR OR COMBINATION AIR/VACUUM RELEASE VALVE DETAIL - UNDERGROUND

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 119



FORCE MAIN MANHOLE LINER*

THICKNESS (INCHES)				MATERIAL	MANUFACTURER
DIAMETER (INCHES)	3-6	7-12	13-17		
48					
60					
72					

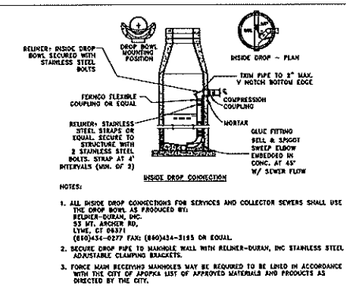
* TO BE COMPLETED BY THE ENGINEER

NOTES:

1. MANHOLE SHOWN IS FOR SEWER SIZE 8" THRU 24". SEE SECTION 20.4 OF THE MANUAL FOR MANHOLE DIAMETER FOR SEWERS LARGER THAN 24".
2. DROP CONNECTIONS ARE REQUIRED WHENEVER INVERT OF INFLUENT SEWER IS 24" OR MORE ABOVE THE INVERT OF THE MANHOLE. SEE MANHOLE CONNECTION DETAILS.
3. THE THICKNESS OF THE LINER SHALL BE 3/8" MINIMUM.
4. EACH BENCH WALL SHALL BE A MINIMUM OF 18 INCHES LONG FROM THE WALL OF THE MANHOLE TOWARD THE CENTER.
5. SANITARY SEWER MANHOLES MAY BE REQUIRED TO BE LINED IN ACCORDANCE WITH THE CITY OF APOPKA LIST OF APPROVED MATERIALS AND PRODUCTS AS DIRECTED BY THE CITY.

TYPICAL MANHOLE

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2015	FIG. 200

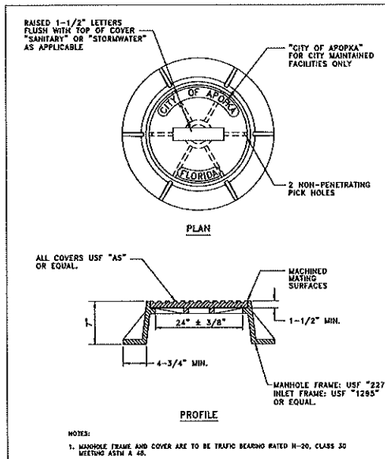


NOTES:

1. DROP PIPE AND FITTINGS SHALL BE OF EQUAL SIZE AND MATERIAL AS THE INFLUENT SEWER.
2. THE CITY MAY APPROVE ALTERNATE WATERTIGHT CONNECTION DETAILS FOR CONNECTION OF 24" DIAMETER PIPES AND LARGER.
3. AN INSIDE DROP CONNECTION SHALL BE REQUIRED FOR ALL INFLUENT WHICH HAVE AN INVERT 24" OR MORE ABOVE THE OUTFLOW PIPE INVERT.
4. CONCRETE TO BE MINIMUM OF 3000 PSI.

MANHOLE CONNECTION DETAILS

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2015	FIG. 201

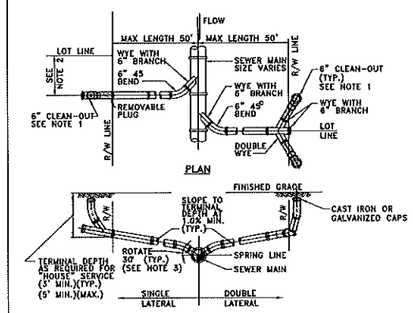


NOTES:

1. MANHOLE FRAME AND COVER ARE TO BE TRAFIC BEARING RATED H-20, CLASS 30 MEETING ASTM A 48.

STANDARD MANHOLE FRAME AND COVER

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 202



NOTES:

1. CLEAN-OUT (SHOWN SHADED) SHALL BE INSTALLED BY THE BUILDER IN ACCORDANCE WITH STANDARD PLUMBING CODE.
2. LOCATE SINGLE LATERAL AS CLOSE TO LOT LINE AS POSSIBLE.
3. INVERT OF SERVICE LATERAL SHALL NOT ENTER SEWER MAIN BELOW SPRING LINE.
4. RESIDENTIAL SERVICES SHALL BE 4 INCHES & NON-RESIDENTIAL SERVICES SHALL BE 6 INCHES IN DIAMETER AS A MINIMUM.
5. GALVANIZED, OR CAST IRON CLEAN-OUT CAP SHALL BE USED ON THE STUBOUT FOR EACH SERVICE.
6. LATERAL SHALL BE MARKED WITH AN "S" STAMPED OR CUT IN THE CURB.

SERVICE LATERAL DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 204

MADDEN MOHERN BARNES & STOKES, LLC
CIVIL ENGINEERS
431 E. Horatio Avenue
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CITY OF APOPKA DETAILS FOR HIDDEN LAKE RESERVE
CITY OF APOPKA FLORIDA

M/I HOMES OF ORLANDO, LLC
400 INTERNATIONAL PKWY, SUITE 470
LAKE MARY, FL 32746
(407) 531-5100

ENGINEER: DANIEL A. STOKES, P.E. No. 66527 — STATE OF FLORIDA — PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION No. EB-0007723

#	DATE	REVISIONS
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JOB #	19039
DATE:	11/16/18
SCALE:	N.T.S.
DESIGNED BY:	WZ
DRAWN BY:	WZ
APPROVED BY:	DS

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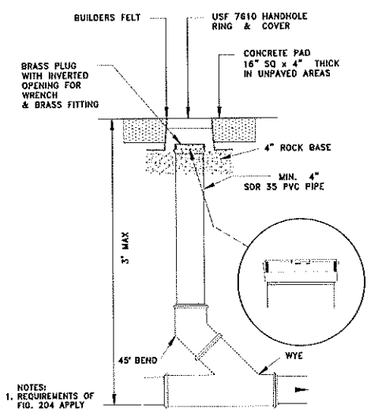
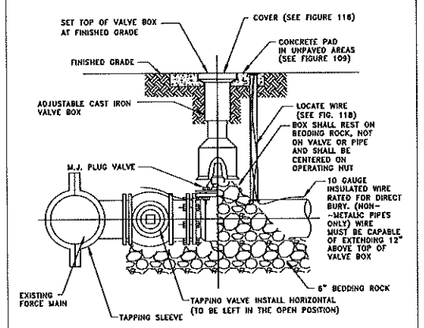


NOTES:
1. REQUIREMENTS OF FIG. 204 APPLY

SANITARY SEWER SERVICE TRAFFIC RATED CLEAN-OUT DETAIL

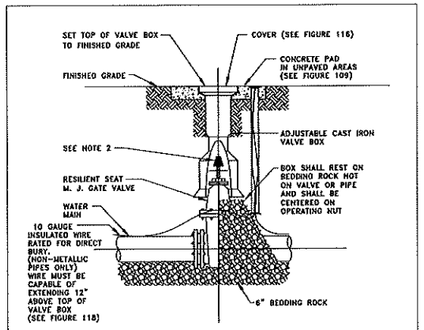
NTS

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 205



FORCE MAIN WET TAP TIE-IN DETAIL

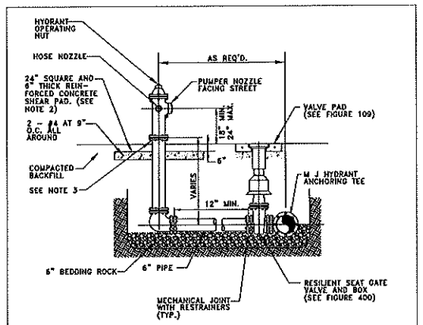
CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 206



NOTES:
1. PVC EXTENSIONS MAY BE USED ON VALVE BOX INSTALLATION.
2. THE ACTUATING NUT FOR DEEPER VALVES SHALL BE EXTENDED TO WITHIN A 3 FEET BELOW FINISHED GRADE.

GATE VALVE AND BOX DETAIL

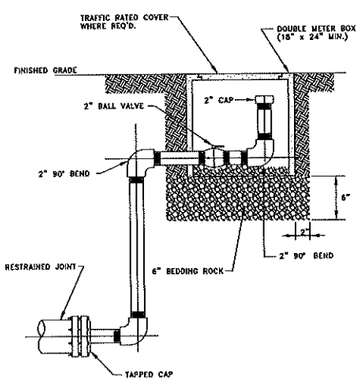
CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 400



NOTES:
1. FIRE HYDRANT SHALL BE SUPPLIED WITHOUT A WEEP HOLE, OR WITH A PERMANENTLY PLUGGED WEEP HOLE.
2. THE SHEAR PAD SHALL BE RECESSED SIX (6) INCHES BELOW THE FINISHED GRADE AND THE RECESSED SECTION SODDED.
3. CLEARANCE BETWEEN BOTTOM OF BOLTS AND TOP OF SHEAR PAD SHALL BE A TWELVE (12) INCH MINIMUM.
4. FIRE HYDRANTS SHALL BE IDENTIFIED IN ACCORDANCE WITH THE CITY OF APOPKA UTILITIES DESIGN CONSTRUCTION STANDARDS MANUAL.

FIRE HYDRANT ASSEMBLY DETAIL

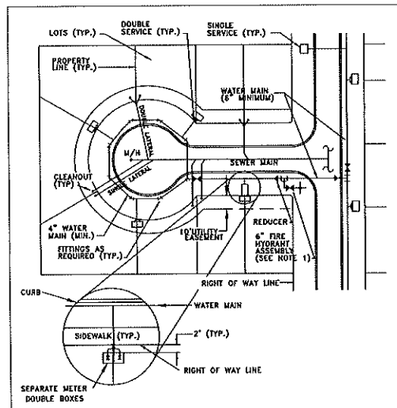
CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 402



NOTES:
1. ALL 2 INCH PIPE AND FITTINGS SHALL BE SCHEDULE 40 GALVANIZED STEEL OR BRASS WITH THREADED (NPT) JOINTS. USE TEFLON TAPE ON JOINTS.
2. COLOR SHALL BE APPROPRIATE FOR USE.

BLOWOFF VALVE DETAIL

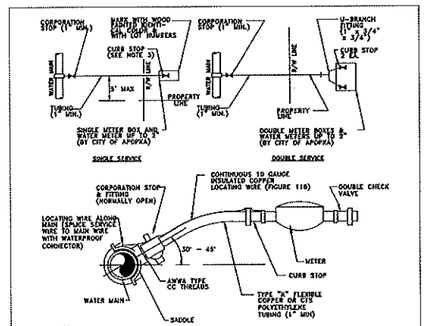
CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 403



NOTES:
1. ANCHORING TYPE 90° BEND SHALL ONLY BE USED WHERE RIGHT-OF-WAY CONSTRUCTION WILL NOT ALLOW INSTALLATION OF A STRAIGHT ASSEMBLY.
2. POTABLE WATER AND RECLAIMED WATER MAINS SHALL BE LOOPED THROUGHOUT CUL-DE SAC.

TYPICAL SERVICE LOCATION DETAIL

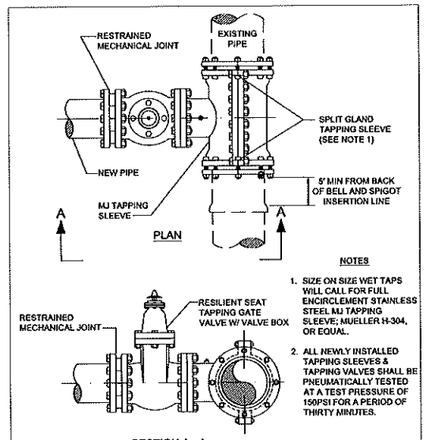
CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 404



NOTES:
1. ALL FITTINGS SHALL BE BRASS WITH COMPRESSION/PACK JOINT TYPE CONNECTIONS.
2. NO SERVICE LINE SHALL TERMINATE UNDER A DRIVEWAY.
3. EACH SERVICE SHALL TERMINATE AT A CURB STOP(S) WHICH SHALL BE BURIED APPROXIMATELY 3" BELOW FINAL GRADE AND SHALL BE CLEARLY MARKED WITH A 2" x 2" x 18" STAKE WITH THE TOP PAINTED BLUE FOR POTABLE WATER AND PURPLE FOR RECLAIMED WATER, AND MARKED WITH THE NUMBER OF THE LOT(S) TO BE SERVED.
4. RECLAIMED WATER SERVICES SHALL USE PURPLE COLORED CTS POLYETHYLENE TUBING.
5. POTABLE WATER SERVICES SHALL USE BLUE COLORED CTS POLYETHYLENE TUBING.
6. ALL SERVICE UNDER EXISTING OR PROPOSED PAVEMENT SHALL BE INSTALLED IN A MINIMUM 2" PVC SLEEVE.

WATER SERVICE CONNECTION DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 405



NOTES
1. SIZE ON SIZE WET TAPS WILL CALL FOR FULL ENCIRCLEMENT STAINLESS STEEL MJ TAPPING SLEEVE; MUELLER H-304, OR EQUAL.
2. ALL NEWLY INSTALLED TAPPING SLEEVES & TAPPING VALVES SHALL BE PNEUMATICALLY TESTED AT A TEST PRESSURE OF 150PSI FOR A PERIOD OF THIRTY MINUTES.

SECTION A - A

WATER AND RECLAIMED WATER MAINS WET TAP TIE-IN DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 406

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CITY OF APOPKA DETAILS
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CITY OF APOPKA FLORIDA

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LAKE MARY, FL 32746
(407) 531-9100

ENGINEER: CHRISTOPHER J. STOKES, LICENSE No. 66527, STATE OF FLORIDA, PROFESSIONAL ENGINEER
DATE OF SIGNATURE: 11/18/19
CERTIFICATE OF AUTHORIZATION NO. EB-0007723

#	DATE	REVISIONS
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JOB # 19039
DATE: 11/18/19
SCALE: N.T.S.
DESIGNED BY: WZ
DRAWN BY: WZ
APPROVED BY: DS

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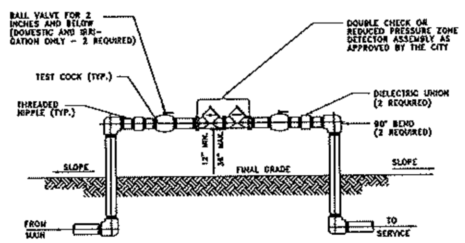


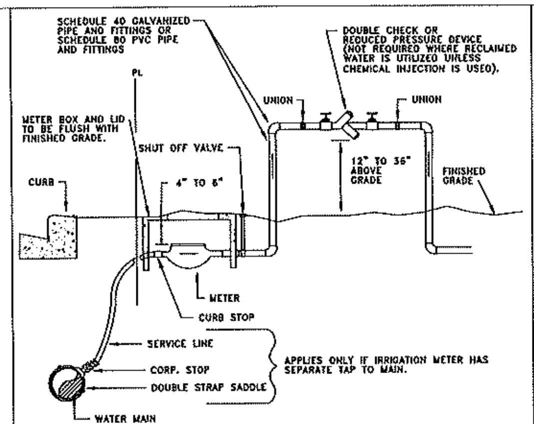
NOTES:

1. ALL PIPE FITTINGS, MATERIALS, LABOR, AND APPURTENANCES SHALL BE SUPPLIED BY THE CONTRACTOR.
2. ALL PIPE AND FITTINGS TWO (2) INCHES AND SMALLER SHALL BE THREADED SCHEDULE 40 GALVANIZED STEEL.

DOUBLE CHECK OR REDUCED PRESSURE ZONE DETECTOR ASSEMBLY

2 INCH AND BELOW ASSEMBLY

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 500 A

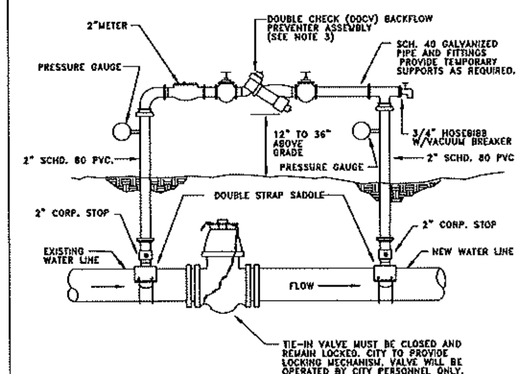


NOTES:

1. A POSITIVE DIELECTRIC CONNECTION SHALL BE MADE BETWEEN ALL GALVANIZED AND BRASS COMPONENTS.
2. METER SHALL BE INSTALLED JUST INSIDE THE ROW LINE OR PROPERTY LINE AND IN NO CASE SHALL IT BE INSTALLED IN THE SIDEWALK OR OTHER PAVED AREAS.
3. DOUBLE CHECK VALVES MAY BE USED AS LONG AS THEIR ARE NO CHEMICALS OR A WELL ON SITE.
4. A PVB DEVICE SHALL BE 12-INCHES MINIMUM ABOVE HIGHEST OUTLET OR SPRAYHEAD
5. ALL BACKFLOW PREVENTION DEVICES ARE TO BE AWWA APPROVED.

IRRIGATION METER AND DOUBLE CHECK VALVE OR REDUCED PRESSURE BACKFLOW PREVENTER

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 502

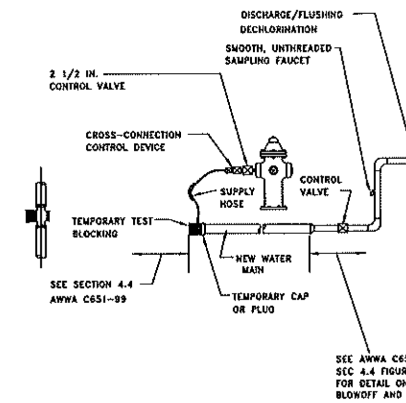


NOTE:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS, ASSEMBLY, AND THE INSTALLATION OF THE DEVICE.
2. SEE FIGURE 504C FOR PROCEDURES.
3. DDCV IS MINIMUM PROTECTION REQUIRED. A RPZ DEVICE MAY BE REQUIRED DEPENDING ON PROJECT. PROVIDE COPY OF LATEST CERTIFICATION TEST RESULTS.

TEMPORARY JUMPER CONNECTION

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 504 A



NOTE:

1. SEE FIGURE 504C FOR PROCEDURES.

TEMPORARY JUMPER CONNECTION FROM FIRE HYDRANT

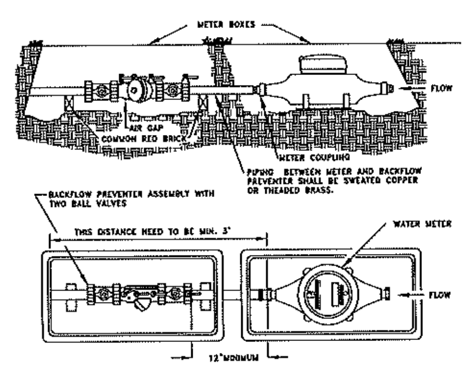
CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 504 B

TEMPORARY JUMPER CONNECTION NOTES:

1. A temporary jumper connection is required at all connections between existing active water mains and proposed new water main improvements.
2. Figures 504 A and 504 B to be used for filling any new water main of any size from existing active water mains and for flushing of new mains up to 6 inches in diameter (2.5 FPS minimum velocity) and for pulling bacteriological samples from any new water main of any size. The jumper connection shall be maintained until after filling, flushing testing and disinfection of the new main has been successfully completed and cleared for use from the Florida Department of Environmental Protection (FDEP) and other pertinent agencies have been received. The jumper connection shall also be used to maintain a minimum pressure of 20 psi in the new mains after disinfection and until the FDEP clearance letter is obtained. Thrust blocking and/or restraints shall be provided temporarily, as required. Pipe and fittings used for connecting the new pipe to the existing pipe shall be disinfected prior to installation in accordance with AWWA C651, 2005 edition. The tapping sleeve and the exterior of the main to be tapped shall be disinfected by spraying or swabbing per section 4 of AWWA C651-05.
3. Flushing of 10 inches in diameter and larger water mains may be done through the tie-in valve under very controlled conditions. The following procedures shall be followed:
   - A. The tie-in valves shall be operated and pressure tested in the presence of the City engineer to verify water tightness prior to tie-in. Valves which are not water tight shall be replaced with a new valve installed immediately adjacent to the leaking valve.
   - B. The temporary jumper connection shall be constructed as detailed. The jumper connection shall be used to fill the new water main and for providing water for bacteriological sampling of the new main as required by the FDEP permit.
     - Flushing shall not be attempted during peak demand hours of the existing water mains.
     - All downstream valves in the system must be open prior to opening the tie-in valve.
     - Provide for and monitor the pressure in the tie-in point. The pressure in the existing main must not drop below 35 psi.
     - The tie-in valve shall be opened a few turns only, ensuring a pressure drop across the valve is greater than 10 psi.
   - C. The tie-in valve shall be locked closed by the City personal until flushing begins.
   - D. The tie-in valve shall be opened only for flushing of the new main. The procedure shall be directed by the City and observed by the engineer.
   - E. After flushing, the tie-in valve shall be closed and locked in the closed position by the City personal.
4. The contractor shall provide documentation demonstrating that the double check backflow prevention device has been tested and is in good working order at the time of installation.
5. Except as required to flush lines of greater than 6 inches in diameter, the tie-in valve shall remain closed and shall be locked in the closed position by the City. The tie-in valve shall remain locked closed until the new system has been cleared for use by FDEP and all other pertinent agencies.
6. Upon receipt of clearance for use from FDEP and all other pertinent agencies, the contractor shall remove the temporary jumper connection. The corporation stops are to be closed and plugged with 2 inch brass plugs.
7. All installation and maintenance of the temporary jumper connection and associated backflow prevention device, fittings, valve, etc. shall be the responsibility of the contractor.

PROCEDURES FOR TEMPORARY JUMPER CONNECTION

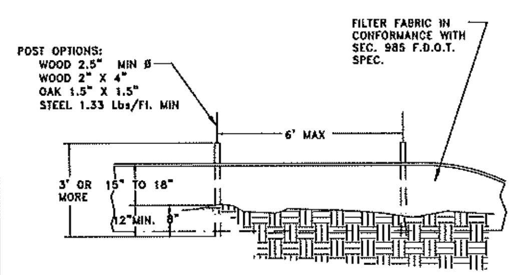
CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 504 C



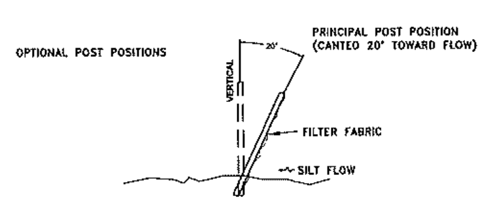
1. A 3' PIECE OF STRAIGHT PIPE MUST BE CONNECTED TO METER USING THE DESIGNATED HOLES IN THE METER BOX BEFORE ANY ANGLES ARE CONNECTED. THE SAME RULES APPLY FOR DOUBLE METER HOOK-UPS.
2. BACKFLOW DEVICE AND METER ARE TO BE SET BY THE CITY FOR METERS 2-INCH OR LESS IN SIZE.

POTABLE WATER SERVICE DETAIL FOR LOTS SERVED WITH RECLAIMED WATER

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 505



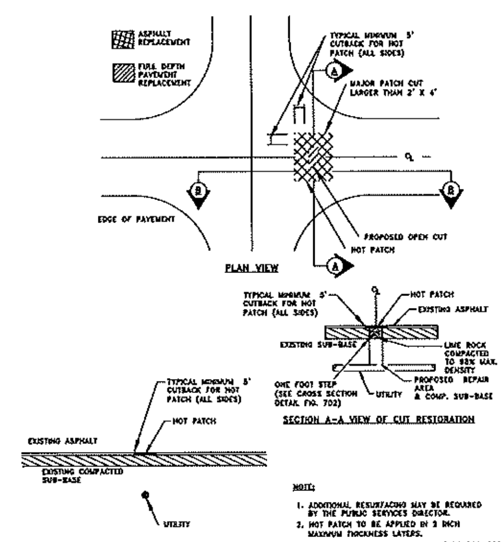
ELEVATION VIEW



SECTION VIEW

SILT FENCE INSTALLATION

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 602



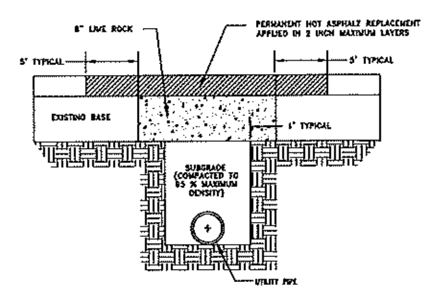
NOTE:

1. ADDITIONAL RESURFACING MAY BE REQUIRED BY THE PUBLIC SERVICES DIRECTOR.
2. HOT PATCH TO BE APPLIED IN 2 INCH MAXIMUM THICKNESS LAYERS.
3. PROCTOR OF THE LIME ROCK MUST BE PROVIDED
4. DENSITIES TO BE PROVIDED BY GEOTECHNICAL ENGINEER.

OPEN-CUT DETAIL - MAJOR PATCH

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2015	FIG. 701

NOTE:
SUB-GRADE TO BE COMPACTED TO 95% MAX. DENSITY AS DETERMINED BY AASTHO T-180 CUT TO BE REPLACED WITH 8" LIME ROCK AND COMPACTED TO 98% MAX. DENSITY TO TOP OF EXISTING BASE. CUT AREA TO BE PLATED OR PROTECTED ON THE DAY OF POUR. EXISTING SURFACE TO BE SAW CUT TO AN AREA OF FIVE FEET (5') BEYOND BASE CUT.



GENERAL NOTES:

1. BASE REPLACEMENT SHALL BE 8" LIME ROCK COMPACTED TO 98% MAX. DENSITY.
2. ASPHALTIC CONCRETE SURFACE MATERIAL SHALL BE REPLACED WITH THE SAME TYPE OF MATERIAL AT THE TIME OF REMOVAL.
3. MINIMUM ASPHALTIC CONCRETE SURFACE OVERLAY THICKNESS SHALL BE ONE (1) INCH.
4. ALL JOINT CUTS SHALL BE MECHANICALLY SAW CUT.

PAVEMENT RESTORATION:

1. LONGITUDINAL CUTS MAY REQUIRE OVERLAY/RESURFACING OF THE COMPLETE WIDTH OF THE TRAVELED WAY.
2. CUTS AT INTERSECTIONS OF STREETS GENERALLY MAY REQUIRE A COMPLETE OVERLAY/RESURFACING TO THE END OF ALL RETURN RADII, AND ALSO TO A POINT TEN FEET (10') BEYOND THE CUT WHICHEVER IS GREATER.
3. ACTUAL REQUIREMENTS WILL BE AS STATED ON THE APPROVED PERMIT.

LIME ROCK

HOT PATCH

OPEN-CUT CROSS SECTION DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2015	FIG. 702

⚠1

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CITY OF APOPKA DETAILS
FOR
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CITY OF APOPKA FLORIDA

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DAVID ASHLEY STOKES, P.E.
LICENSE No. 66527
STATE OF FLORIDA
PROFESSIONAL ENGINEER
ENGINEER
CERTIFICATE OF AUTHORIZATION NO. EB-0007723

No.	DATE	REVISIONS
1	02/19/20	REVISED PER CITY COMMENTS
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JOB #: 19039
DATE: 11/16/18
SCALE: N.T.S.
DESIGNED BY: WZ
DRAWN BY: WZ
APPROVED BY: DS

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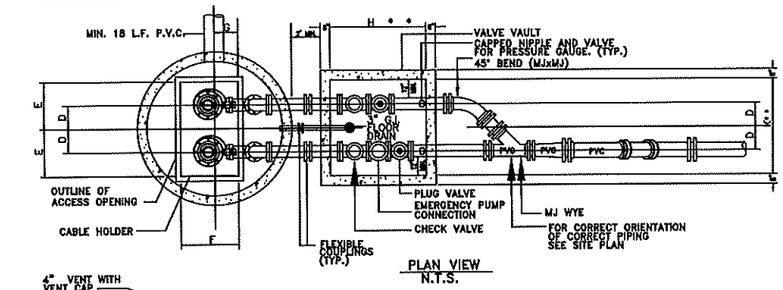

PLAN VIEW
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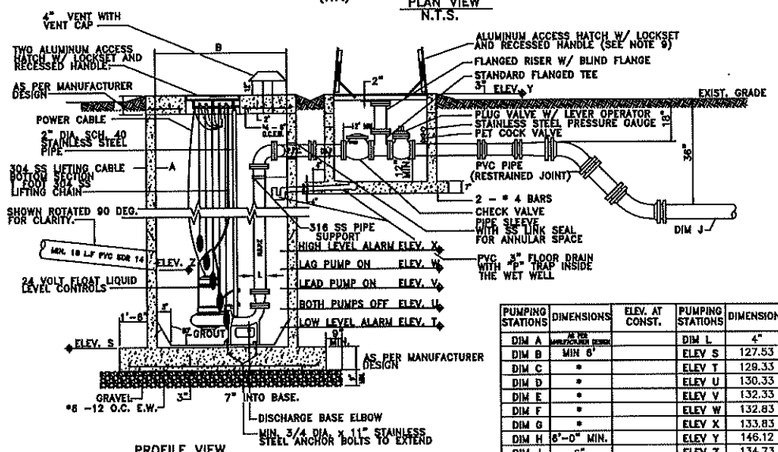


PROFILE VIEW
N.T.S.

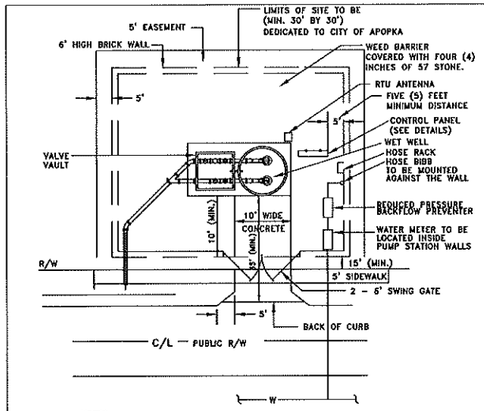
PUMPING STATIONS	DIMENSIONS	ELEV. AT CONST.	PUMPING STATIONS	DIMENSIONS	ELEV. AT CONST.
DIM A	AS PER MANUFACTURER DESIGN		DIM L	4"	
DIM B	MIN 6'		ELEV S	127.53	
DIM C	*		ELEV T	129.33	
DIM D	*		ELEV U	130.33	
DIM E	*		ELEV V	132.33	
DIM F	*		ELEV W	132.83	
DIM G	*		ELEV X	133.83	
DIM H	6'-0" MIN.		ELEV Y	146.12	
DIM J	6"		ELEV Z	134.73	
DIM K	6'				

* PER PUMP MANUFACTURERS REQUIREMENT

GENERAL NOTES:
1. VALVE VAULT AND WET WELL LIDS SHALL BE COATED WITH 1 COAT OF TNEMEC SERIES 66, COLOR EN03, (2-3 MILS), FOLLOWED BY TOP COAT OF TNEMEC SERIES 73, COLOR EN05, (2-3 MILS) OR EQUAL.
2.A THE WET WELL SHALL BE CONSTRUCTED OF FIBERGLASS REINFORCED POLYESTER (RFP) AND MANUFACTURED FROM COMMERCIAL GRADE POLYESTER RESIN OR VINYL ESTER RESIN, WITH FIBERGLASS REINFORCEMENTS. THE WET WELL SHALL BE A ONE PIECE UNIT AND MANUFACTURED BY L.F. MANUFACTURE, INC. OR EQUAL.
2.B IN LIEU OF RFP THE WET WELL MAY BE CONSTRUCTED OF PRECAST CONCRETE HAVING A MINIMUM WALL THICKNESS OF 8 INCHES. THE INTERIOR WALLS SHALL BE LINED USING A HIGH DENSITY POLYETHYLENE PRODUCT AS MANUFACTURED BY AGRU SURE GRIP, OR EQUAL.
3. PIPING IN THE WET WELL TO BE HDPE WITH FUSED 45 DEGREES FITTINGS FROM WET WELL TO VALVE VAULT.
4. INTERIOR OF THE VALVE VAULT AND PIPING IN THE VALVE VAULT WITH ConSeal CS-55 (OR EQUAL), TWO COATS, 4 MILS EACH. PIPING SHALL BE COATED AFTER INSTALLATION.
5. VALVE VAULT SHALL BE SIZED TO PERMIT EASY REMOVAL OF CHECK VALVE SPINDLES WITH MINIMUM CLEARANCES AS SHOWN FOR 6" DIAMETER PIPE AND SMALLER. CLEARANCES SHALL INCREASE AS REQUIRED FOR LARGER PIPE SIZES.
6. VALVE VAULT SHALL HAVE SEALED FLOOR AND DRAIN.
7. ALL LOCATIONS WHERE PIPES ENTER OR LEAVE THE WET WELL OR VALVE VAULT SHALL BE MADE WATERTIGHT WITH WALL SLEEVE AND STAINLESS STEEL LINK SEAL.
8. THERE SHALL BE NO VALVES OR ELECTRICAL JUNCTION BOXES IN WET WELL.
9. WET WELL AND VALVE VAULT COVERS SHALL BE ALUMINUM WITH 316 S.S. HARDWARE LOCK BRACKET. SIZE AS REQUIRED BY PUMP MANUFACTURER AND APPROVED BY THE CITY.
10. FLEXIBLE COUPLING SHALL BE SLEEVE TYPE, EPOXY COATED.
11. PUMPS SHALL BE:
MANUFACTURER: FLYGT ; MODEL: DP N80-2600 ; DIA: 170 MM ; SPEED: 800-2600 RPM ; DISCHARGE SIZE: 3.125" IN.;
VOLTAGE: 230V ; HZ.: 60 ; PHASE: 3 ; H.P.: 5.5 ; MIN. SOLID SIZE: 0 IN.
12. OPERATING CONDITIONS SHALL BE 195 GPM AT 39.4 FEET TDH.
13. ALL HARDWARE IN WET WELL AND VALVE BOX TO BE 316 STAINLESS STEEL.
14. "P" TRAP TO BE INSTALLED IN WET WELL.
15. ALL PUBLIC LIFT STATIONS SHALL BE EQUIPPED WITH SCADA SYSTEM.THE DEVELOPER SHALL PAY THE CITY COST OF THE UNIT.THE CITY WILL BE RESPONSIBLE FOR INSTALLATION.
16. ALL LIFT STATIONS SHALL BE FENCED WITH DECORATIVE STONE OR BRICK OR AS DIRECTED BY THE CITY.
17. ALL LIFT STATIONS SHALL HAVE A 10 FEET WIDE CONCRETE ACCESS DRIVEWAY, 35' LONG FROM EDGE OF WET WELL TO BACK OF CURB.
18. ENGINEER SHALL PROVIDE A SCALED (1" = 20' MIN.) SITE SPECIFIC DETAIL.

PUMP STATION DETAIL

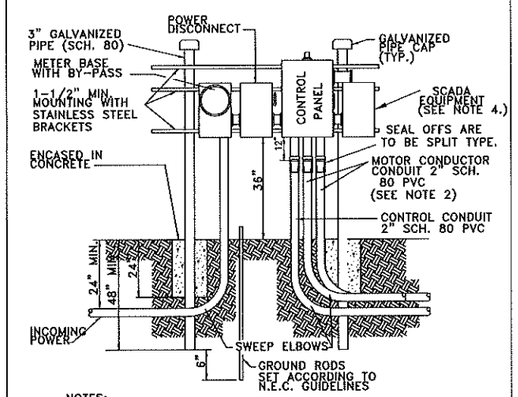
CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 301



NOTES:
1. DRIVEWAY AND APRON SHALL BE SIX (6) INCH THICK, 3000 P.S.I. CONCRETE WITH No.6X6 WIRE MESH OR FIBER MESH.
2. POWER TO THE PUMP STATION SHALL BE THROUGH UNDERGROUND CONDUIT FROM SUPPLY SOURCE IN RIGHT-OF-WAY.
3. GATE TO BE DECORATIVE BLACK POWDER COATED ALUMINUM W/PICKET SPACING = OR < 4"
4. WALLS ARE TO BE BRICK OR DECORATIVE STONE.
5. WET WELL LID MUST OPEN TOWARD CONTROL PANEL (HINGE SIDE TOWARD PANEL).
6. LIFT STATION WALL TO BE PLACED AT LEAST 15FT. BEHIND THE R/W LINE.

PUMP STATION TYPICAL SITE PLAN

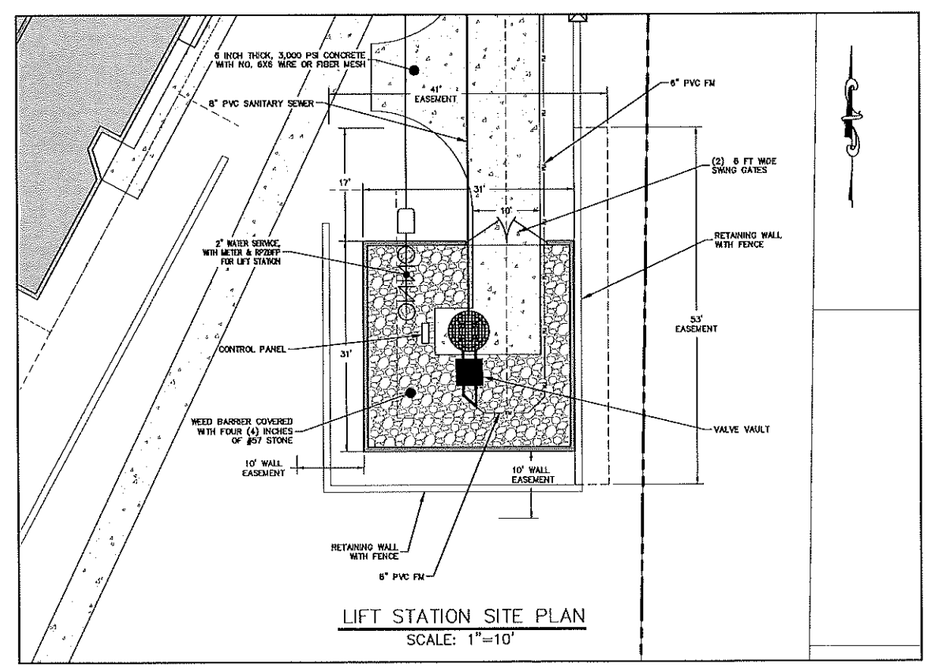
CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 300



NOTES:
1. DRAWING IS SHOWN FOR 230 VOLT POWER SUPPLY. THE LOCATION OF METER AND MAIN POWER DISCONNECT SHALL BE REVERSED FOR 480 VOLT SUPPLY.
2. WHEN TWO (2) SEPARATE CONDUCTOR-TYPE MOTORS ARE USED, CONDUIT SHALL BE INCREASED TO THREE (3) INCH.
3. POWER SUPPLY SHALL BE UNDERGROUND TO THE PUMP STATION AND SHALL BE THREE (3) PHASE FROM A THREE (3) PHASE SOURCE ONLY.
4. STUB OUT UNISTRUT LONG ENOUGH TO ACCOMODATE A 24"x24" SCADA EQUIPMENT CABINET. CITY TO INSTALL SCADA EQUIPMENT CABINET.

DUPLEX PUMP STATION CONTROL PANEL INSTALLATION DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 302



LIFT STATION SITE PLAN
SCALE: 1"=10'

MADDEN
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 250
Maitland, Florida 32751
(407) 629-8330

LIFT STATION DETAILS
FOR
HIDDEN LAKE RESERVE
CITY OF APOPKA FLORIDA

M/I HOMES OF ORLANDO, LLC
400 INTERNATIONAL PKWY, SUITE 470
LAKE MARY, FL 32746
(407) 531-5100

ENGINEER: ASHLEY STOKES LICENSE No. 86527 STATE OF FLORIDA PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION No. EB-0007723

	DATE	REVISIONS
1		
2		
3		
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7		
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9		
10		
11		

JOB # 19039
DATE: 11/16/18
SCALE: N.T.S.
DESIGNED BY: WZ
DRAWN BY: WZ
APPROVED BY: DS

C920

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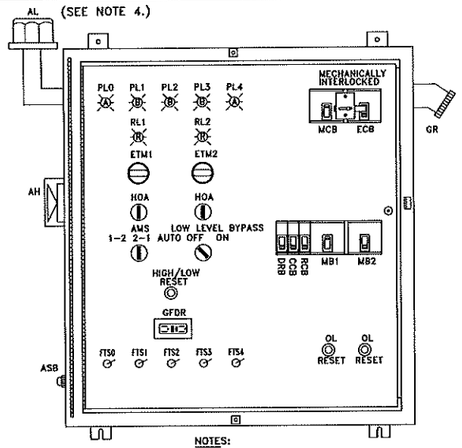
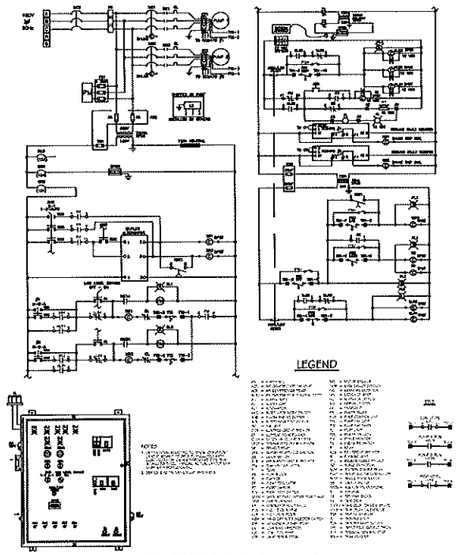


NOTES:

1. OUTER DOOR REMOVED TO SHOW DEADFRONT LAYOUT NEMA TYPE 3R 304 S.S. ENCL. WITH CONTINUOUS HINGE ALL HARDWARE STAINLESS STEEL TYPICAL, ACTUAL LAYOUT MAY VARY WITH HORSEPOWER
2. SERIES 3 (Q-FRAME) CIRCUIT BREAKERS
3. GENERATOR OUTLET FOR 230V – PYLE NATIONAL MODEL JRE4100/460V – CROUSE HINDS MODEL AR 2042.
4. THE HEIGHT OF THE ALARM LIGHT WILL NEED TO BE MADE VISIBLE FROM OUTSIDE THE LIFT STATION.

DUPLEX PUMP STATION CONTROL PANEL FRONT LAYOUT

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 303



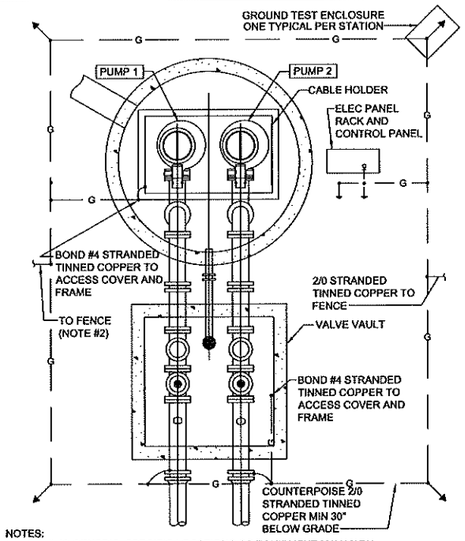
DUPLEX PUMP CONTROL PANEL GENERAL LAYOUT & SCHEMATIC

(460V-3PH)
WITHOUT GENERATOR RECEPTACLE

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 305 D

AB – ALARM BELL
ACFL – AIR COMPRESSOR FAIL LIGHT
ACR – AIR COMPRESSOR RESET
ACTS – AIR COMPRESSOR TERMINAL STRIP
AH – ALARM HORN
AL – ALARM LIGHT
ALT – ALTERNATOR
AMS – ALTERNATOR MODE SWITCH
ASB – ALARM SILENCE BUTTON
ATS – ALTERNATOR TEST SWITCH
AV – AIR VENT
CCB – CONTROL CIRCUIT BREAKER
CT – CURRENT TRANSFORMER
CVLS – CHECK VALVE LIMIT SWITCH
DPDT – DOUBLE-POLE, DOUBLE-THROW
DR – DISABLE RELAY
DRB – DUPLEX RECEPTACLE BREAKER
DS – DOOR SWITCH
ECB – EMERGENCY CIRCUIT BREAKER
ETM – ELAPSED TIME METER
F – FUSE
FB – FUSE BLOCK
FL – FLASHER
FR – FLOAT REGULATOR
FS – FLOW SWITCH
FTS – FLOAT TEST SWITCH
GFDR – GROUND FAULT DUPLEX RECEPTACLE
GND – EARTH GROUND
GR – GENERATOR RECEPTACLE
HLA – HIGH LEVEL ALARM
HLR – HIGH LEVEL RESET
HOA – HAND-OFF-AUTO SELECTOR SWITCH
ISR – INTRINSICALLY SAFE RELAY
LA – LIGHTNING ARRESTOR
LLR – LOW LEVEL RESET
LTB – LAMP TEST BUTTON
MB – MOTOR BREAKER
MCB – MAIN CIRCUIT BREAKER
MD – MOISTURE DETECTOR
MS – MOTOR STARTER
NC – NORMALLY CLOSED
NO – NORMALLY OPEN
OL – OVERLOAD
PB – POWER BLOCK
PCU – PUMP CONTROL UNIT
PFL – PUMP FAIL LIGHT
PFT – PUMP FAIL TIMER
PL – PILOT LIGHT
POL – POWER ON LIGHT
PM – PHASE MONITOR
PS – PRESSURE SWITCH
R – RELAY
RCB – RTU CIRCUIT BREAKER
RL – RUNNING LIGHT
RTU – REMOTE TELEMETRY UNIT
SC – SURGE CAPACITOR
SDR – STATION DISABLE RELAY
SMC – SMART MOTOR CONTROLLER
SPM – SINGLE PHASE MODULE
SS – SAFETY SWITCH
SSOL – SOLID-STATE OVERLOAD
T – TERMINAL
TB – TERMINAL BLOCK
TD – TIME DELAY
TDODE – TIME DELAY ON DE-ENERGIZE
TDOE – TIME DELAY ON ENERGIZE
TDR – TIME DELAY RELAY
TL – TROUBLE LIGHT
TLS – TROUBLE LIGHT SWITCH
TPDT – TRIPLE-POLE, DOUBLE-THROW
TTS – THERMAL TERMINAL STRIP
XFMR – TRANSFORMER

COMPONENT LEGEND



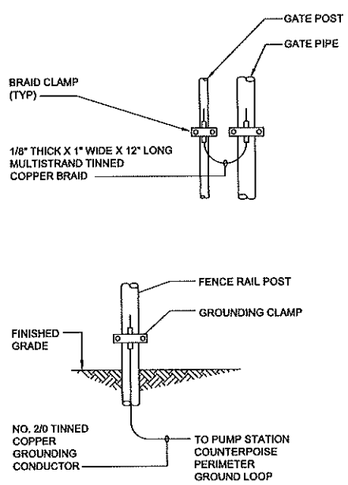
NOTES:

1. DETAIL IS GENERIC. SPECIFIC LOCATIONS OF EQUIPMENT MAY VARY.
2. TIE TO FENCE, MINIMUM 2 LOCATIONS. NOT REQUIRED WHERE PVC COATED OR BLOCK FENCE IS INSTALLED.
3. PROVIDE EXOTHERMIC WELDS UNLESS NOTED OTHERWISE.

PUMP STATION GROUNDING (TYPICAL)

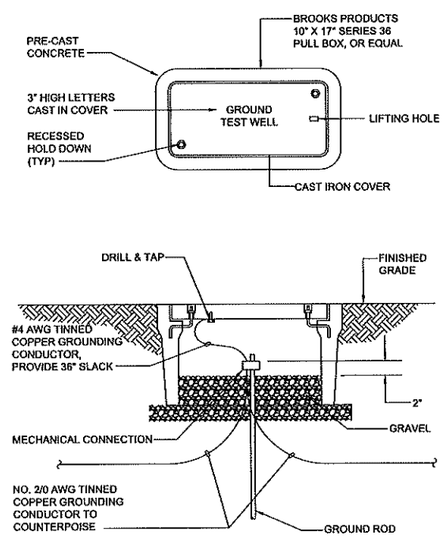
CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 306

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 307



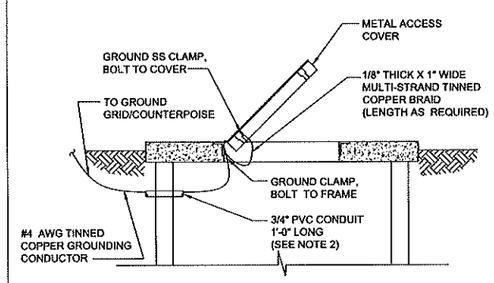
FENCE POST GROUNDING (TYPICAL)

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 307 A



GROUND TEST WELL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 307 B



NOTES:

1. ON COVERS WITH MULTIPLE DOORS, PROVIDE BRAID FROM FRAME TO DOOR ON EACH DOOR. PROVIDE WATERPROOF CAULKING WHERE GROUND CABLE AND CONDUIT PENETRATES WETWELL TO PREVENT INTRUSION OF GROUNDWATER AND ESCAPE OF VAPORS FROM WETWELL.
2. INSTALL GROUND WIRE SO THAT IT WILL NOT CROSS CLEAR OPENING OR PREVENT OR IMPEDE NORMAL METHOD OF REMOVING FLOATS OR PUMPS.

COVER AND DOOR GROUNDING

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 307 C

MADDEN
CIVIL ENGINEERS
431 E. Horatio Avenue
Suite 260
Maitland, Florida 32751
(407) 629-8330

LIFT STATION DETAILS
FOR
HIDDEN LAKE RESERVE
CITY OF APOPKA FLORIDA

M/I HOMES OF ORLANDO, LLC
400 INTERNATIONAL PKWY, SUITE 470
LAKE MARY, FL 32746
(407) 531-5100

ENGINEER: DAVID A. STOKES, P.E. No. 66527 STATE OF FLORIDA PROFESSIONAL ENGINEER
CERTIFICATE OF AUTHORIZATION No. EB-0007723

	DATE	REVISIONS
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JOB # 19039
DATE: 11/16/18
SCALE: N.T.S.
DESIGNED BY: WZ
DRAWN BY: WZ
APPROVED BY: DS

C921

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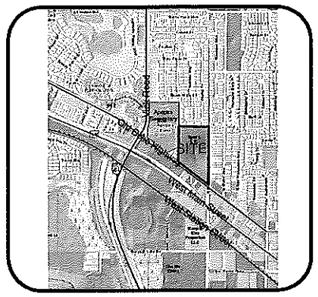
LEGAL DESCRIPTION:

A PARCEL OF LAND LYING IN SECTIONS 4 AND 9, TOWNSHIP 21 SOUTH, RANGE 28 EAST, ORANGE COUNTY, FLORIDA, DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTHWEST CORNER OF SECTION 4, TOWNSHIP 21 SOUTH, RANGE 28 EAST, ORANGE COUNTY, FLORIDA; THENCE RUN S89°58'13"E, ALONG THE SOUTH LINE OF SAID SECTION 4, A DISTANCE OF 667.39 FEET TO THE SOUTHEAST CORNER OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SAID SECTION 4, AND THE POINT OF BEGINNING; THENCE RUN N00°02'44"E ALONG THE EAST LINE OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SAID SECTION 4, A DISTANCE OF 122.09 FEET; THENCE RUN S89°54'14"E, A DISTANCE OF 667.28 FEET; THENCE RUN S00°00'19"E, A DISTANCE OF 1239.25 FEET; THENCE RUN S38°01'52"W, A DISTANCE OF 46.02 FEET TO THE NORTH RIGHT-OF-WAY LINE OF STATE ROAD 424 – DIXIE HIGHWAY; THENCE RUN N51°58'08"W, ALONG SAID NORTH RIGHT-OF-WAY LINE, A DISTANCE OF 812.09 FEET; THENCE RUN N00°02'44"E, A DISTANCE OF 654.21 FEET TO THE POINT OF BEGINNING.

CONTAINING 15.876 ACRES MORE OR LESS (AS CALCULATED PER SURVEYOR'S BOUNDARY).

HIDDEN LAKE RESERVE
Landscape & Irrigation Construction Plans



Location Map

Parcel ID
09-21-28-0000-00-006

501 Old Dixie Highway
City of Apopka, Florida

Prepared For:
M/I Homes
400 International Parkway /470
Lake Mary, Florida 32746

NOV 2019

Revisions

1	02.06.2020	Revisions per City Staff Comments Dated 01.27.20	gh
2	3 19 2020	Rev. Fence/ Wall notations	JC
3	4 7 2020	Rev. Fence/ Wall notations	JC

SHEET INDEX

SHEET	DESCRIPTION
K-200	Landscape Key Sheet
L-001	Landscape Details and Schedule
L-201 thru L-205	Landscape Plans
I-001	Irrigation Details and Schedule
I-301 thru I-304	Irrigation Plans

1722
cvr

daly design group inc.
Urban Planning • Landscape Architecture • Project Management
913 N Pennsylvania Ave, Winter Park, FL 32789
Phone 407.740.7373 • www.dalydesign.com

Team Members

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(407)531-5177

Landscape Architect
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Winter Park, Florida 32789
(407) 740-7373

Civil Engineer
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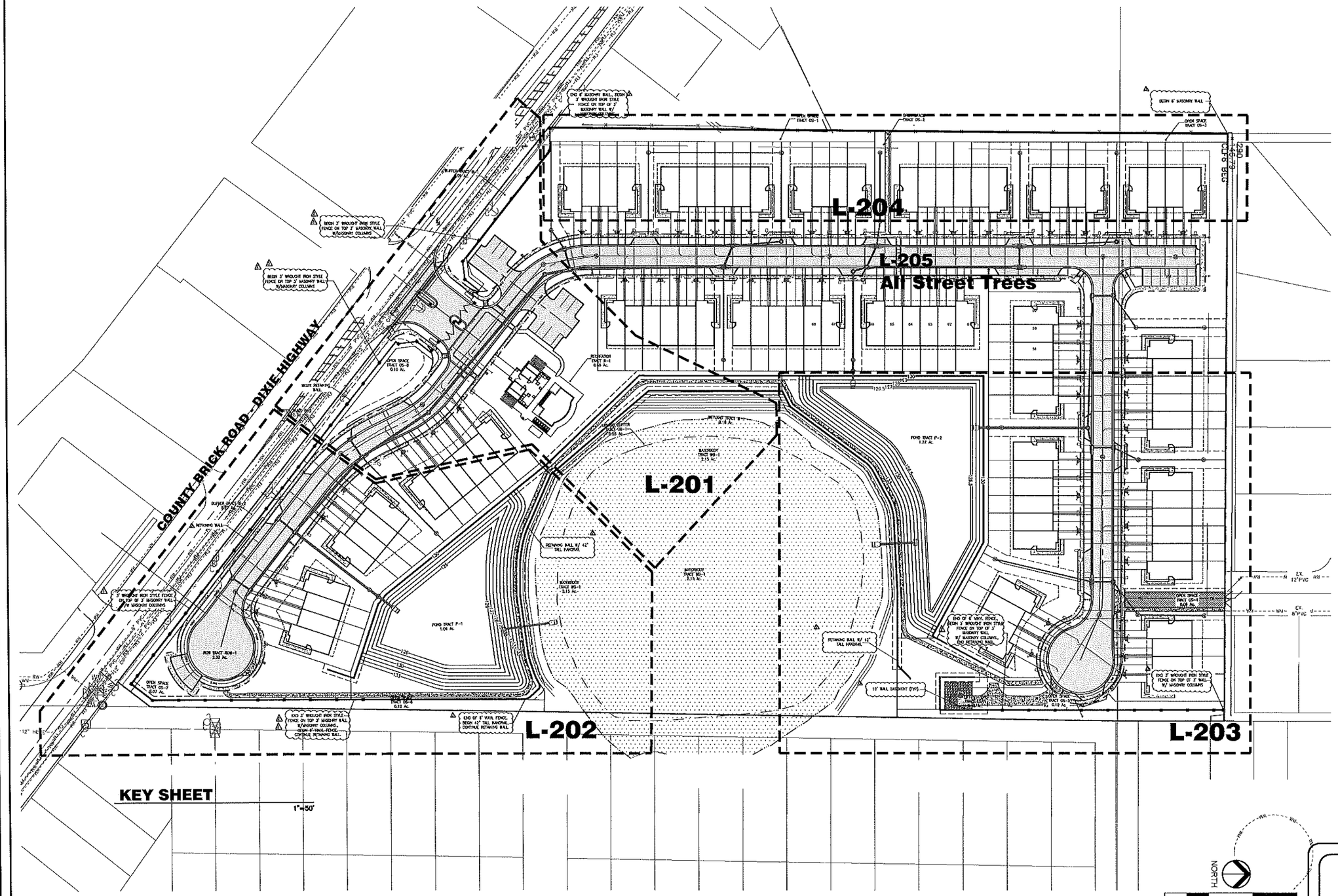
Maitland, FL 3751
(407) 629-8330

Environmental Consultant
Bio-Tech Consulting
3025 E South Street
Orlando, Florida 32803
(407) 894-5969

Surveyor
Shannon Surveying, INC..
499 N SR 434, Suite 2045
Altamonte Springs, FL 32714
407-774-8372



daly design group inc.
Urban Planning, Landscape Architecture, Project Management, Development Consulting
915 N Pennsylvania Ave, Winter Park, FL 32789 (407) 740-7373 www.dalydesign.com

REV	DATE	DESCRIPTION	BY
3	4.7.2020	Rev. Fence/ Wall notations	JC
2	3.19.2020	Rev. Fence/ Wall notations	JC

KEY SHEET
CONSTRUCTION PLANS
HIDDEN LAKE RESERVE
APOPKA, FLORIDA

Date:

PROJECT NO. 1722
SCALE 1"= 50'
DATE NOV 2019
SHEET K-200

LANDSCAPING AND IRRIGATION PLANS
SHALL BE IN ACCORDANCE WITH LDC
ARTICLE V, WATER-WISE ORD. NO. 2069

PLANT SCHEDULE

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SPECIFICATIONS
134	AG	Arachis glabrata	Perennial Peanut	Min., 1 gal., 18" o.c.
114	AZR	Rhododendron x 'Red Ruffle'	Red Ruffle Azalea	Min. 3 gal., 24" o.c.
21	CR	Callistemon rigidus 'Red Cluster'	Red Cluster Bottle Brush	Min. 45 gal. 3" cal. 10' ht.
4	EF	Eugenia foetida	Spanish Stopper Spiral Topiary	Min. 30 gal., 8' ht. matched
15	IP	Ixora x 'Petite Taiwan Red'	Dwarf Red Taiwan Ixora	Min. 3 gal., 24" ht. x 24" spd., 30" o.c.
4	IV	Ilex vomitoria	Yaupon Holly	Min. 30 gal., 8' ht. min.
14	JB	Juniperus sliicicola 'Brodie'	Brodie Southern Red Cedar	Min. 25 gal., 8' ht. min.
11	LB	Loropetalum chinense rubrum 'Burgundy'	Burgundy Loropetalum	Min., 3 gal., 24" ht. x 24" spd. , 36" o.c.
109	LEG	Liriope muscari 'Evergreen Giant'	Evergreen Giant Border Grass	Min. 1 gal, 18" o.c.
62	LM2	Liriope muscari	Lily Turf	Min., 1 gal., 12" o.c.
47	PE	Pinus elliotti	Slash Pine	Min., 30 gal., 3" DBH.,8' ht.
10	MB	Magnolia grandiflora 'D.D. Blanchard' TM	Southern Magnolia	Min. 65 gal., 3" cal., 14' ht. min.
186	MC3	Muhlenbergia capillaris	Pink Muhly	Min. 3 gal., 24" ht. x 24" spd., 36 o.c.
33	PM	Podocarpus macrophyllus	Podocarpus	Min. 3 gal., 24" ht. x 24" spd., 30" o.c.
2	PS	Phoenix sylvestris	Sylvestris Date Palm	Min., FG, 10' ct., matched.
112	QV	Quercus virginiana	Southern Live Oak	Min. 65 gal., 3" cal., 14' ht. min.
78	RI	Rhaphiolepis indica	Indian Hawthorn	Min., 3 gal., 12" ht. x 12" spd. , 24" o.c.
28	TD	Taxodium distichum	Bald Cypress	Min. 30 gal., 8' ht. min.
46	UD	Ulmus parvifolia 'Drake'	Drake Elm	Min. 30 gal., 3" DBH, 8' ht. min.
20	VM	Viburnum obovatum 'Miss Shillers Delight'	Small-Leaf Arrowwood	Min. 3 gal., 18" ht. x 24" spd., 30 o.c.
227	VO	Viburnum odoratissimum	Sweet Viburnum	Min. 3 gal., 18" ht. x 18" spd., 24 o.c.
50	VS	Viburnum suspensum	Sandankwa Viburnum	Min. 3 gal., 24" ht. x 24" spd., 36" oc.
311	TA	Trachelospermum asiaticum 'Asiatic'	Asiatic Jasmine	Min. 1 gal, 12" o.c.
18,160 SF.	SOD A	St. Augustine Sod		
25,907 SF.	SOD B	Bahia - Irrigated		

1

LANDSCAPE NOTES

1. Landscape Contractor shall be responsible for all materials and plants as called for on the landscape plans. The list of plant quantities accompanying the plans shall be used as a guide only. Contractor shall verify all quantities and report any discrepancies at time of bidding.

2. All plant material shall be graded Florida No. 1 or better, as outlined by "Grades and Standards for Nursery Plants", Florida Department of Agriculture and Consumer Services, division of Plant Industry.

3. All planting shall be top dressed with a minimum 2" pine bark mini nuggets.

4. The Landscape Contractor shall be wholly responsible for the stability and plumb condition of all trees and shrubs and shall be legally liable for any damage caused by instability of plant material. The staking method, if not shown by detail on this plan, shall be approved by the owner or his/her authorized representative.

5. Every possible safeguard shall be taken to protect existing trees that are shown on the landscape plan to be preserved.

6. The Landscape Contractor is responsible for cleaning all debris associated with their work.

7. Height and spread specifications refer to the overall plant form. Singular branches may not be used to meet minimum requirements. Tree caliper size to be measured 12" above grade.

8. All landscaping shall be installed according to accepted commercial planting procedures. Soil, shall be free of limerock, pebbles, or other construction debris.

9. Landscaping shall not interfere with power lines, sewer or water pipes or any other existing or proposed utilities.

10. Prior to the issuance of any permits or the removal of any trees, protective tree barriers shall be installed around those trees that will remain on site and shall be inspected by the county.

11. Ball & burlap material shall be an acceptable alternative to container grown trees.

12. Occasionally there is the potential for site modification due to revised field grading, clearing of existing tree canopy or other unforeseen conditions. The Landscape Contractor shall be responsible for informing the Owner and Landscape Architect of site conditions adverse to the healthy establishment of any plant material prior to planting so that a resolution may be achieved.

13. The Landscape Contractor shall be responsible for arranging a pre-construction meeting with the Owner and Landscape architect in order to address and clarify any questions, concerns and/or conditions related to these drawings or the existing site.

14. Landscape Contractor shall use appropriate container size to meet minimum plant height, if minimum plant height can not be met with specified container size.

GENERAL NOTES:

1. PROPOSED STREET TREES TO BE LOCATED IN 5' LANDSCAPE EASEMENT BEHIND THE 10' UTILITY EASEMENT.

2. STREET TREES TO BE MIN. 3' DBH./10' HT AND SPACED 30' O.C/ #1 OR BETTER.

3. EACH LOT WILL HAVE AT ONE REPLACEMENT TREE TO COUNT TOWARDS THE TREE REPLACEMENT REQUIREMENT. DUE TO THE TIGHT NATURE OF THE TOWNHOME LOTS, SELECTED TREES SHOULD HAVE A SMALL TO MEDIUM MATURE SIZE WHILE STILL MEETING THE 3"DBH AND 8'HT MIN. HEIGHT AT PLANTING. IF A SPECIFIC LOT CAN NOT ACCOMMODATE A REPLACEMENT TREE, DEVELOPER MUST INCLUDE ONE IN THE COMMON OPEN SPACE OR BUFFER TRACT.

4. PROPOSED REPLACEMENT TREE DIAMETER SHALL BE 3" DBH MINIMUM, WITH A PLANTED MINIMUM HEIGHT OF 8' AND SHALL BE FLORIDA DEPT. OF AGRICULTURE NURSERY GRADE STANDARD OF NO. 1 OR BETTER. (STREET TREES 10'MIN.)

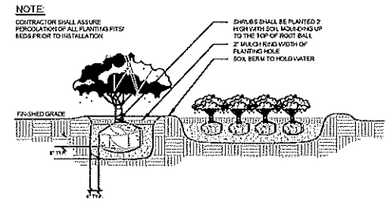
5. IRRIGATION AND LANDSCAPING WITHIN THE COMMON AREAS AND INDIVIDUAL LOTS, SHALL BE IN ACCORDANCE WITH THE CITY'S WATER-WISE ORDINANCE. LDC ARTICLE V. WATERWISE ORD. NO. 2069.

6. IRRIGATION SYSTEM TO BE DESIGNED WITH POP-UP TYPE DEVICES. IRRIGATION RISERS ARE NOT ALLOWED.

7. TREE REPLACEMENT SHALL MEET ALL REQUIREMENTS OF THE CITY OF APOPKA LDC.

8. PROPOSED SIDEWALKS AND DRIVEWAYS CAN BE SHIFTED TO SAVE EXISTING TREES OR ACCOMMODATE STREET TREES WHERE POSSIBLE. ANY CHANGES IN LOCATION WILL BE SHOWN ON FINAL DEVELOPM ENT PLANS.

PLANTING DETAILS

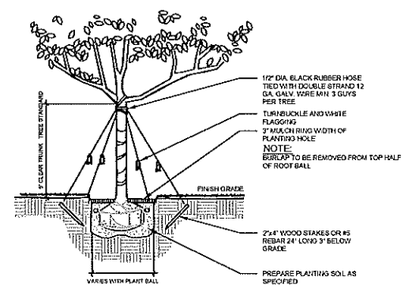


SHRUB AND GROUND COVER DETAIL

NOT TO SCALE

TYPICAL PLANT SPACING

NOT TO SCALE

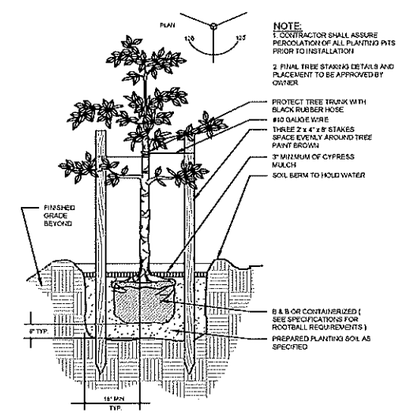


LARGE TREE GUYING DETAIL

Detail for trees greater than 2" cal

NOT TO SCALE

NOT TO SCALE



SMALL TREE GUYING DETAIL

Detail for trees smaller than 2" cal

NOT TO SCALE

I CERTIFY THAT THE LANDSCAPE AND IRRIGATION DESIGN FOR HIDDEN LAKE RESERVE OF SUBDIVISION IS IN ACCORDANCE WITH THE CITY OF APOPKA'S ORDINANCE 2069 ADOPTED MAY 21,2008 WHICH ESTABLISHES WATERWISE LANDSCAPE AND IRRIGATION STANDARDS.

SIGNATURE REG. NO DATE

Date:

daly design group inc.
Urban Planning, Landscape Architecture, Project Management, Development Consulting
9/13 N Pennsylvania Ave, Winter Park, FL 32789 (407) 740-7373 www.dalydesign.com

REV.	DATE	DESCRIPTION	BY
3	4 7 2020	Rev. Fence/ Wall notations	JC
2	3 19 2020	Rev. Fence/ Wall notations	JC
1	12.06.2020	Rev. per City Staff Comments Dated 01.27.20	gh

DETAILS & LANDSCAPE SCHEDULE
CONSTRUCTION PLANS
HIDDEN LAKE RESERVE
APOPKA, FLORIDA

PROJECT NO. 1722
SCALE NTS
DATE NOV 2019
SHEET L-001

- LANDSCAPING AND IRRIGATION PLANS SHALL BE IN ACCORDANCE WITH LDC ARTICLE V, WATER-WISE ORD. NO. 2069
- A LANDSCAPE ISLAND SHALL BE PROVIDED AROUND THE LENGTH OF OF THE SIGN AND NOT BE LESS THAN TWO FEET IN WIDTH. SHRUBS SHALL BE PLANTED 18" IN HEIGHT AND SPACED TWO FEET ON CENTER.

BEGIN 3' WROUGHT IRON STYLE FENCE ON TOP 3' MASONRY WALL W/MASONRY COLUMNS

PROJECT SIGNAGE

BEGIN 3' WROUGHT IRON STYLE FENCE ON TOP 3' MASONRY WALL W/MASONRY COLUMNS

COUNTY BRICK ROAD - DIXIE HIGHWAY

BUFFER TRACT B-1 0.09 Ac.

12" PVC

SIDEWALK

SOD A 12" STRIP

CALL BOX

ENTRY GATE

CONCRETE SIDEWALK

PARKING

OPEN SPACE TRACT OS-8 0.10 Ac.

BEGIN RETAINING WALL

6' MASONRY SCREEN WALL

BUFFER TRACT B-2 0.27 Ac.

SEE STREET TREE PLAN L-205

POOL

RECREATION TRACT R-1 0.58 Ac.

LIMIT OF SOD A

RETAINING WALL

NON IRRIGATED BAHIA BY SITE CONTRACTOR

WETLAND TRACT W-1 0.16 Ac.

UPLAND BUFFER TRACT UB-1 0.55 Ac.

WATERBODY TRACT WB-1 2.15 Ac.

PEDESTRIAN TRAIL

MATCH TO A 204

MATCH TO 201

MATCH TO 202

MATCH TO 203

NORTH

I CERTIFY THAT THE LANDSCAPE AND IRRIGATION DESIGN FOR HIDDEN LAKE RESERVE OF SUBDIVISION IS IN ACCORDANCE WITH THE CITY OF APOPKA'S ORDINANCE 2069 ADOPTED MAY 21,2008 WHICH ESTABLISHES WATERWISE LANDSCAPE AND IRRIGATION STANDARDS.

SIGNATURE REG. NO DATE

20' 0' 20' 40'

Date:

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LANDSCAPE PLAN
CONSTRUCTION PLANS
HIDDEN LAKE RESERVE
APOPKA, FLORIDA

PROJECT NO. 1722
SCALE 1"=20'
DATE NOV 2019
SHEET L-201

LANDSCAPING AND IRRIGATION PLANS SHALL BE IN ACCORDANCE WITH LDC ARTICLE V, WATER-WISE ORD. NO. 2069

COUNTY BRICK ROAD - DIXIE HIGHWAY

12" PVC

BUFFER TRACT B-2
0.27 Ac.

RETAINING WALL

SEE STREET TREE PLAN L-205

MATCH TO 201

MATCH TO 202

MATCH TO 203

UPLAND BUFFER

RETAINING WALL W/ 42" TALL HANDRAIL

RETAINING WALL

PEDESTRIAN TRAIL

WATERBODY TRACT WB-1
2.15 Ac.

3' WROUGHT IRON STYLE FENCE ON TOP OF 3' MASONRY WALL /W MASONRY COLUMNS

8" PVC

12" PVC

3" PVC

CIP

ROW TRACT ROW-1
2.32 Ac.

SEE STREET TREE PLAN L-205

POND TRACT P-1
1.06 Ac.

NON IRRIGATED BAHIA BY SITE CONTRACTOR

RETAINING WALL

SOD B

OPEN SPACE TRACT OS-7
0.07 Ac.

PEDESTRIAN TRAIL

LIMIT OF SOD B

OPEN SPACE TRACT OS-6
0.12 Ac.

NON IRRIGATED BAHIA BY SITE CONTRACTOR

END 3' WROUGHT IRON STYLE FENCE ON TOP 3' MASONRY WALL W/MASONRY COLUMNS., BEGIN 6' VINYL FENCE, CONTINUE RETAINING WALL.

END OF 6' VINYL FENCE, BEGIN 42" TALL HANDRAIL, CONTINUE RETAINING WALL.

NON IRRIGATED BAHIA BY SITE CONTRACTOR

NORTH

I CERTIFY THAT THE LANDSCAPE AND IRRIGATION DESIGN FOR HIDDEN LAKE RESERVE OF SUBDIVISION IS IN ACCORDANCE WITH THE CITY OF APOPKA'S ORDINANCE 2069 ADOPTED MAY 21,2008 WHICH ESTABLISHES WATERWISE LANDSCAPE AND IRRIGATION STANDARDS.

SIGNATURE | REG. NO | DATE

20' 0' 20' 40'

Date:

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REV.	DATE	DESCRIPTION	BY
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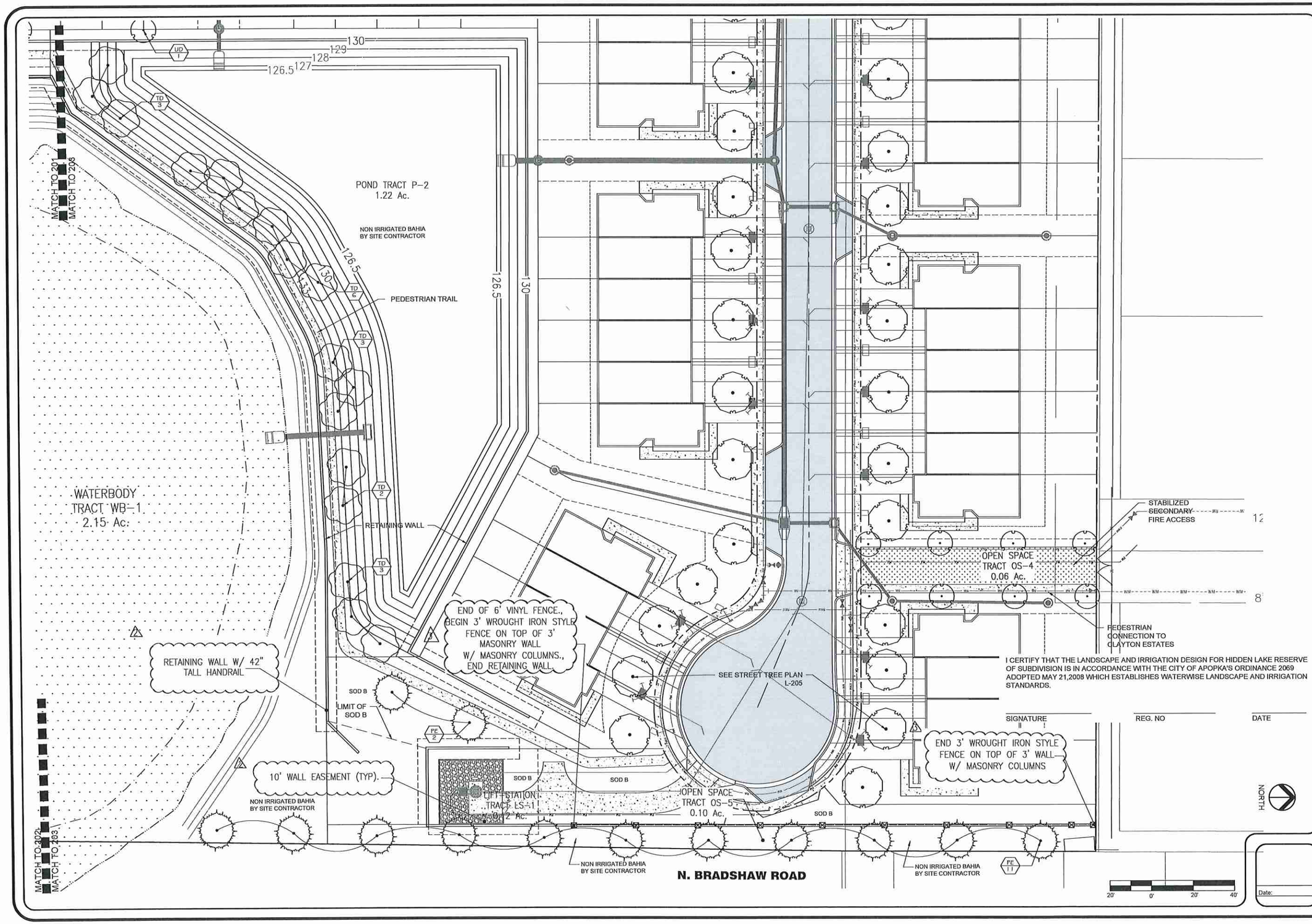
2	3.19.2020	Rev. Fence/ Wall notations	JC
1	02.06.2020	Rev. per City Staff Comments Dated 01.27.20	gh

LANDSCAPE PLAN
CONSTRUCTION PLANS
HIDDEN LAKE RESERVE
APOPKA, FLORIDA

PROJECT NO. 1722
SCALE 1"=20'
DATE NOV 2019
SHEET L-202



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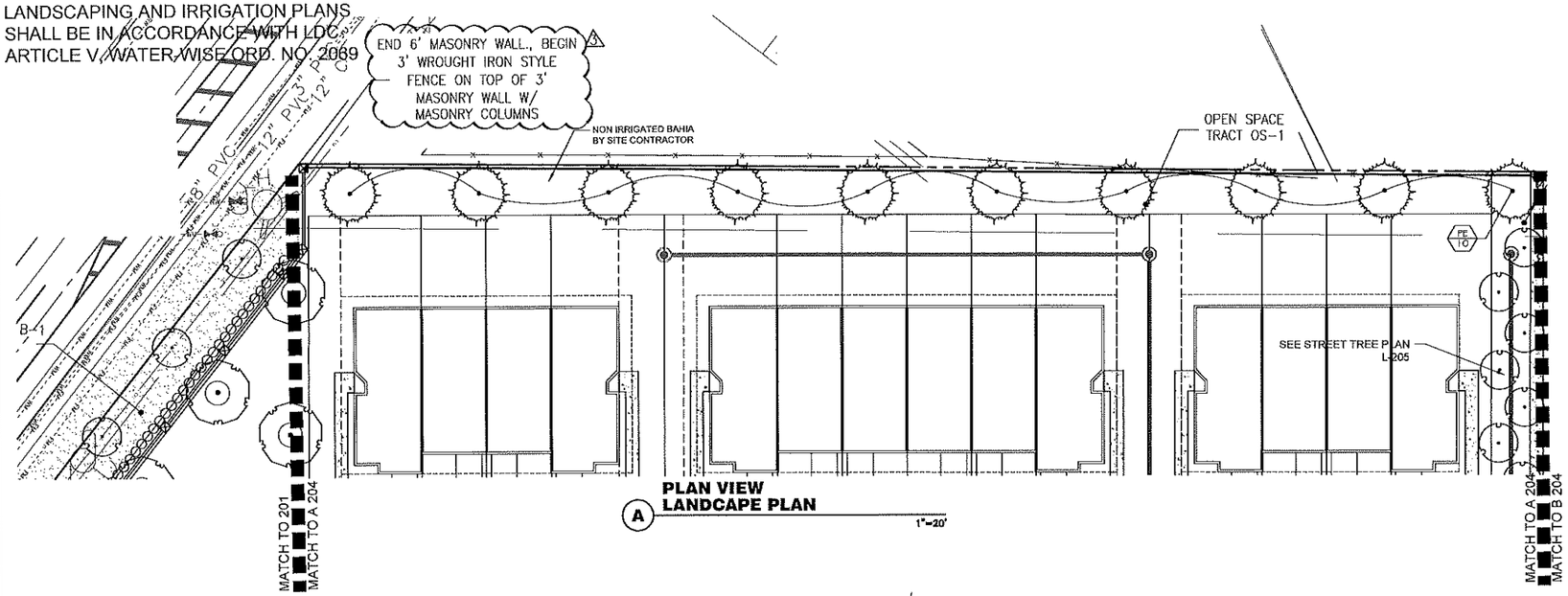
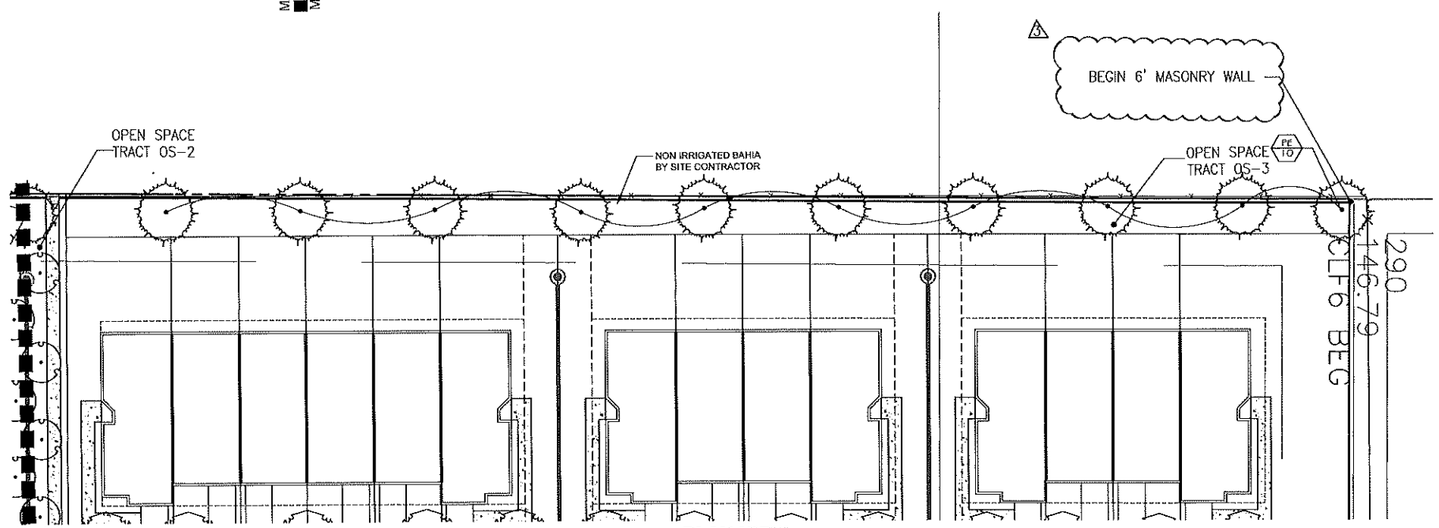
LANDSCAPE PLAN
CONSTRUCTION PLANS
HIDDEN LAKE RESERVE
APOPKA, FLORIDA

PROJECT NO. 1722
SCALE 1"=20'
DATE NOV 2019
SHEET L-203

LANDSCAPING AND IRRIGATION PLANS SHALL BE IN ACCORDANCE WITH LDC ARTICLE V, WATER-WISE ORD. NO. 2069



PLAN VIEW
LANDCAPE PLAN
(A) 1"=20'



PLAN VIEW
LANDCAPE PLAN
(B) 1"=20'

NOTE: OPEN SPACE TREES TO BE PLANTED AT TIME OF LOT CONSTRUCTION.

I CERTIFY THAT THE LANDSCAPE AND IRRIGATION DESIGN FOR HIDDEN LAKE RESERVE OF SUBDIVISION IS IN ACCORDANCE WITH THE CITY OF APOPKA'S ORDINANCE 2069 ADOPTED MAY 21,2008 WHICH ESTABLISHES WATERWISE LANDSCAPE AND IRRIGATION STANDARDS.

SIGNATURE REG. NO DATE

NORTH

20' 0' 20' 40'

Date:

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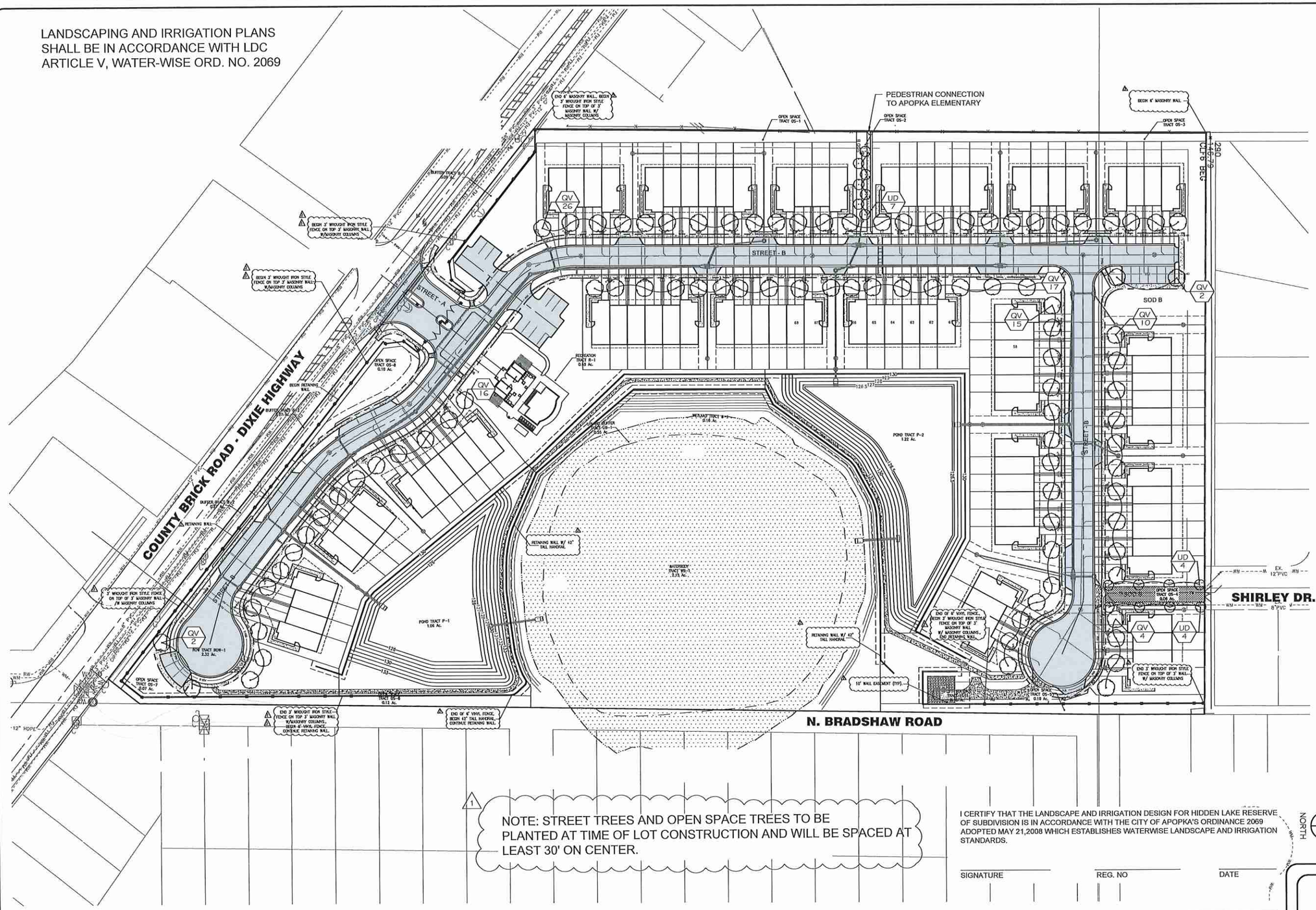
LANDSCAPE PLAN
CONSTRUCTION PLANS
HIDDEN LAKE RESERVE
APOPKA, FLORIDA

PROJECT NO. 1722
SCALE 1"=20'
DATE NOV 2019
SHEET L-204

LANDSCAPING AND IRRIGATION PLANS SHALL BE IN ACCORDANCE WITH LDC ARTICLE V, WATER-WISE ORD. NO. 2069



NOTE: STREET TREES AND OPEN SPACE TREES TO BE PLANTED AT TIME OF LOT CONSTRUCTION AND WILL BE SPACED AT LEAST 30' ON CENTER.

I CERTIFY THAT THE LANDSCAPE AND IRRIGATION DESIGN FOR HIDDEN LAKE RESERVE OF SUBDIVISION IS IN ACCORDANCE WITH THE CITY OF APOPKA'S ORDINANCE 2069 ADOPTED MAY 21,2008 WHICH ESTABLISHES WATERWISE LANDSCAPE AND IRRIGATION STANDARDS.

SIGNATURE _____ REG. NO _____ DATE _____

Date:

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REV	DATE	DESCRIPTION	BY
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STREET TREE LANDSCAPE PLAN
CONSTRUCTION PLANS
HIDDEN LAKE RESERVE
APOPKA, FLORIDA

PROJECT NO. 1722
SCALE 1"=50'
DATE NOV 2019
SHEET L-205

2019-11-08 15:25

IRRIGATION SCHEDULE

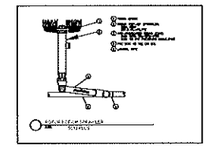
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI			
EST LCS RCS CST SST	Rain Bird 1806 15 Strip Series Turf Spray 6.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. Side and Bottom Inlet. 1/2" NPT Female Threaded Inlet.	44	30			
Q T H F	Rain Bird 1806 8 Series MPR Turf Spray 6.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. Side and Bottom Inlet. 1/2" NPT Female Threaded Inlet.	220	30			
SST	Rain Bird 1806 15 Strip Series Turf Spray 6.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. Side and Bottom Inlet. 1/2" NPT Female Threaded Inlet.	4	30			
Q T H F	Rain Bird 1806 10 Series MPR Turf Spray 6.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. Side and Bottom Inlet. 1/2" NPT Female Threaded Inlet.	11	30			
Q T H TQ F	Rain Bird 1806 12 Series MPR Turf Spray 6.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. Side and Bottom Inlet. 1/2" NPT Female Threaded Inlet.	9	30			
Q T H TQ F	Rain Bird 1806 15 Series MPR Turf Spray 6.0" Pop-Up Sprinkler with Co-Molded Wiper Seal. Side and Bottom Inlet. 1/2" NPT Female Threaded Inlet.	77	30			
	Rain Bird 1800-1300AF TREE BUBBLER Adjustable Flow (1.0-2.3GPM), Full circle bubbler, 1/2" FIPT Inlet.	186	10			
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI	GPM	RADIUS	
0.75	Rain Bird 5000 Turf Rotor, 4.0" Pop-Up. Adjustable and Full Circle.	23	35	0.67	17'	
1.0	Rain Bird 5000 Turf Rotor, 4.0" Pop-Up. Adjustable and Full Circle.	30	35	0.92	21'	
1.5	Rain Bird 5000 Turf Rotor, 4.0" Pop-Up. Adjustable and Full Circle.	20	35	1.28	23'	
2.0	Rain Bird 5000 Turf Rotor, 4.0" Pop-Up. Adjustable and Full Circle.	2	35	1.69	27'	
3.0	Rain Bird 5000 Turf Rotor, 4.0" Pop-Up. Adjustable and Full Circle.	2	35	2.60	31'	
4.0	Rain Bird 5000 Turf Rotor, 4.0" Pop-Up. Adjustable and Full Circle.	35	35	3.58	33'	
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY				DETAIL
	Area to Receive Dripline Rain Bird XFCV-06-18 (18) XFCV On-Surface Landscape Dripline with a Heavy-Duty 3.5 psi Check Valve. 0.6GPH emitters at 18.0" O.C. Dripline laterals spaced at 18.0" apart, with emitters offset for triangular pattern. Great for elevation change. Specify XF insert fittings.	6,104 s.f.				
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY				DETAIL
	Rain Bird PEB 1", 1-1/2", 2" Plastic Industrial Valves. Low Flow Operating Capability, Globe Configuration.	15				
	Rain Bird PEB-PRS-D (2) 1", 1-1/2", 2" Plastic Industrial Valves. Low Flow Operating Capability, Globe Configuration. With Pressure Regulator Module.	10				
BF	Febco 825YA 1-1/2" Reduced Pressure Backflow Preventer	1				
C1	Rain Bird ESP-LXME 20 Station Commercial Controller. Conventional Wire System. Mounted on a Plastic Wall Mount. .	1				
C2	Rain Bird ESP-LXME 20 Station Commercial Controller. Conventional Wire System. Mounted on a Plastic Wall Mount. .	1				
C3	Rain Bird ESP-LXME 20 Station Commercial Controller. Conventional Wire System. Mounted on a Plastic Wall Mount. .	1				
RG	Rain Bird RAINGAUGE Rain Sensor .	3				
M1	Water Meter 2" RECLAIM WATER SERVICE	1				
M2	Water Meter 2" POTABLE WATER SERVICE FOR ALL IRRIGATION WITHIN 100' OF POOL DECK	1				
M3	Water Meter 2" RECLAIM WATER SERVICE CONNECTION	1				
	Irrigation Lateral Line: PVC Schedule 40 PVC Schedule 40 irrigation pipe. Only lateral transition pipe sizes 1" and above are indicated on the plan, with all others being 3/4" in size.	11,141 l.f.				
	Irrigation Mainline: Polyethylene and PVC Class 160 Polyethylene SDR-7 up to 1-1/4, then PVC Class 160 SDR 26 for 1-1/2" and larger.	2,347 l.f.				

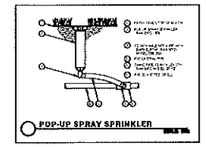
Valve Callout

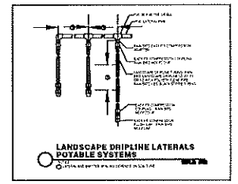
- Valve Number
- Valve Flow
- Valve Size

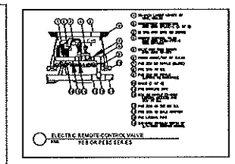
WATERING SCHEDULE: NUMBER	MODEL	TYPE	PRECIP	IN./WEEK	MIN./WEEK	GAL./WEEK	GAL./DAY
2	Rain Bird PEB	Turf Rotor	0.55 in/h	1	110	1,327	663.3
3	Rain Bird PEB-PRS-D (2)	Bubbler	30.64 in/h	0.85	2	36	18
4	Rain Bird PEB-PRS-D (2)	Area for Dripline	0.45 in/h	0.85	113	704.5	352.2
5	Rain Bird PEB	Turf Rotor	0.53 in/h	1	113	2,192	1,096
6	Rain Bird PEB-PRS-D (2)	Bubbler	30.64 in/h	0.85	2	62	31
7	Rain Bird PEB-PRS-D (2)	Bubbler	30.64 in/h	0.85	2	48	24
8	Rain Bird PEB	Turf Spray	1.29 in/h	1	47	1,701	850.5
9	Rain Bird PEB	Turf Spray	1.33 in/h	1	45	2,358	1,179
11	Rain Bird PEB	Turf Rotor	0.82 in/h	1	74	2,343	1,171
12	Rain Bird PEB-PRS-D (2)	Bubbler	30.64 in/h	0.85	2	18	9
13	Rain Bird PEB	Turf Spray	1.39 in/h	1	44	1,350	675.0
14	Rain Bird PEB	Turf Spray	1.47 in/h	1	41	2,141	1,071
15	Rain Bird PEB-PRS-D (2)	Bubbler	30.64 in/h	0.85	2	38	19
16	Rain Bird PEB	Turf Spray	1.26 in/h	1	48	2,244	1,122
17	Rain Bird PEB	Turf Rotor	1.00 in/h	1	61	1,965	982.7
18	Rain Bird PEB	Turf Spray	1.29 in/h	1	47	1,264	631.9
19	Rain Bird PEB-PRS-D (2)	Bubbler	30.64 in/h	0.85	2	26	13
20	Rain Bird PEB	Turf Rotor	1.01 in/h	1	60	2,922	1,461
21	Rain Bird PEB-PRS-D (2)	Bubbler	30.64 in/h	0.85	2	64	32
22	Rain Bird PEB	Turf Spray	1.43 in/h	1	43	817.9	408.9
23	Rain Bird PEB-PRS-D (2)	Area for Dripline	0.45 in/h	0.85	113	1,195	597.6
24	Rain Bird PEB-PRS-D (2)	Bubbler	30.64 in/h	0.85	2	60	30
25	Rain Bird PEB	Turf Rotor	1.09 in/h	1	55	2,166	1,083
26	Rain Bird PEB	Turf Spray	2.33 in/h	1	28	1,392	696.2
27	Rain Bird PEB	Turf Rotor	0.54 in/h	1	111	1,940	970.1
		TOTALS:			1,167	30,375	15,188

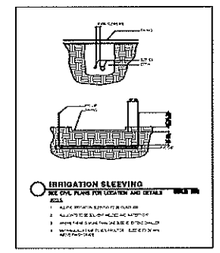
Zones for Bahia Sod Areas are comprised of pop up rotor spray zones for the parks and open space tracts. These tracts shall be planted with Bahia Sod by the site contractor at the time of construction. These irrigation zones will only be run 1 time per week during the months between October and May.











IRRIGATION SYSTEM PERFORMANCE NOTES

1) IRRIGATION SYSTEM AS SHOWN IS DESIGNED TO OPERATE OFF A RECLAIM WATER SOURCE WITH A PROVIDING A MINIMUM PSI OF 45 AT THE SOURCE

2) HEAD LAYOUT BASED ON BASE INFORMATION PROVIDED. HEADS SHALL BE ADJUSTED TO ACCOMMODATE FIELD VARIATIONS WHILE MAINTAINING 100% COVERAGE AND MINIMIZING OVER SPRAY ONTO PAVED AREAS AND BUILDINGS.

3) LATERAL PIPE SHALL BE SIZED SO THAT WATER VELOCITY DOES NOT EXCEED 5 FEET PER SECOND. MAXIMUM GPM PER PIPE SIZE AS FOLLOWS:

3/4 PIPE	8 GPM
1" PIPE	14 GPM
1 1/4" PIPE	24 GPM
1 1/2" PIPE	36 GPM
2" PIPE	50 GPM
2 /2" PIPE	80 GPM
3" PIPE	120 GPM
4" PIPE	200 GPM
6" PIPE	450 GPM

NOTE:

1. LAND FX/ IRRIGATION WAS UTILIZED TO DESIGN THE IRRIGATION SYSTEM. THE 2" IRRIGATION METER HAS BEEN SIZED TO PROVIDE A MAXIMUM OF 40 PSI PER ZONE AS REQUIRED.

2. MAINLINE, LATERAL PIPE & CONTROL VALVES SHOWN IN HARDSCAPE/BUILDINGS AREA'S OR OUTSIDE OF PROPERTY LINES IS FOR CLARITY ONLY. INSTALL PIPE AND EQUIPMENT IN GREEN SPACE AND WITHIN PROPERTY LINES.

3. NO SHRUB RISERS ARE ALLOWED.

GENERAL NOTES

1) REFER TO THE LANDSCAPE PLANS WHEN TRENCHING TO AVOID TREE AND SHRUB LOCATIONS.

2) ALL MAINLINE PIPING SHALL BE BURIED TO A MINIMUM DEPTH OF 18" OF COVER AND ALL LATERAL PIPING SHALL BE BURIED TO A MINIMUM DEPTH OF 12" OF COVER.

3) ALL POP-UP ROTOR AND SPRAY HEADS SHALL BE INSTALLED USING AN 18" PVC FLEX PIPE CONNECTION. CONTRACTOR SHALL NOT USE FUNNY PIPE.

4) PIPE SIZES SHALL CONFORM TO THOSE SHOWN ON THE DRAWINGS. THE SMALLEST LATERAL PIPE SIZE TO A SINGLE SPRAY OR ROTOR HEAD SHALL BE 3/4".

5) ALL RISERS SHALL BE STAKED WITH A 1" METAL DOWEL AND SECURED WITH UV RESISTANT PLASTIC CABLE TIES. RISERS AND DOWEL SHALL BE PAINTED FLAT BLACK.

6) ALL REMOTE CONTROL VALVES, GATE VALVES AND QUICK COUPLERS SHALL BE INSTALLED IN VALVE BOXES.

7) THE EXACT HEIGHT OF ANY 12" POP-UP THAT IS SHOWN IN A SHRUB BED SHALL BE DETERMINED BY THE LANDSCAPE ARCHITECT IN THE FIELD.

8) CONTROL WIRE SHALL BE 14-1 UF DIRECT BURIAL, COLORED RED FOR CONTROL WIRES AND WHITE FOR COMMON WIRES. NO CROSS CONNECTION BETWEEN CONTROLLERS SHALL BE ALLOWED. WIRE SPLICES SHALL BE MADE ONLY IN VALVE BOXES USING RAINBIRD "SNAP-TITE" CONNECTORS.

9) ANY PIPING OR VALVES SHOWN OUTSIDE THE PROPERTY LINE OR OUTSIDE OF A LANDSCAPE AREA IS SHOWN THERE FOR DESIGN CLARITY ONLY. ALL PIPING AND VALVES SHALL BE INSTALLED ON THE PROPERTY AND WITHIN LANDSCAPE AREAS.

10) IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO FAMILIARIZE HIMSELF WITH, AND EXERCISE CARE SO AS TO NOT DAMAGE ANY EXISTING BERMS, WALLS, STRUCTURES, PLANT MATERIALS AND UTILITIES. THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE REPAIR OR REPLACEMENT OF ALL ITEMS DAMAGED BY HIS WORK. HE SHALL COORDINATE HIS WORK WITH OTHER CONTRACTORS FOR THE LOCATION AND INSTALLATION OF SLEEVES AND PIPING THROUGH WALLS, UNDER ROADWAYS AND PAVING, ETC.

11) DO NOT WILLFULLY INSTALL THE SPRINKLER SYSTEM AS SHOWN ON THE DRAWINGS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN OBSTRUCTIONS, GRADE DIFFERENCES OR DIFFERENCES IN AREA DIMENSIONS EXIST THAT MIGHT NOT HAVE BEEN CONSIDERED IN THE ENGINEERING. SUCH OBSTRUCTIONS OR DIFFERENCES SHOULD BE BROUGHT TO THE ATTENTION OF THE OWNER'S AUTHORIZED REPRESENTATIVE. IN THE EVENT THIS NOTIFICATION IS NOT PERFORMED, THE IRRIGATION CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ANY REVISIONS.

12) FINAL LOCATION OF THE AUTOMATIC CONTROLLER(S) SHALL BE APPROVED BY THE OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO INSTALLATION.

13) ELECTRICAL SERVICE TO ALL EQUIPMENT SHALL BE PROVIDED TO A JUNCTION BOX AT THE EQUIPMENT LOCATION. (BY OTHERS. NOT A PART OF THIS CONTRACT) THE IRRIGATION CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINAL CONNECTION FROM THE JUNCTION BOX TO ALL EQUIPMENT.

14) THE IRRIGATION CONTRACTOR SHALL FLUSH AND ADJUST ALL SPRINKLER HEADS AND VALVES TO PROVIDE OPTIMUM COVERAGE WITH MINIMAL OVERSPRAY ONTO WALKS, STREETS, WALLS, ETC. IN ORDER TO ACCOMPLISH THIS, THE CONTRACTOR MAY SUBSTITUTE VARIABLE ARC NOZZLES IN PLACE OF THE SPECIFIED FIXED ARC NOZZLES WHERE NECESSARY. PRESSURE COMPENSATING SCREENS MAY ALSO BE USED TO REDUCE SPRAY DISTANCE.

15) THE CONTRACTOR SHALL COMPLETE ALL WORK IN ACCORDANCE WITH ALL PREVAILING LAWS, CODES AND REGULATIONS

16) ALL SPRINKLER EQUIPMENT NOT OTHERWISE DETAILED OR SPECIFIED SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.

17) THE CONTRACTOR SHALL PREPARE AN AS-BUILT DRAWING ON A REPRODUCIBLE MYLAR SHOWING ALL IRRIGATION INSTALLATION. A MYLAR OF THE ORIGINAL PLAN MAY BE OBTAINED FROM THE LANDSCAPE ARCHITECT FOR A FEE. THE AS-BUILT DRAWING SHALL LOCATE ALL MAINLINE AND VALVES BY SHOWING EXACT MEASUREMENTS FROM HARD SURFACES.

18) ALL WORK SHALL BE GUARANTEED FOR ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE AGAINST ALL DEFECTS IN EQUIPMENT AND WORKMANSHIP.

19) SLEEVES SHALL BE PLACE UNDER PAVEMENT AS SHOWN ON PLANS AND SHALL BE A MINIMUM OF 2X THE SIZE OF THE IRRIGATION PIPE.

20) CONTRACTOR SHALL PERFORM PRESSURE AND VOLUME TEST ON IRRIGATION WATER SOURCE OVER A CONTINUOUS 24 HOUR PERIOD PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION WORK. SHOULD THE AVAILABLE SUPPLY NOT BE ADEQUATE TO MEET THE DEMANDS OF THE IRRIGATION SYSTEM AS DESIGNED THE CONTRACTOR SHALL CONTACT THE LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION FOR DESIGN MODIFICATIONS.

21) ALL IRRIGATION PIPES, SPRINKLER CAPS AND VALVE BOX COVERS SHALL BE PURPLE TO DENOTE REUSE WATER. CONTRACTOR TO PROVIDE SIGNAGE AT ALL PROJECT ENTRANCES DENOTING REUSE IRRIGATION WATER. SEE CIVIL PLAN FOR LOCATION AND DETAIL.

I CERTIFY THAT THE LANDSCAPE AND IRRIGATION DESIGN FOR HIDDEN LAKE RESERVE OF SUBDIVISION IS IN ACCORDANCE WITH THE CITY OF APOPKA'S ORDINANCE 2069 ADOPTED MAY 21,2008 WHICH ESTABLISHES WATERWISE LANDSCAPE AND IRRIGATION STANDARDS.

SIGNATURE _____ REG. NO _____ DATE _____

Date:

daly design group inc.
Urban Planning, Landscape Architecture, Project Management, Development Consulting
913 N Pennsylvania Ave, Winter Park, FL 32789 (407) 740-7373 www.dalydesign.com

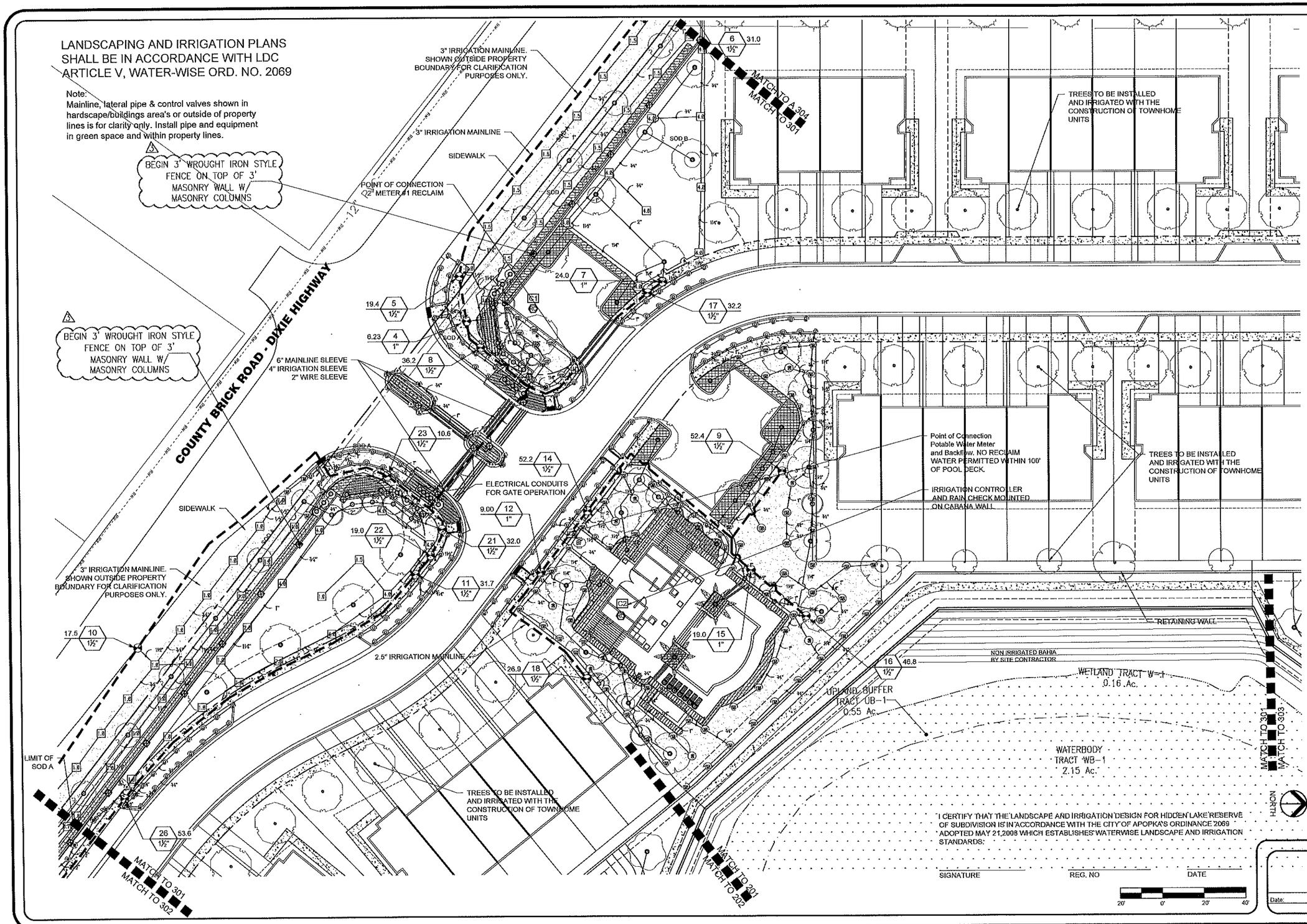
REV	DATE	DESCRIPTION	BY
3	4 7 2020	Rev. Fence/ Wall notations	JC
2	3 19 2020	Rev. Fence/ Wall notations	JC
1	11.11.19	Revised Per Updated Eng Base	wgm

IRRIGATION DETAILS AND SCHEDULE
CONSTRUCTION PLANS
HIDDEN LAKE RESERVE
APOPKA, FLORIDA

PROJECT NO. 1722
SCALE 1"=20'
DATE NOV 2018
SHEET I-001

LANDSCAPING AND IRRIGATION PLANS SHALL BE IN ACCORDANCE WITH LDC ARTICLE V, WATER-WISE ORD. NO. 2069

Note:
Mainline, lateral pipe & control valves shown in hardscape/buildings area's or outside of property lines is for clarity only. Install pipe and equipment in green space and within property lines.



I CERTIFY THAT THE LANDSCAPE AND IRRIGATION DESIGN FOR HIDDEN LAKE RESERVE OF SUBDIVISION IS IN ACCORDANCE WITH THE CITY OF APOPKA'S ORDINANCE 2069 ADOPTED MAY 21,2008 WHICH ESTABLISHES WATERWISE LANDSCAPE AND IRRIGATION STANDARDS.

Date:

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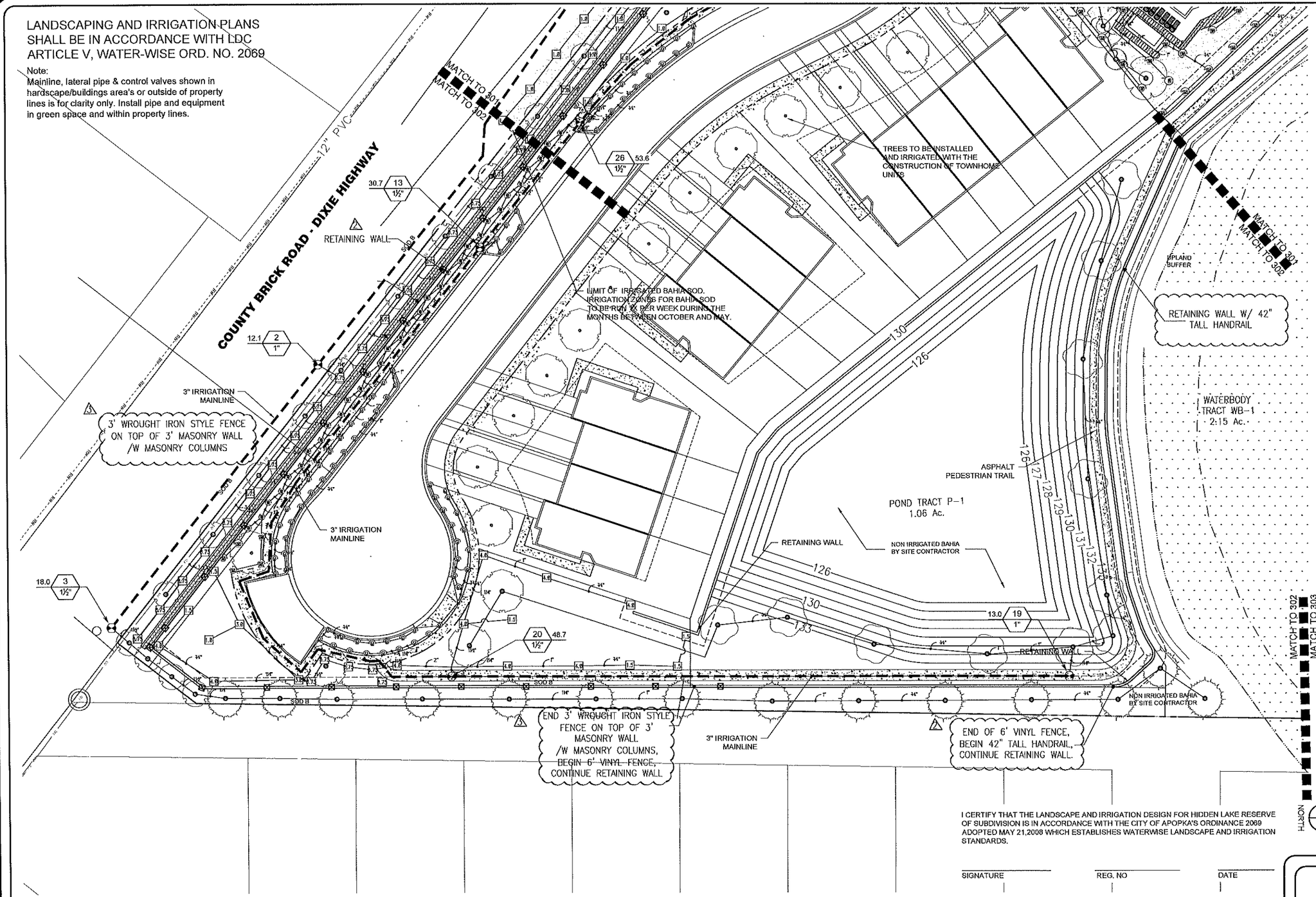
REV	DATE	DESCRIPTION	BY
3	4.7.2020	Rev. Fence/ Wall notations	JC
2	3.19.2020	Rev. Fence/ Wall notations	JC
1	11.11.19	Revised Per Updated Eng Base	wgm

IRRIGATION PLAN
CONSTRUCTION PLANS
HIDDEN LAKE RESERVE
APOPKA, FLORIDA

PROJECT NO. 1722
SCALE 1"=20'
DATE NOV 2018
SHEET I-301

LANDSCAPING AND IRRIGATION PLANS SHALL BE IN ACCORDANCE WITH LDC ARTICLE V, WATER-WISE ORD. NO. 2069

Note:
Mainline, lateral pipe & control valves shown in hardscape/buildings area's or outside of property lines is for clarity only. Install pipe and equipment in green space and within property lines.



I CERTIFY THAT THE LANDSCAPE AND IRRIGATION DESIGN FOR HIDDEN LAKE RESERVE OF SUBDIVISION IS IN ACCORDANCE WITH THE CITY OF APOPKA'S ORDINANCE 2069 ADOPTED MAY 21,2008 WHICH ESTABLISHES WATERWISE LANDSCAPE AND IRRIGATION STANDARDS.

SIGNATURE REG. NO DATE

Date:

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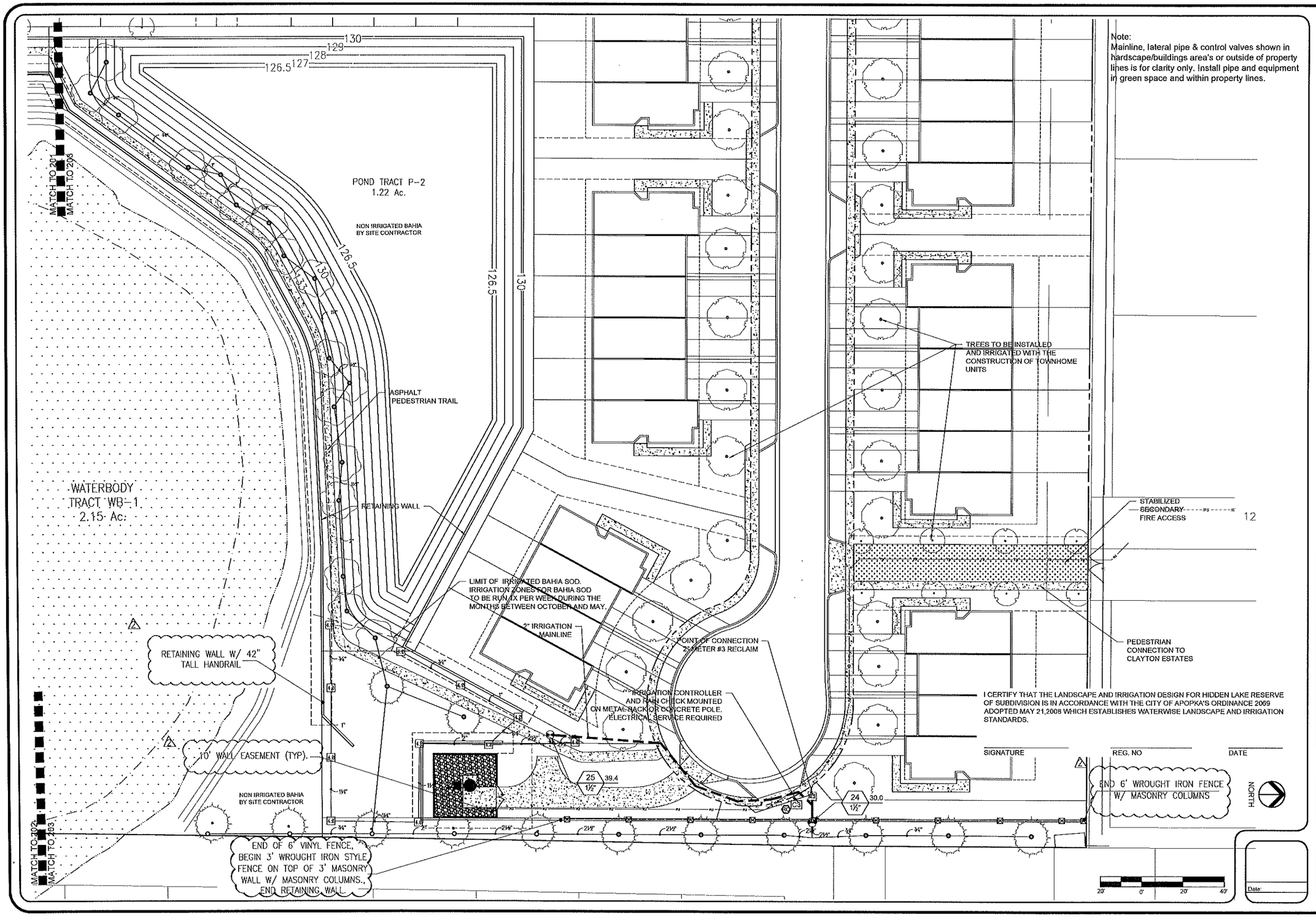
REV.	DATE	DESCRIPTION	BY
3	4.7.2020	Rev. Fence/Wall notations	JC
2	3.19.2020	Rev. Fence/Wall notations	JC
1	11.11.19	Revised Per Updated Eng Base	WST

IRRIGATION PLAN
CONSTRUCTION PLANS
HIDDEN LAKE RESERVE
APOPKA, FLORIDA

PROJECT NO. 1722
SCALE 1"=20'
DATE NOV 2018
SHEET I-302



Note:
Mainline, lateral pipe & control valves shown in hardscape/buildings area's or outside of property lines is for clarity only. Install pipe and equipment in green space and within property lines.

I CERTIFY THAT THE LANDSCAPE AND IRRIGATION DESIGN FOR HIDDEN LAKE RESERVE OF SUBDIVISION IS IN ACCORDANCE WITH THE CITY OF APOPKA'S ORDINANCE 2069 ADOPTED MAY 21,2008 WHICH ESTABLISHES WATERWISE LANDSCAPE AND IRRIGATION STANDARDS.

SIGNATURE | REG. NO | DATE

Date:

REV	DATE	DESCRIPTION	BY
3	4.7.2020	Rev. Fence/ Wall notations	JC
2	3.19.2020	Rev. Fence/ Wall notations	JC
1	11.11.19	Revised Per Updated Eng Base	vgm

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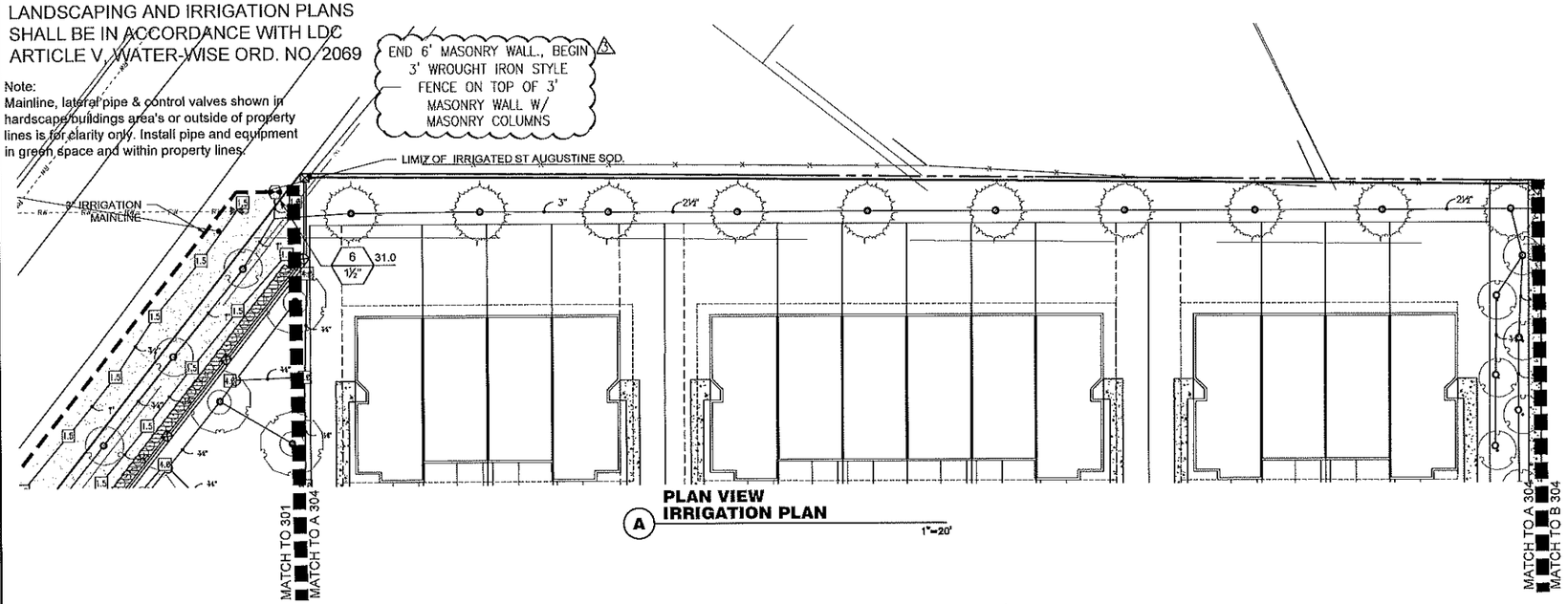
913 N Pennsylvania Ave, Winter Park, FL 32789 (407) 740-7373 www.dalydesign.com

IRRIGATION PLAN
CONSTRUCTION PLANS
HIDDEN LAKE RESERVE
APOPKA, FLORIDA

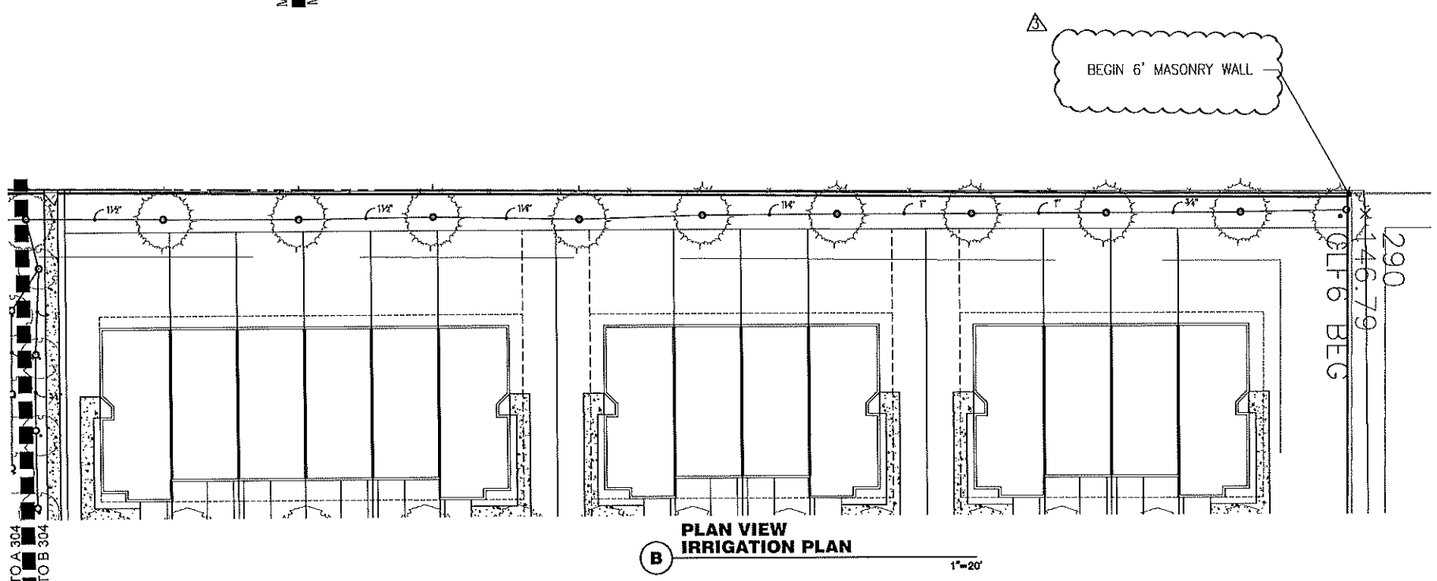
PROJECT NO. 1722
SCALE 1"=20'
DATE NOV 2018
SHEET I-303

LANDSCAPING AND IRRIGATION PLANS SHALL BE IN ACCORDANCE WITH LDC ARTICLE V, WATER-WISE ORD. NO. 2069

Note:
Mainline, lateral pipe & control valves shown in hardscape/buildings area's or outside of property lines is for clarity only. Install pipe and equipment in green space and within property lines.



PLAN VIEW
IRRIGATION PLAN
(A) 1"=20'



PLAN VIEW
IRRIGATION PLAN
(B) 1"=20'

NOTE: OPEN SPACE TREES TO BE PLANTED AT TIME OF LOT CONSTRUCTION.

I CERTIFY THAT THE LANDSCAPE AND IRRIGATION DESIGN FOR HIDDEN LAKE RESERVE OF SUBDIVISION IS IN ACCORDANCE WITH THE CITY OF APOPKA'S ORDINANCE 2069 ADOPTED MAY 21,2008 WHICH ESTABLISHES WATERWISE LANDSCAPE AND IRRIGATION STANDARDS.

SIGNATURE REG. NO DATE

NORTH

20' 0' 20' 40'

Date:

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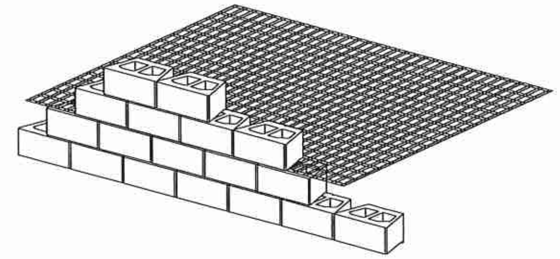
REV.	DATE	DESCRIPTION	BY
3	4.7.2020	Rev. Fence/ Wall notations	JC
2	3.19.2020	Rev. Fence/ Wall notations	JC
1	11.11.19	Revised Per Updated Eng Base	wgm

IRRIGATION PLAN
CONSTRUCTION PLANS
HIDDEN LAKE RESERVE
APOPKA, FLORIDA

PROJECT NO. 1722
SCALE 1"=20'
DATE NOV 2018
SHEET I-304

PROPOSED SEGMENTAL RETAINING WALLS

HIDDEN LAKE RESERVE
APOPKA, FLORIDA



MATERIAL NOTES

1. Concrete Retaining Wall Units: "Anchor Diamond Pro Retaining Wall Units" as manufactured by Oldcastle Coastal under license from Anchor Wall Systems.
2. Geosynthetic Reinforcement: Miragrid 3XT, as shown on the Drawings.
3. Leveling Pad Base
   a. Aggregate Base: Crushed stone or granular fill meeting the following gradation as determined in accordance with ASTM D448:

Sieve Size	Percent Passing
1 Inch	100
No. 4	35 to 70
No. 40	10 to 35
No. 200	3 to 10

   b. Base Thickness: 6 inches (minimum compacted thickness).
4. Drainage Aggregate: Clean crushed stone or granular fill meeting the following gradation as determined in accordance with ASTM D448.

Sieve Size	Percent Passing
1 Inch	100
3/4 Inch	75 to 100
No. 4	0 to 60
No. 40	0 to 50
No. 200	0 to 5

5. Reinforced Fill: Soil free of organics and debris and consisting of either GP, GW, SP, SW, or SP-SM type, classified in accordance with ASTM D2487 and the USCS classification system and meeting the following gradation:

Sieve Size	Percent Passing
1 Inch	100
3/4 Inch	70 to 100
No. 4	30 to 100
No. 40	15 to 100
No. 100	0 to 65
No. 200	0 to 12

   a. PI<6.
   b. Unsuitable soils are organic soils and those soils classified as SM, SC, CL, CH, OH, MH, ML, OL, or PT.
6. Impervious Material: Clayey soil (permeability of less than 10^{-6} cm/sec) or other barrier which will prevent percolation into the reinforced soil zone of the retaining wall.
7. Drainage Pipe: Perforated or slotted PVC or corrugated HDPE pipe manufactured in accordance with D3034 and/or ASTM F405. The pipe may be covered with a geotextile filter fabric to function as a filter.
8. Construction Adhesive: Exterior grade adhesive as recommended by the retaining wall manufacturer.
9. Filter Fabric: Mirafi Type 140N or equal.

FOUNDATION SOIL NOTES

1. Excavate foundation soil as required for footing or base dimension shown on the Drawings, or as directed by the Project geotechnical engineer.
2. The Owner shall retain the services of a geotechnical engineer to examine foundation soil to ensure that the actual foundation soil strength meets or exceeds that indicated on the Drawings. Unsuitable soils are defined as any soil that does not have sufficient bearing capacity or will cause excessive wall settlement. Remove soil not meeting the required strength. Oversize resulting space sufficiently from the front of the block to the back of the reinforcement, and backfill with suitable compacted backfill soils.
3. The Owner shall retain the services of a geotechnical engineer to determine if the foundation soils will require special treatment or correction to control total and differential settlement.
4. Fill over-excavated areas with suitable compacted backfill, as recommended by the Project geotechnical engineer.

BASE COURSE NOTES

1. Place base materials to the depths and widths shown on the Drawings, upon undisturbed soils, or foundation soils prepared as directed by the project geotechnical engineer.
   a. Extend the leveling pad laterally at least 6 inches in front and behind the lowermost concrete retaining wall unit.
   b. Provide aggregate base compacted to 6 inches thick (minimum).
   c. Wrap toe of wall, including leveling pad, with filter fabric.
2. Compact aggregate base material to provide a level, hard surface on which to place the first course of units.
3. Prepare base materials to ensure complete contact with retaining wall units. Gaps are not allowed.

ERECTION NOTES

1. Excavation support, if required, is the responsibility of the Contractor, including the stability of the excavation and its influence on adjacent properties and structures.
2. General: Erect units in accordance with manufacturer's instructions and recommendations, and as specified herein.
3. Place first course of concrete wall units on the prepared base material. Check units for level and alignment. Maintain the same elevation at the top of each unit within each section of the base course.
4. Ensure that foundation units are in full contact with the leveling pad.
5. Place concrete wall units side-by-side for full length of wall alignment. Alignment may be done by using a string line measured from the back of the block. Gaps are not allowed between the foundation concrete wall units.
6. Place 12 inches (minimum) of drainage aggregate between, and directly behind the concrete wall units. Fill voids in retaining wall units with drainage aggregate. Wrap drainage aggregate with filter fabric. Provide a drainage zone behind the wall units to within 9 inches of the final grade. Cap the reinforced zone and drainage aggregate zone with 12 inches of impervious material.
7. Install drainage pipe at the lowest elevation possible, to maintain gravity flow of water to outside of the reinforced zone. Slope the main collection drainage pipe, located just behind the concrete retaining wall units, 1 percent (minimum) to provide gravity flow to the daylighted areas. Daylight the main collection drainage pipe to an appropriate location away from the wall system at each low point or at 50 foot (maximum) intervals along the wall.
8. Remove excess fill from top of units and install next course. Ensure drainage aggregate and backfill are compacted before installation of next course.
9. Check each course for level and alignment. Adjust units as necessary with reinforcement shims to maintain level, alignment, and setback prior to proceeding with each additional course.
10. Install each succeeding course. Backfill as each course is completed. Pull the units forward until the locating surface of the unit contacts the locating surface of the units in the preceding course. Interlock wall segments that meet at corners by overlapping successive courses. Attach concrete retaining wall units at exterior corners with adhesive specified.
11. Install geosynthetic reinforcement in accordance with geosynthetic manufacturer's recommendations and the shop drawings.
    a. Orient geosynthetic reinforcement with the highest strength axis perpendicular to the wall face.
    b. Prior to geosynthetic reinforcement placement, place the backfill and compact to the elevation of the top of the wall units at the elevation of the geosynthetic reinforcement.
    c. Place geosynthetic reinforcement at the elevations and to the lengths shown on the Drawings.
    d. Lay geosynthetic reinforcement horizontally on top of the concrete retaining wall units and the compacted backfill soils. Place the geosynthetic reinforcement within one inch of the face of the concrete retaining wall units. Place the next course of concrete retaining wall units on top of the geosynthetic reinforcement.
    e. The geosynthetic reinforcement shall be in tension and free from wrinkles prior to placement of the backfill soils. Pull geosynthetic reinforcement hand-taut and secure in place with staples, stakes, or by hand-tensioning until the geosynthetic reinforcement is covered by 6 inches of loose fill.
    f. The geosynthetic reinforcements shall be continuous throughout their embedment lengths. Splices in the geosynthetic reinforcement strength direction are not allowed.
    g. Do not operate tracked construction equipment directly on the geosynthetic reinforcement. At least 6 inches of compacted backfill soil is required prior to operation of tracked vehicles over the geosynthetic reinforcement. Keep turning of tracked construction equipment to a minimum.
    h. Rubber-tired equipment may pass over the geosynthetic reinforcement at speeds of less than 5 miles per hour. Turning of rubber-tired equipment is not allowed on geosynthetic reinforcement.

SHEET INDEX

PAGE	DESCRIPTION
W1	TITLE PAGE/KEY PLAN
W2-W9	WALL ELEVATIONS
W10-W12	TYPICAL DETAILS & CROSS SECTIONS

BACKFILL PLACEMENT NOTES

1. Place reinforced backfill, spread and compact in a manner that will minimize slack in the reinforcement.
2. Place fill within the reinforced zone and compact in lifts not exceeding 6 to 8 inches (loose thickness) where hand-operated compaction equipment is used, and not exceeding 12 inches (loose thickness) where heavy, self propelled compaction equipment is used.
   a. Only lightweight hand-operated compaction equipment is allowed within 4 feet of the back of the retaining wall units. If unable to achieve minimum compaction requirements replace the reinforced soil in this zone with drainage aggregate material.
3. Minimum Compaction Requirements for Fill Placed in the Reinforced Zone:
   a. Compact to 95 percent of the soil's standard Proctor maximum dry density (ASTM D698) for the entire wall height.
   b. Compaction requirements for fill placed behind the reinforced soil zone shall be specified by the Project Geotechnical Engineer but at no time should be less than 95% of the standard Proctor density (ASTM D698).
   c. Increase compaction requirements for retaining walls with slope heights at the back of the reinforced soil zone greater than 5 feet above the top of wall. Verify compaction requirements with the Project geotechnical engineer.
   d. Utility Trench Backfill: Compact utility trench backfill in or below the reinforced soil zone to 98 percent of the soil's standard Proctor maximum dry density (ASTM D698), or as recommended by the Project geotechnical engineer.
   e. Moisture Content: Within 2 percentage points of the optimum moisture content for all wall heights.
   f. These notes may be changed based on recommendations by the Project geotechnical engineer.
4. At the end of each day's operation, slope the last level of compacted backfill away from the interior (concealed) face of the wall to direct surface water runoff away from the wall face.
   a. The General Contractor is responsible for ensuring that the finished site drainage is directed away from the retaining wall system.
   b. In addition, the General Contractor is responsible for ensuring that surface water runoff from adjacent construction areas is not allowed to enter the retaining wall area of the construction site.

CAP UNIT INSTALLATION NOTES

1. Apply adhesive to the top surface of the unit below and place the cap unit into desired position.
2. Cut cap units as necessary to obtain the proper fit.
3. Backfill and compact to top of cap unit.

WALL CONSTRUCTION TOLERANCE NOTES

1. Wall Construction Tolerances:
   a. Vertical Alignment: Plus or minus 1-1/4 inches over any 10-foot distance, with a maximum differential of 3 inches over the length of the wall.
   b. Horizontal Location Control from Grading Plan:
      b.1. Straight Lines: Plus or minus 1-1/4 inches over any 10-foot distance, with a maximum differential of 3 inches over the length of the wall.
   c. Immediate Post Construction Wall Batter: Within 2 degrees of the design batter of the concrete retaining wall units.
   d. Maximum Differential Settlement: 1:100.

FIELD QUALITY CONTROL NOTES

1. Installer is responsible for quality control of installation of system components. Owner to employ a qualified independent third party to verify the correct installation of system components in accordance with these specifications and the Drawings.
2. The Owner, at their expense, will retain a qualified professional to perform quality assurance checks of the installer's work.
3. Correct work which does not meet these specifications or the requirements shown on the Drawings at the installer's expense.
4. The Owner or Owner's Representative shall retain the services of a geotechnical engineer to perform compaction testing of the reinforced backfill placed and compacted in the reinforced backfill zone.
   a. Testing Frequency (or as directed by Project Geotechnical Engineer)
   b. One test for every 2 feet (vertical) of fill placed and compacted, for every 50 lineal feet of retaining wall.
   c. Vary compaction test locations to cover the entire area of the reinforced soil zone, including the area compacted by the hand-operated compaction equipment.

SITE DRAINAGE NOTE

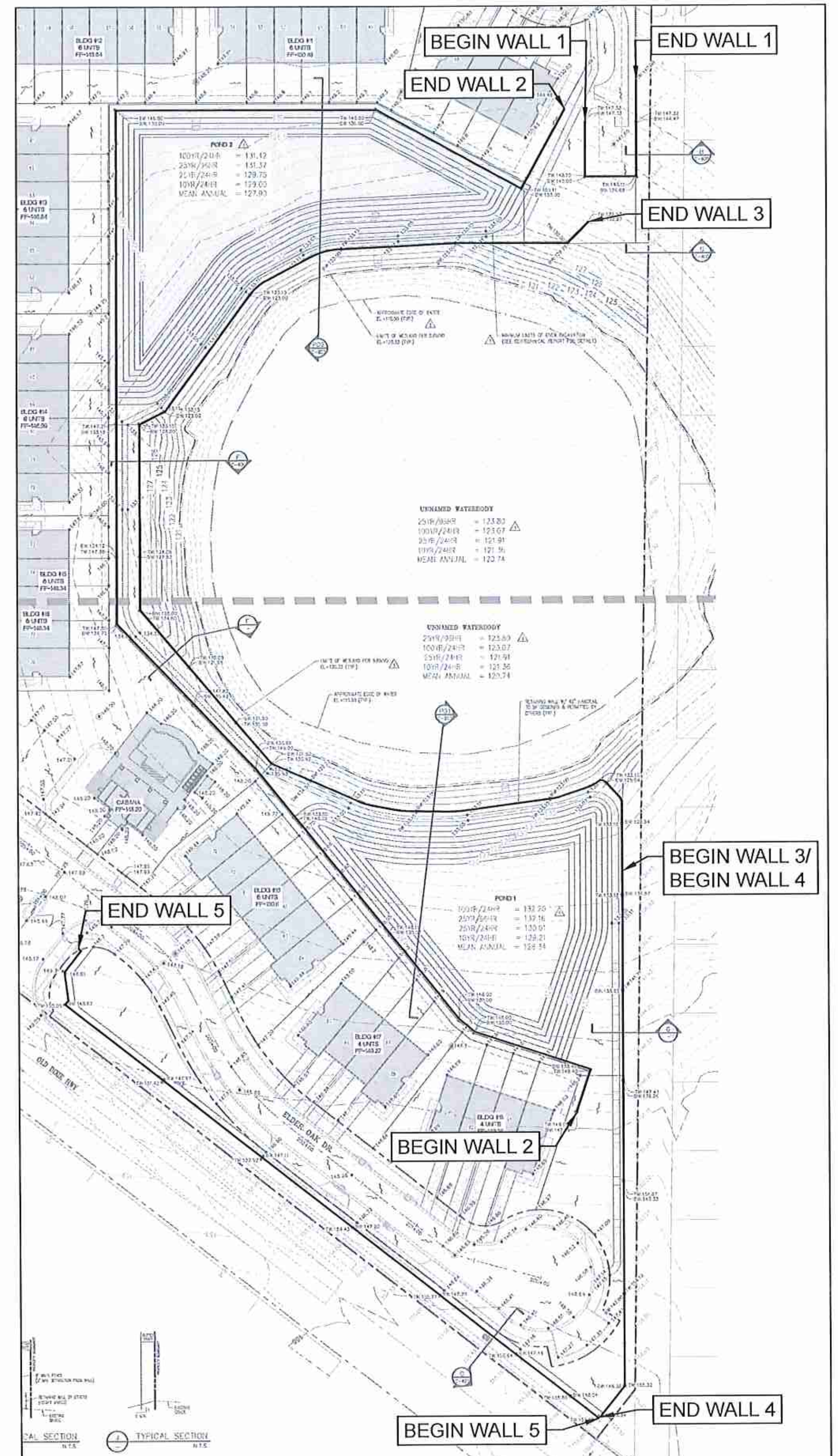
1. This design does not account for any hydrostatic forces on the retaining wall system. It is imperative the finished site grading diverts water away from the block facing and the reinforced soil zone of the retaining wall system. All buildings located above retaining walls must implement gutter systems with downspouts that direct water through solid PVC pipe to the site storm sewer system or to a location below and away from the wall. Building sump pumps should also direct water away from the wall in the same manner. Concentrated discharge of water above the retaining wall and the reinforced soil zone is not allowed.

UTILITY NOTES

1. Utility information has been provided to Anchor Wall Engineering for the preparation of these plans.
2. Utilities must be properly designed (by others) to withstand all forces from the segmental retaining wall units, reinforced soil mass, and surcharge loads (if any).
3. Storm drains are prone to leaking. Therefore, if a joint in a storm drain is located within 100 feet behind the retaining wall the storm water pipe must be water tight. Neoprene O-rings must be installed at all storm pipe joints as a minimum.
4. Water lines, including irrigation systems, must be water tight within 100 feet behind the retaining wall. Leakage behind a retaining wall will increase the horizontal pressure against the wall leading to wall failure. For this reason, subsurface waterlines and irrigation systems should not be installed above the reinforced zones of the retaining wall, or within 5 feet of the reinforced zone.

GENERAL NOTES

1. The owner or owner's representative has not provided foundation or retained soil strength parameters for design of the segmental retaining wall. In preparation of wall design, soil strength parameters for the foundation and retained soils were assumed by Anchor Wall Engineering, based on information provided in the Geotechnical Evaluation prepared by Universal Engineering Sciences (Project No. 0130.1800502.0000), dated November 16, 2018. It is the responsibility of the owner or owner's representative to verify the assumed soil strength parameters are representative of the soils available for wall construction. If the soil strength parameters are found to be inconsistent with those assumed by Anchor Wall Engineering, this design is no longer valid and it is the responsibility of the owner or owner's representative to notify Anchor Wall Engineering so the retaining wall system can be redesigned. Failure to notify Anchor Wall Engineering may result in failure of the retaining wall.
2. Assumed Design Soil Parameters:
   a. Reinforced soil: phi = 30 degrees gamma = 115 pcf.
   b. Retained soil: phi = 30 degrees gamma = 115 pcf.
   c. Foundation soil: phi = 30 degrees gamma = 115 pcf.
3. Any excavation below the wall should have proper 1:1 lateral oversizing. Excavation oversizing should be measured from the front of the gravel leveling pad and the back of the lowest reinforcement layer. Refer to detail 7 on sheet W10.
4. Wall stationing shown on sheets W2 through W9 is not related to any other stationing shown on the grading plans. Station 0+00 is on the left end of the wall as seen from the front of the wall.
5. This set of segmental retaining wall plans are based on the grading plans prepared by Madden Moorhead & Stokes, Inc., dated February 19, 2020. If other plans are produced that contain different information than that referenced, this plan may need to be revised and/or the walls may need to be redesigned.
6. This set of segmental retaining wall plans are based specifically on the walls being constructed with Anchor Diamond Pro block and Mirafi Miragrid 3XT reinforcement products. Absolutely no substitutions allowed.
7. Locations of the segmental retaining walls in relation to property lines, utility easements, watershed easements, or any other type of easements are the responsibility of the owner or the site civil engineer. Anchor Wall Engineering assumes no liability for the locations of the segmental retaining walls, or if construction of the proposed segmental retaining walls encroaches any property lines or easements.
8. It is imperative that the site surveying of the segmental retaining walls be done by the site civil engineer or surveyor and must be based on computer generated site/grading plans and not profile plans done by Anchor Wall Engineering. Surveying of the segmental retaining walls must take into account the design batter indicated on the enclosed plans and details. Failure to take into account wall batter for segmental retaining wall surveying will produce incorrect locations of all top of walls and shall be corrected at no cost to Anchor Wall Engineering or the segmental retaining wall contractor.
9. Wall geometry, locations, slopes and surcharge loads for the segmental retaining walls were measured from the grading plans referenced above, and partially reproduced to the right. If conditions vary in the field from those shown on this plan, Anchor Wall Engineering must be notified prior to construction of the segmental retaining walls to review the design and/or plans. Modifications to the design and/or plans may be required after the review, and may take up to ten business days to complete.
10. These segmental retaining walls have been designed in general accordance with the 2017 Florida Building Code, 6th Edition.
11. If there are discrepancies between any information on these plans and information in the project specifications, the more restrictive information takes precedence.



KEY PLAN
(N.T.S)

ANCHOR WALL ENGINEERING, LLC
5909 BAKER ROAD, SUITE 550
MINNETONKA, MN 55345-5996
PHONE: (952) 933-8855
CERTIFICATE OF AUTHORIZATION: 27077

This item has been electronically signed and sealed by Jon Huyck, PE on March 13, 2020 using a Digital Signature.

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

DESIGN ENGINEER: JON C. HUYCK
FLORIDA REGISTRATION: 61043

JON C. HUYCK LICENSE No 61043 STATE OF FLORIDA PROFESSIONAL ENGINEER

VERIFY THAT THE BAR ABOVE IS 1". IF NOT, ADJUST THE SCALE ACCORDINGLY.

Scale: NO SCALE INTENDED

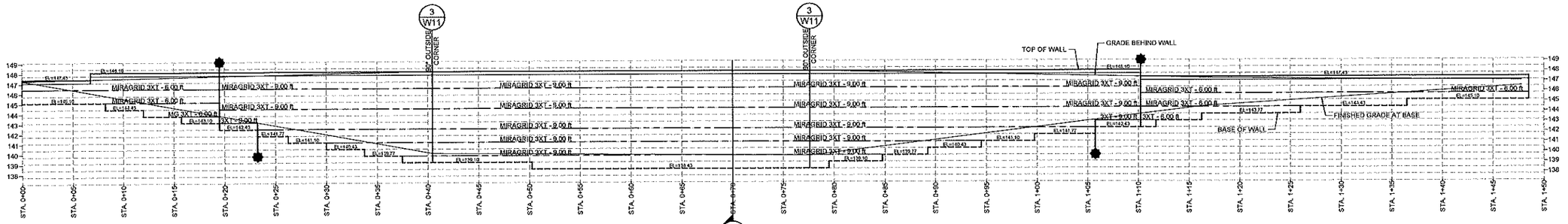
PROPOSED SEGMENTAL RETAINING WALLS
HIDDEN LAKE RESERVE
APOPKA, FLORIDA

OLDCASTLE COASTAL — TAMPA, FL

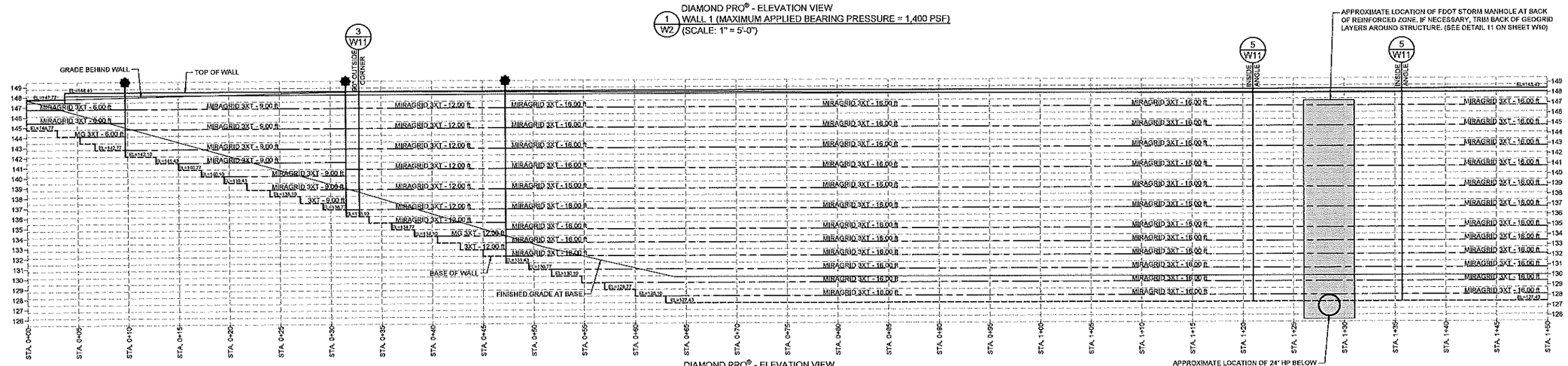
		Rev. No.	Date	Description
Drawn By:	MAH	1	3/6/20	Walls redesigned
Reviewed By:	DJA	2	3/13/20	Fence details revised
Proj. No.:	AF 20-014			
Date:	2/7/20			

SHEET W1 OF 12

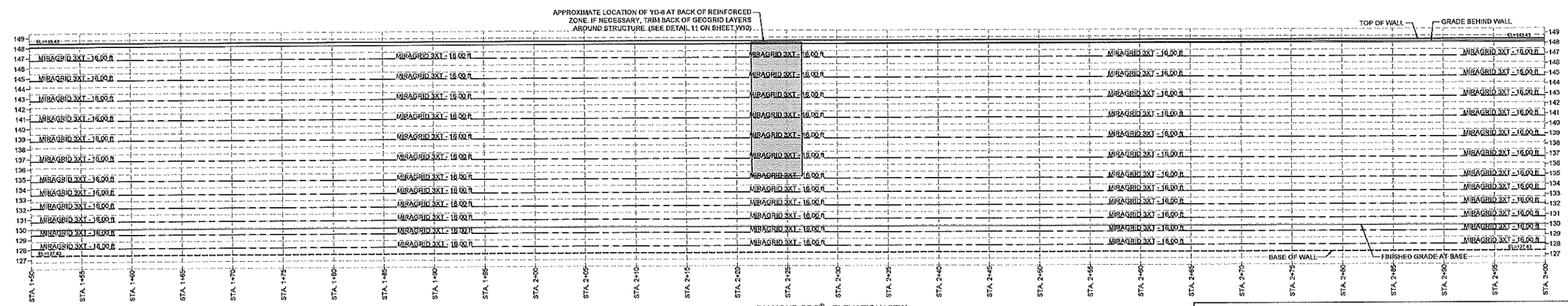
TITLE PAGE/KEY PLAN



DIAMOND PRO® - ELEVATION VIEW
1 / W2 WALL 1 (MAXIMUM APPLIED BEARING PRESSURE = 1,400 PSF)
(SCALE: 1" = 5'-0")



DIAMOND PRO® - ELEVATION VIEW
2 / W2 WALL 2 (MAXIMUM APPLIED BEARING PRESSURE = 2,900 PSF)
(SCALE: 1" = 5'-0")



DIAMOND PRO® - ELEVATION VIEW
3 / W2 WALL 2 (CONTINUED)
(SCALE: 1" = 5'-0")

NOTES:

1) LOCATIONS OF CURVES AND CORNERS SHOWN ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION OF THE SEGMENTAL RETAINING WALLS.

2) LOCATIONS OF UTILITIES SHOWN ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION OF THE SEGMENTAL RETAINING WALLS.

LEGEND

- X / WX - DETAIL NUMBER / SHEET NUMBER
- X / WX - INDICATES LOCATION OF SECTION CUT
- 1 / W11 - INDICATES APPROXIMATE LOCATION OF 90-DEGREE INSIDE CORNER
- 3 / W11 - INDICATES APPROXIMATE LOCATION OF 90-DEGREE OUTSIDE CORNER
- INDICATES REINFORCEMENT LENGTH AND/OR ELEVATION CHANGE
- 5 / W11 - INDICATES APPROXIMATE LOCATION OF INSIDE ANGLED CORNER
- 7 / W11 - INDICATES APPROXIMATE LOCATION OF OUTSIDE ANGLED CORNER
- 9 / W11 - INDICATES APPROXIMATE LOCATION OF INSIDE CURVE (STATIONING SHOWN)
- 11 / W11 - INDICATES APPROXIMATE LOCATION OF OUTSIDE CURVE (STATIONING SHOWN)

ANCHOR WALL ENGINEERING, LLC
5909 BAKER ROAD, SUITE 550
MINNETONKA, MN 55345-5996
PHONE: (952) 933-8855
CERTIFICATE OF AUTHORIZATION: 27077

This item has been electronically signed and sealed by Jon Huyck, PE on March 13, 2020 using a Digital Signature.

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

DESIGN ENGINEER: JON C. HUYCK
FLORIDA REGISTRATION: 61043

JON C. HUYCK LICENSE No 61043 STATE OF FLORIDA PROFESSIONAL ENGINEER

SCALE: 1" = 5'

PROPOSED SEGMENTAL RETAINING WALLS
HIDDEN LAKE RESERVE
APOPKA, FLORIDA

TAMPA, FL

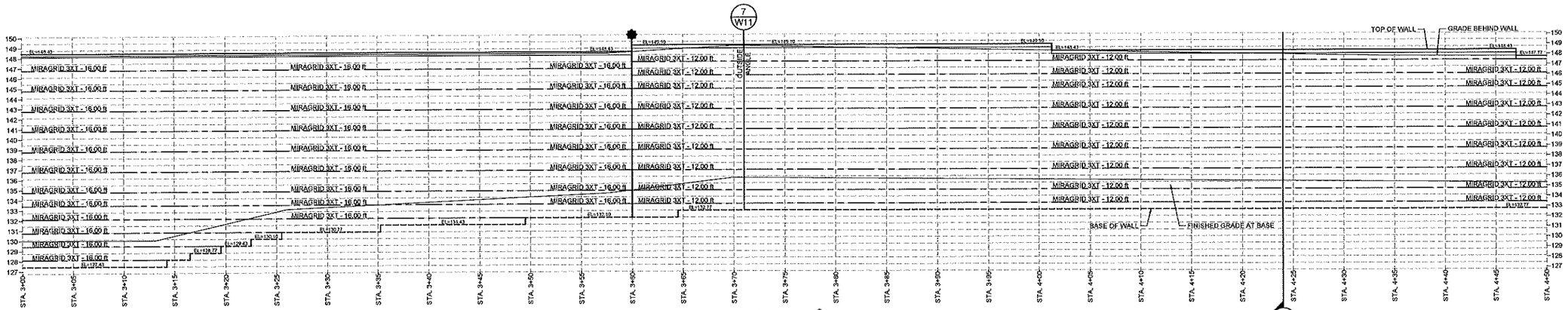
Rev. No.	Date	Description
1	3/9/20	Walls redesigned
2	3/13/20	Fence details revised

OLDCASTLE COASTAL

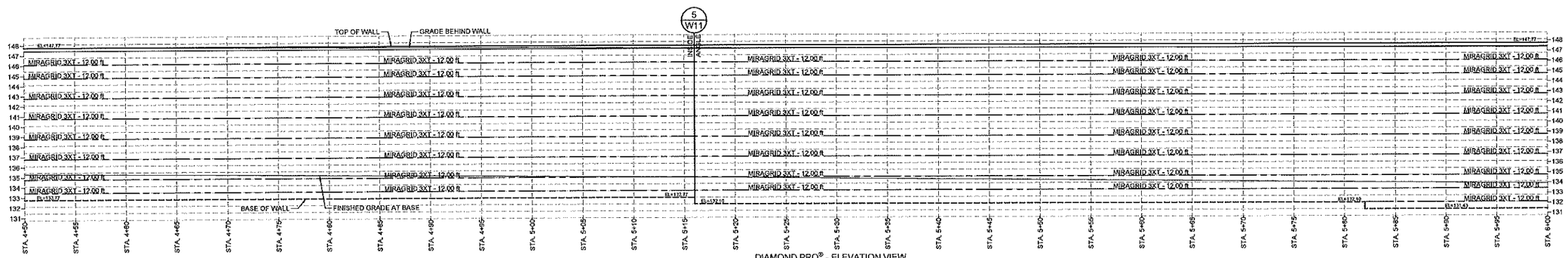
Drawn By:	MAH
Reviewed By:	DJA
Proj. No.:	AW-19-014
Date:	2/7/20

SHEET W2 OF 12

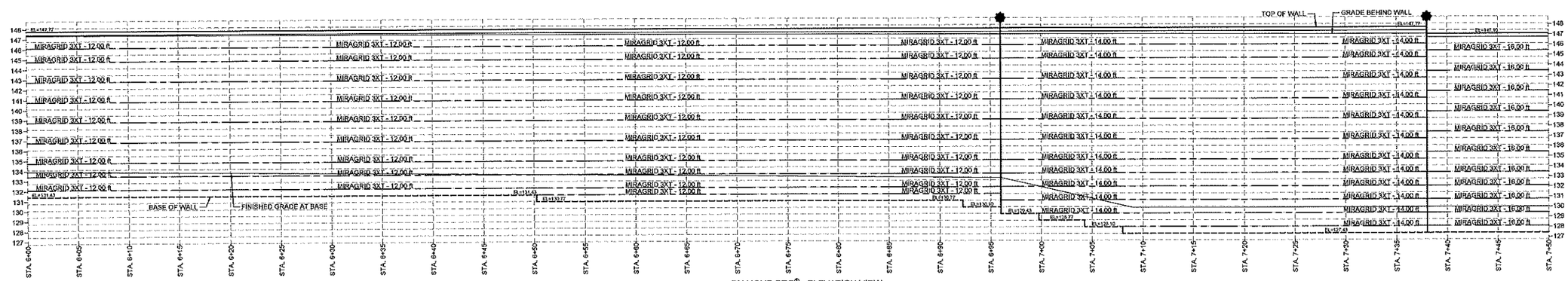
WALL ELEVATIONS



DIAMOND PRO® - ELEVATION VIEW
1 W3 WALL 2 (CONTINUED)
(SCALE: 1" = 5'-0")



DIAMOND PRO® - ELEVATION VIEW
2 W3 WALL 2 (CONTINUED)
(SCALE: 1" = 5'-0")



DIAMOND PRO® - ELEVATION VIEW
3 W3 WALL 2 (CONTINUED)
(SCALE: 1" = 5'-0")

NOTES:

1) LOCATIONS OF CURVES AND CORNERS SHOWN ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION OF THE SEGMENTAL RETAINING WALLS.

2) LOCATIONS OF UTILITIES SHOWN ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION OF THE SEGMENTAL RETAINING WALLS.

LEGEND

- X/WX - DETAIL NUMBER / SHEET NUMBER
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- INDICATES REINFORCEMENT LENGTH AND/OR ELEVATION CHANGE
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- 7/W11 - INDICATES APPROXIMATE LOCATION OF OUTSIDE ANGLED CORNER
- 9/W11 - INDICATES APPROXIMATE LOCATION OF INSIDE CURVE (STATIONING SHOWN)
- 11/W11 - INDICATES APPROXIMATE LOCATION OF OUTSIDE CURVE (STATIONING SHOWN)

ANCHOR WALL ENGINEERING, LLC
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MINNETONKA, MN 55345-5996
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FLORIDA REGISTRATION: 61043

JON C. HUYCK LICENSE No 61043 STATE OF FLORIDA PROFESSIONAL ENGINEER

SCALE: 1" = 5'

PROPOSED SEGMENTAL RETAINING WALLS
HIDDEN LAKE RESERVE
APOPKA, FLORIDA
TAMPA, FL

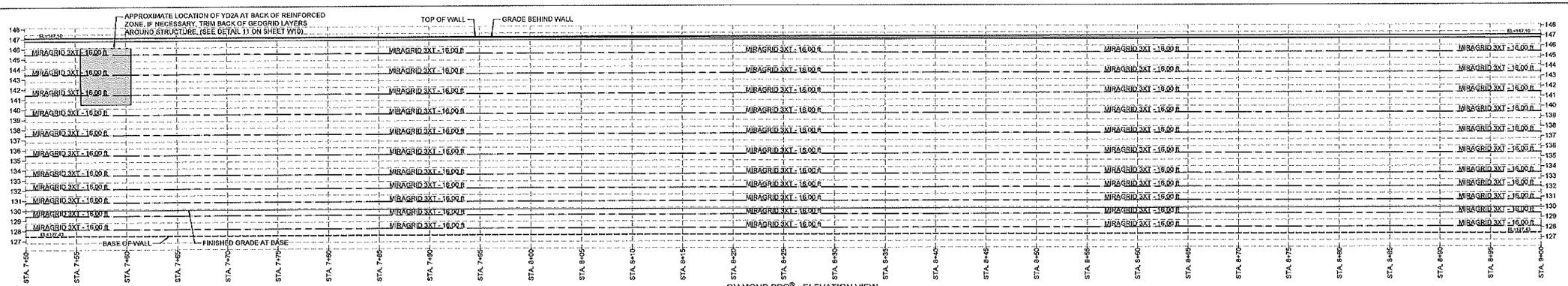
OLDCASTLE COASTAL

Rev. No.	Date	Description
1	3/6/20	Walls redesigned
2	3/13/20	Fence details revised

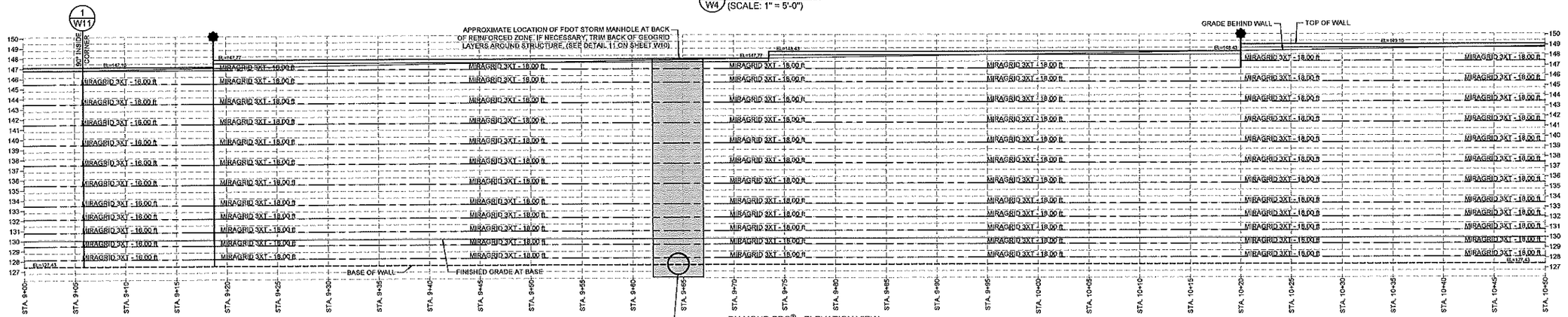
Drawn By: MAH
Reviewed By: DJA
Proj. No.: AP-20-14
Date: 2/7/20

SHEET W3 OF 12

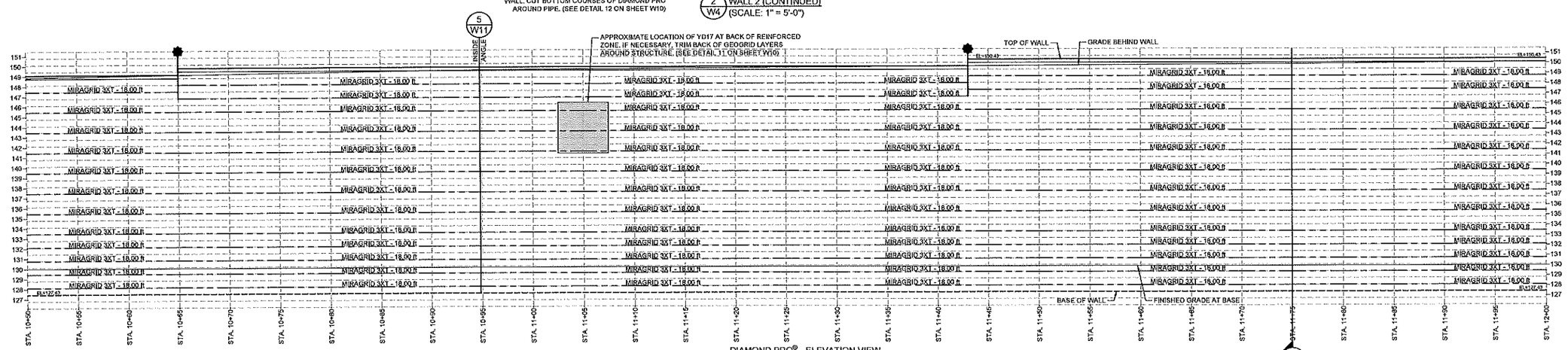
WALL ELEVATIONS



1 W4 DIAMOND PRO® - ELEVATION VIEW WALL 2 (CONTINUED) (SCALE: 1" = 5'-0")



2 W4 DIAMOND PRO® - ELEVATION VIEW WALL 2 (CONTINUED) (SCALE: 1" = 5'-0")



3 W4 DIAMOND PRO® - ELEVATION VIEW WALL 2 (CONTINUED) (SCALE: 1" = 5'-0")

LEGEND

- X/WX - DETAIL NUMBER / SHEET NUMBER
- X/WX - INDICATES LOCATION OF SECTION CUT
- 1/W11 - INDICATES APPROXIMATE LOCATION OF 90-DEGREE INSIDE CORNER
- 3/W11 - INDICATES APPROXIMATE LOCATION OF 90-DEGREE OUTSIDE CORNER
- INDICATES REINFORCEMENT LENGTH AND/OR ELEVATION CHANGE
- 5/W11 - INDICATES APPROXIMATE LOCATION OF INSIDE ANGLED CORNER
- 7/W11 - INDICATES APPROXIMATE LOCATION OF OUTSIDE ANGLED CORNER
- 9/W11 - INDICATES APPROXIMATE LOCATION OF INSIDE CURVE (STATIONING SHOWN)
- 11/W11 - INDICATES APPROXIMATE LOCATION OF OUTSIDE CURVE (STATIONING SHOWN)

NOTES:

1) LOCATIONS OF CURVES AND CORNERS SHOWN ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION OF THE SEGMENTAL RETAINING WALLS.

2) LOCATIONS OF UTILITIES SHOWN ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION OF THE SEGMENTAL RETAINING WALLS.

ANCHOR WALL ENGINEERING, LLC
5909 BAKER ROAD, SUITE 550
MINNETONKA, MN 55345-5996
PHONE: (952) 933-8655
CERTIFICATE OF AUTHORIZATION: 27077

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FLORIDA REGISTRATION: 61043

JON C. HUYCK LICENSE No 61043 STATE OF FLORIDA PROFESSIONAL ENGINEER

SCALE: 1" = 5'

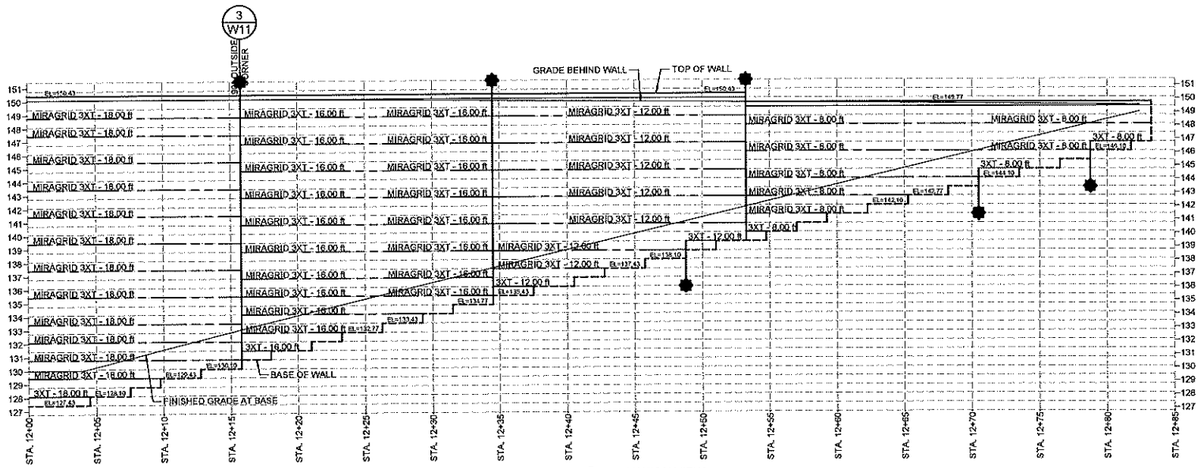
PROPOSED SEGMENTAL RETAINING WALLS
HIDDEN LAKE RESERVE
APOPKA, FLORIDA
TAMPA, FL

Rev. No.	Date	Description
1	3/6/20	Walls redesigned
2	3/13/20	Fence details revised

OLDCASTLE COASTAL
Drawn By: MAH
Reviewed By: DJA
Proj. No.: AF-042414
Date: 2/07/20

SHEET W4 OF 12

WALL ELEVATIONS



1 W5 DIAMOND PRO® - ELEVATION VIEW
WALL 2 (CONTINUED)
(SCALE: 1" = 5'-0")

NOTES:

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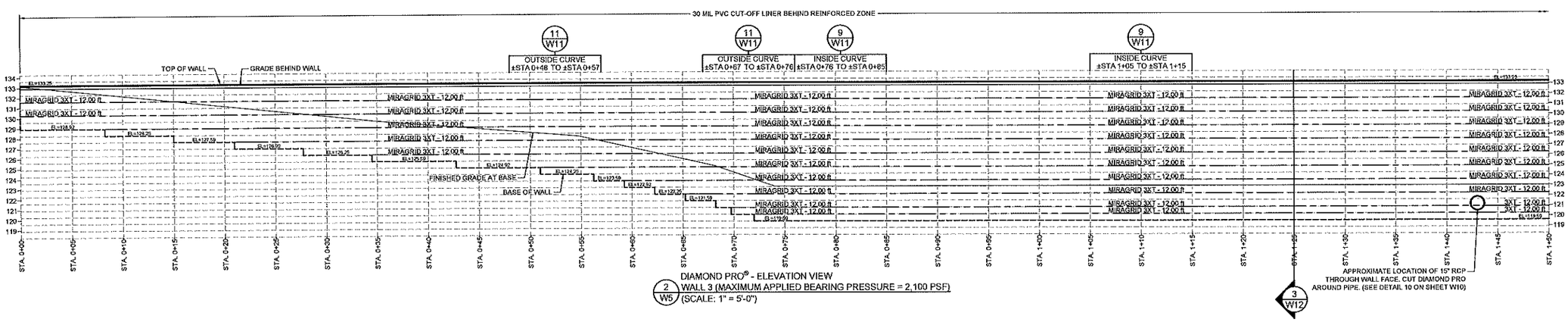
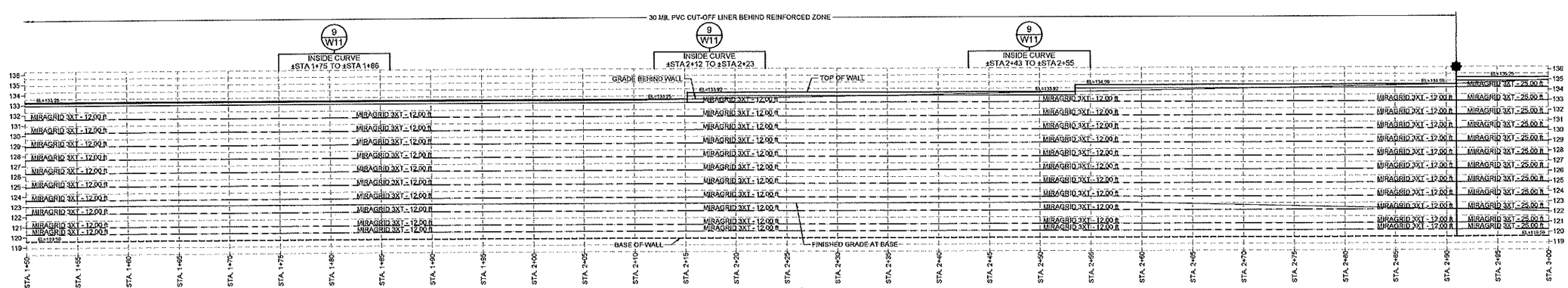
2) LOCATIONS OF UTILITIES SHOWN ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION OF THE SEGMENTAL RETAINING WALLS.

LEGEND

- INDICATES REINFORCEMENT LENGTH AND/OR ELEVATION CHANGE
- X / WX - DETAIL NUMBER / SHEET NUMBER
- X / WX - INDICATES LOCATION OF SECTION CUT
- 1 / W11 - INDICATES APPROXIMATE LOCATION OF 90-DEGREE INSIDE CORNER
- 3 / W11 - INDICATES APPROXIMATE LOCATION OF 90-DEGREE OUTSIDE CORNER
- 5 / W11 - INDICATES APPROXIMATE LOCATION OF INSIDE ANGLED CORNER
- 7 / W11 - INDICATES APPROXIMATE LOCATION OF OUTSIDE ANGLED CORNER
- 9 / W11 - INDICATES APPROXIMATE LOCATION OF INSIDE CURVE (STATIONING SHOWN)
- 11 / W11 - INDICATES APPROXIMATE LOCATION OF OUTSIDE CURVE (STATIONING SHOWN)



2 W5 DIAMOND PRO® - ELEVATION VIEW
WALL 3 (MAXIMUM APPLIED BEARING PRESSURE = 2,100 PSF)
(SCALE: 1" = 5'-0")



3 W5 DIAMOND PRO® - ELEVATION VIEW
WALL 3 (CONTINUED)
(SCALE: 1" = 5'-0")

ANCHOR WALL ENGINEERING, LLC
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MINNETONKA, MN 55345-5996
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DESIGN ENGINEER: JON C. HUYCK
FLORIDA REGISTRATION: 61043

JON C. HUYCK LICENSE No 61043 STATE OF FLORIDA PROFESSIONAL ENGINEER

SCALE: 1" = 5'

PROPOSED SEGMENTAL RETAINING WALLS
HIDDEN LAKE RESERVE
APOPKA, FLORIDA

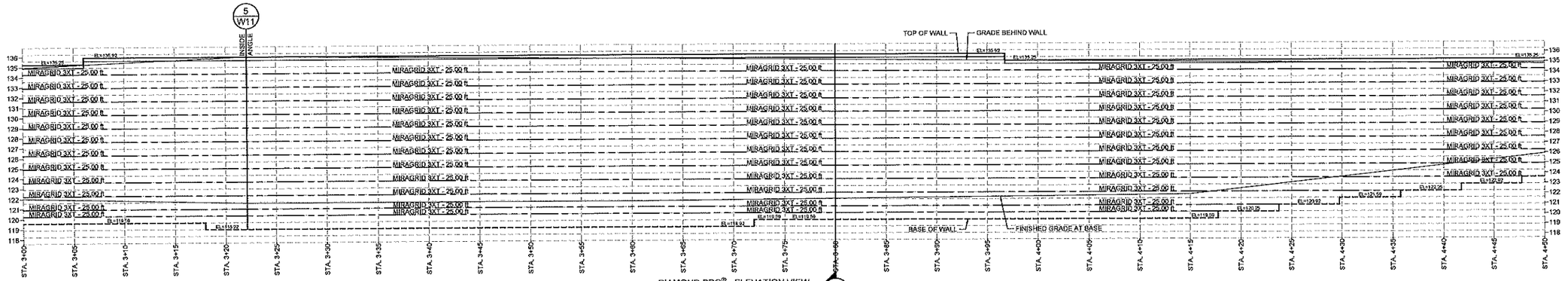
TAMPA, FL

Rev. No.	Date	Description
1	3/6/20	Walls redesigned
2	3/13/20	Fence details revised

OLDCASTLE COASTAL
Drawn By: MJH
Reviewed By: DJA
Proj. No.: AF 20-014
Date: 2/7/20

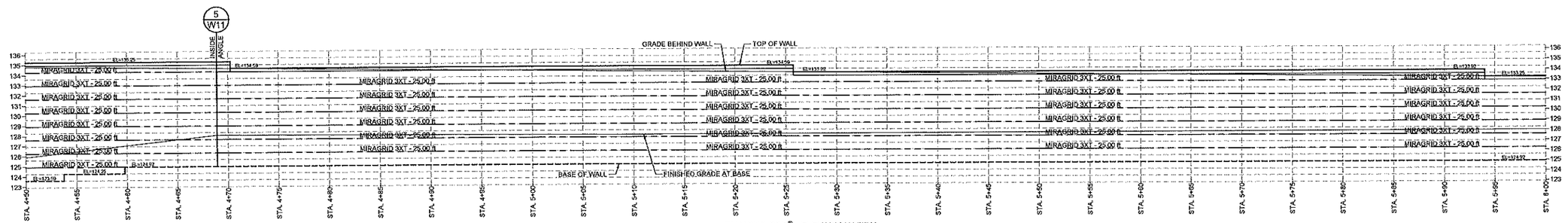
SHEET W5 OF 12

WALL ELEVATIONS

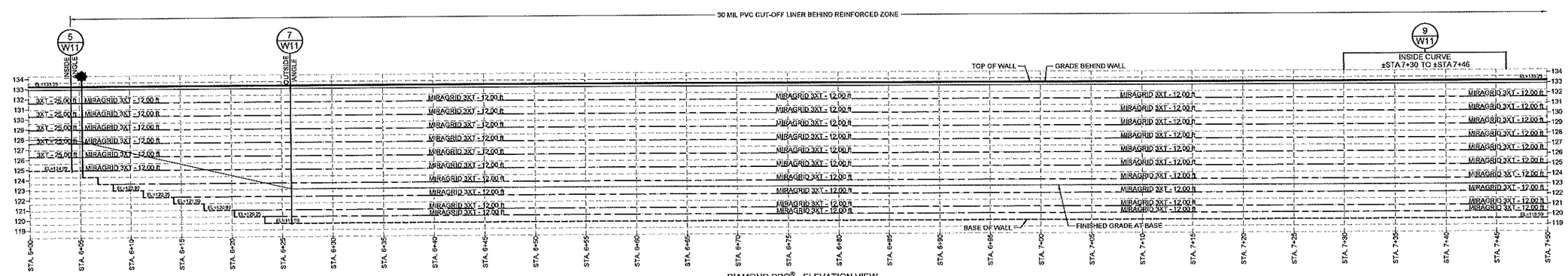


1 W6 DIAMOND PRO® - ELEVATION VIEW
WALL 3 (CONTINUED)
(SCALE: 1" = 5'-0")

4 W12



2 W6 DIAMOND PRO® - ELEVATION VIEW
WALL 3 (CONTINUED)
(SCALE: 1" = 5'-0")



3 W6 DIAMOND PRO® - ELEVATION VIEW
WALL 3 (CONTINUED)
(SCALE: 1" = 5'-0")

NOTES:

1) LOCATIONS OF CURVES AND CORNERS SHOWN ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION OF THE SEGMENTAL RETAINING WALLS.

2) LOCATIONS OF UTILITIES SHOWN ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION OF THE SEGMENTAL RETAINING WALLS.

LEGEND

- X / WX - DETAIL NUMBER / SHEET NUMBER
- X / WX - INDICATES LOCATION OF SECTION CUT
- 1 / W11 - INDICATES APPROXIMATE LOCATION OF 90-DEGREE INSIDE CORNER
- 3 / W11 - INDICATES APPROXIMATE LOCATION OF 90-DEGREE OUTSIDE CORNER
- INDICATES REINFORCEMENT LENGTH AND/OR ELEVATION CHANGE
- 5 / W11 - INDICATES APPROXIMATE LOCATION OF INSIDE ANGLED CORNER
- 7 / W11 - INDICATES APPROXIMATE LOCATION OF OUTSIDE ANGLED CORNER
- 9 / W11 - INDICATES APPROXIMATE LOCATION OF INSIDE CURVE (STATIONING SHOWN)
- 11 / W11 - INDICATES APPROXIMATE LOCATION OF OUTSIDE CURVE (STATIONING SHOWN)

ANCHOR WALL ENGINEERING, LLC
5908 BAKER ROAD, SUITE 550
MINNETONKA, MN 55345-5996
PHONE: (952) 933-8855
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FLORIDA REGISTRATION 61043

JON C. HUYCK LICENSE No 61043 STATE OF FLORIDA PROFESSIONAL ENGINEER

SCALE: 1" = 5'

PROPOSED SEGMENTAL RETAINING WALLS
HIDDEN LAKE RESERVE
APOPKA, FLORIDA

TAMPA, FL

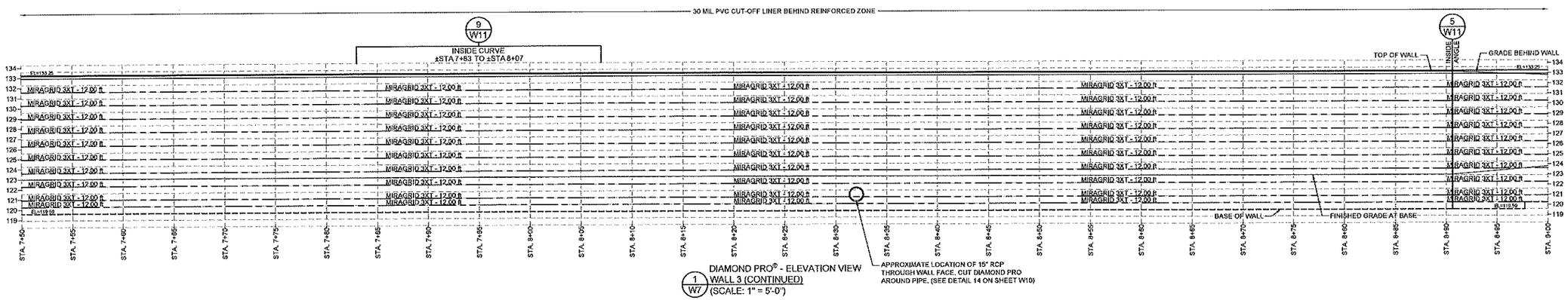
Rev. No.	Date	Description
1	3/6/20	Walls redesigned
2	3/13/20	Fence details revised

CULDCASTLE COASTAL

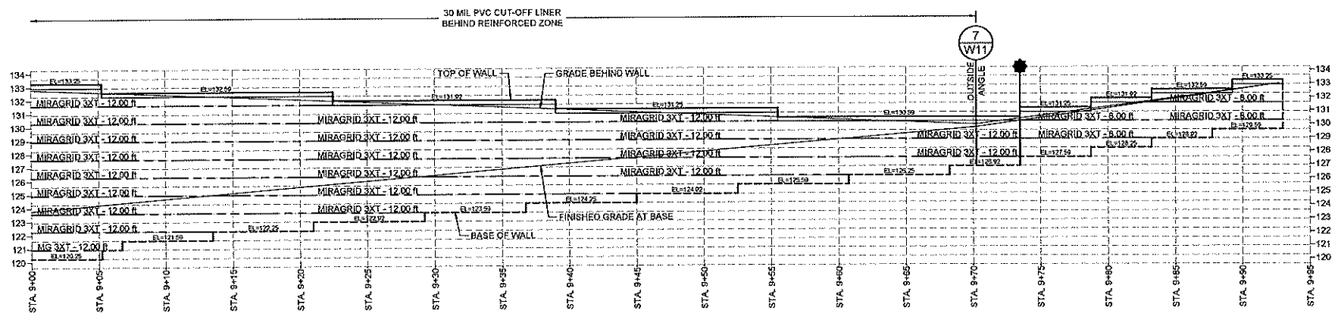
Drawn By:	SJW
Reviewed By:	DJA
Proj. No.:	AP 20-014
Date:	2/7/20

SHEET W6 OF 12

WALL ELEVATIONS



1 W7 DIAMOND PRO® - ELEVATION VIEW
WALL 3 (CONTINUED)
(SCALE: 1" = 5'-0")



2 W7 DIAMOND PRO® - ELEVATION VIEW
WALL 3 (CONTINUED)
(SCALE: 1" = 5'-0")

NOTES:

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LEGEND

- INDICATES REINFORCEMENT LENGTH AND/OR ELEVATION CHANGE
- X / WX - DETAIL NUMBER / SHEET NUMBER
- X / WX - INDICATES LOCATION OF SECTION CUT
- 1 / W11 - INDICATES APPROXIMATE LOCATION OF 90-DEGREE INSIDE CORNER
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ANCHOR WALL ENGINEERING, LLC
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PHONE: (952) 933-8855
CERTIFICATE OF AUTHORIZATION: 27077

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FLORIDA REGISTRATION: 61043

JON C. HUYCK LICENSE No 61043 STATE OF FLORIDA PROFESSIONAL ENGINEER

SCALE: 1" = 5'

PROPOSED SEGMENTAL RETAINING WALLS
HIDDEN LAKE RESERVE
APOPKA, FLORIDA
TAMPA, FL

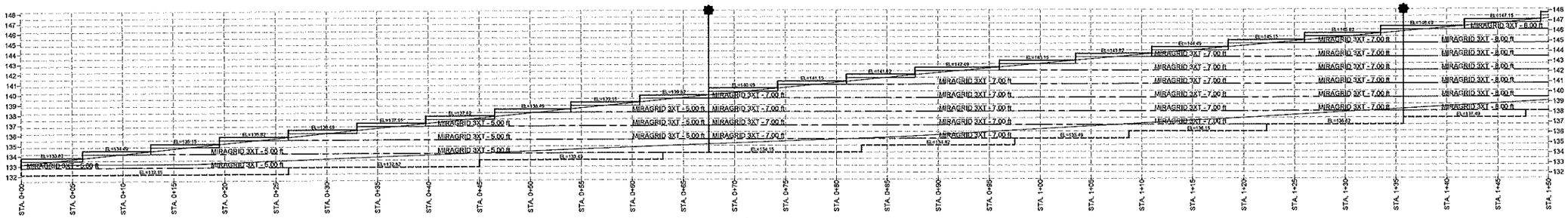
Rev. No.	Date	Description
1	3/6/20	Walls redesigned
2	3/13/20	Fence details revised

OLDCASTLE COASTAL

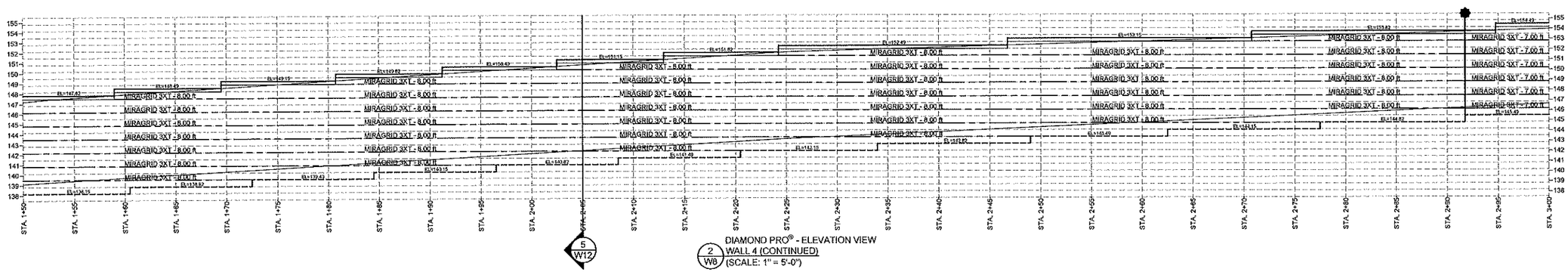
Drawn By:	MAH
Reviewed By:	DJA
Proj. No.:	AF 29-214
Date:	2/7/20

SHEET W7 OF 12

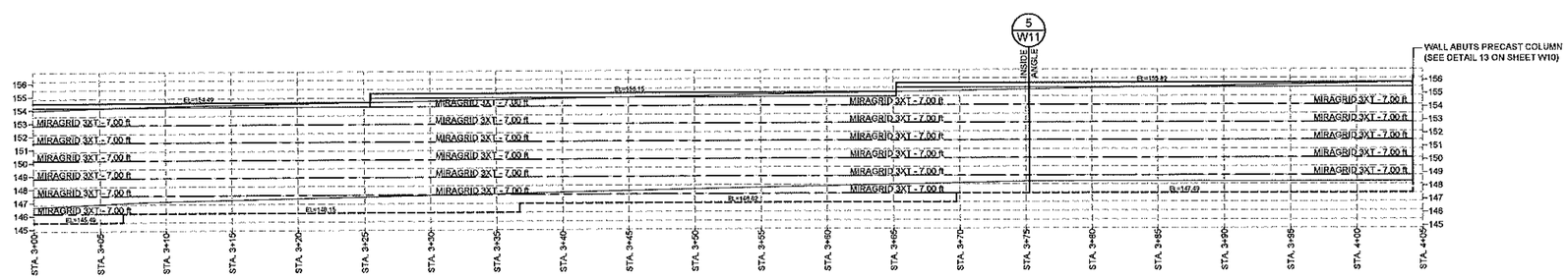
WALL ELEVATIONS



1 W8 DIAMOND PRO® - ELEVATION VIEW
WALL 4 (MAXIMUM APPLIED BEARING PRESSURE = 1,200 PSF)
(SCALE: 1" = 5'-0")



2 W8 DIAMOND PRO® - ELEVATION VIEW
WALL 4 (CONTINUED)
(SCALE: 1" = 5'-0")



3 W8 DIAMOND PRO® - ELEVATION VIEW
WALL 4 (CONTINUED)
(SCALE: 1" = 5'-0")

NOTES:

1) LOCATIONS OF CURVES AND CORNERS SHOWN ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION OF THE SEGMENTAL RETAINING WALLS.

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LEGEND

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- X / WX - DETAIL NUMBER / SHEET NUMBER
- X / WX - INDICATES LOCATION OF SECTION CUT
- 1 / W11 - INDICATES APPROXIMATE LOCATION OF 90-DEGREE INSIDE CORNER
- 3 / W11 - INDICATES APPROXIMATE LOCATION OF 90-DEGREE OUTSIDE CORNER
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- 9 / W11 - INDICATES APPROXIMATE LOCATION OF INSIDE CURVE (STATIONING SHOWN)
- 11 / W11 - INDICATES APPROXIMATE LOCATION OF OUTSIDE CURVE (STATIONING SHOWN)

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FLORIDA REGISTRATION: 61043

JON C. HUYCK LICENSE No 61043 STATE OF FLORIDA PROFESSIONAL ENGINEER

SCALE: 1" = 5'

PROPOSED SEGMENTAL RETAINING WALLS
HIDDEN LAKE RESERVE
APOPKA, FLORIDA
TAMPA, FL.

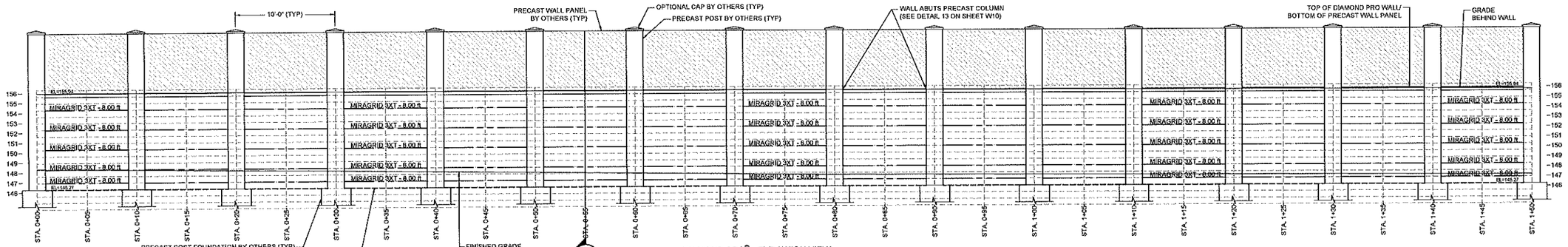
OLDCASTLE COASTAL

Rev. No.	Date	Description
1	3/6/20	Walls redesigned
2	3/13/20	Focus details revised

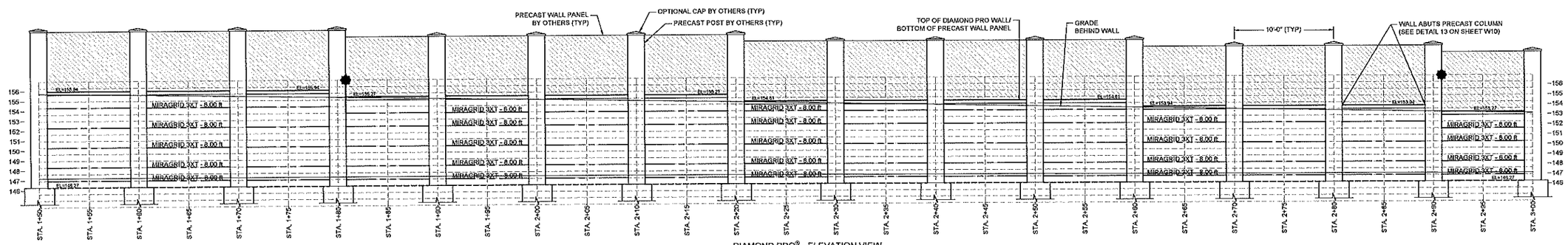
Drawn By: MJH
Reviewed By: DJA
Proj. No.: Ar 20014
Date: 2/7/20

SHEET W8 OF 12

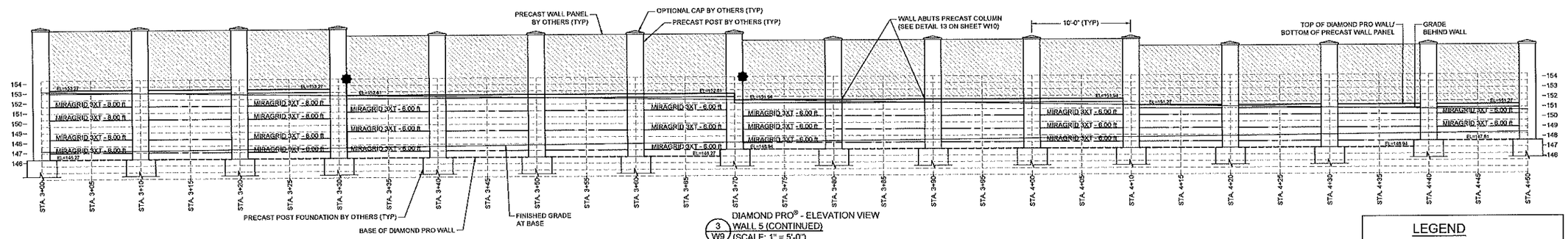
WALL ELEVATIONS



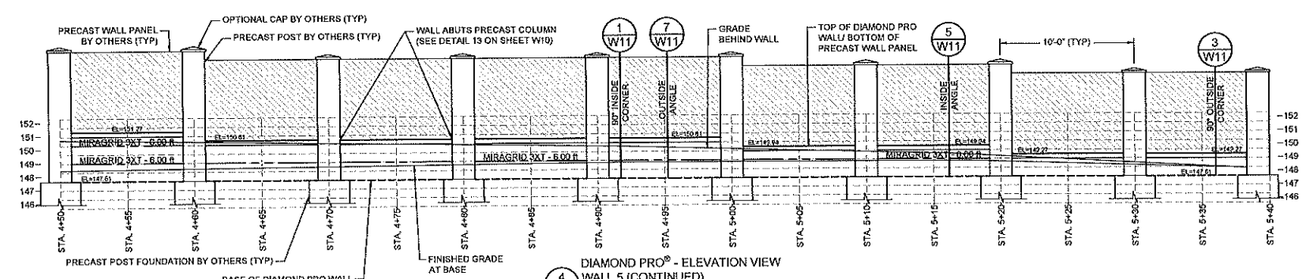
1 W9 DIAMOND PRO® - ELEVATION VIEW
WALL 5 (MAXIMUM APPLIED BEARING PRESSURE = 1,100 PSF)
(SCALE: 1" = 5'-0")



2 W9 DIAMOND PRO® - ELEVATION VIEW
WALL 5 (CONTINUED)
(SCALE: 1" = 5'-0")



3 W9 DIAMOND PRO® - ELEVATION VIEW
WALL 5 (CONTINUED)
(SCALE: 1" = 5'-0")



4 W9 DIAMOND PRO® - ELEVATION VIEW
WALL 5 (CONTINUED)
(SCALE: 1" = 5'-0")

NOTE: THE COLUMNS WITH PRECAST PANELS SHOWN ARE CONCEPTUAL ONLY. THE LOCATION AND DESIGN OF EACH COLUMN AND PANEL SHOULD BE DETERMINED BY THE APPROVED CIVIL DRAWINGS.

NOTES:

1) LOCATIONS OF CURVES AND CORNERS SHOWN ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION OF THE SEGMENTAL RETAINING WALLS.

2) LOCATIONS OF UTILITIES SHOWN ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION OF THE SEGMENTAL RETAINING WALLS.

LEGEND

- INDICATES REINFORCEMENT LENGTH AND/OR ELEVATION CHANGE
- X / WX - DETAIL NUMBER / SHEET NUMBER
- X / WX - INDICATES LOCATION OF SECTION CUT
- 1 / W11 - INDICATES APPROXIMATE LOCATION OF 90-DEGREE INSIDE CORNER
- 3 / W11 - INDICATES APPROXIMATE LOCATION OF 90-DEGREE OUTSIDE CORNER
- 5 / W11 - INDICATES APPROXIMATE LOCATION OF INSIDE ANGLED CORNER
- 7 / W11 - INDICATES APPROXIMATE LOCATION OF OUTSIDE ANGLED CORNER
- 9 / W11 - INDICATES APPROXIMATE LOCATION OF INSIDE CURVE (STATIONING SHOWN)
- 11 / W11 - INDICATES APPROXIMATE LOCATION OF OUTSIDE CURVE (STATIONING SHOWN)

ANCHOR WALL ENGINEERING, LLC
5909 BAKER ROAD, SUITE 550
MINNETONKA, MN 55345-5996
PHONE: (952) 933-8855
CERTIFICATE OF AUTHORIZATION: 27077

This item has been electronically signed and sealed by Jon Huyck, PE on March 13, 2020 using a Digital Signature.

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

DESIGN ENGINEER: JON C. HUYCK
FLORIDA REGISTRATION: 61043

JON C. HUYCK LICENSE No 61043 STATE OF FLORIDA PROFESSIONAL ENGINEER

SCALE: 1" = 5'

PROPOSED SEGMENTAL RETAINING WALLS
HIDDEN LAKE RESERVE
APOPKA, FLORIDA

TAMPA, FL

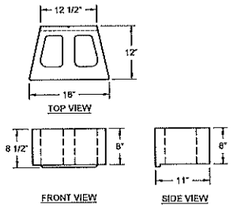
Rev. No.	Date	Description
1	3/6/20	Walls redesigned
2	3/13/20	Fence details revised

OLDCASTLE COASTAL

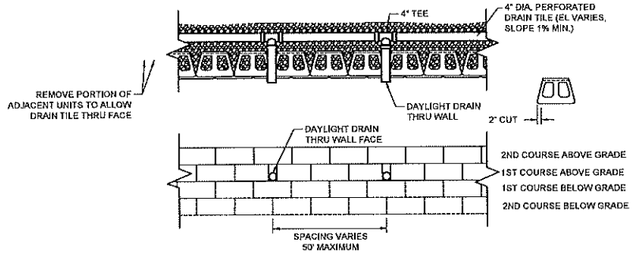
Drawn By:	JMH
Reviewed By:	DJA
Proj. No.:	AF-30414
Date:	2/17/20

SHEET W9 OF 12

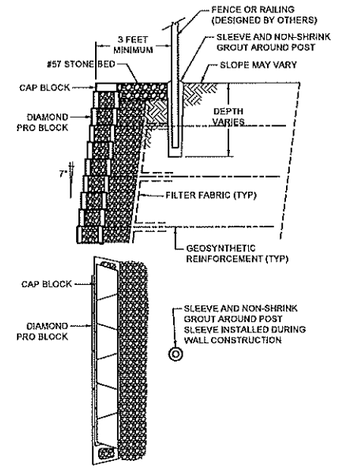
WALL ELEVATIONS



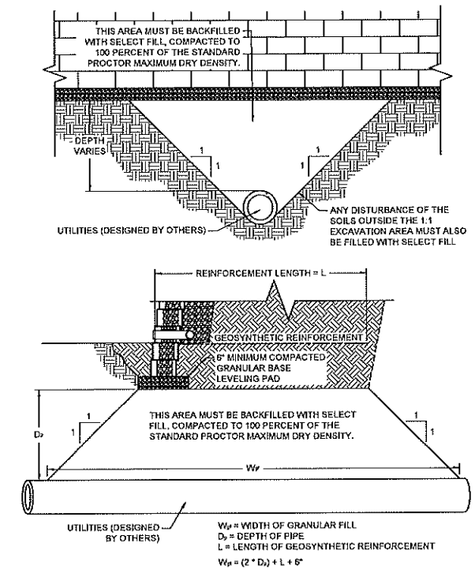
1 W10 DIAMOND PRO® 3-WAY BLOCK VIEWS (NOT TO SCALE)



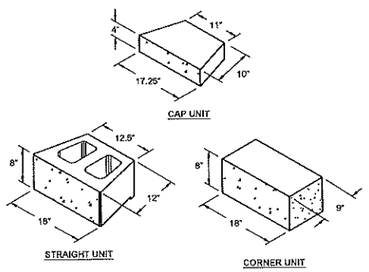
5 W10 DIAMOND PRO® DAYLIGHT DRAINTILE THROUGH WALL (NOT TO SCALE)



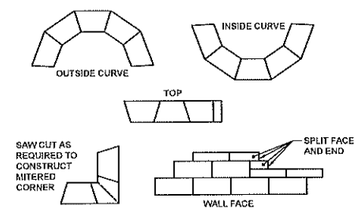
9 W10 DIAMOND PRO® FENCE BEHIND WALL (IF REQUIRED) (NOT TO SCALE)



12 W10 DIAMOND PRO® UTILITY PIPE BELOW WALL (NOT TO SCALE)

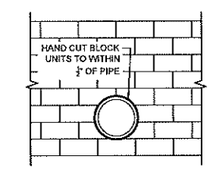


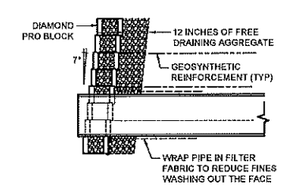
2 W10 DIAMOND PRO® ISOMETRIC BLOCK VIEWS (NOT TO SCALE)



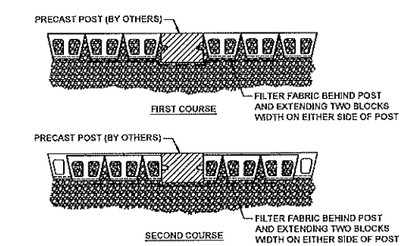
1. ALWAYS START CAPPING WALL FROM THE LOWEST ELEVATION.
2. LAYOUT CAPS PRIOR TO USING ADHESIVE.
3. CUT CAPS TO FIT. VARIOUS COMBINATIONS OF LONG AND SHORT CAP FACES WILL BE NECESSARY FOR RADII GREATER THAN THE MINIMUM.
4. ALTERNATE SHORT AND LONG CAP FACES EVERY OTHER CAP TO ACHIEVE A STRAIGHT ROW OF CAPS.
5. USE EXTERIOR-GRADE CONSTRUCTION ADHESIVE TO SECURE CAPS.
6. REFER TO DETAIL 2 ON SHEET W10 FOR ADDITIONAL INFORMATION.

6 W10 DIAMOND PRO® CAP BLOCK DESIGN DETAILS (NOT TO SCALE)

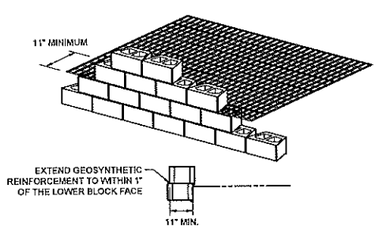




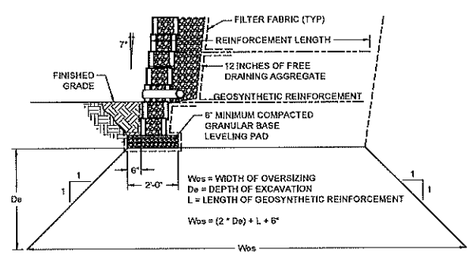
10 W10 DIAMOND PRO® THROUGH WALL PIPE OUTLET (NOT TO SCALE)



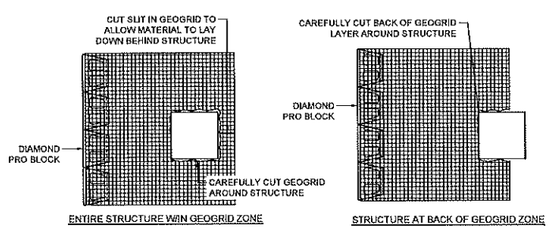
13 W10 DIAMOND PRO® WALL ABUTS PRECAST POST (NOT TO SCALE)



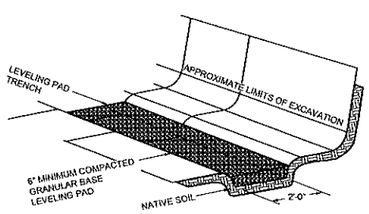
3 W10 DIAMOND PRO® REINFORCEMENT CONNECTION DETAIL (NOT TO SCALE)



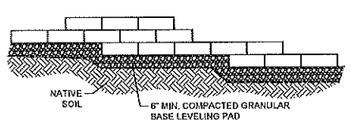
7 W10 DIAMOND PRO® 1:1 EXCAVATION OVERSIZING (NOT TO SCALE)



11 W10 DIAMOND PRO® DROP STRUCTURE IN REINFORCED ZONE (NOT TO SCALE)



4 W10 DIAMOND PRO® TYPICAL BASE PREPARATION (NOT TO SCALE)



8 W10 DIAMOND PRO® TYPICAL STEP-UP DETAIL (NOT TO SCALE)

ANCHOR WALL ENGINEERING, LLC
5909 BAKER ROAD, SUITE 550
MINNETONKA, MN 55345-5996
PHONE: (952) 933-8855
CERTIFICATE OF AUTHORIZATION: 27077

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DESIGN ENGINEER: JON C. HUYCK
FLORIDA REGISTRATION: 61043

JON C. HUYCK LICENSE No 61043 STATE OF FLORIDA PROFESSIONAL ENGINEER

PROPOSED SEGMENTAL RETAINING WALLS
HIDDEN LAKE RESERVE
APOPKA, FLORIDA
TAMPA, FL

Rev. No.	Date	Description
1	3/6/20	Walls redesigned
2	3/13/20	Fence details revised

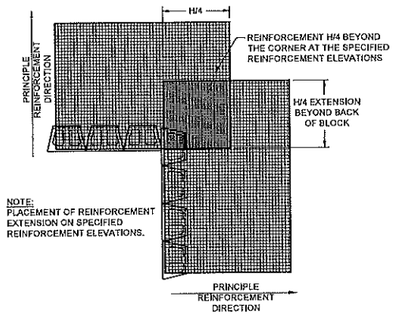
OLDCASTLE COASTAL
Drawn By: MAH
Reviewed By: DJA
Proj. No.: AF-30404
Date: 2/7/20

Scale: AS SHOWN

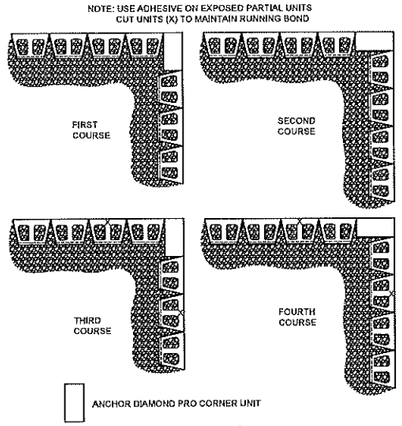
0 1
VERIFY THAT THIS BAR ABOVE IS 1" IF NOT, ADJUST THE DRAWING SCALE ACCORDINGLY

SHEET W10 OF 12

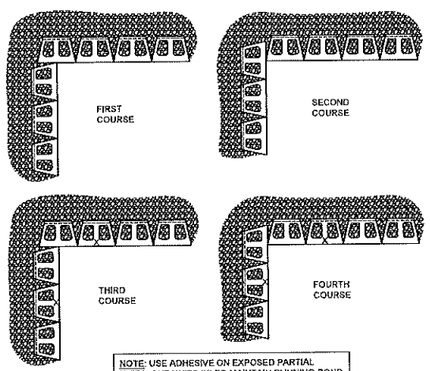
TYPICAL DETAILS



1 W11 DIAMOND PRO® 90-DEGREE INSIDE CORNER W/ GRID (NOT TO SCALE)



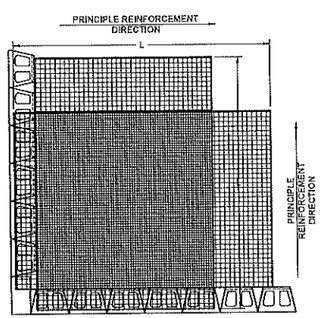
4 W11 DIAMOND PRO® 90-DEGREE OUTSIDE CORNER (NOT TO SCALE)



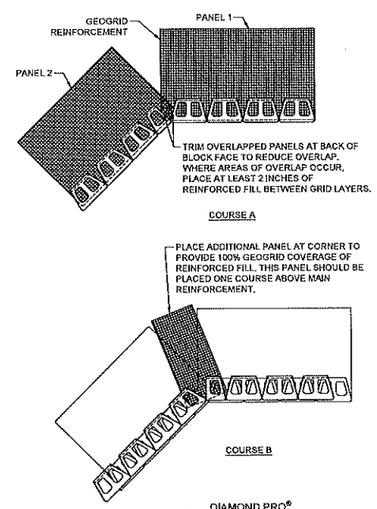
NOTE: USE ADHESIVE ON EXPOSED PARTIAL UNITS. CUT UNITS (X) TO MAINTAIN RUNNING BOND

2 W11 DIAMOND PRO® 90-DEGREE INSIDE CORNER (NOT TO SCALE)

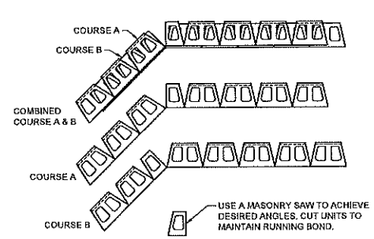
NOTE:
IN THE "CROSS-OVER AREA" OF REINFORCEMENT, ONE OF THE LAYERS OF REINFORCEMENT SHOULD BE LOWERED OR RAISED ONE COURSE TO ALLOW PLACEMENT OF THE REINFORCEMENT WITH THE PRINCIPLE REINFORCEMENT STRENGTH DIRECTION PROPERLY ORIENTATED. THE REINFORCEMENT SHOULD NOT EXTEND INTO THE SEGMENTAL RETAINING WALL UNITS ON THE RETURN LEG OF THE 90-DEGREE CORNER.



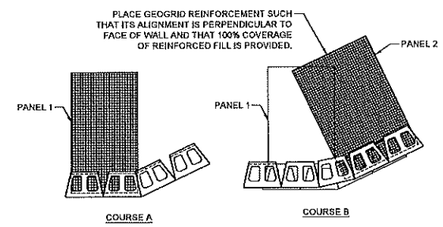
3 W11 DIAMOND PRO® 90-DEGREE OUTSIDE CORNER W/ GRID (NOT TO SCALE)



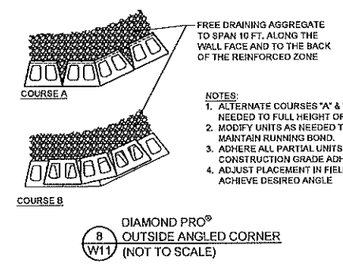
5 W11 DIAMOND PRO® INSIDE ANGLE W/ GRID (NOT TO SCALE)



6 W11 DIAMOND PRO® INSIDE ANGLED CORNER (NOT TO SCALE)

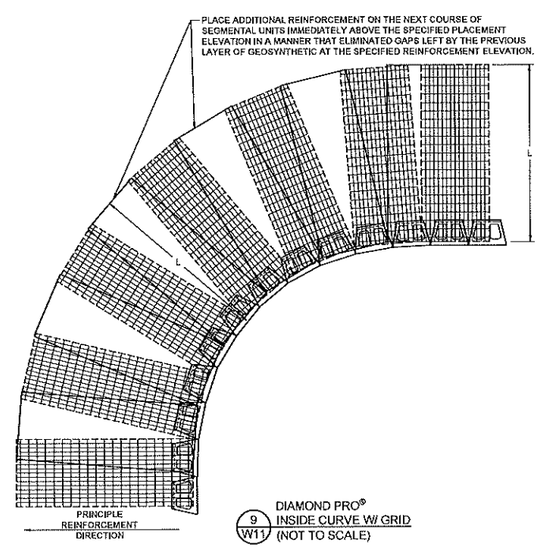


7 W11 DIAMOND PRO® OUTSIDE ANGLE W/ GRID (NOT TO SCALE)

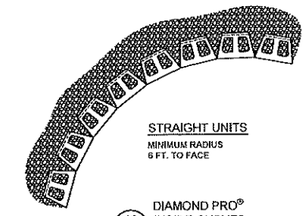


NOTES:
1. ALTERNATE COURSES "A" & "B" AS NEEDED TO FULL HEIGHT OF WALL.
2. MODIFY UNITS AS NEEDED TO MAINTAIN RUNNING BOND.
3. ADHERE ALL PARTIAL UNITS WITH CONSTRUCTION GRADE ADHESIVE.
4. ADJUST PLACEMENT IN FIELD TO ACHIEVE DESIRED ANGLE

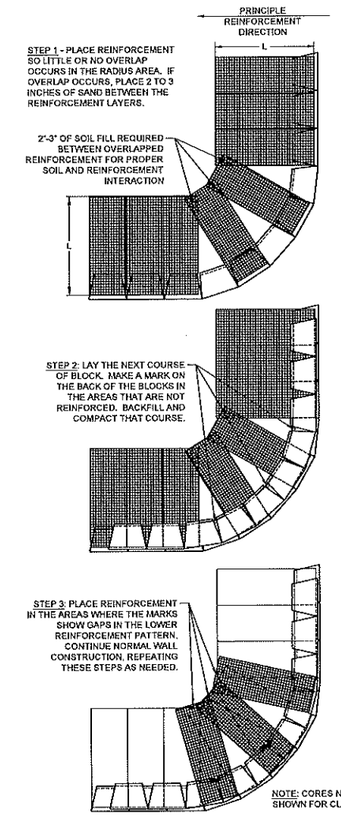
8 W11 DIAMOND PRO® OUTSIDE ANGLED CORNER (NOT TO SCALE)



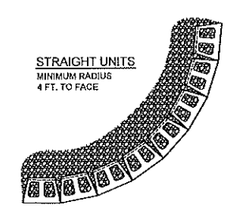
9 W11 DIAMOND PRO® INSIDE CURVE W/ GRID (NOT TO SCALE)



10 W11 DIAMOND PRO® INSIDE CURVES (NOT TO SCALE)



11 W11 DIAMOND PRO® OUTSIDE CURVE W/ GRID (NOT TO SCALE)



12 W11 DIAMOND PRO® OUTSIDE CURVES (NOT TO SCALE)

ANCHOR WALL ENGINEERING, LLC
5909 BAKER ROAD, SUITE 550
MINNETONKA, MN 55345-5996
PHONE: (952) 933-8855
CERTIFICATE OF AUTHORIZATION: 27077

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DESIGN ENGINEER: JON C. HAYCK
FLORIDA REGISTRATION 61043

JON C. HAYCK LICENSE No 61043 STATE OF FLORIDA PROFESSIONAL ENGINEER

VERIFY THAT THIS BAR MEASURES 1" IF NOT, ADJUST THE SCALE ACCORDINGLY

Scale: AS SHOWN

PROPOSED SEGMENTAL RETAINING WALLS
HIDDEN LAKE RESERVE
APOPKA, FLORIDA

TAMPA, FL

Rev. No.	Date	Description
1	3/6/20	Walls redesigned
2	3/13/20	Fence details revised

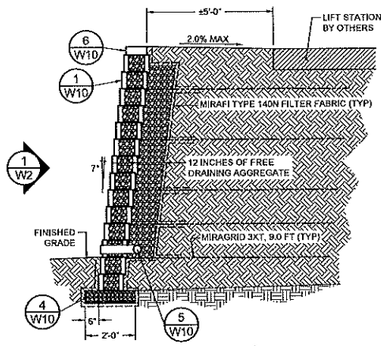
OLDCASTLE COASTAL

Drawn By:	Sean
Reviewed By:	DJA
Proj. No.:	AF 20-014
Date:	2/7/20

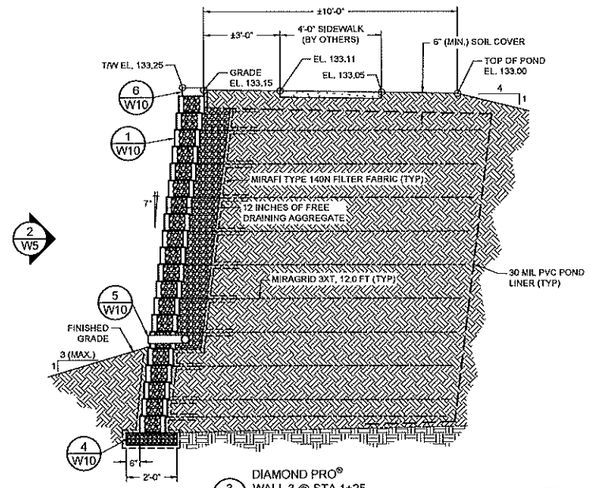
SHEET W11 OF 12

TYPICAL DETAILS

WALL 1 NOTE: IF A FENCE IS REQUIRED BEHIND WALL 1, SEE DETAIL 9 ON SHEET W10 FOR OPTION A FOR PLACEMENT. FENCE (IF REQUIRED) MUST BE OFFSET 3 FT MINIMUM FROM THE WALL.

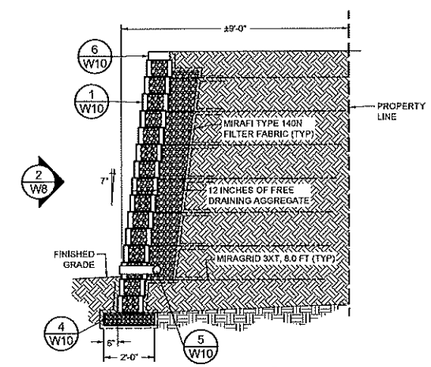


1 W12 DIAMOND PRO® WALL 1 @ STA 0+70 (NOT TO SCALE)



3 W12 DIAMOND PRO® WALL 3 @ STA 1+25 (NOT TO SCALE)

WALL 4 NOTE: ANY REQUIRED EASEMENTS ARE THE RESPONSIBILITY OF OTHERS.

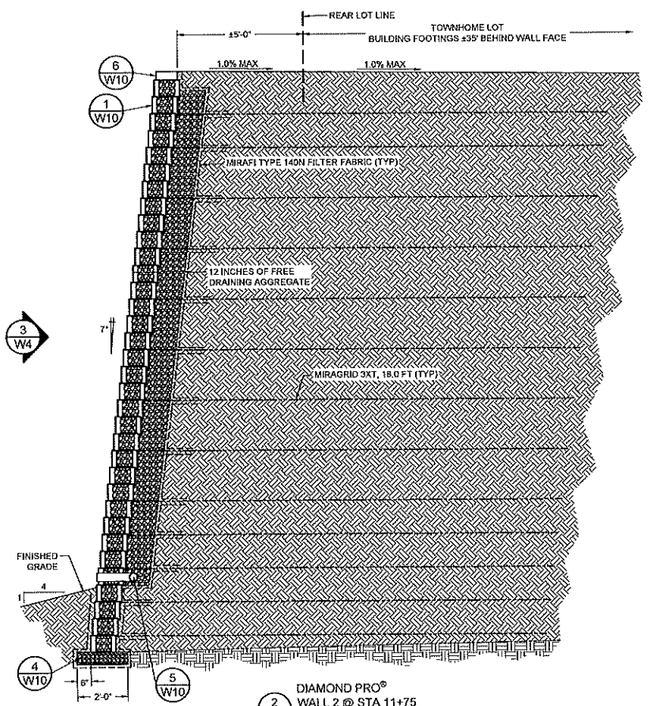


5 W12 DIAMOND PRO® WALL 4 @ STA 2+05 (NOT TO SCALE)

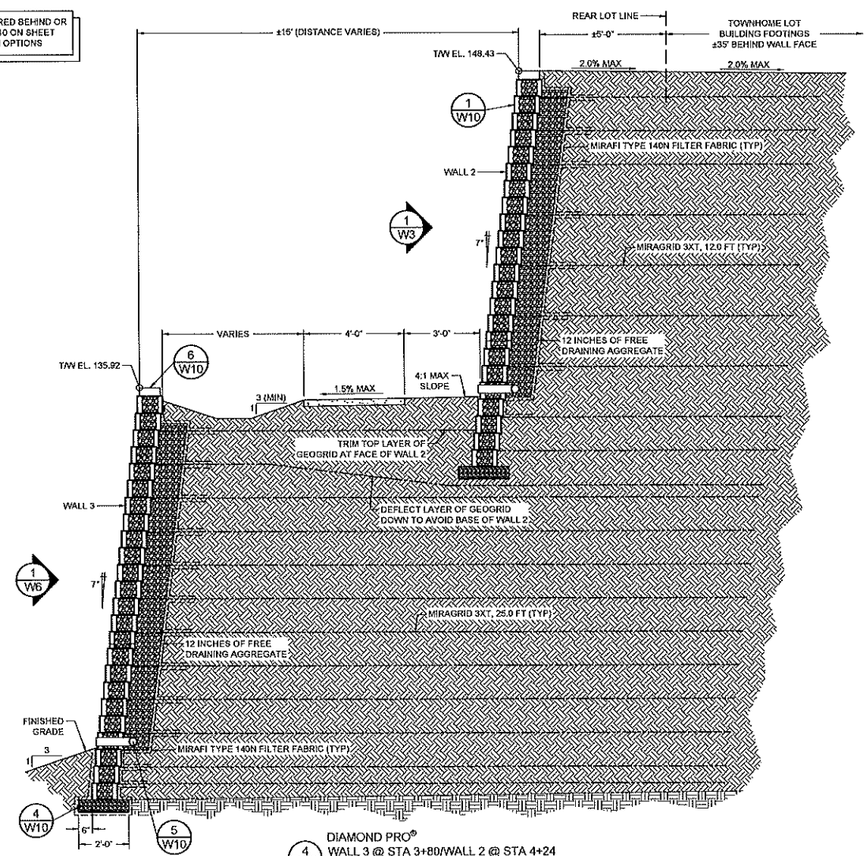
WALL 2 NOTE: PROPOSED BUILDINGS TO BE LOCATED BEHIND WALL 2 (DISTANCE VARIES). RETAINING WALL MUST BE CONSTRUCTED PRIOR TO PLACEMENT OF BUILDING FOUNDATIONS. COORDINATE WITH BUILDING CONTRACTOR TO ENSURE NO GEOGRID IS DAMAGED DURING PLACEMENT OF BUILDING FOUNDATIONS.

GENERAL NOTE: IF A FENCE IS REQUIRED BEHIND OR ON TOP OF WALL(S), SEE DETAILS 9 & 10 ON SHEET W10 FOR PLACEMENT/CONSTRUCTION OPTIONS

WALL 2 NOTE: PROPOSED BUILDINGS TO BE LOCATED BEHIND WALL 2 (DISTANCE VARIES). RETAINING WALL MUST BE CONSTRUCTED PRIOR TO PLACEMENT OF BUILDING FOUNDATIONS. COORDINATE WITH BUILDING CONTRACTOR TO ENSURE NO GEOGRID IS DAMAGED DURING PLACEMENT OF BUILDING FOUNDATIONS.

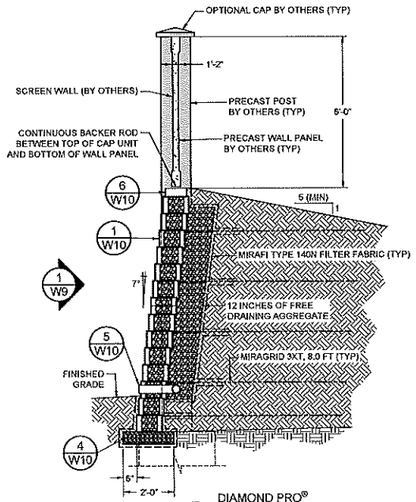


2 W12 DIAMOND PRO® WALL 2 @ STA 11+75 (NOT TO SCALE)



4 W12 DIAMOND PRO® WALL 3 @ STA 3+80/WALL 2 @ STA 4+24 (NOT TO SCALE)

WALL 5 NOTE: SEE CIVIL DRAWINGS FOR DESIGN AND LOCATIONS OF COLUMN/PANEL WALL. SEGMENTAL WALL CONTRACTOR TO COORDINATE WITH PRECAST PANEL WALL CONTRACTOR DURING CONSTRUCTION.



6 W12 DIAMOND PRO® WALL 5 @ STA 0+55 (NOT TO SCALE)

ANCHOR WALL ENGINEERING, LLC
5909 BAKER ROAD, SUITE 550
MINNETONKA, MN 55345-5996
PHONE: (952) 933-8855
CERTIFICATE OF AUTHORIZATION: 27077

This item has been electronically signed and sealed by Jon Huyck, PE on March 13, 2020 using a Digital Signature.

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

DESIGN ENGINEER: JON C. HUYCK
FLORIDA REGISTRATION: 61043

JON C. HUYCK LICENSE No 61043 STATE OF FLORIDA PROFESSIONAL ENGINEER

VERIFY THAT THE BAR ABOVE IS 1" IF NOT, ADJUST THE SCALE ACCORDINGLY

Scale: AS SHOWN

PROPOSED SEGMENTAL RETAINING WALLS
HIDDEN LAKE RESERVE
APOPKA, FLORIDA

Rev. No.	Date	Description
1	3/6/20	Walls revised/plot
2	3/13/20	Fence details revised

Drawn By: OLDCASTLE COASTAL
Reviewed By: MBH
Proj. No.: DJA
Date: 27722
AF 20414

SHEET W12 OF 12

CROSS SECTIONS

CITY OF APOPKA
PLANNING COMMISSION

X	PUBLIC HEARING	MEETING OF:	June 9, 2020
	SITE PLAN	FROM:	Community Development
	SPECIAL REPORTS	EXHIBITS:	Vicinity Map
X	OTHER: FDP, Plat		Plat
			Final Development Plan

SUBJECT: **LAKESIDE, PHASE 1 RESIDENTIAL SUBDIVISION – AMENDMENT TO FINAL DEVLOPMENT PLAN AND PLAT**

REQUEST: **RECOMMEND APPROVAL OF THE LAKESIDE, PHASE 1 AMENDMENT TO FINAL DEVELOPMENT PLAN AND PLAT**

SUMMARY:

OWNER:	Avatar Properties Inc.
APPLICANT:	Appian Engineering, LLC., c/o Luke M. Classon, P.E.
LOCATION:	South of Marshall Lake and West of SR 451
EXISTING USE:	Vacant land
FUTURE LAND USE:	Low Density Residential
ZONING:	PD (Planned Development)
PROPOSED USE:	177 single-family homes
TRACT SIZE:	114.29 +/- acres
LDC:	1993

DISTRIBUTION

Mayor Nelson	Finance Director	Public Services Director
Commissioners	HR Director	Recreation Director
City Administrator	IT Director	City Clerk
Community Development Director	Police Chief	Fire Chief

RELATIONSHIP TO ADJACENT PROPERTIES:

Direction	*Future Land Use*	*Zoning*	*Present Use*
North (City)	Low Density Residential (0-5 du/ac)	RMF	Marshall Lake, Lake Doe Estates subdivision
East (City)	Industrial, None assigned (SR 451 right-of-way)	I-L, no zoning assigned	Existing agricultural use (John's Nursery), SR 451 right-of-way
South (City)	Low Density Residential (0-5 du/ac), Commercial (max 0.25 FAR)	RSF-1B, C-C	Vacant property, SR 451 retention pond
West (City)	Low Density Residential (0-5 du/ac)	RSF-1B, RTF, PD	Breckenridge residential subdivision buffer tract, vacant property

Project Use: In 2018 the City Council approved a Final Development Plan and Plat for Phase 1 of the Lakeside subdivision, which is located south of Marshall Lake and west of SR 451. Site construction commenced and was subsequently accepted by the City. In February 2020 the home builder, Taylor Morrision, submitted an amendment to the Final Development and Plat for Phase 1 to allow for the construction of retaining walls in the subdivision. The purpose of the Amendment to the Final Development Plan and Plat is to extend one retaining wall in the northern portion of Phase 1 and incorporate additional retaining walls. A total of eight new retaining walls were designed as part of this proposed amendment to provide flatter rear yards at the request of the property owner. Plat revisions include additional retaining wall access and maintenance easements. Below is a breakdown of location, height, and length for each of the new or modified retaining walls:

- Wall 1 – This wall is located along the rear of lots 24 through 28, adjacent to Dry Pond 1 (Tract 'O'). The maximum height of this wall is six feet, which is maintained for most of this wall, and its overall length is approximately 530 feet.

- Wall 2 – This wall is located along the east side of lot 102, adjacent to the Waterview Ridge Circle right-of-way. The height of this wall is two feet, and its length is 135 feet.

- Wall 3 – This wall is located along the rear of lots 102 through 108, and its height varies between three and six feet. The length of this wall is approximately 320 feet.

- Wall 4 – This wall is currently located along the rear of lots 158 through 162. In order to fulfill the developer's request, changes to the wall are proposed to extend it approximately 480 feet to the east along the rear of lots 150 through 157 and approximately 120 feet to the west along the rear of lots 162 through 164. The overall length of the wall after the revision is approximately 840 lineal feet. The maximum height of the wall is six feet; however, the average height is approximately four feet.

- Wall 5 – This wall is proposed within open space Tract 'G', north of Wall 4. The maximum height is six feet, but most of the wall maintains a height of four feet. The length of this wall is approximately 395 feet.

- Wall 6 – This wall is proposed within lots 173 through 176 and has a maximum height of approximately four feet. The length of this wall is approximately 137 feet.

- Wall 7 – This wall is located along the west side of lot 125, adjacent to the Waterview Ridge Circle right-of-way. Wall 7 is approximately two feet in height and has a length of 130 feet.

- Wall 8 – This wall is located along the west side of lot 168, adjacent to the Waterview Ridge Circle right-of-way. It is approximately two feet in height and has a length of approximately 140 lineal feet.

- Wall 9 – This wall is proposed along the rear of lots 48 through 55, adjacent to Dry Pond 2 (Tract 'P'). The maximum height is six feet, but the majority of the wall is approximately three feet tall. The length of Wall 9 is 720 feet.

With the addition of these retaining walls, yard drains and a swale system were added along the top to avoid runoff overtopping the walls. The entire existing stormwater drainage system was evaluated to ensure the pipes and ponds could support the flow patterns altered with the grading revision.

SCHOOL CAPACITY REPORT: Since this is a revision to an existing platted subdivision, school concurrency is not applicable to this application.

ORANGE COUNTY NOTIFICATION: The County was notified at the time of the subdivision plan and plat for this property through the DRC agenda distribution.

PUBLIC HEARING SCHEDULE:
June 9, 2020 - Planning Commission, 5:30 p.m.
July 1, 2020 - City Council, 1:30 p.m.

RECOMMENDATION ACTION:

The **Development Review Committee** recommends approval of the Lakeside, Phase 1 Final Development Plan and Plat amendment subject to final review by the City surveyor and city engineer prior to recording the plat.

Recommended Motion: Recommend approval of the Lakeside, Phase 1 Final Development and Plat amendment, subject to final review by the City surveyor and City Engineer prior to recording the plat.

Planning Commission Role: The role of the Planning Commission for this development application is to advise the City Council to approve or deny based on consistency with the Comprehensive Plan and Land Development Code.

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.

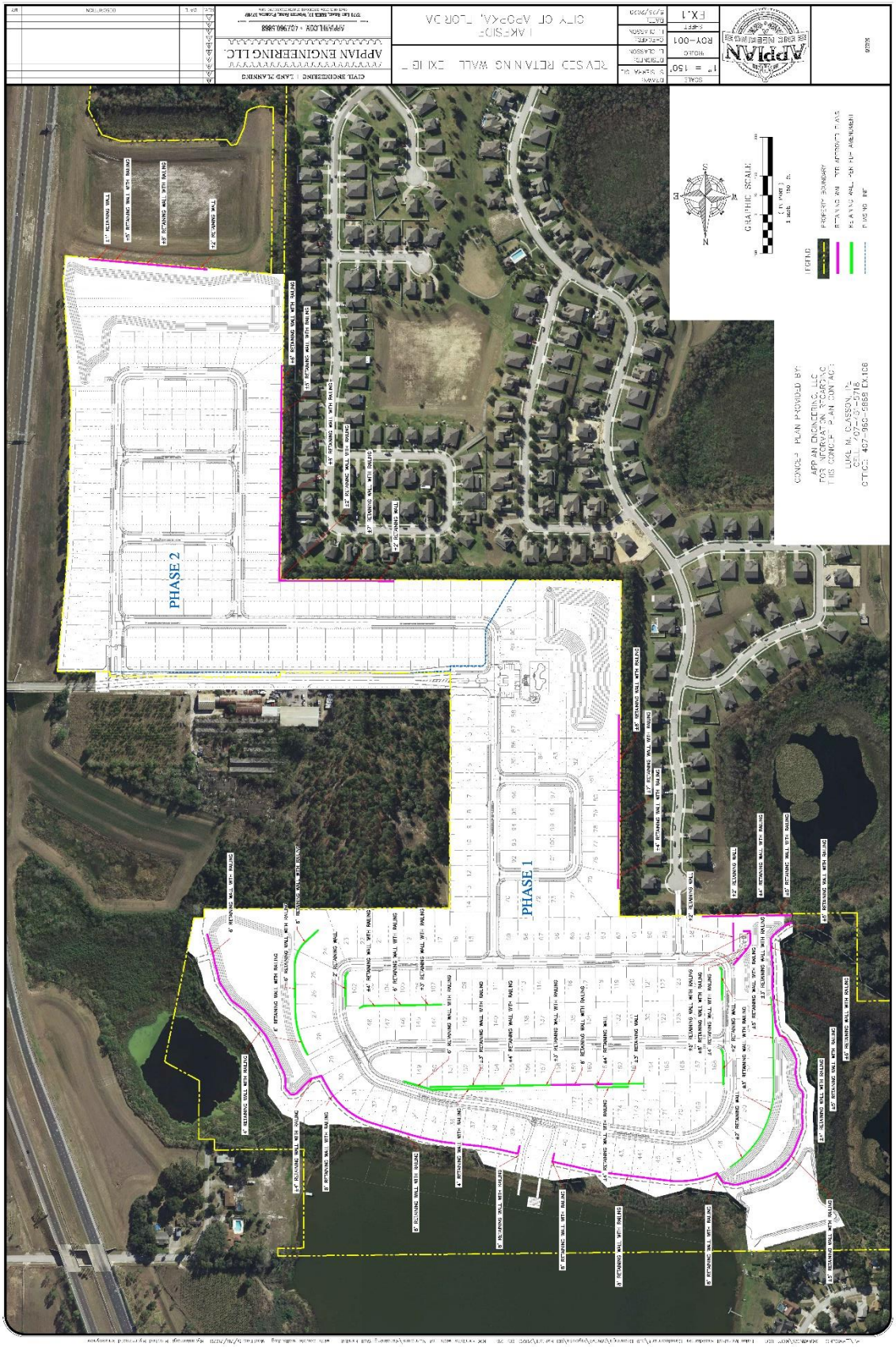
Application: Lakeside, Phase 1 Final Development Plana and Plat amendment
Owner: Avatar Properties, Inc.
Project Engineer: Appian Engineering, Inc., c/o Luke M. Classon, P.E.
Total Acres: 114.288 +/-

VICINITY MAP

AERIAL MAP

Marshall Lake Rd
Maudeberlen Sub
Sunset Grove
John's Nursery
John's Rd
Howard's Orchards
Brackenridge
Fairwood Nursery
Tyler Chicken Farm
451

RETAINING WALL EXHIBIT



LAKESIDE PHASE I AMENDMENT 2

A REPLAT

REPLATTING ALL OF THE PLAT OF LAKESIDE PHASE I AMENDMENT
AS RECORDED IN PLAT BOOK 99, PAGES 79 THROUGH 87
SECTION 8, TOWNSHIP 21 SOUTH, RANGE 28 EAST
CITY OF APOPKA, ORANGE COUNTY, FLORIDA

LEGAL DESCRIPTION

A TRACT OF LAND, BEING ALL OF THE LANDS DESCRIBED IN THE PLAT OF LAKESIDE PHASE I AMENDMENT, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 99, PAGES 79 THROUGH 87 OF THE PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA, LYING IN SECTION 8, TOWNSHIP 21 SOUTH, RANGE 28 EAST, BEING DESCRIBED AS FOLLOWS:

COMMENCE AT THE SOUTHWEST CORNER OF THE SOUTHEAST QUARTER OF SAID SECTION 8, FOR A POINT OF BEGINNING; SAID POINT ALSO BEING THE SOUTHEAST CORNER OF TRACT "W", BRECKENRIDGE PHASE II, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 68, PAGES 150 THROUGH 153 OF SAID PUBLIC RECORDS; THENCE RUN NORTH 00°17'43" EAST, ALONG THE EAST LINE OF SAID PLAT OF BRECKENRIDGE PHASE II, A DISTANCE OF 1,302.48 FEET TO THE NORTHEAST CORNER OF SAID PLAT OF BRECKENRIDGE PHASE II; THENCE RUN SOUTH 89°05'44" WEST, ALONG THE NORTH LINE OF SAID PLAT OF BRECKENRIDGE PHASE II, A DISTANCE OF 920.74 FEET; THENCE DEPARTING SAID NORTH LINE, RUN NORTH 00°04'11" EAST, 343.00 FEET; THENCE RUN SOUTH 89°05'44" WEST, 400.00 FEET TO A POINT LYING ON THE WEST LINE OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 8; THENCE RUN NORTH 00°04'46" EAST, ALONG THE WEST LINE OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 8, A DISTANCE OF 866.35 FEET TO THE NORTHWEST CORNER OF THE NORTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SAID SECTION 8; THENCE RUN NORTH 89°23'48" EAST, ALONG THE NORTH LINE OF THE SOUTH HALF OF SAID SECTION 8, A DISTANCE OF 2643.02 FEET TO THE NORTHEAST CORNER OF THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SAID SECTION 8 ; THENCE DEPARTING SAID NORTH LINE, RUN SOUTH 00°14'00" WEST, ALONG THE EAST LINE OF THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SAID SECTION 8 A DISTANCE OF 30.00 FEET; THENCE DEPARTING SAID EAST LINE, RUN SOUTH 89°23'48" WEST, 100.01 FEET; THENCE RUN SOUTH 00°14'00" WEST, 383.74 FEET; THENCE RUN NORTH 89°23'24" EAST, 347.63 FEET; THENCE RUN SOUTH 00°10'50" WEST, 41.32 FEET; THENCE RUN SOUTH 89°48'48" EAST, 60.00 FEET; THENCE RUN SOUTH 00°11'21" WEST, 227.85 FEET; THENCE RUN SOUTH 61°33'29" EAST, 144.33 FEET; THENCE RUN SOUTH 46°46'48" EAST, 8.49 FEET; THENCE RUN SOUTH 11°30'21" WEST, 566.65 FEET TO A POINT LYING ON THE NORTH LINE OF THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER OF SAID SECTION 8; THENCE RUN SOUTH 89°47'21" WEST, ALONG SAID NORTH LINE, 39.81 FEET; THENCE DEPARTING SAID NORTH LINE, RUN SOUTH 00°12'39" WEST, 35.00 FEET; THENCE RUN SOUTH 89°47'21" WEST, 950.03 FEET TO A POINT LYING ON THE EAST LINE OF THE WEST HALF OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SAID SECTION 8; THENCE RUN SOUTH 00°15'51" WEST, ALONG SAID EAST LINE, 911.99 FEET TO A POINT LYING ON THE SOUTH RIGHT-OF-WAY LINE OF JOHN'S ROAD, ACCORDING TO THAT CERTAIN RIGHT-OF-WAY AGREEMENT, AS RECORDED IN OFFICIAL RECORDS BOOK 1981, PAGE 296, OF SAID PUBLIC RECORDS; THENCE DEPARTING SAID EAST LINE, RUN SOUTH 89°49'08" EAST, ALONG SAID SOUTH RIGHT-OF-WAY LINE, 659.83 FEET; THENCE RUN NORTH 00°19'13" EAST, ALONG THE EAST LINE OF SAID JOHN'S ROAD, 18.00 FEET TO A POINT LYING ON THE SOUTH RIGHT-OF-WAY LINE OF JONH'S ROAD, PER THE PLAT OF JOHN'S ROAD, ACCORDING TO THE PLAT THEREOF, AS RECORDED IN PLAT BOOK 65, PAGE 5, OF SAID PUBLIC RECORDS; THENCE RUN ALONG SAID SOUTH RIGHT-O-WAY LINE, THE FOLLOWING FIVE COURSES: SOUTH 89°49'08" EAST, 527.68 FEET; THENCE RUN SOUTH 00°10'52" WEST, 2.35 FEET; THENCE RUN SOUTH 88°14'07" EAST, 4.89 FEET; THENCE RUN NORTH 00°10'52" EAST, 2.49 FEET; THENCE RUN SOUTH 89°49'08" EAST, 127.27 FEET; THENCE DEPARTING SAID SOUTH RIGHT-OF-WAY LINE, RUN SOUTH 00°12'09" WEST, 378.00 FEET TO A POINT LYING ON THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SAID SECTION 8; THENCE RUN NORTH 89°49'08" WEST, ALONG THE SOUTH LINE OF THE SOUTHEAST QUARTER OF SAID SECTION 8, A DISTANCE OF 1980.15 FEET TO THE POINT OF BEGINNING.

THE ABOVE DESCRIBED TRACT OF LAND LIES IN THE CITY OF APOPKA, ORANGE COUNTY, FLORIDA AND CONTAINS 114.288 ACRES MORE OR LESS.

LEGEND

P.O.B.	--	POINT OF BEGINNING
O.R.B.	--	OFFICIAL RECORDS BOOK
PG.(S)	--	PAGE(S)
SEC.	--	SECTION
C.C.R.	--	CERTIFIED CORNER RECORD
R/W	--	RIGHT-OF-WAY
L.S.	--	LICENSED SURVEYOR
LB.	--	LICENSED BUSINESS
P.R.M.	--	PERMANENT REFERENCE MONUMENT
C.M.	--	CONCRETE MONUMENT
R.W.M.&D.	--	RETAINING WALL MAINTENANCE & DRAINAGE EASEMENT
U.E.	--	UTILITY EASEMENT
L.E.	--	LANDSCAPE EASEMENT
U.D.E.	--	UTILITY AND DRAINAGE EASEMENT
P.C.	--	POINT OF CURVATURE
P.T.	--	POINT OF TANGENCY
P.B.	--	PLAT BOOK
(N.R.)	--	NON-RADIAL
F.K.A.	--	FORMERLY KNOWN AS
P.I.	--	POINT OF INTERSECTION
TYP.	--	TYPICAL
DOC. #	--	RECORDED DOCUMENT NUMBER
	--	R.W.M.&D. EASEMENT (SEE SHEET 10 FOR EASEMENT GEOMETRY)

NOTICE:

THIS PLAT, AS RECORDED IN ITS GRAPHIC FORM, IS THE OFFICIAL DEPICTION OF THE SUBDIVIDED LANDS DESCRIBED HEREIN AND WILL IN NO CIRCUMSTANCES BE SUPPLANTED IN AUTHORITY BY ANY OTHER GRAPHIC OR DIGITAL FORM OF THE PLAT.

THERE MAY BE ADDITIONAL RESTRICTIONS THAT ARE NOT RECORDED ON THIS PLAT THAT MAY BE FOUND IN THE PUBLIC RECORDS OF THIS COUNTY.

SURVEYOR'S NOTES:

(1) BEARINGS SHOWN HEREON ARE RELATIVE TO THE FLORIDA STATE PLANE COORDINATE SYSTEM 1983 EAST ZONE, BASED ON GPS WITH L-NET CORRECTIONS. THE MONUMENTED SOUTH LINE OF THE SOUTHEAST QUARTER OF SECTION 8, TOWNSHIP 21 SOUTH, RANGE 28 EAST. BEING NORTH 89°49'08" WEST.

(2) -■- DENOTES A PERMANENT REFERENCE MONUMENT (P.R.M.) A SET 4" X 4" CONCRETE MONUMENT STAMPED PRM. L.S. # 4044, UNLESS OTHERWISE NOTED.

(3) -●- DENOTES A PERMANENT CONTROL POINT (P.C.P.) A SET NAIL AND DISK STAMPED PCP L.S. # 4044.

(4) ALL PLATTED UTILITY EASEMENTS SHALL PROVIDE THAT SUCH EASEMENTS SHALL ALSO BE EASEMENTS FOR THE CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION OF CABLE TELEVISION SERVICES; PROVIDED, HOWEVER, NO SUCH CONSTRUCTION, INSTALLATION, MAINTENANCE, AND OPERATION OF CABLE TELEVISION SERVICES SHALL INTERFERE WITH THE FACILITIES AND SERVICES OF AN ELECTRIC, TELEPHONE, GAS, OR OTHER PUBLIC UTILITY. IN THE EVENT A CABLE TELEVISION COMPANY DAMAGES THE FACILITIES OF A PUBLIC UTILITY, IT SHALL BE SOLELY RESPONSIBLE FOR THE DAMAGES.

(5) TRACT I (LIFT STATION), SHALL BE OWNED AND MAINTAINED BY THE CITY OF APOPKA, FLORIDA.

(6) ALL LINES INTERSECTING CURVES ARE RADIAL UNLESS OTHERWISE NOTED.

(7) TRACTS "K" AND "L" (CONSERVATION AREAS), SHALL BE OWNED AND MAINTAINED BY THE LAKESIDE APOPKA HOMEOWNERS ASSOCIATION, INC., WITH DEVELOPMENT RIGHTS DEDICATED TO THE CITY OF APOPKA, FLORIDA. NO CONSTRUCTION, CLEARING, GRADING OR ALTERATION OF TRACTS "K" AND "L" IS ALLOWED UNLESS APPROVED BY THE CITY OF APOPKA AND THE OTHER APPLICABLE JURISDICTIONAL AGENCIES. TRACT "K" AND "L" ARE SUBJECT TO A CONSERVATION EASEMENT IN FAVOR OF THE ST. JOHNS RIVER WATER MANAGEMENT DISTRICT PURSUANT TO SECTION 704.06, FLORIDA STATUTES, TO BE DEDICATED BY SEPARATE INSTRUMENT IN THE PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA.

(8) TRACTS "A", "B", "C", "W" AND "X" (LANDSCAPE BUFFERS), SHALL BE OWNED AND MAINTAINED BY THE LAKESIDE APOPKA HOMEOWNERS ASSOCIATION, INC.

(9) TRACT "D" (PRIVATE RIGHT-OF-WAY), SHALL BE OWNED AND MAINTAINED BY THE LAKESIDE APOPKA HOMEOWNERS ASSOCIATION, INC., WITH A UTILITY EASEMENT OVER, ACROSS AND UNDER SAID TRACT "D", IN FAVOR OF UTILITIES.

(10) TRACT "E" (PARK), TRACT "F" (COMMUNITY LAKE PARK), TRACTS "G" AND "H" (OPEN SPACE), SHALL BE OWNED AND MAINTAINED BY THE LAKESIDE APOPKA HOMEOWNERS ASSOCIATION, INC.

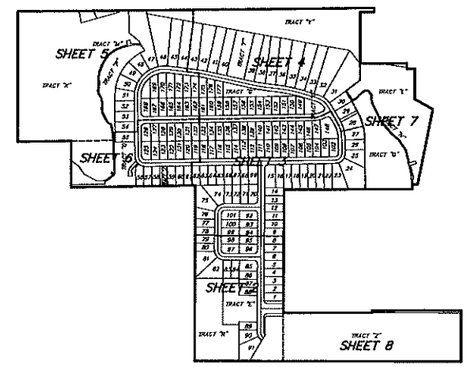
(11) TRACT "J" (GATED EMERGENCY ACCESS), TRACT "Y" (COMMON AREA), TRACTS "S", "T" AND "AA" (H.O.A. TRACT)(OPEN SPACE), SHALL BE OWNED AND MAINTAINED BY THE LAKESIDE APOPKA HOMEOWNERS ASSOCIATION, INC.

(12) TRACTS "M" AND "N" (OPEN SPACE), TRACTS "O", "P", "Q" AND "R" (DRY PONDS), SHALL BE OWNED AND MAINTAINED BY THE LAKESIDE APOPKA HOMEOWNERS ASSOCIATION, INC.

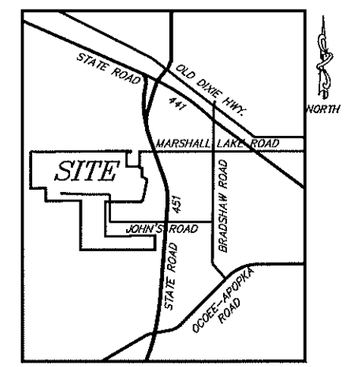
(13) TRACT "Z" (FUTURE DEVELOPMENT), SHALL BE OWNED AND MAINTAINED BY TAYLOR MORRISON OF FLORIDA INC.

(14) THERE IS A INGRESS/EGRESS EASEMENT OVER TRACT "K" (CONSERVATION AREA), FOR THE BENEFIT OF TRACTS "AA" AND "S" (H.O.A. TRACTS).

(15) RETAINING WALL MAINTENANCE & DRAINAGE EASEMENTS SHOWN HEREON ARE DEDICATED TO THE LAKESIDE APOPKA HOMEOWNERS ASSOCIATION, INC.



KEY MAP
NOT TO SCALE



VICINITY MAP
NOT TO SCALE

INDEX:

SHEET 1 – COVER SHEET, LEGAL DESCRIPTION, SURVEYOR'S NOTES
SHEET 2 – DETAIL SHEET
SHEET 3 – DETAIL SHEET
SHEET 4 – DETAIL SHEET
SHEET 5 – DETAIL SHEET
SHEET 6 – DETAIL SHEET
SHEET 7 – DETAIL SHEET
SHEET 8 – DETAIL SHEET
SHEET 9 – TOTAL BOUNDARY DETAIL
SHEET 10 – RETAINING WALL MAINTENANCE EASEMENT DETAIL

PEC | SURVEYING AND MAPPING, LLC
CERTIFICATE OF AUTHORIZATION NUMBER LB 7808
2100 Alafaya Trail, Suite 203 • Oviedo, Florida 32765 • 407-542-4967

AVATAR PROPERTIES, INC.
a Florida corporation

2600 Lake Lucien Drive, Suite 350
Maitland, FL 32751

PLAT BOOK _____ PAGE _____

LAKESIDE PHASE I AMENDMENT 2
A REPLAT

DEDICATION

KNOWN ALL MEN BY THESE PRESENTS, That the Corporation named below, being the owner in fee simple of the lands described in the foregoing caption to this plat, hereby dedicates said lands and plat for the uses and purposes therein expressed and dedicates Tracts "U" and "V" public right-of-ways, and easements to the perpetual use of the public.

TRACT I, (Lift Station) is dedicated to the City of Apopka, a political subdivision of the State of Florida, its successors and assigns.

IN WITNESS WHEREOF, Avatar Properties Inc., a Florida corporation, has caused this Dedication to be executed in its name by the below-named officer thereunto duly authorized this _____ day of _____, 2020.

Signed, sealed and delivered in the presence of the following two witnesses:

AVATAR PROPERTIES, INC.
a Florida corporation

By: _____
Brian Brunhofer
Division President

Print Name: _____
(Witness)

Print Name: _____
(Witness)

STATE OF FLORIDA

COUNTY OF _____

The foregoing instrument was acknowledged before me by means of [] physical presence or [] online notarization, this _____ day of _____, 2020, by Brian Brunhofer as Division President of AVATAR PROPERTIES, INC, a Florida Corporation on behalf of the company, who [] is personally known to me or [] has produced _____ as identification.

Print Name: _____
Notary Public – State of Florida
Commission No.: _____
My Commission Expires: _____

CERTIFICATE OF SURVEYOR AND MAPPER

KNOWN ALL MEN BY THESE PRESENTS, that the undersigned, being a licensed and registered surveyor and mapper, does hereby certify that on MARCH 7th, 2018

a survey of the lands shown in the foregoing plat was completed; that said plat is a true and correct representation of the lands surveyed; that permanent reference monuments have been placed as shown thereon; that the plat was prepared under my responsible direction and supervision; and that this plat complies with all the survey requirements of Chapter 177 and Chapter 95.361, Florida Statutes.

Date _____
LS 4044
Surveyor's Registration Number
LB 7808
Certificate of Authorization Number

Surveyor's Signature
David A. White
Surveyor's Name (printed)

PEC – Surveying and Mapping, LLC
2100 Alafaya Trail, Suite 203, Oviedo, Florida, 32765

CERTIFICATE OF APPROVAL BY REVIEWING SURVEYOR

Pursuant to Section 177.081, Florida Statutes, I have reviewed this plat for compliance with the technical requirements of that chapter; provided however, that my review does not include field verification of any of the coordinates, points or measurements shown on this plat.

Signed: _____ Date
Printed name: Ralph A. Nieto P.S.M.
NIETO WHITTAKER SURVEYING, LLC
Registration Number

CERTIFICATE OF APPROVAL BY APOPKA PLANNING COMMISSION

THIS IS TO CERTIFY, that on _____, 2020 the undersigned approved the foregoing plat.

BY: _____
Chairman

CERTIFICATE OF APPROVAL BY THE MAYOR

THIS IS TO CERTIFY, that on _____, 2020 the undersigned approved the foregoing plat.

BY: _____
Bryan Nelson, Mayor of the City of Apopka

Attest: _____
Linda F. Goff, City Clerk

CERTIFICATE OF APPROVAL BY CITY ENGINEER

THIS IS TO CERTIFY, that on _____, 2020 the undersigned approved the foregoing plat.

BY: _____
Richard W. Earp, City Engineer

CERTIFICATE OF COUNTY COMPTROLLER

I HEREBY CERTIFY, that the foregoing plat was recorded in the Orange County Official Records on

_____ print _____

Comptroller in and for Orange County, Florida

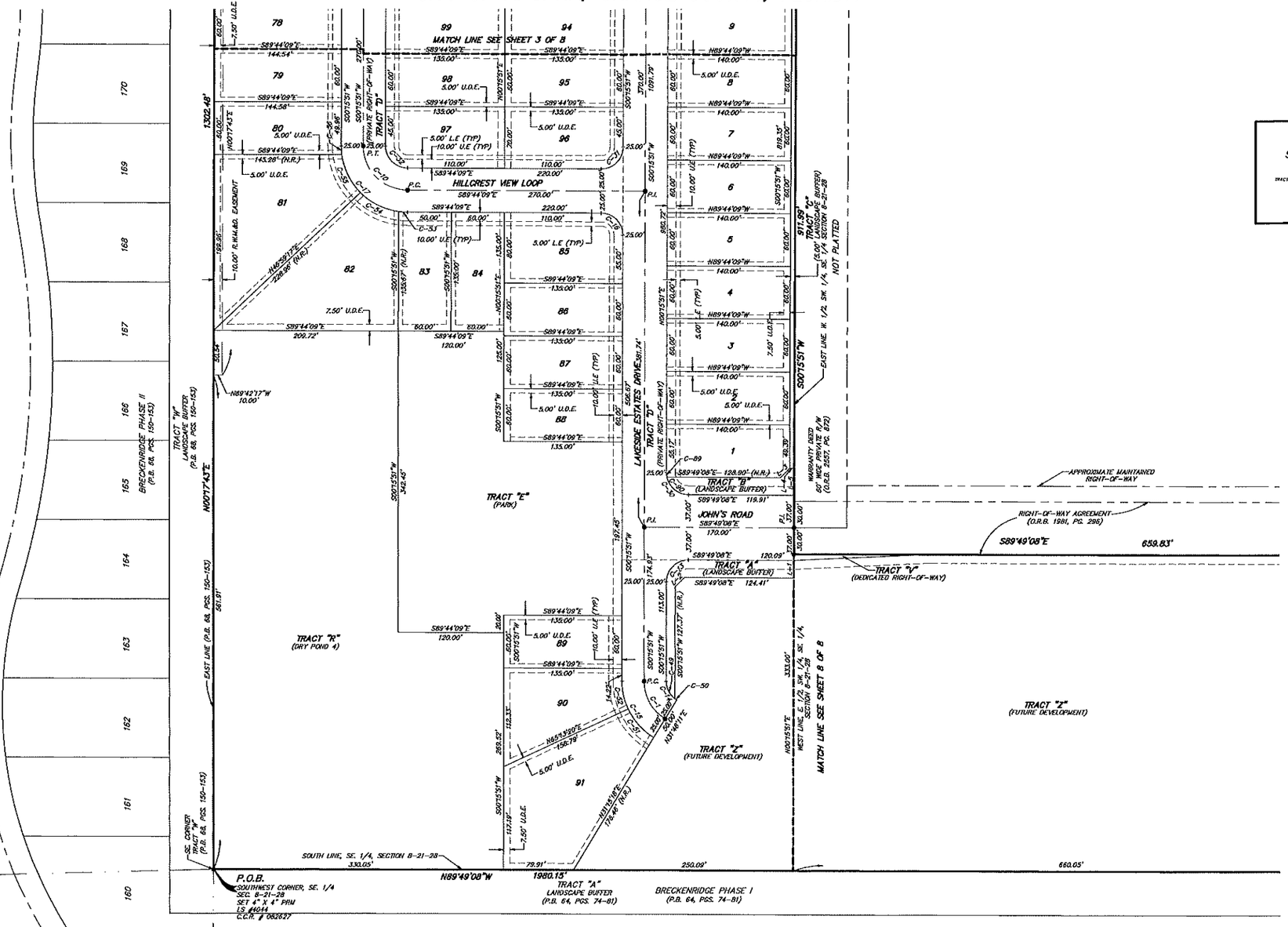
BY: _____

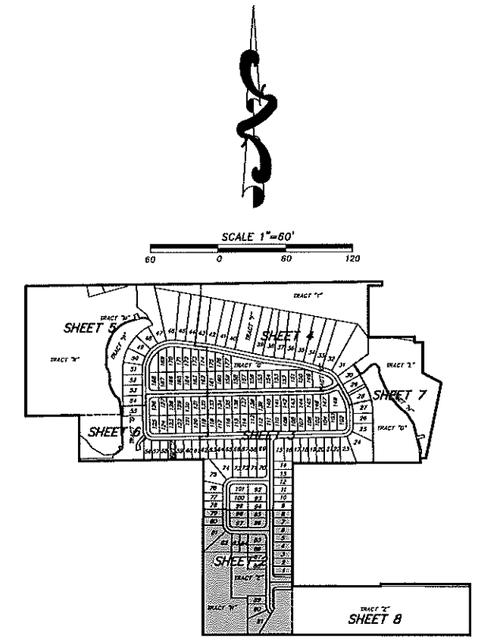
C:\20-055 LAKESIDE PHASE 1 AMENDMENT 2\20-055 LAKESIDE PH 1 AMENDMENT 2.dwg Apr 28, 2020 – 10:44am

LAKESIDE PHASE I AMENDMENT 2

A REPLAT

REPLATTING ALL OF THE PLAT OF LAKESIDE PHASE I AMENDMENT
AS RECORDED IN PLAT BOOK 99, PAGES 79 THROUGH 87
SECTION 8, TOWNSHIP 21 SOUTH, RANGE 28 EAST
CITY OF APOPKA, ORANGE COUNTY, FLORIDA





KEY MAP
NOT TO SCALE

LINE TABLE		
LINE	BEARING	LENGTH
L-1	S00°15'51"W	20.00'
L-2	N45°10'52"E	15.00'
L-3	S45°10'52"W	15.00'
L-4	S89°44'09"E	5.00'
L-5	S00°15'51"W	30.60'

CURVE TABLE					
CURVE	RADIUS	DELTA	LENGTH	CHORD	CH. BEARING
C-1	50.00'	58°27'40"	51.03'	48.83'	S28°57'59"E
C-10	50.00'	90°00'00"	78.54'	70.71'	S44°44'09"E
C-13	25.00'	89°55'01"	39.23'	35.33'	S45°13'22"W
C-14	25.00'	58°27'40"	25.51'	24.42'	S28°57'59"E
C-15	75.00'	58°27'40"	76.53'	73.25'	S28°57'59"E
C-16	25.00'	90°00'00"	39.27'	35.36'	S44°44'09"E
C-17	75.00'	90°00'00"	117.81'	106.07'	S44°44'09"E
C-30	25.00'	90°04'59"	39.31'	35.36'	S44°46'39"E
C-31	25.00'	90°00'00"	39.27'	35.36'	S45°15'51"W
C-32	25.00'	90°00'00"	39.27'	35.36'	N44°44'09"W
C-49	25.00'	53°07'48"	23.18'	22.36'	S26°16'03"E
C-50	25.00'	5°19'52"	2.33'	2.33'	S55°31'53"E
C-51	75.00'	33°23'09"	43.76'	43.13'	S41°29'15"E
C-52	75.00'	25°02'31"	32.78'	32.52'	S12°16'24"E
C-53	75.00'	7°39'44"	10.03'	10.02'	S85°54'17"E
C-54	75.00'	37°18'29"	48.88'	48.00'	S63°24'40"E
C-55	75.00'	37°18'29"	48.85'	47.99'	S26°05'23"E
C-56	75.00'	7°41'42"	10.07'	10.07'	S03°35'00"E
C-89	25.00'	11°37'12"	5.07'	5.06'	N05°32'45"W
C-90	25.00'	78°27'47"	34.24'	31.62'	S50°35'14"E

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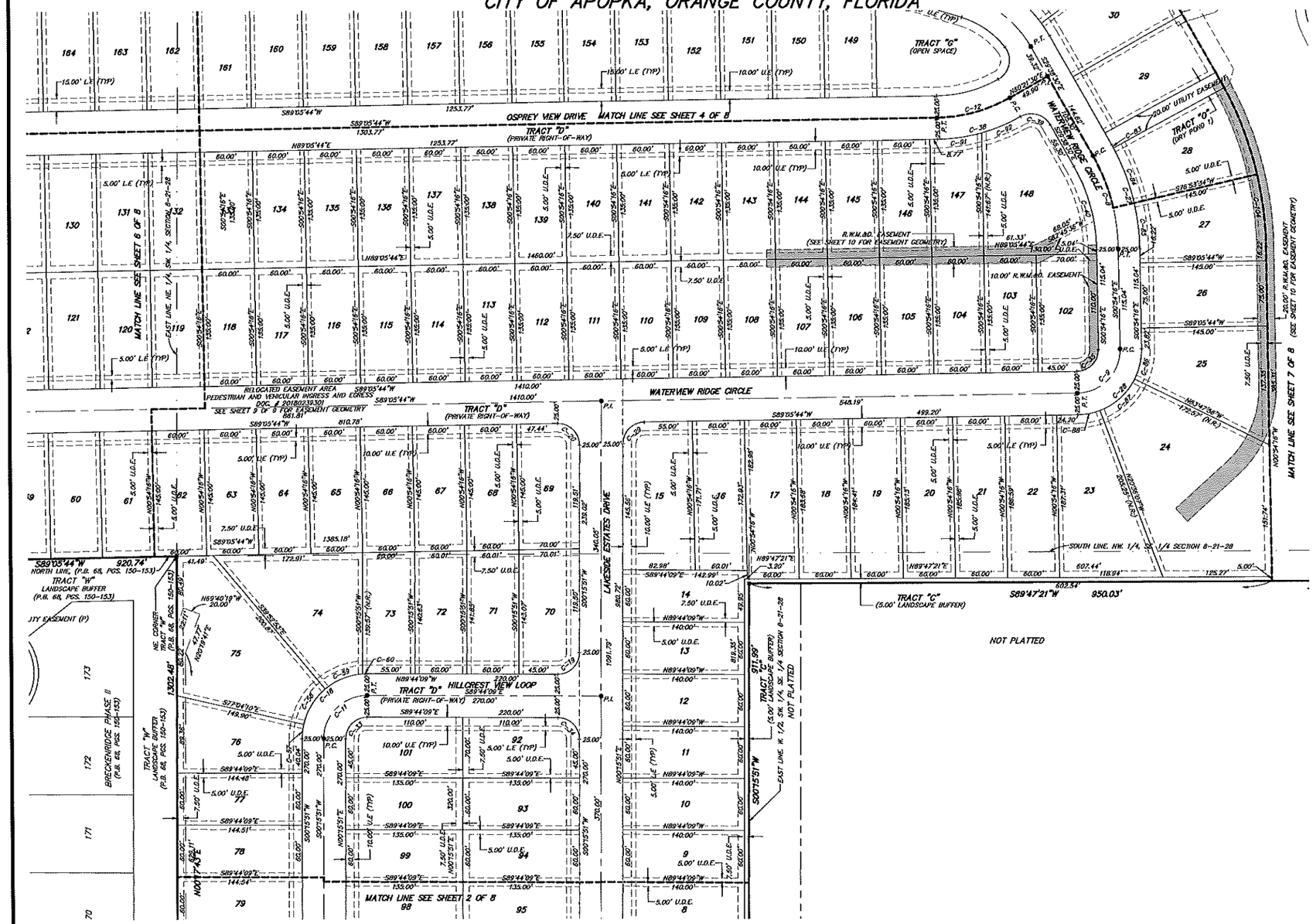
G:\20-055 LAKESIDE PHASE 1 AMENDMENT 2\20-055 LAKESIDE PH 1 AMENDMENT 2.dwg Apr 28, 2020 - 10:44am

LAKESIDE PHASE I AMENDMENT 2

A REPLAT

REPLATTING ALL OF THE PLAT OF LAKESIDE PHASE I AMENDMENT
AS RECORDED IN PLAT BOOK 99, PAGES 79 THROUGH 87
SECTION 8, TOWNSHIP 21 SOUTH, RANGE 28 EAST
CITY OF APOPKA, ORANGE COUNTY, FLORIDA



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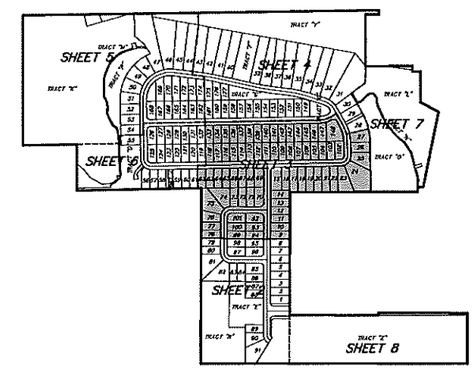

KEY MAP
NOT TO SCALE

CURVE TABLE					
CURVE	RADIUS	DELTA	LENGTH	CHORD	CH. BEARING
C-7	125.00'	43°27'28"	94.63'	92.38'	N51°19'43"W
C-8	225.00'	28°44'14"	112.85'	111.67'	N15°16'23"W
C-9	50.00'	90°00'00"	78.54'	70.71'	N44°05'44"E
C-11	50.00'	90°00'00"	78.54'	70.71'	S45°15'51"W
C-12	175.00'	28°44'14"	87.77'	86.86'	N14°43'37"E
C-18	75.00'	90°00'00"	117.81'	106.07'	S45°15'51"W
C-19	25.00'	90°00'00"	39.27'	35.36'	S45°15'51"W
C-20	25.00'	31°00'27"	38.78'	35.71'	S65°19'12"E
C-27	250.00'	28°44'14"	125.39'	124.08'	N15°16'23"W
C-28	75.00'	90°00'00"	117.81'	106.07'	N44°05'44"E
C-29	25.00'	88°49'53"	38.76'	34.99'	N44°40'48"E
C-33	25.00'	90°00'00"	39.27'	35.36'	N45°15'51"E
C-34	25.00'	90°00'00"	39.27'	35.36'	S44°44'09"E
C-35	25.00'	90°00'00"	39.27'	35.36'	S44°05'44"W
C-38	200.00'	28°42'45"	100.23'	99.16'	N74°44'21"E
C-39	25.00'	89°58'32"	39.26'	35.35'	S74°37'45"E
C-40	200.00'	28°44'14"	100.31'	99.28'	S15°16'23"E
C-57	75.00'	12°39'59"	16.58'	16.55'	S06°35'51"W
C-58	75.00'	37°11'17"	48.68'	47.83'	S31°31'29"W
C-59	75.00'	35°20'03"	46.26'	45.77'	S68°17'29"W
C-60	75.00'	3°48'41"	4.99'	4.99'	S88°21'31"W
C-84	250.00'	15°33'17"	67.87'	67.65'	N20°53'04"W
C-85	250.00'	12°12'10"	53.24'	53.14'	N07°00'21"W
C-86	75.00'	27°44'03"	36.30'	35.93'	N12°57'47"E
C-87	75.00'	42°00'39"	55.43'	54.18'	N48°10'09"E
C-88	75.00'	19°55'16"	26.08'	25.95'	N79°08'06"E
C-91	200.00'	14°50'35"	51.81'	51.67'	N81°40'27"E
C-92	200.00'	13°52'10"	48.41'	48.30'	N87°18'04"E
C-103	395.00'	15°31'17"	107.23'	106.91'	N20°53'04"W
C-104	395.00'	12°12'10"	84.13'	83.97'	S07°00'21"E
C-121	395.00'	27°45'27"	191.36'	189.50'	N14°46'59"W

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— R.W.M.&D. EASEMENT (SEE SHEET 10 FOR EASEMENT GEOMETRY)

SEE SHEET 1 OF 10 FOR LEGEND.

PLAT BOOK PAGE

LAKESIDE PHASE I AMENDMENT 2

A REPLAT

REPLATTING ALL OF THE PLAT OF LAKESIDE PHASE I AMENDMENT
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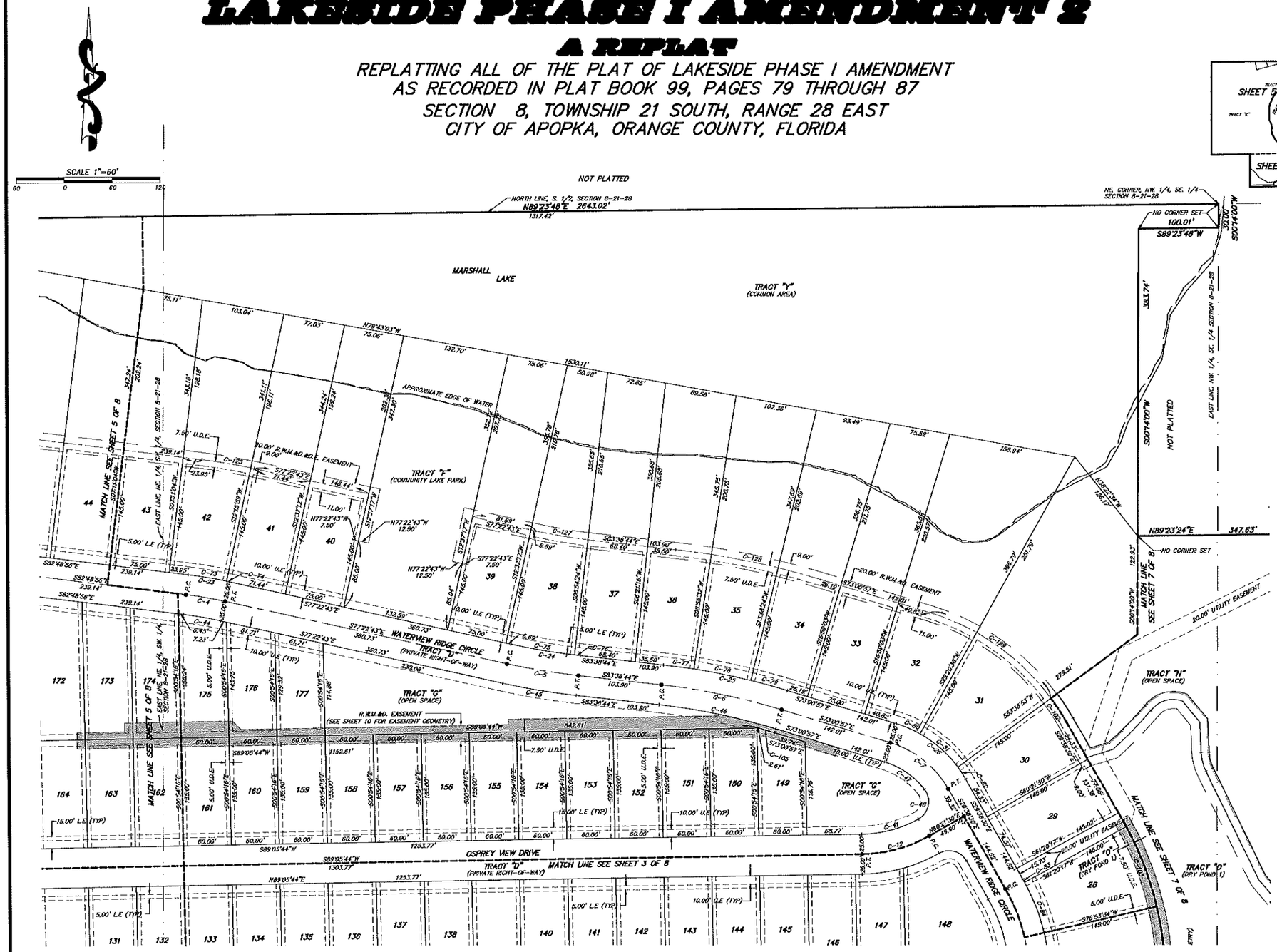
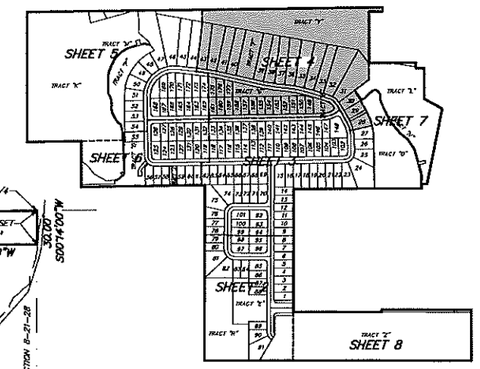
CITY OF APOPKA, ORANGE COUNTY, FLORIDA





KEY MAP
NOT TO SCALE

CURVE TABLE					
CURVE	RADIUS	DELTA	LENGTH	CHORD	CH. BEARING
C-4	525.00'	5°26'13"	49.82'	49.80'	N80°05'49"W
C-5	625.00'	6°16'01"	90.24'	90.19'	S80°30'43"E
C-6	830.00'	10°37'46"	153.99'	153.76'	N78°19'50"W
C-7	125.00'	43°22'28"	94.63'	92.38'	N51°19'43"W
C-8	275.00'	28°44'14"	112.85'	111.67'	N15°16'23"W
C-12	125.00'	28°44'14"	62.72'	62.06'	N14°43'32"E
C-23	550.00'	5°26'13"	52.19'	52.17'	N80°05'49"W
C-24	800.00'	6°16'01"	87.50'	87.46'	S80°30'43"E
C-25	855.00'	10°37'46"	158.62'	158.39'	N78°19'50"W
C-26	150.00'	43°22'28"	113.55'	110.86'	N51°19'43"W
C-27	250.00'	28°44'14"	125.39'	124.08'	N15°16'23"W
C-41	150.00'	28°20'34"	74.20'	73.45'	S74°55'27"W
C-44	500.00'	5°26'13"	47.45'	47.43'	S80°05'49"E
C-45	850.00'	6°16'01"	92.97'	92.93'	S80°30'43"E
C-46	805.00'	10°37'46"	149.34'	149.13'	S78°19'50"E
C-47	100.00'	35°11'22"	61.42'	60.46'	S55°25'16"E
C-48	25.00'	98°34'46"	43.01'	37.90'	S12°27'43"W
C-73	550.00'	5°04'55"	48.78'	48.77'	N80°16'20"W
C-74	550.00'	0°21'18"	3.41'	3.41'	N77°13'22"W
C-75	800.00'	5°42'53"	79.79'	79.76'	N80°14'09"W
C-76	800.00'	0°33'08"	7.71'	7.71'	N83°22'10"W
C-77	855.00'	2°34'16"	38.37'	38.36'	N82°21'36"W
C-78	855.00'	4°52'52"	72.84'	72.82'	N78°38'02"W
C-79	855.00'	3°10'19"	47.42'	47.41'	N74°36'17"W
C-80	150.00'	12°21'33"	32.36'	32.29'	N66°50'11"W
C-81	150.00'	24°16'17"	63.54'	63.07'	N48°31'15"W
C-82	150.00'	6°44'37"	17.66'	17.64'	N33°00'46"W
C-83	250.00'	0°58'47"	4.28'	4.27'	N29°09'06"W
C-84	250.00'	15°33'17"	67.87'	67.66'	N20°53'04"W
C-102	295.00'	6°44'37"	34.72'	34.70'	S33°00'46"E
C-103	325.00'	15°33'17"	107.83'	106.91'	S20°53'04"E
C-105	800.00'	1°28'02"	20.49'	20.49'	S73°44'56"E
C-125	695.00'	5°26'13"	65.95'	65.93'	N80°05'49"W
C-127	655.00'	6°16'01"	71.64'	71.61'	S80°30'43"E
C-128	1000.00'	10°37'46"	185.52'	185.26'	N78°19'50"W
C-129	295.00'	36°37'50"	188.60'	185.41'	N34°42'02"W

— R.W.M.&D. EASEMENT (SEE SHEET 10 FOR EASEMENT GEOMETRY)

SEE SHEET 1 OF 10 FOR LEGEND.

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PLAT BOOK PAGE

LAKESIDE PHASE I AMENDMENT 2

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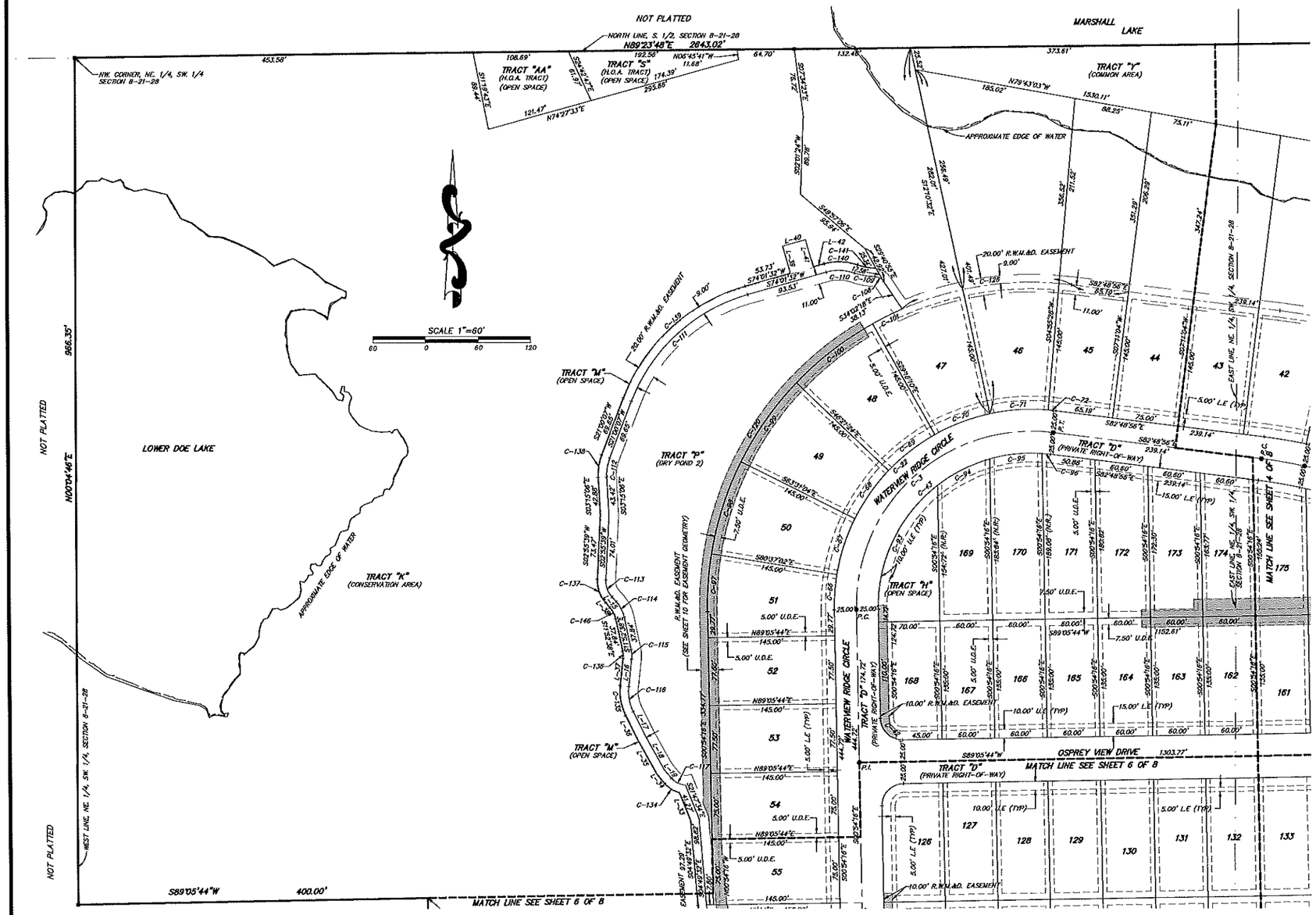

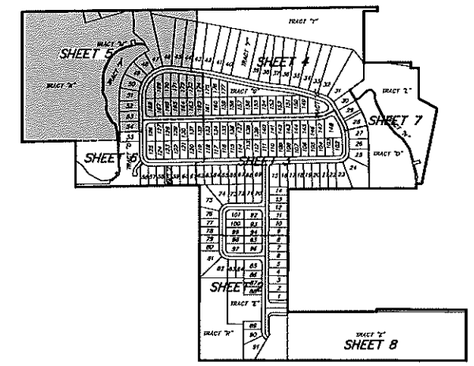

KEY MAP
NOT TO SCALE

LINE TABLE		
LINE	BEARING	LENGTH
L-15	S41°58'07"E	7.12'
L-16	S06°14'28"W	31.43'
L-17	S28°08'58"E	31.14'
L-18	S29°04'42"E	43.65'
L-19	S38°49'23"E	13.10'
L-33	S21°47'34"E	34.11'
L-34	S38°49'23"E	14.04'
L-35	S29°04'42"E	44.85'
L-36	S28°08'58"E	31.39'
L-37	S06°14'28"W	31.43'
L-38	S41°58'07"E	7.12'
L-39	N15°36'29"W	32.00'
L-40	N74°01'32"E	27.00'
L-41	S15°36'29"E	32.00'
L-42	S74°01'32"W	12.81'

CURVE TABLE					
CURVE	RADIUS	DELTA	LENGTH	CHORD	CH. BEARING
C-3	200.00'	88°05'30"	342.39'	303.09'	S40°08'24"W
C-22	225.00'	90°05'20"	366.19'	329.65'	S40°08'24"W
C-42	25.00'	90°00'00"	39.27'	35.36'	N45°54'16"W
C-43	175.00'	88°05'20"	299.60'	264.33'	S40°08'24"W
C-66	225.00'	10°17'14"	40.40'	40.34'	S04°14'21"W
C-67	225.00'	17°05'58"	67.15'	66.90'	S12°55'57"W
C-68	225.00'	17°06'40"	67.39'	67.14'	S35°03'46"W
C-69	225.00'	17°05'14"	67.10'	66.85'	S52°11'13"W
C-70	225.00'	17°05'39"	67.13'	66.88'	S69°16'39"W
C-71	225.00'	17°06'00"	67.15'	66.90'	S86°22'28"W
C-72	225.00'	2°15'36"	8.86'	8.87'	N83°56'44"W
C-93	175.00'	53°07'48"	162.28'	156.52'	N25°39'58"E
C-94	175.00'	21°50'09"	67.10'	66.69'	N63°12'37"E
C-95	175.00'	19°49'04"	60.53'	60.23'	N84°06'14"E
C-96	175.00'	3°10'16"	9.69'	9.69'	S84°24'05"E
C-97	370.00'	10°17'14"	66.43'	66.34'	N04°14'21"E
C-98	370.00'	17°05'58"	110.42'	110.01'	N12°55'57"E
C-99	370.00'	17°06'40"	110.52'	110.11'	N35°03'46"E
C-100	370.00'	17°05'14"	110.34'	109.94'	N52°11'13"E
C-101	370.00'	5°31'51"	37.87'	37.85'	N63°39'45"E
C-108	12.00'	55°03'05"	11.53'	11.09'	N61°33'51"W
C-109	23.00'	18°46'59"	23.93'	23.82'	N79°41'54"W
C-110	52.00'	35°40'03"	32.37'	31.85'	N86°08'26"W
C-111	202.00'	53°01'25"	186.94'	180.34'	S47°30'49"W
C-112	52.00'	24°15'13"	22.01'	21.85'	S08°52'30"W
C-113	27.00'	44°53'46"	21.16'	20.62'	S19°31'14"E
C-114	38.00'	30°05'28"	19.96'	19.73'	S26°55'22"E
C-115	35.00'	18°02'56"	11.07'	11.02'	S02°49'05"E
C-116	52.00'	32°23'26"	29.40'	29.01'	S09°57'15"E
C-117	22.00'	47°45'29"	18.34'	17.81'	S63°42'07"E
C-120	370.00'	67°29'56"	435.89'	411.12'	S32°50'42"W
C-126	370.00'	30°35'34"	197.54'	195.20'	S81°53'22"W
C-134	32.00'	35°29'47"	19.82'	19.51'	S57°34'16"E
C-135	62.00'	32°23'26"	35.05'	34.59'	S09°57'15"E
C-136	25.00'	18°07'06"	7.91'	7.87'	N02°49'05"W
C-137	37.00'	44°53'46"	28.98'	28.26'	S19°31'14"E
C-138	62.00'	24°15'13"	26.25'	26.05'	S08°52'30"W
C-139	212.00'	53°01'25"	196.19'	189.27'	S47°30'49"W
C-140	62.00'	35°40'03"	38.60'	37.98'	N86°08'26"W
C-141	63.00'	19°35'32"	21.54'	21.44'	S80°06'11"E
C-146	28.00'	30°05'28"	14.71'	14.54'	N26°55'22"W

— R.W.M.&D. EASEMENT (SEE SHEET 10 FOR EASEMENT GEOMETRY)

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PLAT BOOK PAGE

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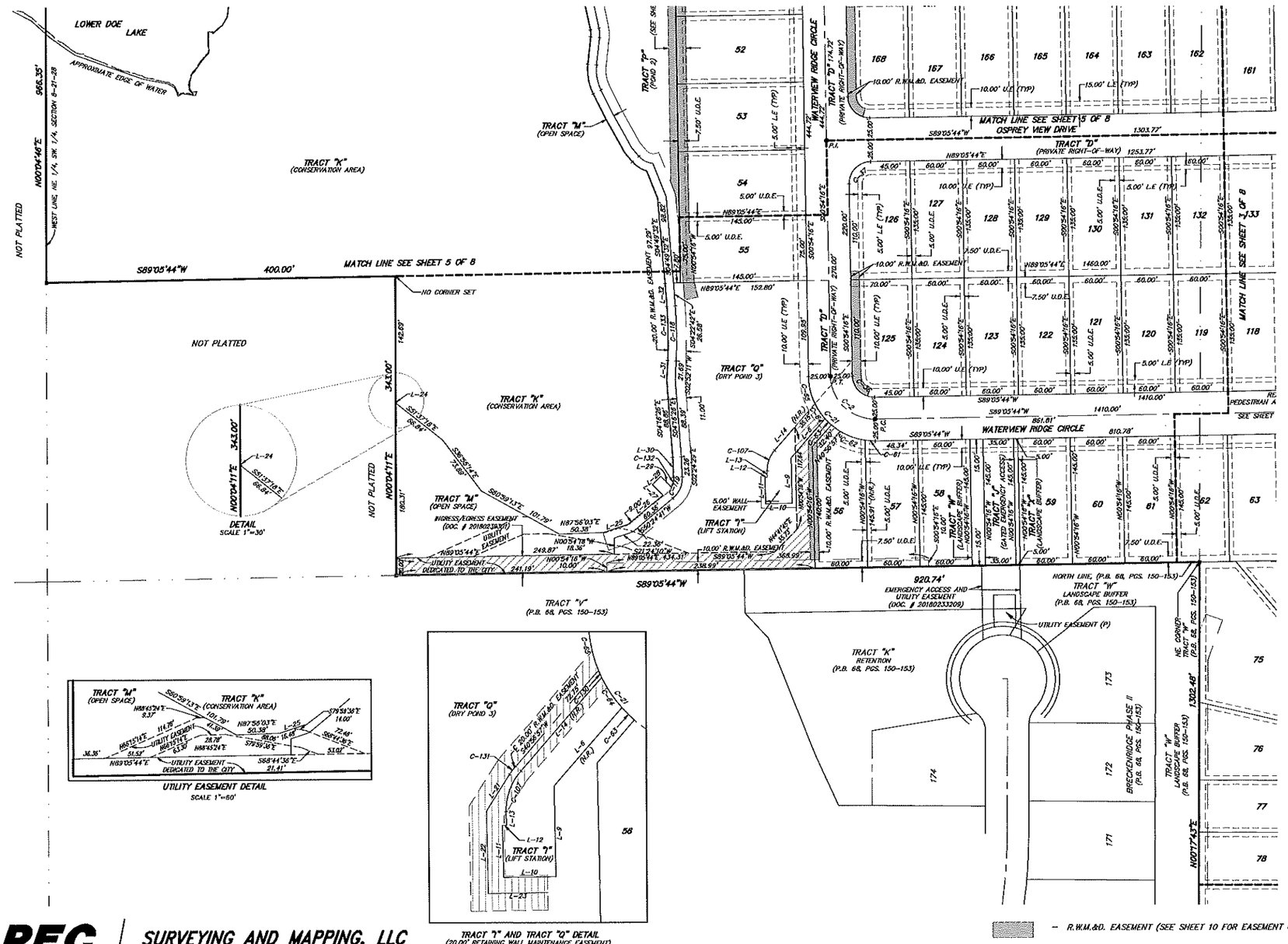
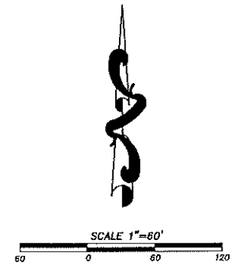
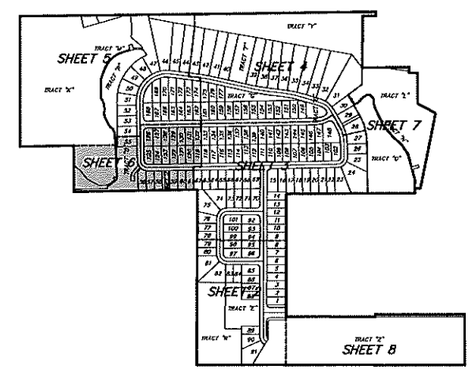


DETAIL
SCALE 1"=30'

UTILITY EASEMENT DETAIL
SCALE 1"=60'

TRACT "T" AND TRACT "O" DETAIL
(20.00' RETAINING WALL MAINTENANCE EASEMENT)
SCALE 1"=30'





KEY MAP
NOT TO SCALE

LINE TABLE		
LINE	BEARING	LENGTH
L-6	S40°58'57"W	59.38'
L-7	NOT USED	
L-8	NOT USED	
L-9	S00°54'16"E	52.08'
L-10	S89°05'44"W	30.00'
L-11	N00°54'16"W	30.00'
L-12	N89°05'44"E	2.24'
L-13	N00°54'16"W	7.68'
L-14	N40°58'57"E	70.86'
L-21	N32°22'04"E	24.85'
L-22	N00°54'16"W	47.30'
L-23	S89°05'44"W	34.00'
L-24	S15°12'09"E	3.57'
L-25	S71°24'10"W	30.00'
L-26	S50°24'41"W	52.00'
L-27	N44°54'41"W	16.99'
L-28	N45°05'19"E	13.50'
L-29	S44°54'41"E	17.00'
L-30	S02°24'29"E	23.10'
L-31	S02°52'11"W	22.31'
L-32	S04°22'42"E	26.54'

CURVE TABLE					
CURVE	RADIUS	DELTA	LENGTH	CHORD	CH. BEARING
C-2	50.00'	90°00'00"	78.54'	70.71'	S45°54'16"E
C-31	75.00'	90°00'00"	117.81'	106.07'	S45°54'16"E
C-36	25.00'	90°00'00"	39.27'	35.36'	N45°54'16"W
C-37	25.00'	90°00'00"	39.27'	35.36'	N44°05'44"E
C-61	75.00'	8°56'47"	11.71'	11.70'	S86°25'52"E
C-62	75.00'	32°54'26"	43.08'	42.49'	S85°30'18"E
C-63	75.00'	7°39'44"	10.03'	10.02'	S45°13'11"E
C-64	75.00'	15°54'57"	20.83'	20.77'	S33°25'50"E
C-65	75.00'	24°34'05"	32.16'	31.91'	S13°11'18"E
C-106	NOT USED				
C-107	35.00'	41°31'13"	25.37'	25.00'	N20°01'21"E
C-118	500.00'	7°14'53"	63.25'	63.21'	S00°45'16"E
C-119	30.00'	52°49'09"	27.66'	26.69'	S24°00'06"W
C-130	75.00'	3°22'48"	4.42'	4.42'	S23°46'28"E
C-131	39.00'	8°34'54"	5.84'	5.84'	S36°39'31"W
C-132	20.00'	32°31'51"	11.35'	11.20'	N13°31'27"E
C-133	490.00'	7°14'53"	61.99'	61.94'	N00°45'16"W

– R.W.M.&D. EASEMENT (SEE SHEET 10 FOR EASEMENT GEOMETRY)

PEC | SURVEYING AND MAPPING, LLC
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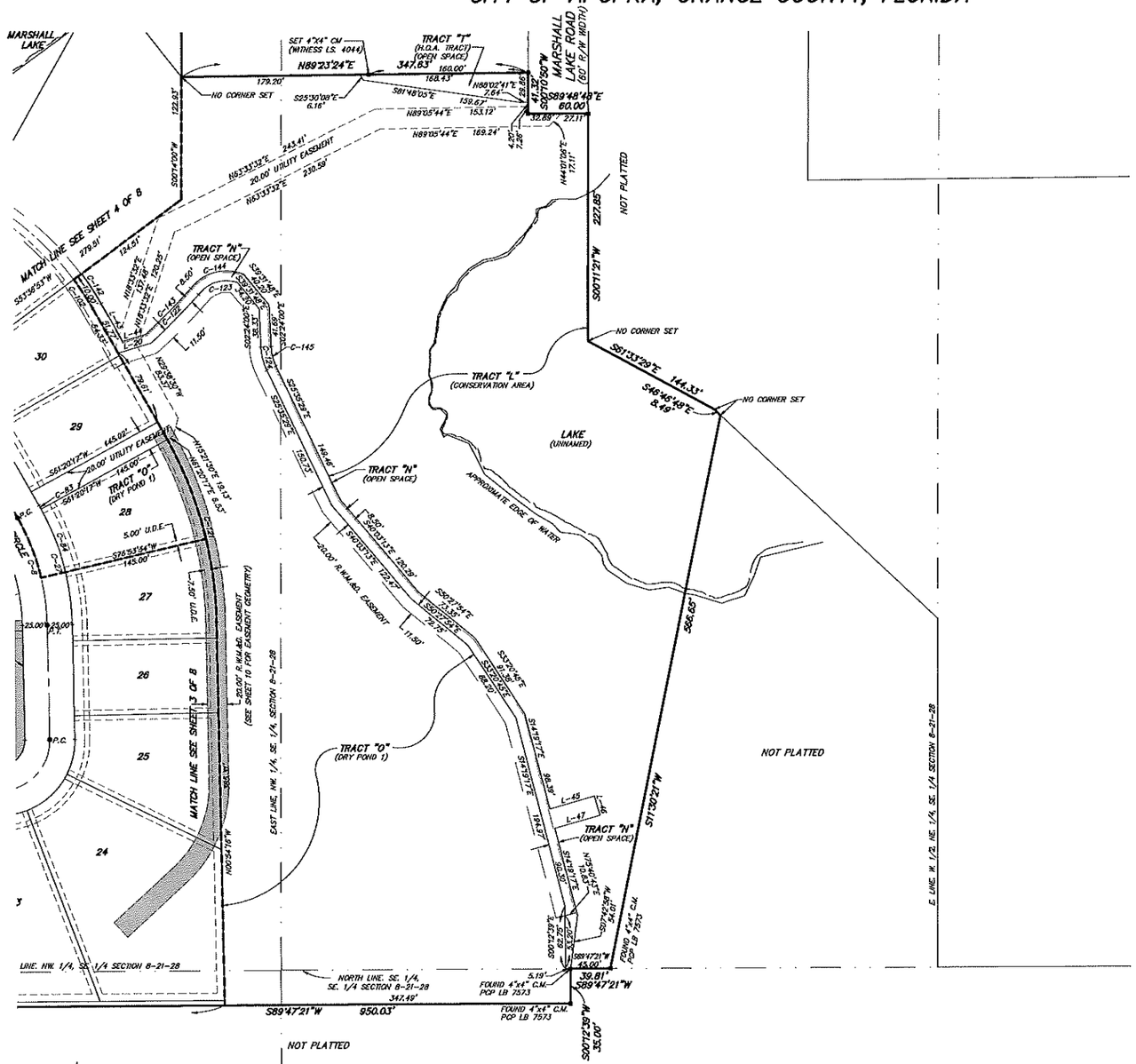
SEE SHEET 1 OF 10 FOR LEGEND.

G:\20-055 LAKESIDE PHASE 1 AMENDMENT 2\20-055 LAKESIDE PH 1 AMENDMENT 2.dwg Apr 28, 2020 - 10:40am

LAKESIDE PHASE I AMENDMENT 2

A REPLAT

REPLATTING ALL OF THE PLAT OF LAKESIDE PHASE I AMENDMENT
AS RECORDED IN PLAT BOOK 99, PAGES 79 THROUGH 87
SECTION 8, TOWNSHIP 21 SOUTH, RANGE 28 EAST
CITY OF APOPKA, ORANGE COUNTY, FLORIDA



SCALE 1"=60'

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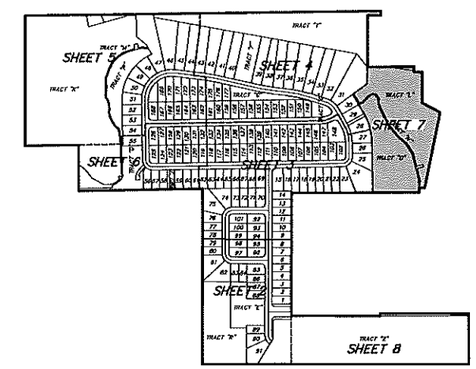

KEY MAP
NOT TO SCALE

LINE TABLE		
LINE	BEARING	LENGTH
L-20	N72°46'25"E	34.49'
L-43	S29°38'30"E	43.23'
L-44	N72°46'25"E	24.25'
L-45	N73°46'52"E	46.40'
L-46	S16°20'58"E	20.00'
L-47	S73°46'52"W	47.11'

CURVE TABLE					
CURVE	RADIUS	DELTA	LENGTH	CHORD	CH. BEARING
C-102	295.00'	6°44'37"	34.72'	34.70'	N33°00'48"W
C-103	395.00'	15°33'17"	107.23'	106.91'	N20°53'04"W
C-121	335.00'	27°45'22"	191.36'	189.50'	N14°46'59"W
C-122	557.00'	7°00'06"	68.07'	68.02'	S44°37'57"W
C-123	35.00'	71°37'04"	43.75'	40.96'	S73°00'15"W
C-124	60.00'	23°11'29"	24.29'	24.12'	N13°59'45"W
C-143	305.00'	6°44'37"	35.90'	35.88'	N33°00'48"W
C-143	547.00'	6°44'25"	64.35'	64.31'	N44°32'07"E
C-144	45.00'	74°58'11"	58.88'	54.77'	S75°08'50"W
C-145	50.00'	23°11'29"	20.24'	20.10'	S13°59'45"E

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– R.W.M.&D. EASEMENT (SEE SHEET 10 FOR EASEMENT GEOMETRY)

SEE SHEET 1 OF 10 FOR LEGEND.

G:\20-055 LAKESIDE PHASE 1 AMENDMENT 2\20-055 LAKESIDE PH 1 AMENDMENT 2.dwg Apr 28, 2020 – 10:47am

PLAT BOOK PAGE

LAKESIDE PHASE I AMENDMENT 2

A REPLAT

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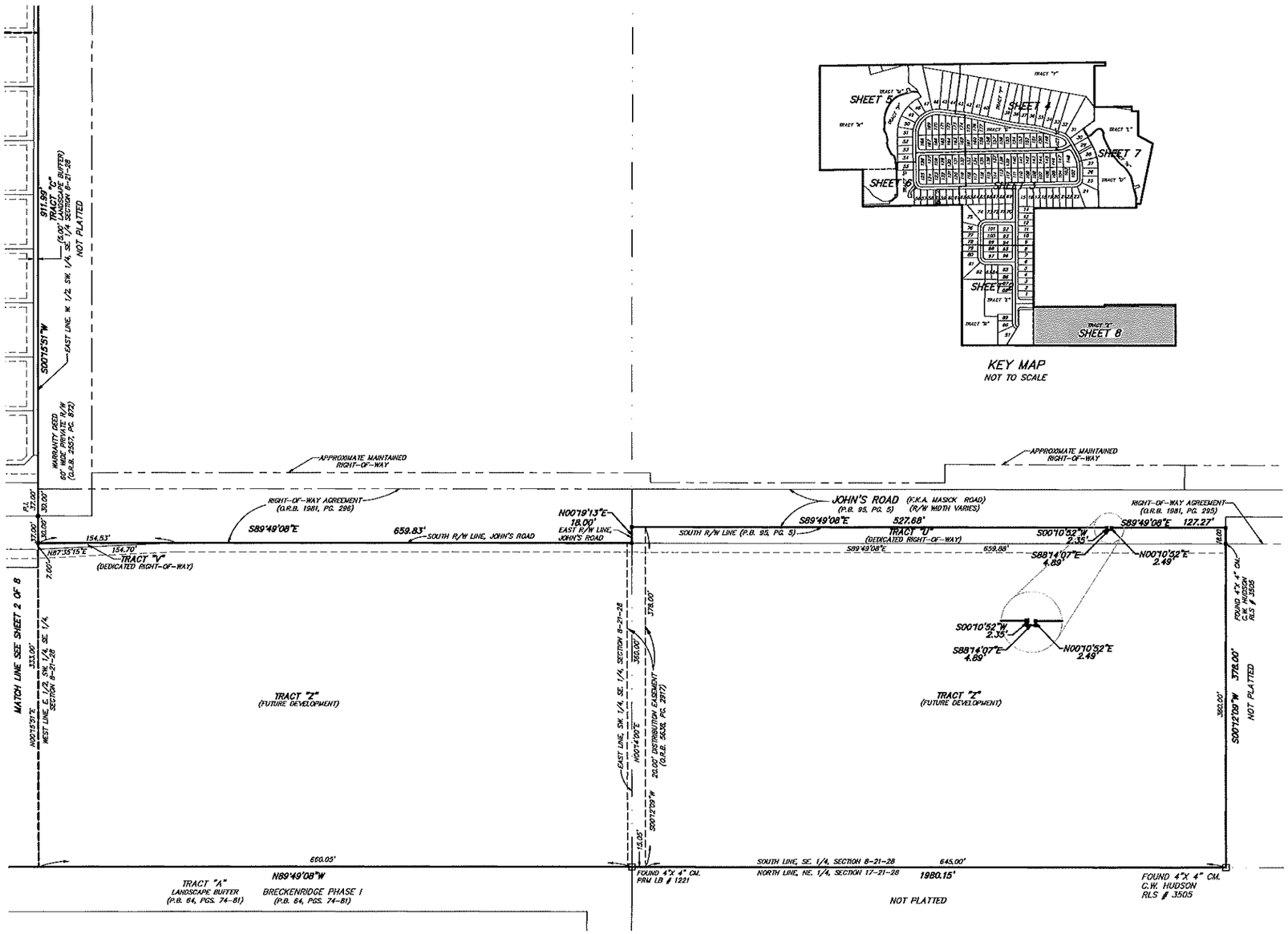
AS RECORDED IN PLAT BOOK 99, PAGES 79 THROUGH 87
SECTION 8, TOWNSHIP 21 SOUTH, RANGE 28 EAST
CITY OF APOPKA, ORANGE COUNTY, FLORIDA

SCALE 1"=80'

60 0 60 120



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SEE SHEET 1 OF 10 FOR LEGEND.

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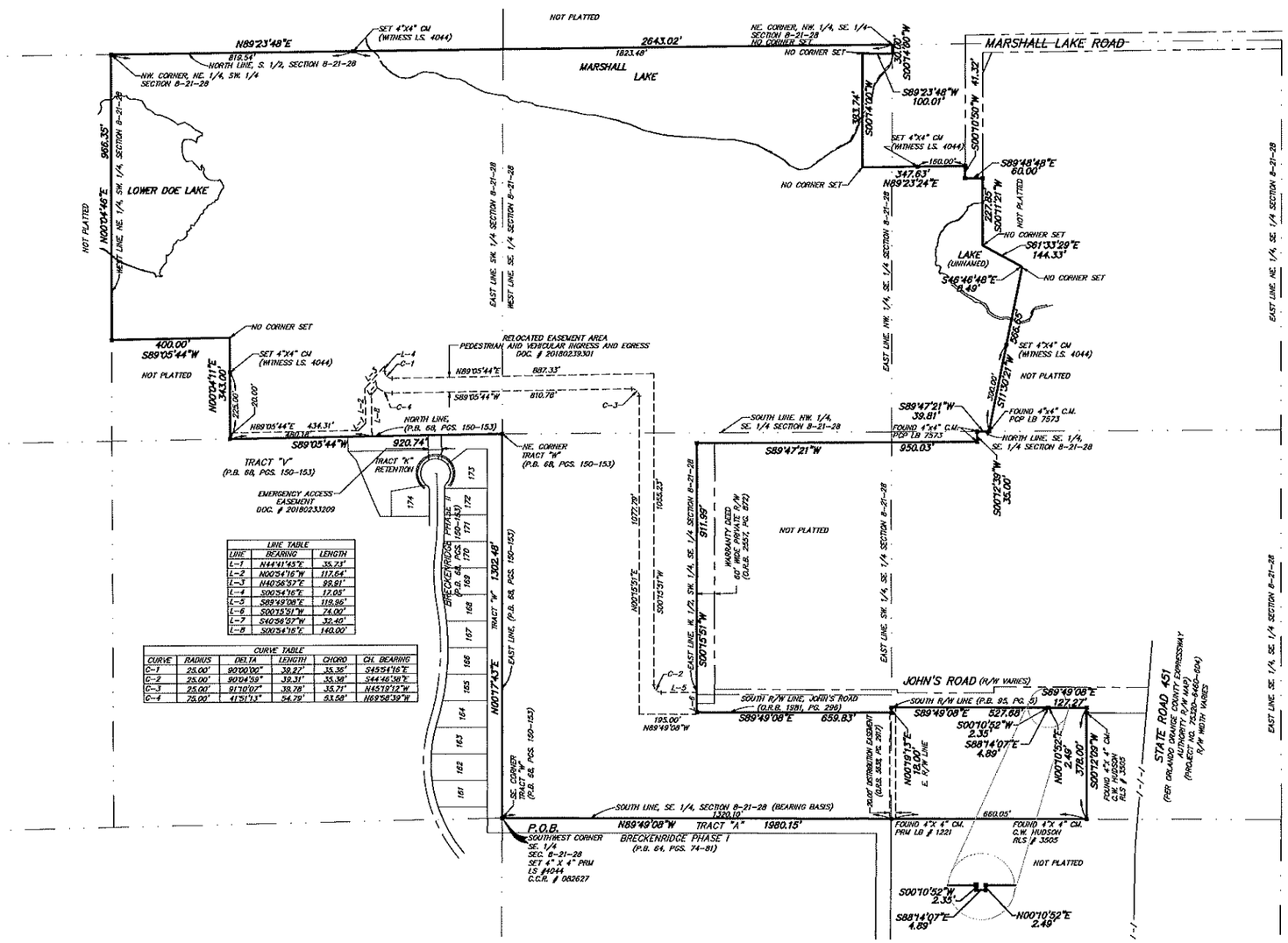
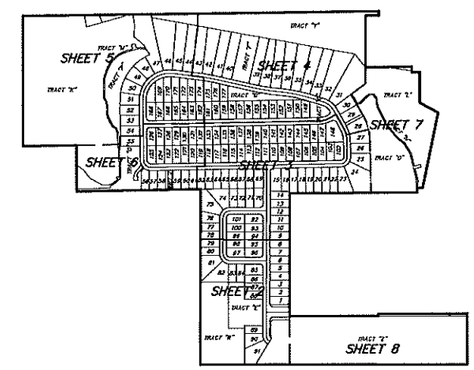
CITY OF APOPKA, ORANGE COUNTY, FLORIDA



LINE TABLE		
LINE	BEARING	LENGTH
L-1	N44°11'45"E	35.73'
L-2	N00°54'16"W	117.64'
L-3	N40°56'57"E	99.91'
L-4	S00°54'16"E	17.05'
L-5	S89°49'08"E	119.96'
L-6	S00°13'51"W	74.00'
L-7	S40°56'57"W	32.40'
L-8	S00°54'16"E	140.00'

CURVE TABLE					
CURVE	RADIUS	DELTA	CHORD	CH. BEARING
C-1	25.00'	90°00'00"	39.27'	35.36'	S45°54'16"E
C-2	25.00'	90°04'59"	39.31'	35.38'	S44°46'58"E
C-3	25.00'	91°10'07"	39.78'	35.71'	N45°10'12"W
C-4	75.00'	41°51'13"	54.79'	53.58'	N69°58'39"W



KEY MAP
NOT TO SCALE

NOTE:

BEARINGS SHOWN HEREON ARE RELATIVE TO THE FLORIDA STATE PLANE COORDINATE SYSTEM 1983 EAST ZONE, BASED ON GPS WITH L-NET CORRECTIONS. THE MONUMENTED SOUTH LINE OF THE SOUTHEAST QUARTER OF SECTION 8, TOWNSHIP 21 SOUTH, RANGE 28 EAST, BEING NORTH 89°49'08" WEST.

SEE SHEET 1 OF 10 FOR LEGEND.

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PLAT BOOK PAGE

LAKESIDE PHASE I AMENDMENT 2

A REPLAT

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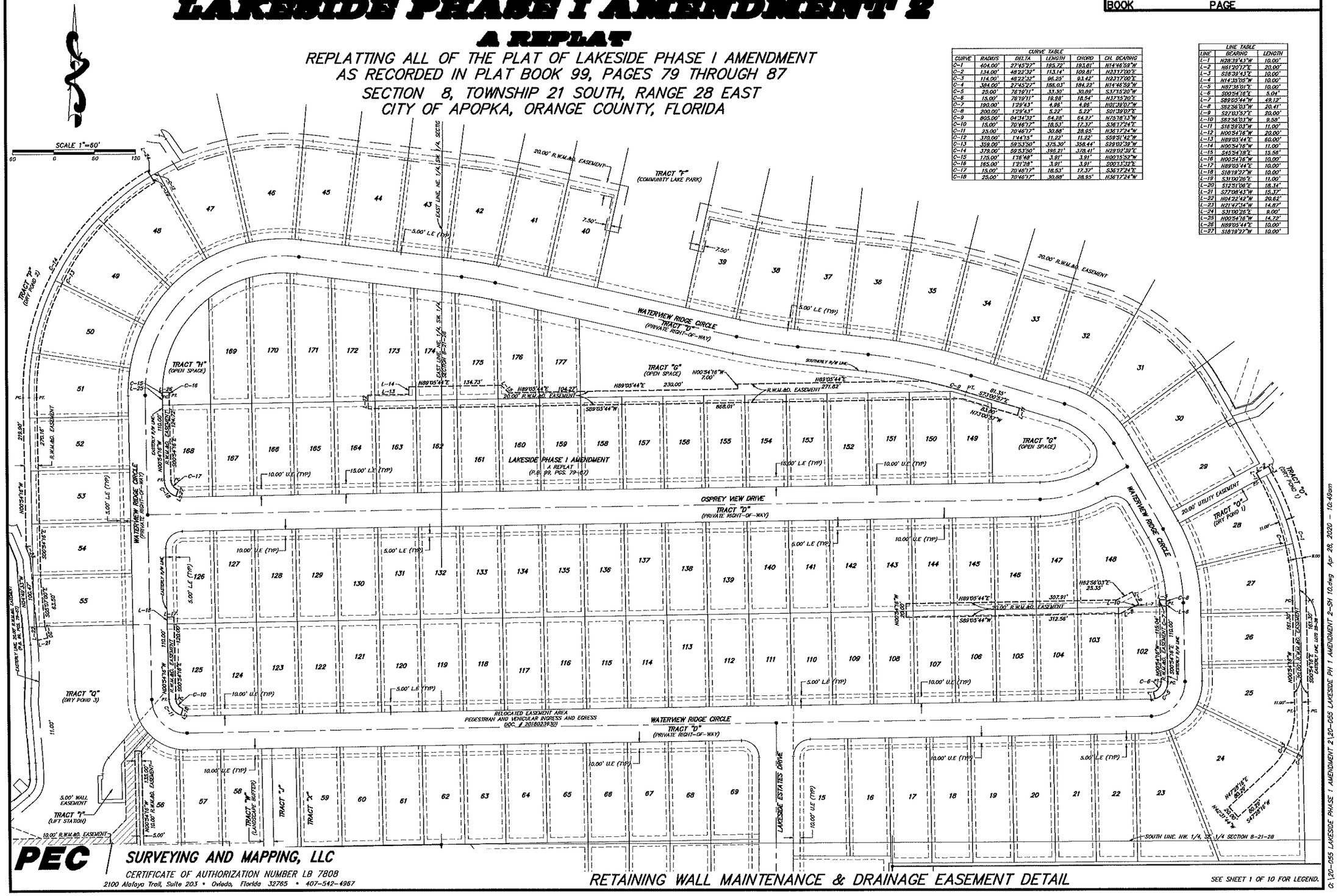
SECTION 8, TOWNSHIP 21 SOUTH, RANGE 28 EAST
CITY OF APOPKA, ORANGE COUNTY, FLORIDA



CURVE TABLE					
CURVE	RADIUS	DELTA	LENGTH	CHORD	CH. BEARING
C-1	404.00'	27°45'27"	195.72'	193.81'	N14°46'59"W
C-2	134.00'	48°22'32"	113.14'	109.81'	N23°17'00"E
C-3	114.00'	48°22'32"	96.25'	93.45'	N23°17'00"E
C-4	384.00'	27°45'27"	186.03'	184.22'	N14°46'59"W
C-5	25.00'	78°19'11"	33.30'	30.89'	S37°15'20"W
C-6	15.00'	78°19'11"	19.98'	18.54'	N37°15'20"E
C-7	190.00'	1°29'43"	4.96'	4.96'	N01°39'07"W
C-8	200.00'	1°29'43"	5.22'	5.22'	S01°39'07"E
C-9	805.00'	04°34'32"	64.28'	64.27'	N25°16'13"W
C-10	15.00'	70°46'17"	18.53'	17.37'	S36°17'24"E
C-11	25.00'	70°46'17"	30.88'	28.95'	N36°17'24"W
C-12	370.00'	1°44'15"	11.22'	11.22'	S59°51'42"W
C-13	359.00'	59°53'50"	375.30'	358.44'	S29°02'39"W
C-14	379.00'	59°53'50"	396.21'	378.41'	N29°02'39"E
C-15	125.00'	1°16'48"	3.91'	3.91'	N00°35'52"W
C-16	165.00'	1°21'28"	3.91'	3.91'	S00°33'32"E
C-17	15.00'	70°46'17"	18.53'	17.37'	S36°17'24"E
C-18	25.00'	70°46'17"	30.88'	28.95'	N36°17'24"W

LINE TABLE		
LINE	BEARING	LENGTH
L-1	N28°39'43"W	10.00'
L-2	N61°20'17"E	20.00'
L-3	S28°39'43"E	10.00'
L-4	N14°33'05"W	10.00'
L-5	N87°36'01"E	10.00'
L-6	S00°54'16"E	5.04'
L-7	S89°05'44"W	49.12'
L-8	S82°56'03"W	20.41'
L-9	S27°03'57"E	20.00'
L-10	S82°56'03"W	9.59'
L-11	S16°39'04"W	15.00'
L-12	N00°54'16"W	20.00'
L-13	N89°05'44"E	60.00'
L-14	N00°54'16"W	11.00'
L-15	S45°54'16"E	15.56'
L-16	N00°54'16"W	10.00'
L-17	N89°05'44"E	10.00'
L-18	S18°19'27"W	10.00'
L-19	S31°30'26"E	11.00'
L-20	S12°51'06"E	18.34'
L-21	S77°08'43"W	15.37'
L-22	N04°22'42"W	20.62'
L-23	N21°47'34"W	14.62'
L-24	S31°30'26"E	9.00'
L-25	N00°54'16"W	14.72'
L-26	N89°05'44"E	10.00'
L-27	S18°19'27"W	10.00'

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RETAINING WALL MAINTENANCE & DRAINAGE EASEMENT DETAIL

SEE SHEET 1 OF 10 FOR LEGEND.

G:\20-055 LAKESIDE PHASE I AMENDMENT 2\20-055 LAKESIDE PH I AMENDMENT 2-SH 10.dwg Apr 28, 2020 - 10:49am

FINAL DEVELOPMENT PLAN AMENDMENT
FOR
LAKESIDE PHASE 1
(fka LAKE MARSHALL SUBDIVISION)
CITY OF APOPKA , FLORIDA
OCPA PARCEL ID# 28-21-08-0000-00-005 & 28-21-08-0000-00-043

LEGAL DESCRIPTION PER PEC - SURVEYING AND MAPPING, LLC
DATED: JUNE 2017

OCPA PARCEL ID 28-21-08-0000-00-005:

FIRST AMERICAN TITLE FILE NUMBER: 2037-3759052

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE COUNTY OF ORANGE, STATE OF FLORIDA, AND IS DESCRIBED AS FOLLOWS:

PARCEL 1:

NORTHEAST 1/4 OF SOUTHWEST 1/4 OF SECTION 8, TOWNSHIP 21 SOUTH, RANGE 28 EAST, LESS: BEGIN AT SOUTHWEST CORNER OF NORTHEAST 1/4 OF SOUTHWEST 1/4, SECTION 8, TOWNSHIP 21 SOUTH, RANGE 28 EAST, RUN NORTH 343 FEET, EAST 400 FEET, SOUTH 343 FEET, WEST 400 FEET TO POINT OF BEGINNING, ORANGE COUNTY, FLORIDA.

PARCEL 2:

WEST 1/2 OF THE NORTHWEST 1/4 OF SOUTHEAST 1/4 OF SECTION 8, TOWNSHIP 21 SOUTH, RANGE 28 EAST, ORANGE COUNTY, FLORIDA.

AND

BEGIN AT THE NORTHWEST CORNER OF THE EAST HALF OF THE SOUTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 8, TOWNSHIP 21 SOUTH, RANGE 28 EAST, RUN NORTH 89°33'48" EAST 950 FEET; THENCE SOUTH 00°30'54" WEST 35 FEET; THENCE SOUTH 89°33'48" WEST 950 FEET; THENCE NORTH 00°30'54" EAST 35 FEET TO POINT OF BEGINNING, ORANGE COUNTY, FLORIDA.

AND

THE EAST HALF OF THE NORTHWEST 1/4 OF THE SOUTHEAST 1/4, ALSO THAT PORTION OF THE SOUTH 12 ACRES OF THE WEST HALF OF THE NORTHEAST 1/4 OF THE SOUTHEAST 1/4 SOUTH OF CENTER LINE OF LAKE, LESS THE FOLLOWING DESCRIBED PARCEL: BEGIN AT THE SOUTHEAST CORNER OF THE WEST HALF OF THE NORTHEAST 1/4 OF THE SOUTHEAST 1/4, SECTION 8, TOWNSHIP 21 SOUTH, RANGE 28 EAST. RUN SOUTH 89°33'48" WEST ALONG THE SOUTH LINE OF SAID WEST HALF 328.92 FEET; THENCE NORTH 11°16'48" EAST 350 FEET TO THE CENTRAL LINE OF LAKE; THENCE SOUTH 44°53'28" EAST ALONG CENTRAL LINE OF LAKE, 306.45 FEET TO THE EAST LINE OF SAID WEST HALF; THENCE SOUTH ALONG EAST LINE OF SAID WEST HALF 350 FEET TO POINT OF BEGINNING, SECTION 8, TOWNSHIP 21 SOUTH, RANGE 28 EAST, ORANGE COUNTY, FLORIDA, AND COMMENCE EAST 1/4 CORNER OF SECTION 8, TOWNSHIP 21 SOUTH, RANGE 28 EAST, RUN THENCE SOUTH 89°39'41" WEST 1070.14 FEET, SOUTH 00°18'05" WEST 388.7 FEET TO THE POINT OF BEGINNING; RUN THENCE SOUTH 00°18'05" WEST 25 FEET; THENCE SOUTH 89°39'41" WEST 247.92 FEET; THENCE SOUTH 00°21'52" WEST 115.13 FEET; THENCE NORTH 89°39'41" EAST 307.92 FEET; THENCE NORTH 00°18'05" EAST 140.13 FEET; THENCE WEST TO POINT OF BEGINNING, LESS SOUTH 303.7 FEET OF THE NORTH 413.7 FEET OF THE EAST 100 FEET OF THE NORTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 8, TOWNSHIP 21 SOUTH, RANGE 28 EAST, ORANGE COUNTY, FLORIDA. LESS ANY PORTION OF THE ABOVE DESCRIPTION LYING WITHIN THE BOUNDARY OF LAKE MARSHALL DRIVE AS DESCRIBED IN QUIT CLAIM DEED RECORDED IN OFFICIAL RECORDS BOOK 3726, PAGE 2538, OF THE PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA.

ALSO LESS AND EXCEPT FROM THE ABOVE DESCRIPTIONS, ANY PORTION LYING WITHIN THE PROPERTY DESCRIBED IN STIPULATED ORDER OF TAKING RECORDED IN OFFICIAL RECORDS BOOK 5461, PAGE 2470, OF THE PUBLIC RECORDS OF ORANGE COUNTY, FLORIDA.

PARCEL 3:

THE NORTHWEST 1/4 OF THE SOUTHWEST 1/4 OF THE SOUTHEAST 1/4 AND THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 8, TOWNSHIP 21 SOUTH, RANGE 28 EAST, ORANGE COUNTY, FLORIDA.

OCPA PARCEL ID 28-21-08-0000-00-043:

FIRST AMERICAN FILE NUMBER: 2037-3736852

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE COUNTY OF ORANGE, STATE OF FLORIDA, AND IS DESCRIBED AS FOLLOWS:

THE EAST 1/2 OF THE SOUTHWEST 1/4 OF THE SOUTHEAST 1/4, SECTION 8, TOWNSHIP 21 SOUTH, RANGE 28 EAST, ORANGE COUNTY, FLORIDA, LYING SOUTH OF MASEK ROAD NOW KNOWN AS JOHNS ROAD.

AND

THE WEST 1/2 OF THE SOUTHEAST 1/4 OF THE SOUTHEAST 1/4, SECTION 8, TOWNSHIP 21 SOUTH, RANGE 28 EAST, ORANGE COUNTY, FLORIDA, LYING SOUTH OF MASEK ROAD NOW KNOWN AS JOHNS ROAD.

UTILITY PROVIDERS

WATER/SEWER:
CITY OF APOPKA
748 E. CLEVELAND STREET
APOPKA, FL 32703
CONTACT: BRIAN BISHOP
(407) 703-1731, EXT. 685

SOLID WASTE COLLECTION:
CITY OF APOPKA
120 E MAIN STREET
APOPKA, FLORIDA 32703
PHONE: (407) 703-1700

GAS:
LAKE APOPKA NATURAL GAS DISTRICT
1320 WINTER GARDEN VINELAND ROAD
ORLANDO, FL 32803
CONTACT: ANTONIO GIBSON
PHONE: (407) 656-2734

TELEPHONE:
CENTURY LINK
33 N. MAIN MAIN STREET, ROOM 144
WINTER GARDEN, FL 34787
CONTACT: TY LESLIE
PHONE: (407) 814-5293

CABLE:
CHARTER COMMUNICATIONS (A.K.A. SPECTRUM)
3767 ALL AMERICAN BOULEVARD
ORLANDO, FLORIDA 32810
CONTACT: MARVIN USRY JR.
PHONE: (407) 532-8509

POWER:
DUKE ENERGY
2501 25TH STREET NORTH
ST. PETERSBURG, FL 33713
CONTACT: MEGAN VONSKETINA
PHONE: (727) 893-9394

PROJECT TEAM

OWNER
AVATAR PROPERTIES, INC
2420 S. LAKEMONT AVE., SUITE 450
ORLANDO, FL 32814

JAMES D. & DEBORAH M. LYDA
2265 PARK VILLAGE PLACE
APOPKA, FL 32712

DEVELOPER
AVATAR PROPERTIES, INC
CONTACT: MATTHEW R. YOUNG, P.E.
2420 S. LAKEMONT AVE., SUITE 450
ORLANDO, FL 32814
PHONE: (407) 206-9317
EMAIL: M.YOUNG@AVATARGROUP.COM

ENGINEER
APPIAN ENGINEERING, LLC
ENGINEER: LUKE M. CLASSON, P.E.
2221 LEE ROAD-SUITE 17
WINTER PARK, FL 32789
PHONE: (407) 960-5868
FAX: (866) 571-8179
EMAIL: LCLASSON@APPIANFL.COM

SURVEYOR
P.E.C. SURVEYING & MAPPING, LLC
SURVEYOR: DAVID A. WHITE, PSM
2100 ALAFAYA TRAIL, SUITE 203
OVIEDO, FL 32765
PHONE: (407) 545-4867
EMAIL: DW@PECONSULTS.COM

LANDSCAPE ARCHITECT
LANDSCAPE DESIGNS, LLC
ARCHITECT: CARL J. KELLY JR., RLA
4403 GABRIELLA LANE
WINTER PARK, FL 32792
PHONE: (407) 484-3414
EMAIL: CKELLY@CFL.RR.COM

GEOTECHNICAL ENGINEER
ANDREYEV ENGINEERING, INC
ENGINEER: RAYMOND W. JONES, PE
4035 ST. JOHN'S PARKWAY
SANFORD, FL 32771
PHONE: (407) 330-7563
FAX: (407) 330-7565
EMAIL: RJONES@ANDREYEVENGINEERING.COM

ENVIRONMENTAL CONSULTANT
BIO-TECH CONSULTING INC
ENVIRONMENTALIST: MARK AUSLEY
3025 EAST SOUTH STREET
ORLANDO, FL 32803
PHONE: (407) 894-5969
FAX: (407) 894-5970
EMAIL: MARK@BIO-TECHCONSULTING.COM

TRAFFIC ENGINEER
TRAFFIC & MOBILITY CONSULTANTS
ENGINEER: MOHAMMED ABDALLAH, P.E., P.T.O.E.
3101 MAGUIRE BLVD., SUITE 265
ORLANDO, FL 32803
PHONE: (407) 531-5332
EMAIL: MNA@TRAFFICMOBILITY.COM

VICINITY MAP
SCALE: 1" = 2000'

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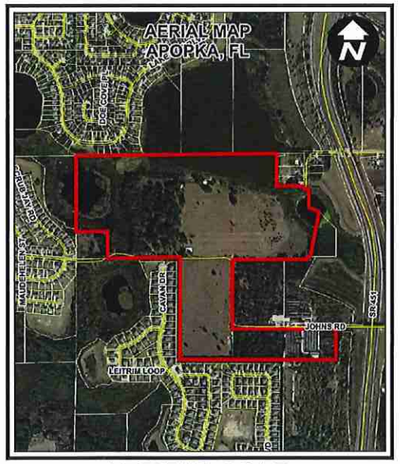

AERIAL MAP
SCALE: 1" = 1000'

SOILS MAP
SCALE: 1" = 1000'

FEMA FLOOD MAP
SCALE: 1" = 1000'

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C1.2	EXISTING CONDITIONS PLAN - NORTHEAST
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C5.0	UTILITY NOTES
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C6.6	OVERALL DRAINAGE PLAN
C6.7	DRAINAGE PLAN - NORTHEAST
C6.8	DRAINAGE PLAN - NORTH
C6.9	DRAINAGE PLAN - NORTHWEST
C6.10	DRAINAGE PLAN - SOUTH
C6.11	DRAINAGE PLAN - SOUTHEAST
C7.0	PLAN & PROFILE - STREET A - STA. -0+93 TO STA. 6+50
C7.1	PLAN & PROFILE - STREET A - STA. 6+50 TO STA. 12+70
C7.2	PLAN & PROFILE - STREET B - STA. 0+00 TO STA. 3+50
C7.3	PLAN & PROFILE - STREET B - STA. 3+50 TO STA. 6+50
C7.4	PLAN & PROFILE - STREET B - STA. 6+50 TO STA. 9+67
C7.5	PLAN & PROFILE - STREET C NORTH - STA. 0+00 TO STA 3+50
C7.6	PLAN & PROFILE - STREET C NORTH - STA. 3+50 TO STA. 10+50
C7.7	PLAN & PROFILE - STREET C NORTH - STA. 10+50 TO STA. 17+91
C7.8	PLAN & PROFILE - STREET C SOUTH - STA. 0+00 TO STA. 3+50
C7.9	PLAN & PROFILE - STREET C SOUTH - STA. 3+50 TO STA. 10+50
C7.10	PLAN & PROFILE - STREET C SOUTH - STA. 10+50 TO STA. 15+00
C7.11	PLAN & PROFILE - STREET C SOUTH - STA. 15+00 TO STA. 21+70
C7.12	PLAN & PROFILE - STREET D - STA. 0+00 TO STA. 7+00
C7.13	PLAN & PROFILE - STREET D - STA. 7+00 TO STA. 14+11
C7.14	PLAN & PROFILE - EMERGENCY ACCESS - STA. 0+00 TO STA. 2+77
C7.15	PLAN & PROFILE - OFFSITE JOHNS ROAD - STA. 0+00 TO STA. 7+00
C7.16	PLAN & PROFILE - OFFSITE JOHNS ROAD - STA. 7+00 TO STA. 15+76
C8.0	CIVIL DETAILS
C9.0	DRAINAGE DETAILS
C9.1	DRAINAGE DETAILS
C10.0	UTILITY DETAILS
C10.1	UTILITY DETAILS
C10.2	UTILITY DETAILS
C10.3	UTILITY DETAILS
C10.4	LIFT STATION DETAILS
C10.5	LIFT STATION DETAILS
C10.6	LIFT STATION DETAILS
LS-01	TREE MITIGATION PLAN
LS-02	TREE MITIGATION PLAN
LS-03	TREE MITIGATION PLAN
LS-04	TREE MITIGATION PLAN
LS-05	LANDSCAPE SITE PLAN
LS-06	LANDSCAPE SITE PLAN
LS-07	LANDSCAPE SITE PLAN
LS-08	LANDSCAPE SITE PLAN
IR-01	IRRIGATION PLAN
IR-02	IRRIGATION PLAN
IR-03	IRRIGATION PLAN
HS-01	HARDSCAPE DETAILS
HS-02	HARDSCAPE DETAILS
	MAP OF BOUNDARY & TOPOGRAPHIC SURVEY- OCPA PARCEL ID#28-21-28-0000-00-005
	MAP OF BOUNDARY & TOPOGRAPHIC SURVEY- OCPA PARCEL ID#28-21-28-0000-00-005
	MAP OF BOUNDARY, TOPOGRAPHIC & TREE SURVEY- OCPA PARCEL ID#28-21-28-0000-00-005
	MAP OF BOUNDARY & TOPOGRAPHIC SURVEY- OCPA PARCEL ID#28-21-28-0000-00-043
	MAP OF BOUNDARY & TOPOGRAPHIC SURVEY- OCPA PARCEL ID#28-21-28-0000-00-043
	MAP OF BOUNDARY & TOPOGRAPHIC SURVEY- OCPA PARCEL ID#28-21-28-0000-00-043
	MAP OF BOUNDARY & TREE SURVEY- OCPA PARCEL ID#28-21-28-0000-00-043
	MAP OF BOUNDARY & TREE SURVEY- OCPA PARCEL ID#28-21-28-0000-00-043
	MAP OF BOUNDARY & TREE SURVEY- OCPA PARCEL ID#28-21-28-0000-00-043

SHEET 1 OF 92

APPIAN ENGINEERING
2221 LEE ROAD, SUITE 17
WINTER PARK, FLORIDA 32789
(407) 960-5868

BOARD OF PROFESSIONAL ENGINEERING CERTIFICATE NO. 32174

PERMITS REQUIRED

AGENCY	PERMIT TYPE	DATE APPLIED	DATE APPROVED	APPROVAL NO.
CITY OF APOPKA	SITE PERMIT	1/25/18	7/18/18	PR18-03
S.J.R.W.M.D.	ERP	1/26/18	6/22/18	152676-1
F.D.E.P.	WATER	7/30/18	7/31/18	0080719-398-DSGP
F.D.E.P.	WASTEWATER	8/1/18	8/2/18	0367184-001-DWC
F.E.M.A.	CLOMR-F	2/1/18	4/24/18	18-04-2830C

REV.	DATE	DESCRIPTION
1	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18
2	03/15/18	S.J.R.W.M.D. COMMENTS DATED 03/15/18
3	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18
4	01/21/20	FDP AMENDMENT – GRADING REVISION
5	03/24/20	CITY OF APOPKA COMMENTS DATE 03/16/20
6	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION
7		
8		
9		
10		

3/30/20

P:_PROJECT DRAWINGS\ROY-001 – Lake Marshall Residential Development\5.0 Drawings\59civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT – PHASE 1\Cover Sheet.dwg Plotted:3/30/2020 By:sslerrogll

GENERAL NOTES

1. UNLESS OTHERWISE SPECIFIED, ALL WORK SHALL BE PERFORMED CONSISTENT WITH THE FOLLOWING SPECIFICATIONS:

- CITY OF APOPKA, FLORIDA
- ST. JOHNS RIVER WATER MANAGEMENT DISTRICT
- FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
- NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

2. THE GEOTECHNICAL REPORT SHALL BE REVIEWED BY THE CONTRACTOR, AND THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE SITE, INCLUDING ALL SURFACE AND SUBSURFACE CONDITIONS, THE WORK REQUIRED, AND ALL OTHER CONDITIONS THAT MAY AFFECT THE SUCCESSFUL COMPLETION OF THE JOB PRIOR TO COMMENCEMENT OF WORK.

3. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND PERMIT CONDITIONS BEARING ON THE CONDUCT OF THE WORK, AS DRAWN AND SPECIFIED. IF THE CONTRACTOR OBSERVES THAT THE DRAWINGS AND SPECIFICATIONS ARE AT VARIANCE THEREWITH, HE SHALL PROMPTLY NOTIFY THE ENGINEER, IN WRITING, AND ANY NECESSARY CHANGES SHALL BE ADJUSTED, AS PROVIDED IN THE AGREEMENT FOR CHANGES IN THE WORK.

4. THE CONTRACTOR SHALL BE RESPONSIBLE TO THE OWNER AND THE ENGINEER FOR THE ACTS AND OMISSIONS OF CONTRACTOR'S EMPLOYEES AND ALL HIS SUBCONTRACTORS AND THEIR AGENTS AND EMPLOYEES AND OTHER PERSONS PERFORMING ANY OF THE WORK UNDER A CONTRACT WITH THE CONTRACTOR.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL NECESSARY ARRANGEMENTS WITH GOVERNMENTAL DEPARTMENTS, PUBLIC UTILITIES, PUBLIC CARRIERS, SERVICE COMPANIES, AND CORPORATIONS OWNING OR CONTROLLING ROADWAYS, RAILWAYS, WATER, SEWER, GAS, ELECTRICAL, TELEPHONE, AND TELEGRAPH FACILITIES SUCH AS PAVEMENTS, TRACKS, PIPING, WIRES, CABLES, CONDUITS, POLES, GUYS, OR OTHER SIMILAR FACILITIES, INCLUDING INCIDENTAL STRUCTURES CONNECTED THEREWITH THAT ARE ENCOUNTERED IN THE WORK IN ORDER THAT SUCH ITEMS MAY BE PROPERLY SUPPORTED, PROTECTED OR LOCATED.

6. UNLESS OTHERWISE SPECIFIED IN THE GENERAL CONDITIONS, ALL CONSTRUCTION IS TO BE GOVERNED BY THE PLANS, APPLICABLE PERMITS, AND SPECIFICATIONS HEREIN, AND ALL APPLICABLE FEDERAL, STATE AND LOCAL BUILDING AND SAFETY CODES, LAWS AND ORDINANCES.

7. PRIOR TO PERFORMING ANY WORK WITHIN ANY PUBLIC OR UTILITY RIGHT-OF-WAY, CONTRACTOR SHALL OBTAIN AUTHORIZATION AND PERMIT FROM JURISDICTION RESPONSIBLE FOR SUCH RIGHT-OF-WAY. IN ADDITION, CONTRACTOR SHALL OBTAIN GAS I.D. NUMBER FROM LOCAL GAS COMPANY AND NOTIFY SUNSHINE STATE ONE-CALL UTILITY NOTIFICATION CENTER AT 1-800-432-4770 AT LEAST 48 HOURS PRIOR TO START OF WORK.

8. PRIOR TO PERFORMING ANY WORK WITHIN ANY PUBLIC RIGHT-OF-WAY, CONTRACTOR SHALL DEVELOP AND IMPLEMENT A TRAFFIC CONTROL PLAN CONSISTENT WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION, AND SUBMIT TO THE COUNTY ENGINEER FOR APPROVAL.

9. IN THE EVENT THE CONTRACTOR DISCOVERS ANY ERRORS OR OMISSIONS IN THE PLANS HE SHALL IMMEDIATELY NOTIFY THE ENGINEER AND/OR OWNER OR OWNER'S AGENT.

10. CONTRACTOR SHALL PRESERVE AND PROTECT ALL PERMANENT REFERENCE MONUMENTS, PERMANENT CONTROL POINTS, PERMANENT BENCH MARKS AND PROPERTY CORNERS. IN THE EVENT THE MONUMENTS, POINTS OR MARKERS ARE DISTURBED THE CONTRACTOR SHALL EMPLOY A FLORIDA REGISTERED LAND SURVEYOR TO RESET OR REPLACE THEM.

11. THE OWNER, OWNER'S AGENT AND INSPECTORS OF APPLICABLE GOVERNMENT JURISDICTIONS, SHALL AT ALL TIMES HAVE ACCESS TO THE WORK WHEREVER AND WHENEVER IT IS IN PREPARATION OR PROGRESS; AND THE CONTRACTOR SHALL PROVIDE PROPER FACILITIES FOR SUCH ACCESS AND FOR THE INSPECTION.

12. IT IS THE CONTRACTOR'S RESPONSIBILITY TO TAKE ALL REASONABLE AND PRUDENT PRECAUTIONS TO INSURE THAT ALL COMPLETED WORK, MATERIALS AND EQUIPMENT STORED ON SITE ARE SAFE AND SECURED FROM UNAUTHORIZED ACCESS, USE, THEFT, OR VANDALISM. SUCH PRECAUTIONS MAY INCLUDE INSTALLATION OF SIGNS, FENCES, OR POSTING OF SECURITY GUARDS.

13. CONTRACTOR SHALL, AT ALL TIMES, UTILIZE ALL NORMALLY ACCEPTED AND REASONABLY EXPECTED SAFETY PRACTICES AND COMPLY WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES AND GUIDELINES PERTAINING TO SAFE UTILIZATION OF EQUIPMENT OR MATERIALS AS PUBLISHED BY THEIR MANUFACTURER'S.

14. PRIOR TO INITIATING ANY EXCAVATION (INCLUDING BUT NOT LIMITED TO TUNNELS, DITCHES, STORM WATER PONDS, CANALS, ARTIFICIAL LAKES) CONTRACTOR SHALL INSTALL FENCES AND/OR TAKE ALL OTHER REASONABLE AND PRUDENT STEPS TO INSURE THAT ACCESS TO EXCAVATION BY UNAUTHORIZED PERSONNEL IS PREVENTED.

15. CONTRACTOR SHALL COMPLY IN EVERY RESPECT WITH THE PROVISIONS OF THE FLORIDA STATE TRENCH SAFETY ACT.

16. THE CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS FOR THE SAFETY OF, AND SHALL PROVIDE ALL REASONABLE PROTECTION TO PREVENT DAMAGE, INJURY OR LOSS TO:

    A. ALL EMPLOYEES ON THE WORK AND ALL OTHER PERSONS WHO MAY BE AFFECTED THEREBY;

    B. ALL THE WORK AND ALL MATERIALS AND EQUIPMENT TO BE INCORPORATED THEREIN, WHETHER IN STORAGE ON OR OFF THE SITE, UNDER THE CARE, CUSTODY OR CONTROL OF THE CONTRACTOR OR ANY OF ITS SUBCONTRACTORS;

    C. OTHER PROPERTY AT THE SITE OR ADJACENT THERETO, INCLUDING TREES, SHRUBS, LAWNS, WALKS, PAVEMENTS, ROADWAY, STRUCTURES AND UTILITIES NOT DESIGNATED FOR DEMOLITION IN THE COURSE OF CONSTRUCTION.

17. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAFETY CODES AND WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC, QUASI PUBLIC OR OTHER AUTHORITY HAVING JURISDICTION FOR THE SAFETY OF PERSONS OR PROPERTY OR FOR THEIR PROTECTION AGAINST DAMAGE, INJURY OR LOSS, OR DESIGNED TO PROTECT THE ENVIRONMENT. THE CONTRACTOR SHALL ERECT AND MAINTAIN, AS REQUIRED BY EXISTING CONDITIONS AND PROGRESS OF THE WORK, ALL REASONABLE SAFEGUARDS FOR SAFETY AND PROTECTION, INCLUDING POSTING DANGER SIGNS AND OTHER WARNINGS AGAINST HAZARDS, PROMULGATING SAFETY REGULATIONS AND NOTIFYING OWNERS AND USERS OF ADJACENT UTILITIES OF THE EXISTENCE OF HAZARDS AND OF THE SAFETY REGULATIONS.

18. ALL DAMAGE OR LOSS TO ANY PROPERTY CAUSED IN WHOLE OR IN PART BY THE CONTRACTOR, A SUBCONTRACTOR, OR BY ANYONE FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE, SHALL BE REMEDIED BY THE CONTRACTOR, EXCEPT DAMAGE OR LOSS PROPERLY ATTRIBUTABLE SOLELY TO THE ACTS OR OMISSIONS OF THE OWNER, OR THE ENGINEER OR ANYONE EMPLOYED BY THEM, OR FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE, AND NOT PROPERLY ATTRIBUTABLE IN WHOLE OR IN PART, TO THE FAULT OR NEGLIGENCE OF THE CONTRACTOR.

19. THOSE PARTS OF WORK IN PLACE WHICH ARE SUBJECT TO DAMAGE BECAUSE OF OPERATIONS BEING CARRIED ON ADJACENT THERETO SHALL BE COVERED, BOARDED UP OR SUBSTANTIALLY ENCLOSED WITH ADEQUATE PROTECTION BY THE CONTRACTOR AT CONTRACTOR'S EXPENSE.

20. UNTIL FINAL ACCEPTANCE OF THE WORK BY OWNER, THE CONTRACTOR SHALL HAVE THE CHARGE AND CARE OF AND SHALL BEAR THE RISK OF INJURY OR DAMAGE, LOSS OR EXPENSE TO ANY PART THEREOF, OR TO ANY MATERIALS STORED ON SITE, BY THE ACTION OF THE ELEMENTS OR FROM ANY OTHER CAUSE WHETHER ARISING FROM THE EXECUTION OR NON-EXECUTION OF THE WORK. THE CONTRACTOR SHALL REBUILD, REPAIR, RESTORE AND MAKE GOOD ALL INJURIES OR DAMAGES TO ANY PORTION OF THE WORK OCCASIONED BY ANY OF THE ABOVE CAUSES BEFORE FINAL ACCEPTANCE AND SHALL BEAR THE EXPENSES THEREOF.

21. ADEQUATE TRAFFIC CONTROL, BARRICADES AND FLAGMAN SERVICES SHALL BE FURNISHED AND MAINTAINED BY THE CONTRACTOR AT ALL POINTS WHERE CONVEYING EQUIPMENT ENGAGED ON THE WORK REGULARLY ENTERS ONTO OR CROSSES TRAFFIC-CARRYING ROADS.

22. THE CONTRACTOR SHALL COMPLY IN EVERY RESPECT WITH THE FEDERAL OCCUPATIONAL HEALTH AND SAFETY ACT OF 1970 AND ALL RULES AND REGULATIONS NOW OR HEREAFTER IN EFFECT UNDER SAID ACT, AND THE CONTRACTOR FURTHER AGREES TO COMPLY WITH ANY AND ALL APPLICABLE STATE LAWS AND REGULATIONS PERTAINING TO JOB SAFETY AND HEALTH.

23. CONTRACTOR AND ITS SUBCONTRACTORS SHALL USE, HANDLE, TRANSPORT, AND DISPOSE OF ALL MATERIALS (HAZARDOUS OR OTHERWISE) IN COMPLIANCE WITH ALL PRESENT FEDERAL, STATE AND LOCAL ENVIRONMENTAL, HEALTH OR SAFETY LAW, INCLUDING, BUT NOT LIMITED TO, ALL SUCH STATUTES, REGULATIONS, RULES, ORDINANCES, CODES, AND RULES OF COMMON LAW.

24. CONTRACTOR FURTHER AGREES THAT CONTRACTOR AND ITS SUBCONTRACTORS SHALL NOT CAUSE THE DISCHARGE, RELEASE OR DISPOSAL OF ANY HAZARDOUS MATERIAL CREATED BY ITS WORK ON OR ABOUT THE JOB SITE. IN THE EVENT OF ANY SPILL, RELEASE OR ANY OTHER REPORTABLE OCCURRENCE, CONTRACTOR SHALL NOTIFY THE APPROPRIATE GOVERNMENTAL AGENCY AND SHALL TAKE SUCH ACTION AS MAY BE NECESSARY TO MINIMIZE THE DELETERIOUS EFFECT OF SUCH SPILL ON PERSONS OR PROPERTY.

25. THE CONTRACTOR SHALL PROTECT AND KEEP OWNER (INCLUDING THEIR AGENTS AND EMPLOYEES) FREE AND HARMLESS FROM ANY AND ALL LIABILITY, PUBLIC OR PRIVATE, PENALTIES, CONTRACTUAL OR OTHERWISE, LOSSES, DAMAGES, COSTS, ATTORNEY'S FEES, EXPENSES, CAUSES OF ACTION, CLAIMS OR JUDGMENTS RESULTING FROM THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AS AMENDED OR ANY RULE OR REGULATION PROMULGATED THEREUNDER OR OF ANY STATE LAWS OR REGULATIONS PERTAINING TO JOB SAFETY AND HEALTH ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE PERFORMANCE OF WORK OR WORK TO BE PERFORMED UNDER THIS CONTRACT, AND CONTRACTOR SHALL INDEMNIFY OWNER FROM ANY SUCH CLAIMS, PENALTIES, SUITS OR ACTIONS, PUBLIC OR PRIVATE, ADMINISTRATIVE OR JUDICIAL, INCLUDING ATTORNEY'S FEES PAID OR INCURRED BY OR ON BEHALF OF OWNER, JOINTLY OR SEVERALLY, AND/OR THEIR AGENTS AND EMPLOYEES. THE CONTRACTOR FURTHER AGREES, IN THE EVENT OF A CLAIMED VIOLATION OF ANY FEDERAL OR STATE SAFETY AND HEALTH LAW OR REGULATION ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE PERFORMANCE OF WORK OR WORK TO BE PERFORMED UNDER THIS CONTRACT, OWNER MAY IMMEDIATELY TAKE WHATEVER ACTION IS DEEMED NECESSARY BY OWNER TO REMEDY THE CLAIMED VIOLATION. ANY AND ALL COSTS OR EXPENSES PAID OR INCURRED BY OWNER IN TAKING SUCH ACTION SHALL BE BORNE BY CONTRACTOR, AND CONTRACTOR AGREES TO PROTECT, HOLD HARMLESS AND INDEMNIFY OWNER AGAINST ANY AND ALL SUCH COSTS OR EXPENSES.

26. CONTRACTOR AND ITS SUBCONTRACTORS SHALL, UPON COMPLETION OF PERFORMANCE OF ALL DUTIES UNDER THIS CONTRACT, REMOVE ALL SUPPLIES, MATERIALS, AND WASTE CONTAINING AND HAZARDOUS MATERIAL FROM THE JOB SITE. CONTRACTOR SHALL BEAR FULL FINANCIAL RESPONSIBILITY, AS BETWEEN THE PARTIES OF THIS CONTRACT, FOR THE COMPLIANCE OF CONTRACTOR AND ITS SUBCONTRACTORS WITH THE PROVISIONS OF THIS CONTRACT.

27. CONTRACTOR AGREES TO INDEMNIFY, DEFEND, PROTECT AND HOLD THE OWNER HARMLESS FROM AND AGAINST ANY CLAIMS INCLUDING, WITHOUT LIMITATION, ACTUAL ATTORNEY'S FEES AND ANY COSTS OF INVESTIGATION, SOILS TESTING, GOVERNMENTAL APPROVALS, REMEDIATION AND CLEANUP ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE FAILURE OF CONTRACTOR OR ITS SUBCONTRACTORS, OR THEIR AGENTS, EMPLOYEES, OFFICERS, OR REPRESENTATIVES, TO COMPLY WITH THE TERMS OF THESE CONSTRUCTION DOCUMENTS.

28. SHOULD CONTRACTOR OR ITS SUBCONTRACTORS DISCHARGE, RELEASE OR DISPOSE OF ANY HAZARDOUS MATERIAL ON OR ABOUT THE JOB SITE IN VIOLATION OF THESE CONSTRUCTION DOCUMENTS, CONTRACTOR SHALL IMMEDIATELY SO INFORM OWNER & ENGINEER IN WRITING. IN THE EVENT OF ANY SPILL, RELEASE OR ANY OTHER REPORTABLE OCCURRENCE, CONTRACTOR SHALL NOTIFY THE APPROPRIATE GOVERNMENTAL AGENCY, OWNER & ENGINEER AND SHALL TAKE SUCH ACTION AS MAY BE NECESSARY TO MINIMIZE THE DELETERIOUS EFFECT OF SUCH SPILL ON PERSONS OR PROPERTY.

29. IN THE EVENT CONTRACTOR OR ITS SUBCONTRACTORS ENCOUNTER ON THE PREMISES ANY PIPELINE, UNDERGROUND STORAGE TANK OR OTHER CONTAINER, OF ANY KIND, THAT MAY CONTAIN A HAZARDOUS MATERIAL, OR ENCOUNTER MATERIAL REASONABLY BELIEVED TO BE A HAZARDOUS MATERIAL, CONTRACTOR SHALL IMMEDIATELY STOP WORK IN THE AREA AFFECTED AND REPORT THE CONDITION TO OWNER AND/OR ENGINEER IN WRITING.

30. "HAZARDOUS MATERIAL" MEANS ANY SUBSTANCE: (A) THE PRESENCE OF WHICH REQUIRES INVESTIGATION OR REMEDIATION UNDER ANY PRESENT FEDERAL, STATE OR LOCAL STATUTE, REGULATION, ORDINANCE, RULE, CODE, ORDER, ACTION, POLICY OR COMMON LAW, OR (B) WHICH IS OR BECOMES DEFINED AS A "HAZARDOUS WASTE," "HAZARDOUS SUBSTANCE," POLLUTANT OR CONTAMINANT UNDER ANY PRESENT FEDERAL, STATE OR LOCAL STATUTE, REGULATION, RULE OR ORDINANCE OR AMENDMENTS THERETO INCLUDING, WITHOUT LIMITATION, THE COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (42 U.S.C. SECTIONS 9601 ET SEQ.) AND/OR THE RESOURCE CONSERVATION AND RECOVERY ACT (42 U.S.C. SECTIONS 6901 ET SEQ.), OR (C) WHICH IS TOXIC, EXPLOSIVE, CORROSIVE, FLAMMABLE, INFECTIOUS, RADIOACTIVE, CARCINOGENIC, MUTAGENIC, OR OTHERWISE HAZARDOUS AND IS REGULATED BY ANY GOVERNMENTAL AUTHORITY, AGENCY, DEPARTMENT, COMMISSION, BOARD, AGENCY OR INSTRUMENTALITY OF THE UNITED STATES, THE STATE IN WHICH THE PREMISES ARE LOCATED OR ANY POLITICAL SUBDIVISION THEREOF, OR (D) THE PRESENCE OF WHICH ON THE PREMISES CAUSES OR THREATENS TO CAUSE A NUISANCE UPON THE PREMISES OR TO ADJACENT PROPERTIES OR POSES OR THREATENS TO POSE A HAZARD TO THE HEALTH OR SAFETY OF PERSONS ON OR ABOUT THE PREMISES, OR (E) WHICH CONTAINS GASOLINE, DIESEL FUEL OR OTHER PETROLEUM HYDROCARBONS, OR (F) WHICH CONTAINS POLYCHLORINATED BIPHENYLS (PCBS), ASBESTOS, LEAD OR UREA FORMALDEHYDE FOAM INSULATION.

31. THE CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UTILITIES AS TO SIZE, LOCATION, AND ELEVATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY AND ALL CONFLICTS, DEVIATIONS OR OMISSIONS TO THESE CONSTRUCTION DRAWINGS PRIOR TO BEGINNING CONSTRUCTION.

32. IF ANY TESTING, INSPECTION OR APPROVAL REVEAL DEFECTIVE WORK, CONTRACTOR SHALL NOT BE ALLOWED TO RECEIVE ANY ASSOCIATED COSTS AND THE OWNER SHALL BE ENTITLED TO DEDUCT FROM THE CONTRACT PRICE, BY ISSUING A CHANGE ORDER, OWNER'S COSTS ARISING OUT OF THE DEFECTIVE WORK, INCLUDING COSTS OF REPEATED PROCEDURES, COMPENSATION FOR ENGINEER'S AND DESIGN ENGINEER'S SERVICES AND ALL OTHER RELATED COSTS.

ADDITIONAL NOTES

1. BEARINGS SHOWN HEREON ARE ASSUMED RELATIVE TO THE FLORIDA STATE PLANE COORDINATE SYSTEM 1983 EAST ZONE, BASED ON GPS WITH L-NET CORRECTIONS. THE MONUMENTED SOUTH LINE OF THE SOUTHEAST QUARTER OF SECTION 8, TOWNSHIP 21 SOUTH, RANGE 28 EAST, BEING NORTH 89°49'08" WEST.

2. ELEVATIONS SHOWN HEREON ARE RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 AND ARE BASED ON THE FOLLOWING ORANGE COUNTY ENGINEERING DEPARTMENT'S BENCHMARKS (PER SURVEY PROVIDED BY PEC-SURVEYING AND MAPPING, LLC.):
   L653002 EL. 131.081'
   L1549013 EL. 135.026'

3. THE VERTICAL CONTROL ESTABLISHED FOR THE SURVEY IS BASED ON A CLOSED LEVEL LOOP, HAVING A CLOSURE ACCURACY WHICH MEETS OR EXCEEDS THAT REQUIRED BY THE STANDARDS OF PRACTICE SET FORTH IN RULE CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE, FLORIDA STATURES 472.027.

LEGEND

Symbol	Description
	EXISTING CONTOURS
——75.0——	PROPOSED CONTOURS
×[75.0]	PROPOSED SPOT GRADES
	PROPOSED STORM PIPE
	SILT FENCE (1/C2.6)
——WM——	PROPOSED WATER MAIN
——S——	PROPOSED SANITARY PIPE
——RU——	PROPOSED RECLAIM WATER MAIN
——FM——	PROPOSED FORCE MAIN
	TYPE "D" CURB (10/C8.0)
	TYPE "F" CURB (10/C8.0)
	CONCRETE SIDEWALK (5/C8.0)
Ⓓ	STORM MANHOLE (2/C9.0)
	MITER END SECTION (4/C9.0)
	FDOT TYPE 1 INLET (5/C9.0)
	FDOT TYPE 2 INLET (5/C9.0)
	FDOT TYPE 3 INLET (5/C9.0)
	FDOT TYPE 4 INLET (5/C9.0)
	STOP SIGN (R1-1) (1/C8.0)

HANDICAP ACCESSIBILITY NOTES:

1. ALL CONSTRUCTION MUST MEET OR EXCEED ALL REQUIREMENTS AS OUTLINED IN THE AMERICANS WITH DISABILITIES ACT (ADA) AND THE FLORIDA ACCESSIBILITY CODE, MOST RECENT EDITIONS. BOTTOM OF CURB RAMP ELEVATION (B.O. RAMP) IS RELATIVE TO EACH CURB RAMP CONDITION. ACTUAL ELEVATIONS SHALL BE BASED ON EXISTING GRADE OF CURB FLOW LINE AT THE B.O. RAMPS.

2. TOP OF CURB ELEVATION ADJACENT TO B.O. RAMP = 0.50 FT. MAX. UNLESS OTHERWISE NOTED.

3. ADA REQUIREMENTS SUPERSEDE SPOT GRADES AT LOT LINES. CONTRACTOR TO CUT BACK SLOPE AT 3:1 OR FLATTER AS NEEDED FOR RAMP AND SIDEWALK CONNECTION.

4. REFER TO PLAN SHEETS AND SECTIONS FOR LOCATIONS AND SIDEWALK WIDTHS.

5. THE DETECTABLE WARNING STRIP SHALL CONSIST OF A 24 INCH WIDE TACTILE PATTERN OF RAISED TRUNCATED DOMES (ALIGNED PATTERN). DOMES SHALL HAVE A DIAMETER OF 0.9 INCH, A HEIGHT OF 0.2 INCH, AND A CENTER TO CENTER SPACING OF 2.35 INCHES. THE RAMP DETECTABLE WARNING STRIP SHALL BE CONTRASTING IN COLOR. THE MATERIAL USED TO PROVIDE CONTRAST SHALL CONTRAST BY AT LEAST 70%.

6. THE CROSS SLOPE OF RAMP SURFACES AND ADJACENT STREET GRADES SHALL BE NO MORE THAN 1:50 OR 2% MAXIMUM.

7. CURB RAMPS CONSTRUCTED BY THE CONTRACTOR SHALL MEET ALL CURRENT APPLICABLE A.D.A. REQUIREMENTS AND SHALL HAVE DETECTABLE WARNING COMPLYING WITH A.D.A. REQUIREMENTS. ACCESSIBILITY ROUTES SHALL MEET ALL APPLICABLE A.D.A. REQUIREMENTS.

8. CONTRACTOR TO REFER TO MUNICIPALITY DETAILS AS NEEDED.

9. DRIVEWAY/ROADWAY CROSS SLOPES AT CROSSWALKS SHALL BE MAXIMUM 2% PER ADA REQUIREMENTS.

10. SIDEWALK CROSS SLOPES SHALL BE MAXIMUM 2% PER ADA REQUIREMENTS.

11. CURB RAMP FLARES & LANDINGS SHALL MEET ADA REQUIREMENTS.

12. ACCESSIBLE ROUTE WITH RUNNING SLOPES GREATER THAN 1:20 IS A RAMP AND SHALL COMPLY WITH ADA RAMP REQUIREMENTS.

13. IT IS THE CONTRACTORS SOLE RESPONSIBILITY TO MEET ALL CURRENT ADA STANDARDS. CONTRACTOR SHALL REFER TO FDOT STANDARDS. (INDEX 304, MOST CURRENT EDITION)

RECORD DRAWING AS-BUILT REQUIREMENTS:

AS-BUILT DRAWINGS SHALL BE PREPARED BY AND CERTIFIED (SIGNED AND SEALED) BY A REGISTERED SURVEYOR, AND SHALL BE PROVIDED TO THE ENGINEER OF RECORD UPON COMPLETION OF THE PROJECT SITE IMPROVEMENTS A MINIMUM OF 1 WEEK PRIOR TO CONTRACTORS ATTEMPT FOR FINAL CERTIFICATE OF OCCUPANCY (CO). AS-BUILT DRAWINGS SHALL REFLECT ANY CHANGES TO THE IMPROVEMENTS MADE DURING CONSTRUCTION AND MUST MEET THE MINIMUM REQUIREMENTS OF ALL REGULATORY AGENCIES HAVING JURISDICTION AS WELL AS THE CRITERIA OUTLINED BELOW. BOTH THE ORIGINAL DESIGN AND REVISED AS-BUILT DATA, AS APPLICABLE, MUST BE CLEARLY SHOWN. THE AS-BUILT DRAWINGS MUST BE CLEARLY LABELED AS AS-BUILT OR RECORD DRAWING. THE FOLLOWING INFORMATION, AT A MINIMUM, SHALL BE CERTIFIED ON THE AS-BUILT DRAWINGS:

WATER DISTRIBUTION SYSTEM:

A. LOCATION AND DIMENSIONS OF PIPES, VALVES, FITTINGS, CHANGE OF DIRECTION, AND OTHER ASSOCIATED FACILITIES.

WASTEWATER COLLECTION/TRANSMISSION SYSTEM:

A. LOCATION, DIMENSION, AND INVERT ELEVATIONS OF PIPES, MANHOLES (INCLUDING RIM ELEVATION), LIFTSTATION, FORCEMAIN, FITTINGS, CHANGE IN DIRECTION AND OTHER ASSOCIATED FACILITIES.

PAVING AND DRAINAGE SYSTEM:

A. DIMENSIONS AND ELEVATIONS OF ALL DISCHARGE STRUCTURES INCLUDING ALL WEIRS, SLOTS, GATES, PIPES, AND SKIMMERS;

B. LOCATIONS, DIMENSIONS, AND ELEVATIONS OF ALL FILTER, EXFILTRATION, OR UNDERDRAIN SYSTEMS INCLUDING CLEANOUTS, PIPES, CONNECTIONS TO CONTROL STRUCTURES, AND POINTS OF DISCHARGE TO THE RECEIVING WATERS;

C. DIMENSIONS, ELEVATIONS, CONTOURS, OR CROSS-SECTIONS OF ALL STORMWATER TREATMENT POND STORAGE AREAS SUFFICIENT TO DETERMINE STAGE-STORAGE RELATIONSHIPS OF THE STORAGE AREA, AND THE POND DEPTH AND VOLUME BELOW THE CONTROL WATER ELEVATION FOR NORMALLY WET SYSTEMS;

D. DIMENSIONS, ELEVATIONS, CONTOURS, FINAL GRADES, OR CROSS-SECTIONS OF THE DRAINAGE SYSTEM IMPROVEMENTS TO DETERMINE FLOW DIRECTIONS AND CONVEYANCE OF RUNOFF TO THE TREATMENT SYSTEM;

E. DIMENSIONS, ELEVATIONS, CONTOURS, FINAL GRADES, OR CROSS-SECTIONS OF ALL CONVEYANCE SYSTEMS UTILIZED TO CONVEY OFF-SITE RUNOFF AROUND THE SYSTEM;

F. EXISTING WATER ELEVATION OF SURFACE WATERS AND THE DATE DETERMINED;

G. ELEVATION AND LOCATION OF BENCHMARK'S FOR THE SURVEY.

ADA FACILITIES:

A. ELEVATIONS AT THE FOUR CORNERS OF ALL HANDICAP PARKING SPACES AND ADJACENT LOADING AISLES.

B. ELEVATIONS AND LOCATIONS FOR ALL ACCESSIBLE RAMPS WHICH ADEQUATELY REFLECT THE BUILT SLOPES.

C. ELEVATIONS AND LOCATIONS ALONG THE PATHS OF CONVEYANCE FOR PEDESTRIAN TRAFFIC AND ALL ADA ACCESSIBLE ROUTES EVERY 25 FT. WHICH ADEQUATELY REFLECT THE SLOPE AND CROSS SLOPE.

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REV.	DATE	DESCRIPTION	BY
	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
	01/21/20	FDP AMENDMENT - GRADING REVISION	SCS
	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
	03/15/18	SJRWMD COMMENTS DATED 03/15/18	SCS
	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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GENERAL NOTES
FINAL DEVELOPMENT PLAN
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: O. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/22/2020

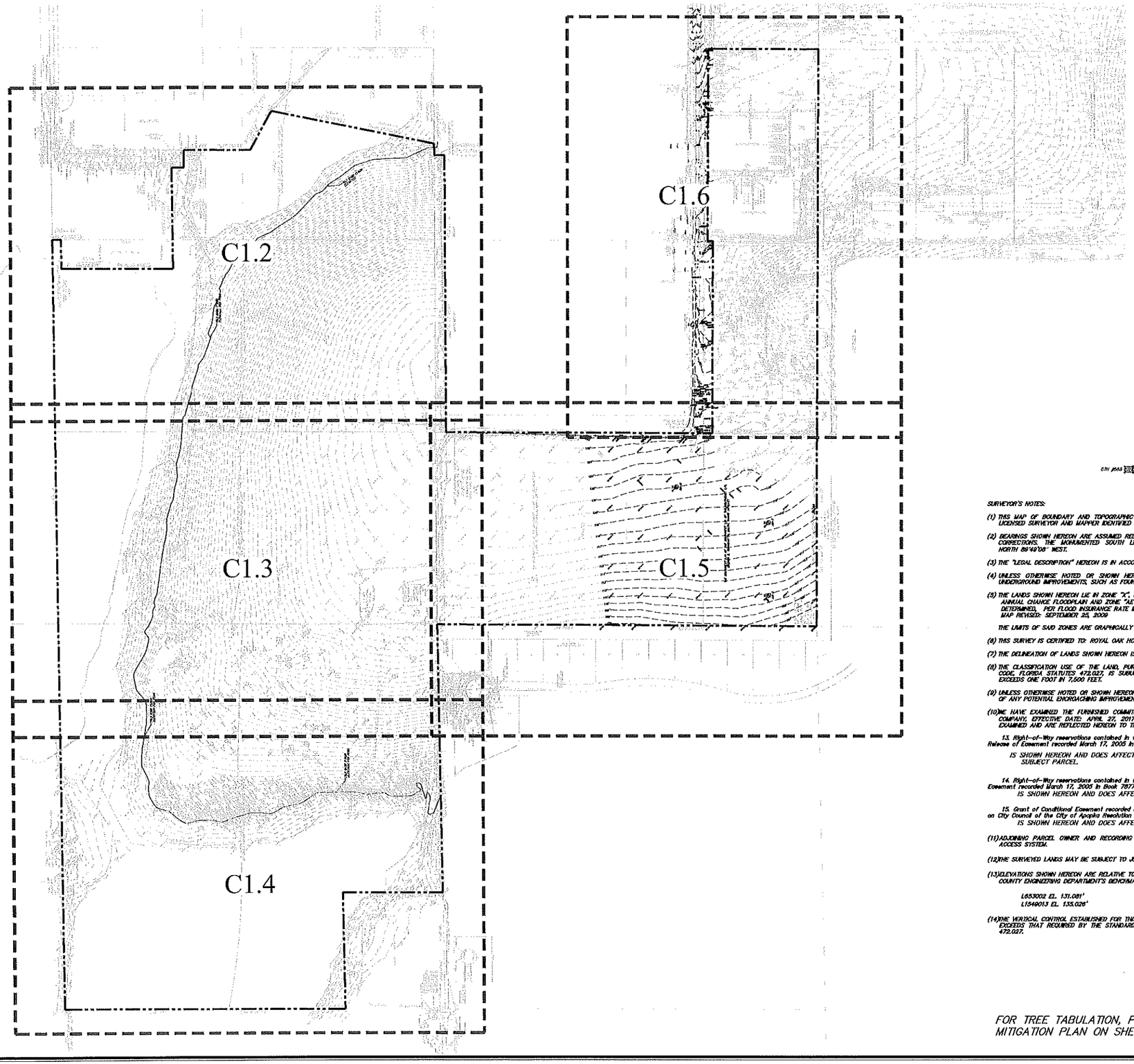
SCALE: N.T.S.
PROJECT: ROY-001
SHEET: C1.0

APPIAN ENGINEERING

3/30/20

SHEET 2 OF 92

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.9 Drawings\59civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\General Notes.dwg Modified:1/22/2020 By:ssierragil



GRAPHIC SCALE

160 0 80 160 320

(IN FEET)
1 inch = 160 ft.

EXISTING CONDITION PLANS BASED ON SURVEY PROVIDED BY:

PEC – SURVEYING AND MAPPING, LLC
DAVID A. WHITE, P.S.M.
FLORIDA REGISTRATION NO. 4044
DATE OF FIELD SURVEY: JULY 2017

LEGEND

P.B. ..... PLAT BOOK
PG. ..... PAGE
O.R.B. ..... OFFICIAL RECORDS BOOK
R ..... RADIUS
Δ ..... CENTRAL ANGLE
L ..... ARC LENGTH
C ..... CHORD LENGTH
CB ..... CHORD BEARING
SEC. ..... SECTION
CM ..... CONCRETE MONUMENT
I.R. ..... IRON REBAR
IP ..... IRON PIPE
N&D ..... NAIL AND DISK
L.B. ..... LICENCED BUSINESS
P.L.S. ..... PROFESIONAL LAND SURVEYOR
R/W ..... RIGHT-OF-WAY
C.C.R. ..... CERTIFIED CORNER RECORDS
● ..... SET 5/8" IRON BAR WITH CAP LB # 7806, UNLESS OTHERWISE NOTED
P.C. ..... POINT OF CURVATURE
PRM ..... PERMANENT REFERENCE MONUMENT
CONC. ..... CONCRETE
CMP ..... CORRUGATED METAL PIPE
RCP ..... REINFORCED CONCRETE PIPE
OHW ..... OVERHEAD UTILITY LINES
EL ..... ELEVATION
INV. ..... INVERT
R/W ..... RIGHT-OF-WAY
JWL ..... JURISDICTIONAL WETLAND LIMITS STAKED BY OTHERS
GTH PASS GTH ..... GOPHER TORTOISE HOLE
^ ..... ID FLAG MARKING GOPHER TORTOISE HOLE
..... TEMPORARY BENCHMARK
..... BORING HOLE WITH ID
..... POWER POLE
..... GUY POLE
..... GUY ANCHOR
..... MAIL BOX
..... TELEPHONE BOX
..... ELECTRIC BOX
..... DRAINAGE MANHOLE
..... FIRE HYDRANT
..... WELL
..... SIGN
..... SIGN
..... OAK TREE WITH SIZE
..... SWEET GUM TREE WITH SITE
..... HICKORY TREE WITH SIZE
..... MAPLE TREE WITH SIZE

SURVEYOR'S NOTES:

(1) THIS MAP OF BOUNDARY AND TOPOGRAPHIC SURVEY IS NOT VALID UNLESS IT BEARS THE SIGNATURE AND ORIGINAL RAISED SEAL OF THE FLORIDA LICENSED SURVEYOR AND MAPPER IDENTIFIED BELOW.

(2) BEARINGS SHOWN HEREON ARE ASSUMED RELATIVE TO THE FLORIDA STATE PLANE COORDINATE SYSTEM 1983 EAST ZONE, BASED ON GPS WITH L-NET CORRECTIONS. THE MONUMENTED SOUTH LINE OF THE SOUTHEAST QUARTER OF SECTION 8, TOWNSHIP 21 SOUTH, RANGE 28 EAST, BEING NORTH 89°49'08" WEST.

(3) THE "LEGAL DESCRIPTION" HEREON IS IN ACCORD WITH THE DESCRIPTION FURNISHED BY THE CLIENT.

(4) UNLESS OTHERWISE NOTED OR SHOWN HEREON, APPARENT AND/OR UNOBSTRUCTED, ABOVE GROUND PERIMETER IMPROVEMENTS WERE LOCATED. UNDERGROUND IMPROVEMENTS, SUCH AS FOUNDATIONS AND UTILITIES, WERE NOT LOCATED.

(5) THE LANDS SHOWN HEREON LIE IN ZONE "X", DEFINED AS AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN AND ZONE "AE" ELEVATION 69.3, DEFINED AS BASE FLOOD ELEVATION DETERMINED, PER FLOOD INSURANCE RATE MAP (FIRM) COMMUNITY PANEL NO. 12095C0120F, MAP REVISED: SEPTEMBER 25, 2009

THE LIMITS OF SAID ZONES ARE GRAPHICALLY DEPICTED HEREON AS NEAR AS MAY BE SCALED FROM SAID MAP.

(6) THIS SURVEY IS CERTIFIED TO: ROYAL OAK HOMES, FIRST AMERICAN TITLE INSURANCE COMPANY.

(7) THE DELINEATION OF LANDS SHOWN HEREON IS AS PER THE CLIENT'S INSTRUCTIONS.

(8) THE CLASSIFICATION USE OF THE LAND, PURSUANT TO THE STANDARDS OF PRACTICE SET FORTH IN RULE CHAPTER 5J-17 FLORIDA ADMINISTRATIVE CODE, FLORIDA STATUTES 472.027, IS SUBURBAN. THE MINIMUM RELATIVE DISTANCE ACCURACY OF THIS MAP OF BOUNDARY SURVEY ACHIEVES OR EXCEEDS ONE FOOT IN 7,500 FEET.

(9) 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.

(10) WE HAVE EXAMINED THE FURNISHED COMMITMENT TO INSURE TITLE, FILE NUMBER 2037-3759052, PREPARED BY FIRST AMERICAN TITLE INSURANCE COMPANY, EFFECTIVE DATE: APRIL 27, 2017. INSTRUMENTS 13, 14 & 15 INCLUDED IN "SCHEDULE B II, PART II", OF THE COMMITMENT HAVE BEEN EXAMINED AND ARE REFLECTED HEREON TO THE EXTENT THEY AFFECT THE LANDS SURVEYED.

13. Right-of-Way reservations contained in that certain Warranty Deed recorded August 13, 1974 in Book 2557, Page 872, as affected by Partial Release of Easement recorded March 17, 2005 in Book 7877, Page 845.

IS SHOWN HEREON AND DOES AFFECT THE SUBJECT PROPERTY. THE PARTIAL RELEASE OF EASEMENT DOES NOT AFFECT THE SUBJECT PARCEL.

14. Right-of-Way reservations contained in that certain Deed recorded August 13, 1974 in Book 2557, Page 872, as affected by Partial Release of Easement recorded March 17, 2005 in Book 7877, Page 845.
IS SHOWN HEREON AND DOES AFFECT THE SUBJECT PROPERTY

15. Grant of Conditional Easement recorded December 7, 1994 in Book 4828, Page 365, Rights of the Public for the use of John's Road as depicted on City Council of the City of Apopka Resolution No. 9601 recorded January 10, 1996 in Book 4998, Page 2820.
IS SHOWN HEREON AND DOES AFFECT THE SUBJECT PROPERTY

(11) ADJOINING PARCEL OWNER AND RECORDING INFORMATION DELINEATED HEREON WAS OBTAINED FROM THE COUNTY PROPERTY APPRAISER'S PUBLIC ACCESS SYSTEM.

(12) THE SURVEYED LANDS MAY BE SUBJECT TO JURISDICTIONAL ENTITIES.

(13) ELEVATIONS SHOWN HEREON ARE RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 AND ARE BASED ON THE FOLLOWING ORANGE COUNTY ENGINEERING DEPARTMENT'S BENCHMARKS:

L653002 EL. 131.081'
L1549013 EL. 135.026'

(14) THE VERTICAL CONTROL ESTABLISHED FOR THIS SURVEY IS BASED ON A CLOSED LEVEL LOOP, HAVING A CLOSURE ACCURACY WHICH MEETS OR EXCEEDS THAT REQUIRED BY THE STANDARDS OF PRACTICE SET FORTH IN RULE CHAPTER 5J-17, FLORIDA ADMINISTRATIVE CODE, FLORIDA STATUTES 472.027.

FOR TREE TABULATION, PLEASE REFER TO TREE MITIGATION PLAN ON SHEET LS-03.

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SHEET 3 OF 92

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY CORRECTIONS	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/18/20	SCS
A	07/31/20	PDP AMENDMENT - GRADING REVISION	SCS
A	05/09/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	03/15/18	SAWHO COMMENTS DATED 03/15/18	SCS
A	02/19/18	CITY OF APOPKA COMMENTS DATED 02/15/18	SCS

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AUTHORIZATION NUMBER: EC-0000 8-0

OVERALL EXISTING CONDITIONS FINAL DEVELOPMENT PLAN

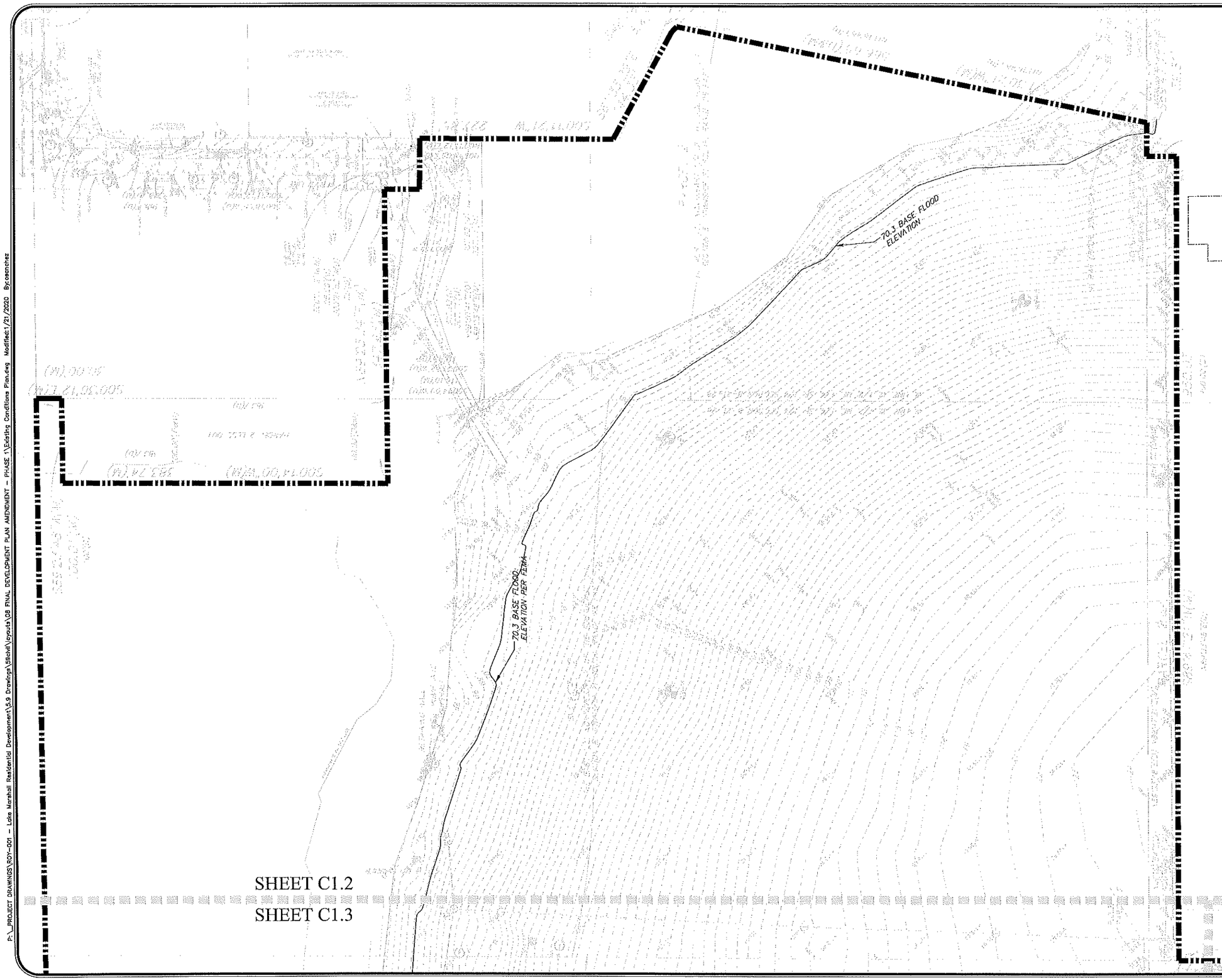
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

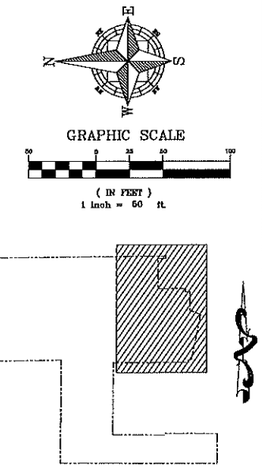
DRAWN: S. SIERRA-GIL
DESIGNED: O. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/21/2020
SCALE: 1" = 160'
PROJECT: ROY-001
SHEET: C1.1

3/30/20

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.9 Drawings\59civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Existing Conditions Plan.dwg Modified:1/21/2020 By:osanchez

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.9 Drawings\Sitchel\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Existing Conditions Plan.dwg Modified:1/21/2020 By:cesanchez





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SHEET 4 OF 92

REV	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/21/20	PDP AMENDMENT - GRADING REVISION	SCS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	03/15/18	SURVND COMMENTS DATED 03/15/18	SCS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/15/18	SCS

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EXISTING CONDITIONS - NORTHEAST
FINAL DEVELOPMENT PLAN

LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

SCALE	1" = 50'
PROJECT	ROY-001
SHEET	C1.2
DRAWN:	S. SIERRA-GIL
DESIGNED:	C. SANCHEZ
CHECKED:	L. CLASSON
DATE:	1/21/2020

3/30/20

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/21/20	PDP AMENDMENT – GRADING REVISION	SCS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	03/15/18	S.W.M.D. COMMENTS DATED 03/15/18	SCS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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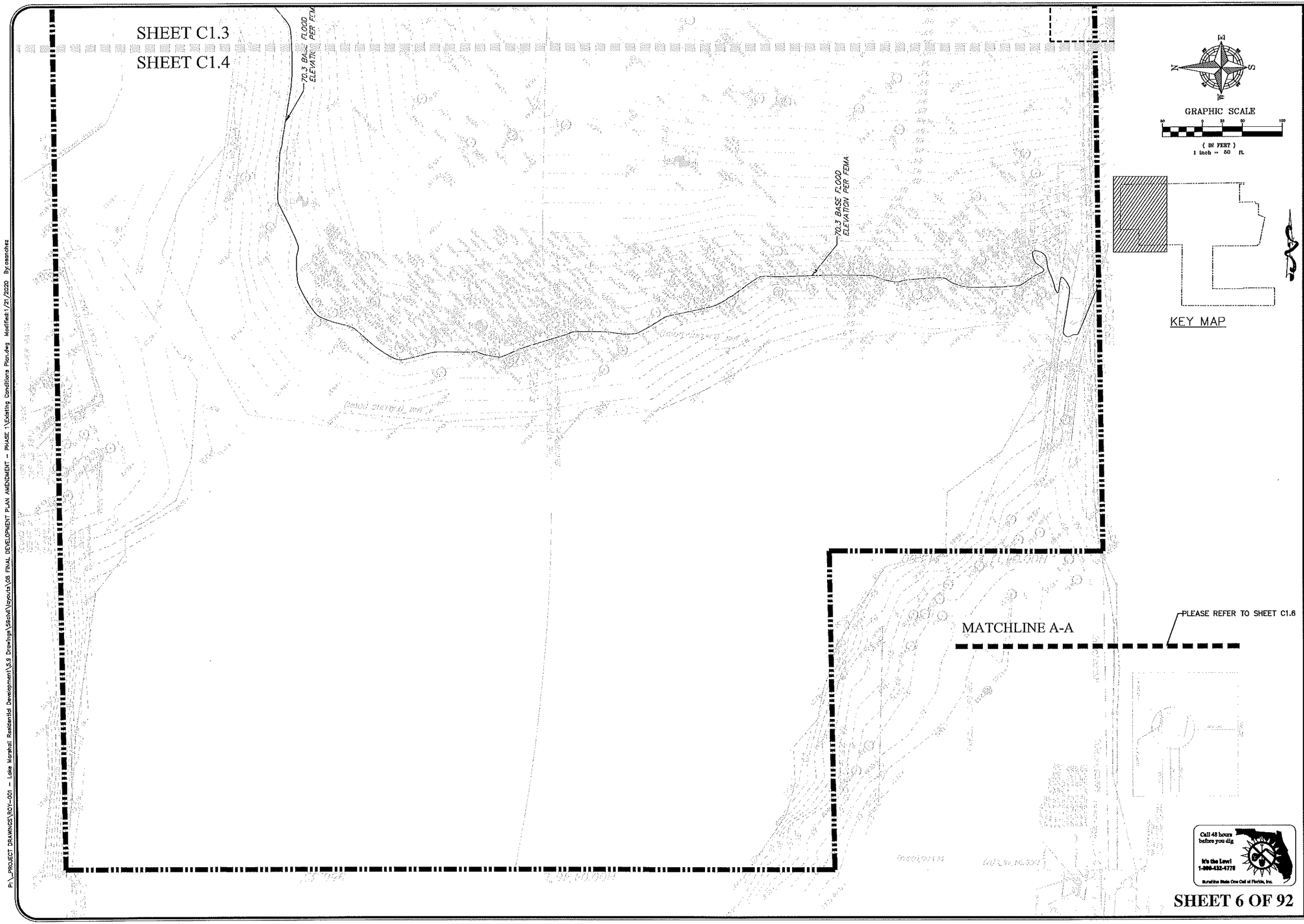
EXISTING CONDITIONS – NORTH
FINAL DEVELOPMENT PLAN

LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL	DESIGNED: O. SANCHEZ
CHECKED: L. CLASSON	DATE: 1/21/2020
SCALE: 1" = 50'	PROJECT: ROY-001
SHEET: C1.3	

3/30/20

P:_PROJECT DRAWINGS\ROY-001 – Lake Marshall Residential Development\5.9 Drawings\Civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT – PHASE 1\Existing Conditions Plan.dwg Modified:1/21/2020 By:osanchez



SHEET 6 OF 92

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/21/20	PDP AMENDMENT - GRADING REVISION	SCS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	03/15/18	SJRWMD COMMENTS DATED 03/15/18	SCS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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A DIVISION OF PARKER CONSTRUCTION OF OPPIDAN GROUP, INC.

EXISTING CONDITIONS – NORTHWEST
FINAL DEVELOPMENT PLAN

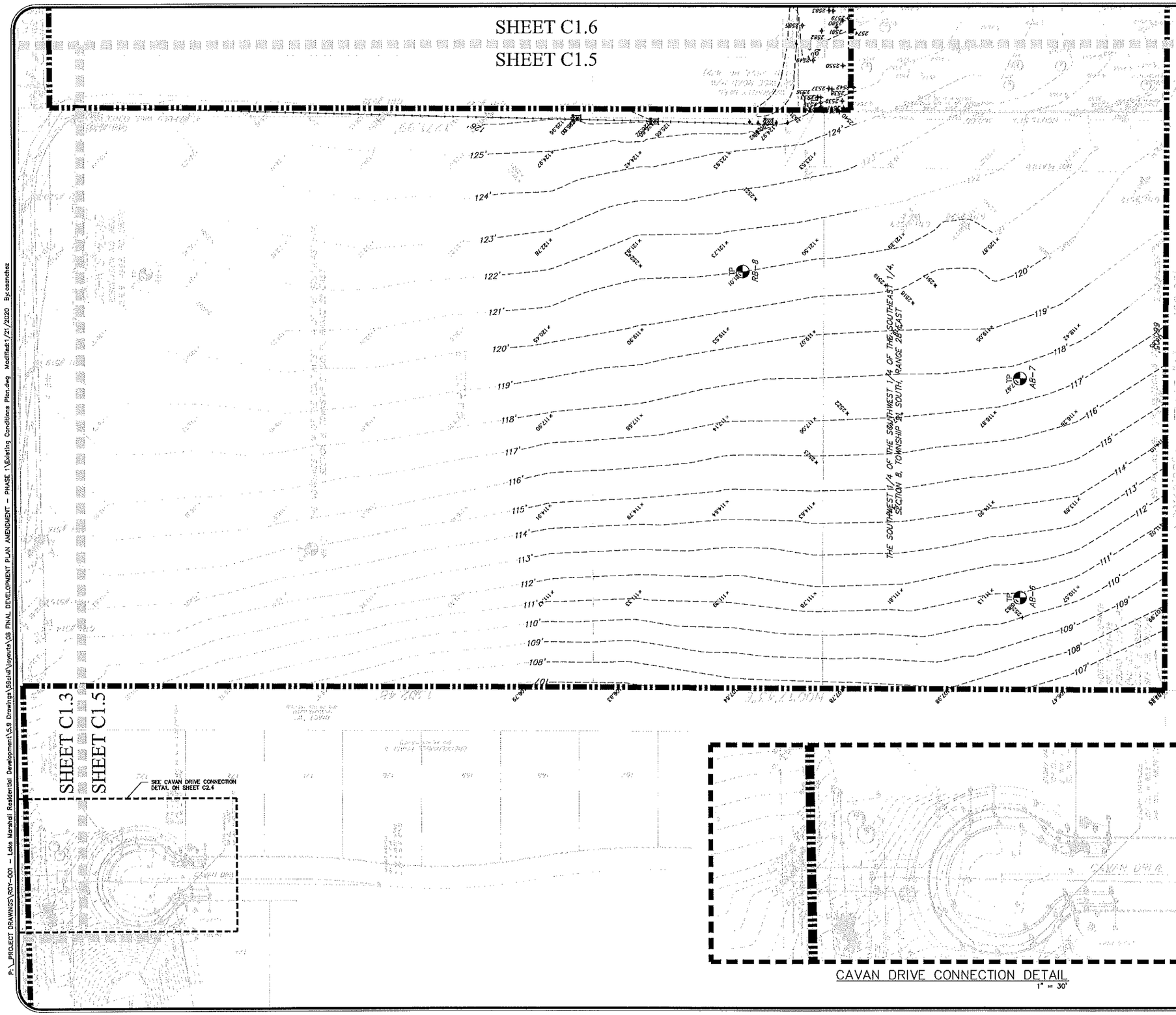
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: O. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/21/2020

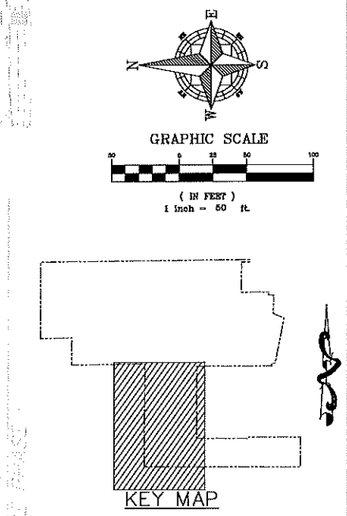
SCALE: 1" = 50'
PROJECT: ROY-001
SHEET: C1.4

3/30/20

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\3.9 Drawings\Site\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Existing Conditions Plan.dwg Modified:1/21/2020 By:osanchez



CAVAN DRIVE CONNECTION DETAIL
1" = 30'



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SHEET 7 OF 92

REV.	DATE	DESCRIPTION	BY
A	02/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 02/16/20	SCS
A	01/21/20	PDP AMENDMENT - GRADING REVISION	SCS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	03/15/18	SJRWMD COMMENTS DATED 03/15/18	SCS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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EXISTING CONDITIONS – SOUTH
FINAL DEVELOPMENT PLAN

LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: O. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/21/2020
SCALE: 1" = 50'
PROJECT: ROY-001
SHEET: C1.5

3/30/20

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.9 Drawings\59dist\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Existing Conditions Plan.dwg Modified:1/21/2020 By:osanchez

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.3 Drawings\Civil\Layouts\05 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Existing Conditions Plan.dwg Modified:1/21/2020 By:ssanchez

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/21/20	PDP AMENDMENT - GRADING REVISION	SCS
A	05/08/18	SITEWORK APPROVAL COMMENTS DATED 05/07/18	SCS
A	03/27/18	CITY OF APOPKA COMMENTS DATED 03/26/18	SCS
A	02/22/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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EXISTING CONDITIONS - SOUTHEAST
FINAL DEVELOPMENT PLAN

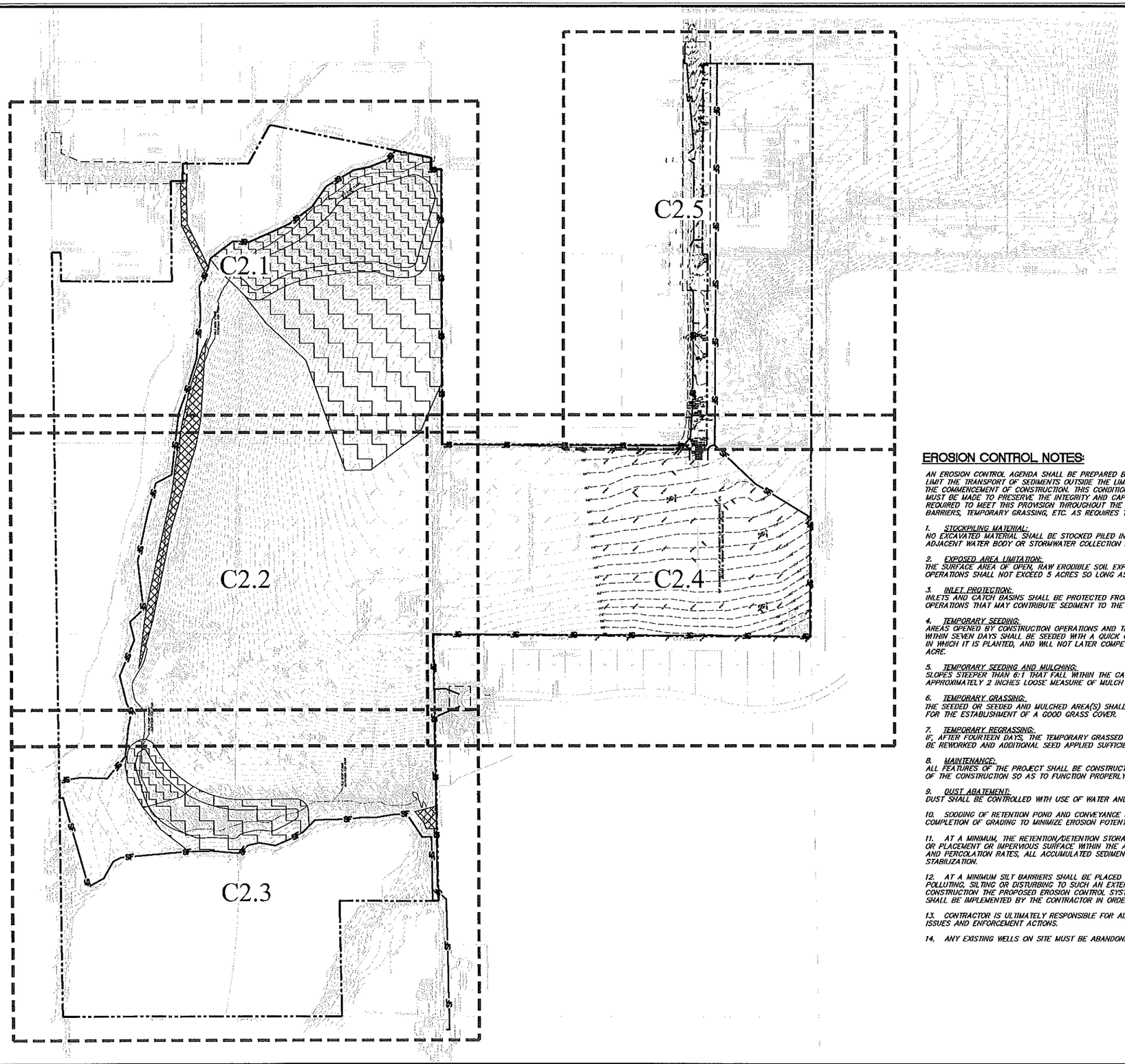
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL	DESIGNED: C. SANCHEZ
CHECKED: L. CLASSON	DATE: 1/21/2020
SCALE: 1" = 50'	PROJECT: ROY-001
SHEET: C1.6	

3/30/20

SHEET 8 OF 92

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.0 Drawings\90civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Erosion Control & Demolition Plan.dwg Modified:1/21/2020 By:sstorrgill



GRAPHIC SCALE

160 0 80 160 320

(IN FEET)
1 inch = 160 ft.

LEGEND

- PROPERTY BOUNDARY
- SF — SILT FENCE
- MAINTENANCE OF TRAFFIC

SITE PREPARATION/OVER EXCAVATION NOTES:

1. CONTRACTOR TO REFER TO SUBSURFACE EXPLORATION AND GEOTECHNICAL ANALYSIS REPORTS AND COORDINATE WITH GEOTECHNICAL ENGINEER FOR LIMITS OF OVER-EXCAVATION AND SUITABLE APPROVED REPLACEMENT FILL WITHIN THE PROJECT LIMITS.

- APPROXIMATE LIMITS OF POTENTIAL ORGANIC SOILS PER GEOTECHNICAL REPORT THAT MAY BE AFFECTED DURING CONSTRUCTION ACTIVITIES. CONTRACTOR TO COORDINATE WITH GEOTECHNICAL ENGINEER ON SITE FOR REMOVAL/RELOCATION REQUIREMENTS.
- APPROXIMATE LIMITS OF STRATUM 4 SOILS TO BE REMOVED PER GEOTECHNICAL REPORT
- APPROXIMATE LIMITS OF STRATUM 4 SOILS CONTRACTOR TO DISCUSS WITH GEOTECHNICAL ENGINEER DURING SITE GRADING PER GEOTECHNICAL REPORT

EROSION CONTROL NOTES:

AN EROSION CONTROL AGENDA SHALL BE PREPARED BY THE CONTRACTOR. CONTRACTOR SHALL EXECUTE ALL MEASURES NECESSARY YO LIMIT THE TRANSPORT OF SEDIMENTS OUTSIDE THE LIMITS OF THE PROJECT TO THE VOLUME AND AMOUNT AS THAT ARE EXISTING PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THIS CONDITION WILL BE SATISFIED FOR THE TOTAL ANTICIPATED CONSTRUCTION PERIOD. PROVISION MUST BE MADE TO PRESERVE THE INTEGRITY AND CAPACITY OF CHECK WEIRS, SEDIMENT BASINS, SLOPE DRAINS, GRADING PATTERNS, ETC. REQUIRED TO MEET THIS PROVISION THROUGHOUT THE LIFE OF THE CONSTRUCTION. CONTRACTOR SHALL PROVIDE SYNTHETIC BALES, SILT BARRIERS, TEMPORARY GRASSING, ETC. AS REQUIRES TO FULLY COMPLY WITH THE INTENT OF THIS SPECIFICATION.

1. STOCKPILING MATERIAL:
NO EXCAVATED MATERIAL SHALL BE STOCKED PILED IN SUCH MANNER AS TO DIRECT RUNOFF DIRECTLY OFF THE PROJECT SITE OR INTO ANY ADJACENT WATER BODY OR STORMWATER COLLECTION FACILITY.

2. EXPOSED AREA LIMITATION:
THE SURFACE AREA OF OPEN, RAW ERODIBLE SOIL EXPOSED BY CLEARING AND GRUBBING OPERATIONS OR EXCAVATION AND FILLING OPERATIONS SHALL NOT EXCEED 5 ACRES SO LONG AS THIS OPERATION WILL NOT SIGNIFICANTLY AFFECT OFF-SITE DEPOSIT OF SEDIMENT.

3. INLET PROTECTION:
INLETS AND CATCH BASINS SHALL BE PROTECTED FROM SEDIMENT LADEN STORM RUNOFF UNTIL THE COMPLETION OF ALL CONSTRUCTION OPERATIONS THAT MAY CONTRIBUTE SEDIMENT TO THE INLET.

4. TEMPORARY SEEDING:
AREAS OPENED BY CONSTRUCTION OPERATIONS AND THAT ARE NOT ANTICIPATED TO BE DRESSED AND RECEIVE FINAL GRASSING TREATMENT WITHIN SEVEN DAYS SHALL BE SEEDED WITH A QUICK GROWING GRASS SPECIES WHICH WILL PROVIDE AN EARLY COVER DURING THE SEASON IN WHICH IT IS PLANTED, AND WILL NOT LATER COMPETE WITH THE PERMANENT GRASSING. THE RATE OF SEEDING SHALL BE 30 LBS. PER ACRE.

5. TEMPORARY SEEDING AND MULCHING:
SLOPES STEEPER THAN 6:1 THAT FALL WITHIN THE CATEGORY ESTABLISHED IN 4 ABOVE, SHALL ADDITIONALLY RECEIVE MULCHING OF APPROXIMATELY 2 INCHES LOOSE MEASURE OF MULCH MATERIAL CUT INTO THE SOIL OF THE SEEDED AREA TO A DEPTH OF FOUR INCHES.

6. TEMPORARY GRASSING:
THE SEEDED OR SEEDED AND MULCHED AREA(S) SHALL BE ROLLED AND WATERS AS REQUIRED TO ASSURE OPTIMUM GROWING CONDITIONS FOR THE ESTABLISHMENT OF A GOOD GRASS COVER.

7. TEMPORARY REGRASSING:
IF, AFTER FOURTEEN DAYS, THE TEMPORARY GRASSED AREAS HAVE NOT ATTAINED A MINIMUM OF 75% GOOD GRASS COVER, THE AREA WILL BE REWORKED AND ADDITIONAL SEED APPLIED SUFFICIENT TO ESTABLISH THE DESIRED VEGETATION COVER.

8. MAINTENANCE:
ALL FEATURES OF THE PROJECT SHALL BE CONSTRUCTED TO PREVENT EROSION AND SEDIMENT AND SHALL BE MAINTAINED DURING THE LIFE OF THE CONSTRUCTION SO AS TO FUNCTION PROPERLY WITHOUT THE TRANSPORT OF SEDIMENTS OUTSIDE THE LIMITS OF THE PROJECT.

9. DUST ABATEMENT:
DUST SHALL BE CONTROLLED WITH USE OF WATER AND CALCIUM CHLORIDE.

10. SODDING OF RETENTION POND AND CONVEYANCE SWALE SIDE SLOPES SHOULD NE ACCOMPLISHED AS SOON AS POSSIBLE FOLLOWING COMPLETION OF GRADING TO MINIMIZE EROSION POTENTIAL.

11. AT A MINIMUM, THE RETENTION/DETENTION STORAGE AREA MUST BE EXCAVATED TO ROUGH GRADE PRIOR TO BUILDING CONSTRUCTION OR PLACEMENT OR IMPERVIOUS SURFACE WITHIN THE AREA TO BE SERVED BY THOSE FACILITIES. TO PREVENT REDUCTION IN STORAGE VOLUME AND PERCOLATION RATES, ALL ACCUMULATED SEDIMENT MUST BE REMOVED FOR THE STORAGE AREA PRIOR TO FINAL GRADING AND STABILIZATION.

12. AT A MINIMUM SILT BARRIERS SHALL BE PLACED AS SHOWN ON SHEET C2.1 OF THE CONSTRUCTION PLANS TO INSURE AGAINST POLLUTING, SILTING OR DISTURBING TO SUCH AN EXTENT AS TO CAUSE AN INCREASE IN TURBIDITY TO THE EXISTING WETLAND. IF DURING CONSTRUCTION THE PROPOSED EROSION CONTROL SYSTEM DOES NOT PERFORM SATISFACTORY, ALTERNATIVES AND ADDITIONAL MEASURES SHALL BE IMPLEMENTED BY THE CONTRACTOR IN ORDER TO COMPLY WITH ORANGE CO. AND S.J.R.W.M.D EROSION PROTECTION STANDARDS.

13. CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR ALL EROSION PROTECTION COSTS. INCLUDING ANY COSTS ASSOCIATED WITH COMPLIANCE ISSUES AND ENFORCEMENT ACTIONS.

14. ANY EXISTING WELLS ON SITE MUST BE ABANDONED AS PER S.JRWMD PROCEDURES.

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SHEET 9 OF 92

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/21/20	PDP AMENDMENT - GRADING REVISION	SCS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	03/15/18	SJRWMD COMMENTS DATED 03/15/18	SCS
A	02/19/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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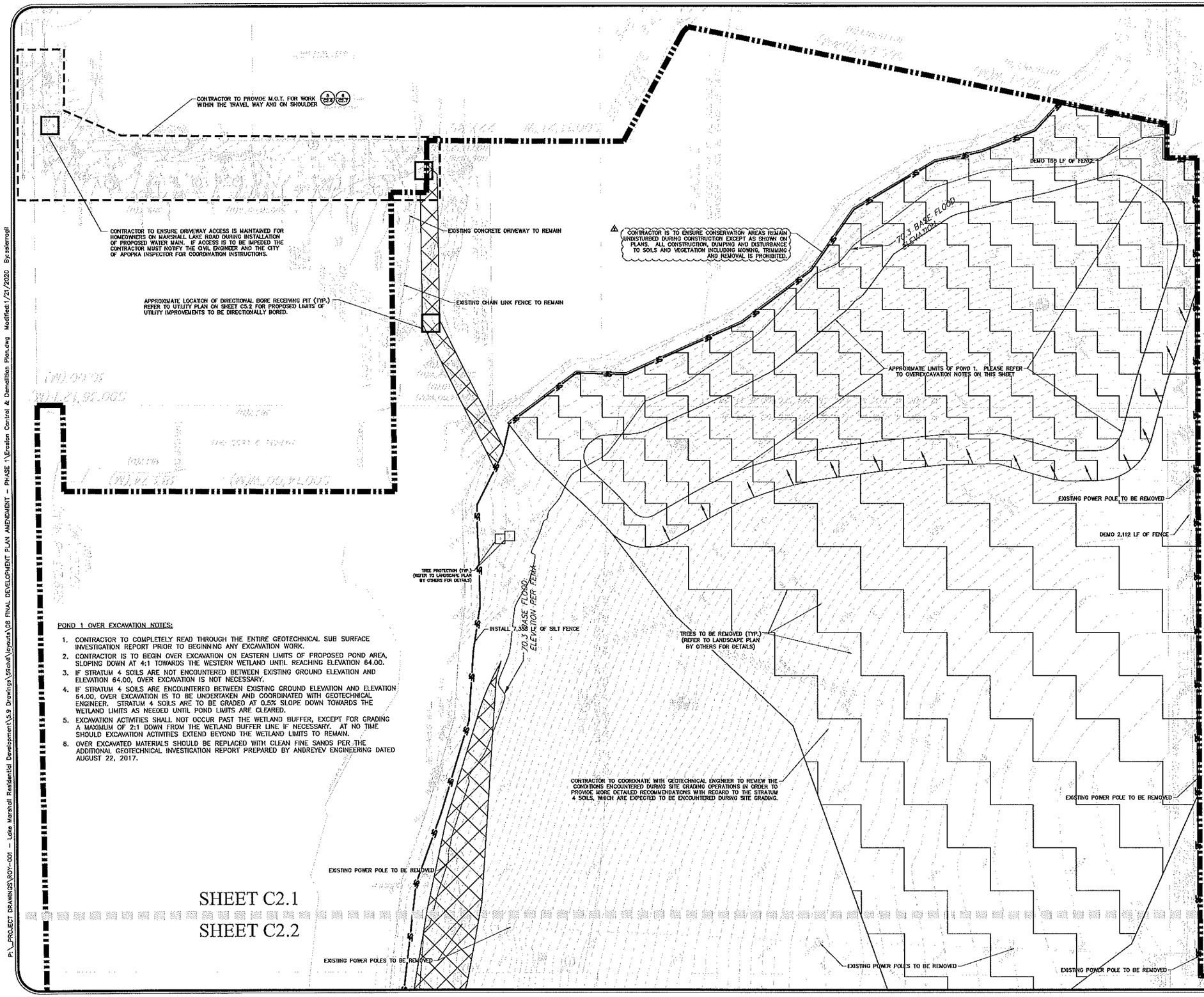
FLORIDA CERTIFICATE OF AUTHORIZATION No. 31011

OVERALL EROSION CONTROL & DEMO PLAN
FINAL DEVELOPMENT PLAN

LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: O. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/21/2020
SCALE: 1"=160'
PROJECT: ROY-001
SHEET: C2.0

3/30/20



POND 1 OVER EXCAVATION NOTES:

1. CONTRACTOR TO COMPLETELY READ THROUGH THE ENTIRE GEOTECHNICAL SUB SURFACE INVESTIGATION REPORT PRIOR TO BEGINNING ANY EXCAVATION WORK.
2. CONTRACTOR IS TO BEGIN OVER EXCAVATION ON EASTERN LIMITS OF PROPOSED POND AREA, SLOPING DOWN AT 4:1 TOWARDS THE WESTERN WETLAND UNTIL REACHING ELEVATION 64.00.
3. IF STRATUM 4 SOILS ARE NOT ENCOUNTERED BETWEEN EXISTING GROUND ELEVATION AND ELEVATION 64.00, OVER EXCAVATION IS NOT NECESSARY.
4. IF STRATUM 4 SOILS ARE ENCOUNTERED BETWEEN EXISTING GROUND ELEVATION AND ELEVATION 64.00, OVER EXCAVATION IS TO BE UNDERTAKEN AND COORDINATED WITH GEOTECHNICAL ENGINEER. STRATUM 4 SOILS ARE TO BE GRADED AT 0.5% SLOPE DOWN TOWARDS THE WETLAND LIMITS AS NEEDED UNTIL POND LIMITS ARE CLEARED.
5. EXCAVATION ACTIVITIES SHALL NOT OCCUR PAST THE WETLAND BUFFER, EXCEPT FOR GRADING A MAXIMUM OF 2:1 DOWN FROM THE WETLAND BUFFER LINE IF NECESSARY. AT NO TIME SHOULD EXCAVATION ACTIVITIES EXTEND BEYOND THE WETLAND LIMITS TO REMAIN.
6. OVER EXCAVATED MATERIALS SHOULD BE REPLACED WITH CLEAN FINE SANDS PER THE ADDITIONAL GEOTECHNICAL INVESTIGATION REPORT PREPARED BY ANDREYEV ENGINEERING DATED AUGUST 22, 2017.

GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.

KEY MAP

LEGEND

- PROPERTY BOUNDARY
- SILT FENCE
- MAINTENANCE OF TRAFFIC
- DIRECTION OF OVER EXCAVATION
- APPROXIMATE LOCATION OF DIRECTIONAL BORE RECEIVING PIT

SITE PREPARATION/OVER EXCAVATION NOTES:

1. CONTRACTOR TO REFER TO SUBSURFACE EXPLORATION AND GEOTECHNICAL ANALYSIS REPORTS AND COORDINATE WITH GEOTECHNICAL ENGINEER FOR LIMITS OF OVER-EXCAVATION AND SUITABLE APPROVED REPLACEMENT FILL WITHIN THE PROJECT LIMITS.

- APPROXIMATE LIMITS OF POTENTIAL ORGANIC SOILS PER GEOTECHNICAL REPORT THAT MAY BE AFFECTED DURING CONSTRUCTION ACTIVITIES. CONTRACTOR TO COORDINATE WITH GEOTECHNICAL ENGINEER ON SITE FOR REMOVAL/RELOCATION REQUIREMENTS.
- APPROXIMATE LIMITS OF STRATUM 4 SOILS TO BE REMOVED PER GEOTECHNICAL REPORT
- APPROXIMATE LIMITS OF STRATUM 4 SOILS CONTRACTOR TO DISCUSS WITH GEOTECHNICAL ENGINEER DURING SITE GRADING PER GEOTECHNICAL REPORT

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SHEET 10 OF 92

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SKS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SKS
A	07/21/20	PDP AMENDMENT - GRADING REVISION	SES
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SES
A	03/15/18	SWFWMD COMMENTS DATED 3/9/18	SES
A	02/19/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SES

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EROSION CONTROL & DEMO PLAN - NORTHEAST
FINAL DEVELOPMENT PLAN
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: G. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/21/2020

SCALE: 1" = 50'
PROJECT: ROY-001
SHEET: C2.1

3/30/20

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.9 Drawings\Civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Erosion Control & Demolition Plan.dwg Modified:1/21/2020 By:salerrogil

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.8 Drawings\59sld\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Erosion Control & Demolition Plan.dwg Modified:1/21/2020 By:salerrogil

GRAPHIC SCALE

(IN FEET)
1 inch = 60 ft.

KEY MAP

LEGEND

- PROPERTY BOUNDARY
- SILT FENCE
- MAINTENANCE OF TRAFFIC

SITE PREPARATION/OVER EXCAVATION NOTES:

1. CONTRACTOR TO REFER TO SUBSURFACE EXPLORATION AND GEOTECHNICAL ANALYSIS REPORTS AND COORDINATE WITH GEOTECHNICAL ENGINEER FOR LIMITS OF OVER-EXCAVATION AND SUITABLE APPROVED REPLACEMENT FILL WITHIN THE PROJECT LIMITS.

APPROXIMATE LIMITS OF POTENTIAL ORGANIC SOILS PER GEOTECHNICAL REPORT THAT MAY BE AFFECTED DURING CONSTRUCTION ACTIVITIES. CONTRACTOR TO COORDINATE WITH GEOTECHNICAL ENGINEER ON SITE FOR REMOVAL/RELOCATION REQUIREMENTS.

APPROXIMATE LIMITS OF STRATUM 4 SOILS TO BE REMOVED PER GEOTECHNICAL REPORT

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SHEET C2.1
SHEET C2.2

EXISTING POWER POLE TO BE REMOVED

EXISTING POWER POLES TO BE REMOVED

CONTRACTOR IS TO ENSURE CONSERVATION AREAS REMAIN UNDISTURBED DURING CONSTRUCTION EXCEPT AS SHOWN ON PLANS. ALL CONSTRUCTION, DUMPING AND DISTURBANCE TO SOILS AND VEGETATION INCLUDING MOWING, TRIMMING AND REMOVAL IS PROHIBITED.

TREE PROTECTION (TYP.) (REFER TO LANDSCAPE PLAN BY OTHERS FOR DETAILS)

EXISTING CONCRETE RAMP TO REMAIN AND BE REPAIRED/EXTENDED BEYOND WATER'S EDGE (RAMP IMPROVEMENTS ARE SHOWN FOR REFERENCE PURPOSES ONLY. IMPROVEMENTS SHALL REQUIRE MORE PERMITTING AND SHALL BE PERMITTED SEPARATELY.)

DEMO 84 LF OF FENCE

EXISTING WOODEN DECK TO BE DEMOLLISHED

DEMO WELL

EXISTING POWER POLES TO BE REMOVED

DEMO BUILDING

EXISTING WOODEN DOCK TO BE REPAIRED AND REPLACED (DOCK RENOVATIONS ARE SHOWN FOR REFERENCE PURPOSES ONLY. IMPROVEMENTS SHALL REQUIRE MORE PERMITTING AND SHALL BE PERMITTED SEPARATELY.)

DEMO 75 LF OF FENCE

DEMO 66 LF OF FENCE

DEMO FENCE

DEMO POLE BARN

DEMO FENCE

INSTALL 7,358 LF OF SILT FENCE

SHEET C2.2
SHEET C2.3

70.3 BASE FLOOD ELEVATION PER FEMA

EXISTING POWER POLES TO BE REMOVED

EXISTING POWER POLE TO BE REMOVED

CONTRACTOR TO COORDINATE WITH GEOTECHNICAL ENGINEER TO REVIEW THE CONDITIONS ENCOUNTERED DURING SITE GRADING OPERATIONS IN ORDER TO PROVIDE MORE DETAILED RECOMMENDATIONS WITH REGARD TO THE STRATUM 4 SOILS, WHICH ARE EXPECTED TO BE ENCOUNTERED DURING SITE GRADING.

DEMO 663 LF OF FENCE

EXISTING POWER POLE TO BE REMOVED

DEMO 2,112 LF OF FENCE

SHEET C2.2
SHEET C2.4

EXISTING POWER POLES TO BE REMOVED

DEMO 718 LF OF FENCE

DEMO POLE BARN

DEMO TIN SHED

DEMO WELL

DEMO WELL

INSTALL 3,729 LF OF SILT FENCE

TREES TO BE REMOVED (TYP) (REFER TO LANDSCAPE PLAN BY OTHERS FOR DETAILS)

TREES TO BE REMOVED (TYP) (REFER TO LANDSCAPE PLAN BY OTHERS FOR DETAILS)

CONTRACTOR TO PROVIDE M.O. WITHIN THE TRAVEL WAY AND

REFER TO GEOMETRY PLAN FOR LIMITS OF TYPE "F" C

WATER METER TO BE REMOVED OR RELOCATED. CONTRACTOR TO COORDINATE WITH CITY OF APOPKA PUBLIC SERVICES DEPARTMENT STAFF ON RELOCATION OF METER IF ACCEPTABLE.

EXISTING VALVE TO BE REMOVED

EXISTING VALVE TO BE REMOVED
ELECTRICAL BOX TO BE REMOVED

DEMO 249 LF OF 12" RECLAIMED WATER MAIN (REFER TO UTILITY PLAN FOR LIMITS OF DEMOLITION)

DEMO 240 LF OF 12" WATER MAIN (REFER TO UTILITY PLAN FOR LIMITS OF DEMOLITION)

EXISTING FIRE HYDRANT TO BE REMOVED

SHEET 11 OF 92

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/21/20	FDP AMENDMENT - GRADING REVISION	SCS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 03/07/18	SCS
A	02/21/18	CLIENT COMMENTS DATED 02/15/18	SCS
A	02/19/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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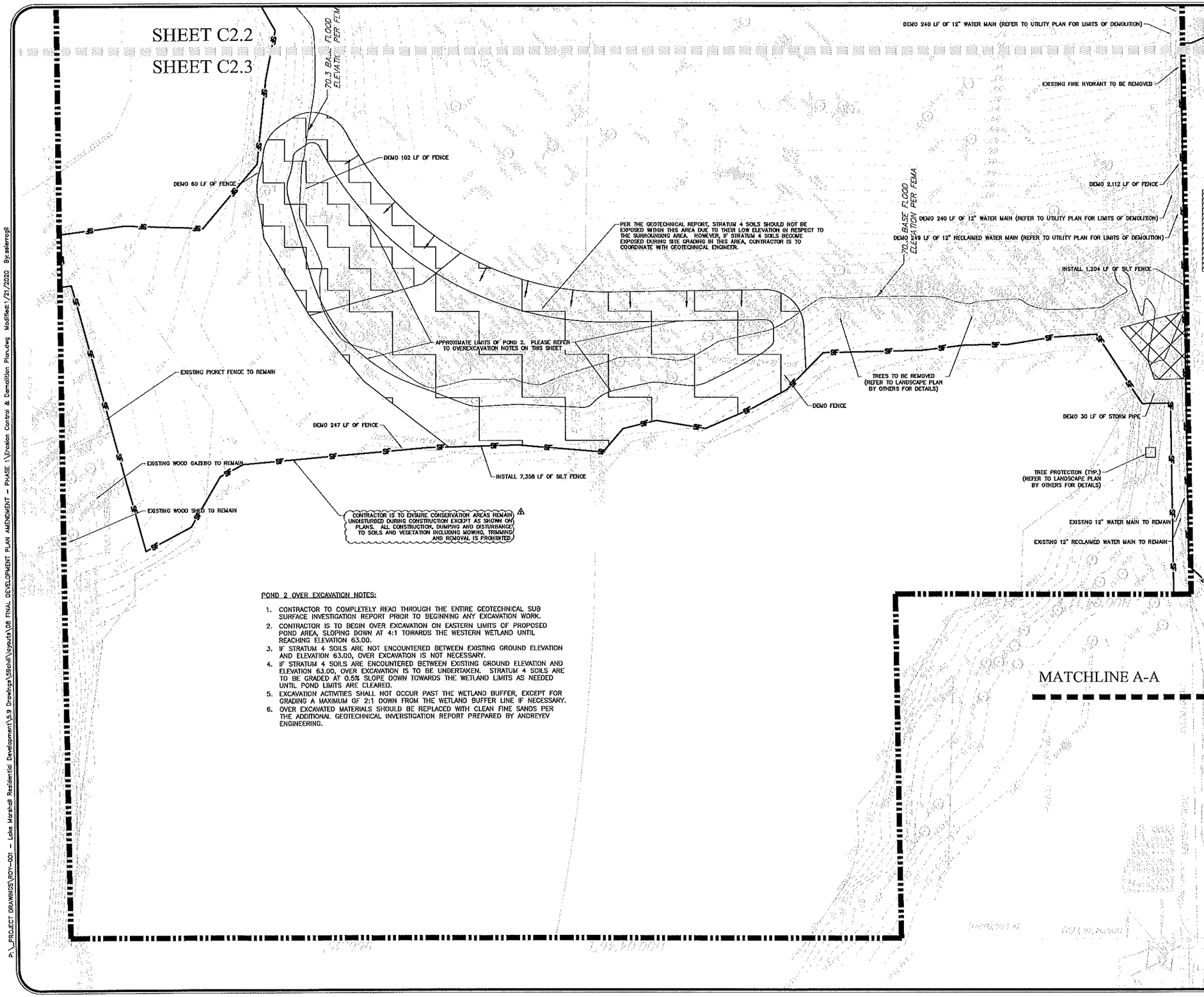
NORTH

EROSION CONTROL & DEMO PLAN - NORTH
FINAL DEVELOPMENT PLAN
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: G. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/21/2020
SCALE: 1" = 50'
PROJECT: ROY-001
SHEET: C2.2

3/30/20



SITE PREPARATION/OVER EXCAVATION NOTES:

1. CONTRACTOR TO REFER TO SUBSURFACE EXPLORATION AND GEOTECHNICAL ANALYSIS REPORTS AND COORDINATE WITH GEOTECHNICAL ENGINEER FOR LIMITS OF OVER-EXCAVATION AND SUITABLE APPROVED REPLACEMENT FILL WITHIN THE PROJECT LIMITS.

POND 2 OVER EXCAVATION NOTES:

1. CONTRACTOR TO COMPLETELY READ THROUGH THE ENTIRE GEOTECHNICAL SUB SURFACE INVESTIGATION REPORT PRIOR TO BEGINNING ANY EXCAVATION WORK.
2. CONTRACTOR IS TO BEGIN OVER EXCAVATION ON EASTERN LIMITS OF PROPOSED POND AREA, SLOPING DOWN AT 4:1 TOWARDS THE WESTERN WETLAND UNTIL REACHING ELEVATION 63.00.
3. IF STRATUM 4 SOILS ARE NOT ENCOUNTERED BETWEEN EXISTING GROUND ELEVATION AND ELEVATION 63.00, OVER EXCAVATION IS NOT NECESSARY.
4. IF STRATUM 4 SOILS ARE ENCOUNTERED BETWEEN EXISTING GROUND ELEVATION AND ELEVATION 63.00, OVER EXCAVATION IS TO BE UNDERTAKEN. STRATUM 4 SOILS ARE TO BE GRADED AT 0.5% SLOPE DOWN TOWARDS THE WETLAND LIMITS AS NEEDED UNTIL POND LIMITS ARE CLEARED.
5. EXCAVATION ACTIVITIES SHALL NOT OCCUR PAST THE WETLAND BUFFER, EXCEPT FOR GRADING A MAXIMUM OF 2:1 DOWN FROM THE WETLAND BUFFER LINE IF NECESSARY.
6. OVER EXCAVATED MATERIALS SHOULD BE REPLACED WITH CLEAN FINE SANDS PER THE ADDITIONAL GEOTECHNICAL INVERSTIGATION REPORT PREPARED BY ANDREYEV ENGINEERING.

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/21/20	PDP AMENDMENT - GRADING REVISION	SCS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	03/15/18	SJRWMD COMMENTS DATED 03/15/18	SCS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS
REV.	DATE	DESCRIPTION	BY

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EROSION CONTROL & DEMO PLAN – NORTHWEST

FINAL DEVELOPMENT PLAN

LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)

PHASE 1

CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: O. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/21/2020
SCALE: 1" = 50'
PROJECT: ROY-001
SHEET: C2.3

3/30/20

SHEET 12 OF 92

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.9 Drawings\59civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Erosion Control & Demolition Plan.dwg Modified:1/21/2020 By:salerrogil

SHEET C2.5
SHEET C2.4

SHEET C2.2
SHEET C2.4

DEMO 1,239 LF OF FENCE

INSTALL 7,358 LF OF SILT FENCE

10'X10' CONCRETE WASH OUT

CONSTRUCTION ENTRANCE

FENCE TO BE REMOVED

DEMO 663 LF OF FENCE

EXISTING POWER POLE TO BE REMOVED

TREES TO BE REMOVED (TYP.) (REFER TO LANDSCAPE PLAN BY OTHERS FOR DETAILS)

THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 8, TOWNSHIP 21 SOUTH, RANGE 28 EAST

DEMO 3,729 LF OF FENCE

INSTALL 3,729 LF OF SILT FENCE

TREES TO BE REMOVED (TYP) (REFER TO LANDSCAPE PLAN BY OTHERS FOR DETAILS)

CONTRACTOR TO PROVIDE M.O.T. FOR WORK WITHIN THE TRAVEL WAY AND ON SHOULDER (5/C2.6) (6/C2.7)

REFER TO GEOMETRY PLAN AND GRADING PLAN FOR LIMITS OF TYPE 'F' CURB TO BE REMOVED.

INLET PROTECTION (1/C2.6)

GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft

KEY MAP

LEGEND

- PROPERTY BOUNDARY
- SILT FENCE
- MAINTENANCE OF TRAFFIC

SITE PREPARATION/OVER EXCAVATION NOTES:

1. CONTRACTOR TO REFER TO SUBSURFACE EXPLORATION AND GEOTECHNICAL ANALYSIS REPORTS AND COORDINATE WITH GEOTECHNICAL ENGINEER FOR LIMITS OF OVER-EXCAVATION AND SUITABLE APPROVED REPLACEMENT FILL WITHIN THE PROJECT LIMITS.

APPROXIMATE LIMITS OF POTENTIAL ORGANIC SOILS PER GEOTECHNICAL REPORT THAT MAY BE AFFECTED DURING CONSTRUCTION ACTIVITIES. CONTRACTOR TO COORDINATE WITH GEOTECHNICAL ENGINEER ON SITE FOR REMOVAL/RELOCATION REQUIREMENTS.

APPROXIMATE LIMITS OF STRATUM 4 SOILS TO BE REMOVED PER GEOTECHNICAL REPORT

APPROXIMATE LIMITS OF STRATUM 4 SOILS CONTRACTOR TO DISCUSS WITH GEOTECHNICAL ENGINEER DURING SITE GRADING PER GEOTECHNICAL REPORT

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REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER ELLIOT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/21/20	PDP AMENDMENT - GRADING REVISION	SCS
A	05/06/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	03/29/18	ELLIOT COMMENTS	SCS
A	02/19/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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EROSION CONTROL & DEMO PLAN - SOUTH
FINAL DEVELOPMENT PLAN
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

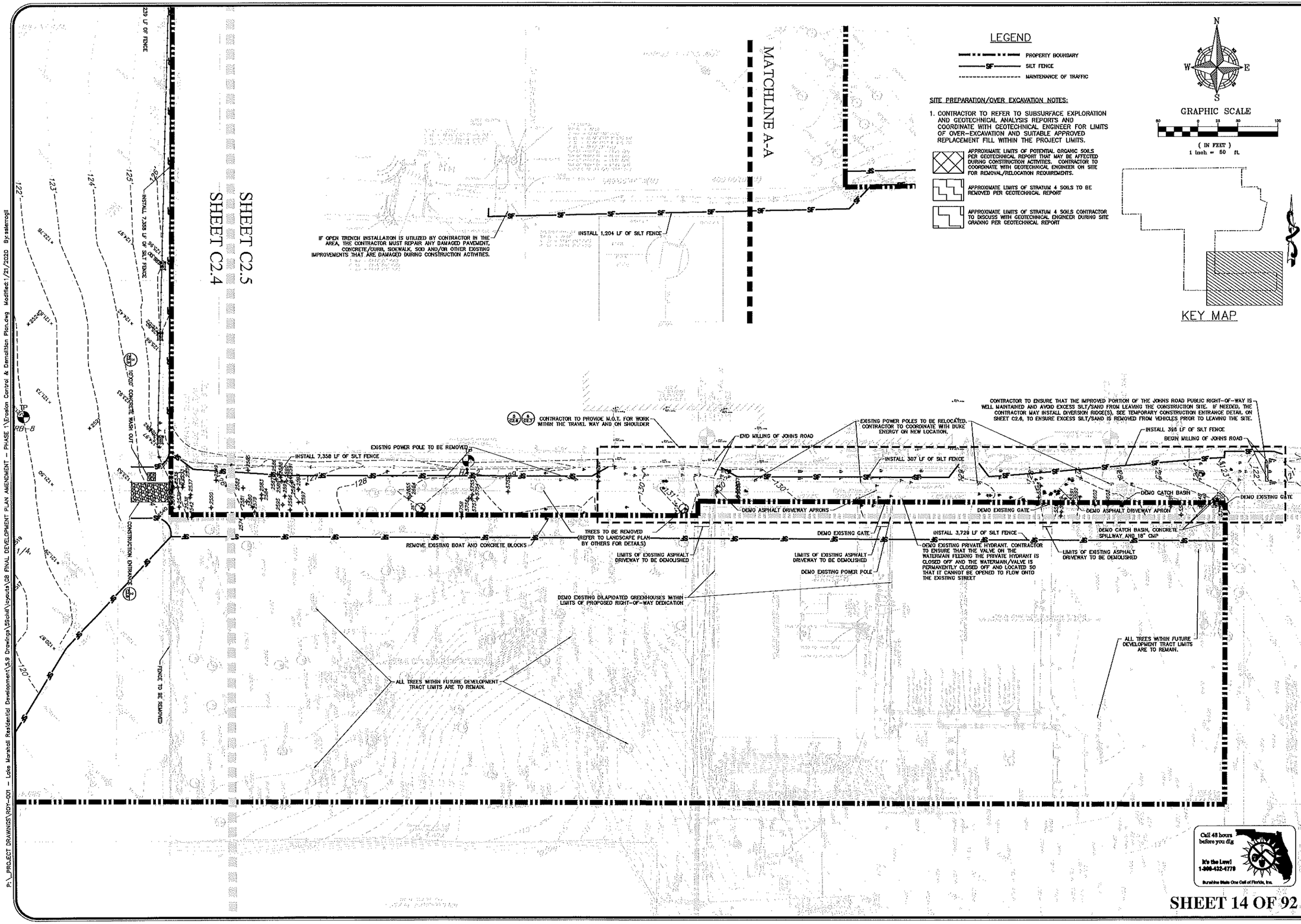
DRAWN: S. SIERRA-GIL
DESIGNED: O. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/21/2020
SCALE: 1" = 50'
PROJECT: ROY-001
SHEET: C2.4

3/30/20

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\3.9 Drawings\59civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Erosion Control & Demolition Plan.dwg Modified:1/21/2020 By:salerrogil

SHEET 13 OF 92

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\3.9 Drawings\59civil\layouts\DB FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Erosion Control & Demolition Plan.dwg Modified:1/21/2020 By:salerrogil



REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/21/20	PDP AMENDMENT - GRADING REVISION	SCS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	03/15/18	SARWD COMMENTS DATED 03/15/18	SCS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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EROSION CONTROL & DEMO PLAN - SOUTHEAST

FINAL DEVELOPMENT PLAN

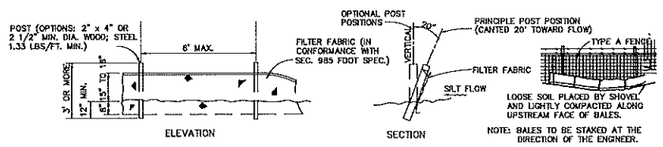
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)

PHASE 1

CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL	DESIGNED: G. SANCHEZ	CHECKED: L. CLASSON	DATE: 1/21/2020
SCALE: 1" = 50'	PROJECT: ROY-001	SHEET: C2.5	

3/30/20

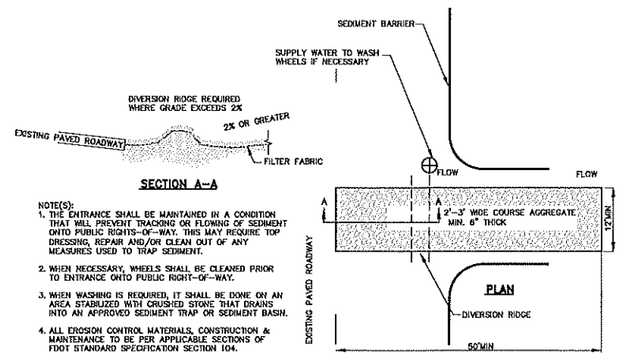


NOTE

SILT FENCE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR STAKED SILT FENCE (LF).

1 TYPE III SILT FENCE DETAIL

N.T.S.

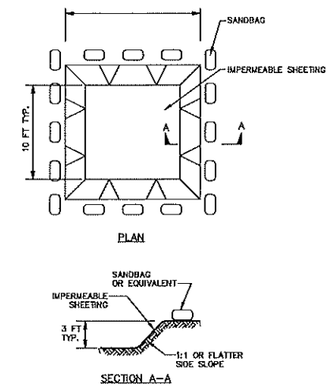


NOTE(S):

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
4. ALL EROSION CONTROL MATERIALS, CONSTRUCTION & MAINTENANCE TO BE PER APPLICABLE SECTIONS OF FDOT STANDARD SPECIFICATION SECTION 104.
5. USE SANDBAGS OR OTHER APPROVED METHODS TO CHANNELIZE RUNOFF TO BASIN REQUIRED.
6. COURSE AGGREGATE & FILTER FABRIC TO BE PER SECTIONS OF FDOT STANDARD SPECIFICATION SECTION 901 & 985 RESPECTIVELY.

2 TEMPORARY CONSTRUCTION ENTRANCE DETAIL

N.T.S.



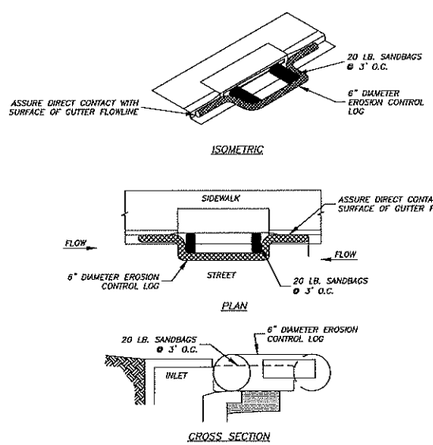
EXCAVATED WASHOUT STRUCTURE

NOTES:

1. LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
2. SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
3. PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
4. PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
5. KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED). EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL, AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET-VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

3 CONCRETE WASH OUT

N.T.S.

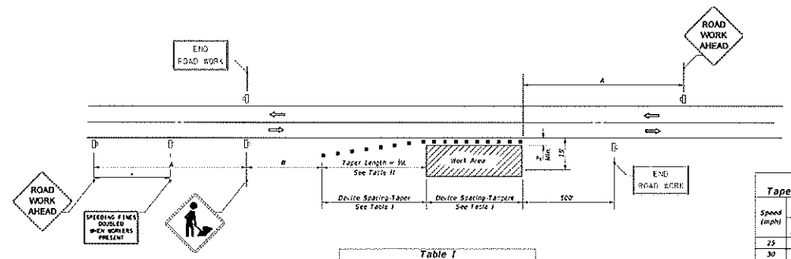


NOTES:

1. EROSION CONTROL LOG CONTAINMENT MESH SHALL BE 100% BIODEGRADABLE, PHOTODEGRADABLE OR RECYCLABLE; AND FILL MATERIAL SHALL CONSIST OF MULCH, ASPEN EXCELSIOR FIBERS, CHIPPED SITE VEGETATION, COCONUT FIBERS, 100% RECYCLABLE FIBERS, OR ANY OTHER ACCEPTABLE MATERIAL EXCLUDING STRAW AND HAY.
2. DAILY INSPECTION SHALL BE MADE BY THE CONTRACTOR AND SILT ACCUMULATION MUST BE REMOVED WHEN DEPTH REACHES 2".
3. CONTRACTOR SHALL MONITOR THE PERFORMANCE OF INLET PROTECTION DURING EACH RAINFALL EVENT AND IMMEDIATELY REMOVE THE INLET PROTECTIONS IF THE STORM WATER BEGINS TO OVERTOP THE CURB.
4. INLET PROTECTIONS SHALL BE REMOVED AS SOON AS THE SOURCE OF SEDIMENT IS STABILIZED.

4 EROSION CONTROL LOG DETAIL

N.T.S.



DISTANCE BETWEEN SIGNS

Speed	Spacing (ft.)* A	B
40 mph or less	200	200
45 mph	350	350
50 mph or greater	500	500

*Midway between signs

Table I
Device Spacing

Speed (mph)	Max. Distance Between Devices (ft.) Cones or Tubular Markers: Taper	Tangent	Type I or Type II Barricades or Vertical Panels or Drums: Taper	Tangent
25	25	50	25	50
30 to 45	35	50	30	50
50 to 70	35	50	50	100

Table II
Taper Length - Shoulder

Speed (mph)	½L (ft) 8' Shldr.	10' Shldr.	12' Shldr.	Notes
25	28	35	42	L=WS²/60
30	40	50	60	
35	55	68	82	
40	72	90	107	
45	128	159	180	L=WS
50	133	167	200	
55	147	183	220	
60	160	200	240	
65	173	217	260	
70	187	233	280	

B = minimum shoulder width

½L = Length of shoulder taper in feet

W = Width of total shoulder in feet (combined paved and unpaved widths)

S = Posted speed limit (mph)

SYMBOLS

- Work Area
- Channelizing Device (See Index No. 600)
- Work Zone Sign
- Lane Identification + Direction of Traffic

GENERAL NOTES

1. When four or more work vehicles enter the through traffic lanes in a one hour period or less (excluding establishing and terminating the work area), the advanced FLAGGER sign shall be substituted for the WORKERS sign. For location of flaggers and FLAGGER signs, see Index No. 600.
2. SHOULDER WORK sign may be used as an alternate to the WORKER symbol sign only on the side where the shoulder work is being performed.
3. When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed in accordance with other applicable TCZ Indexes.
4. For general TCZ requirements and additional information, refer to Index No. 600.

DURATION NOTES

1. Signs and channelizing devices may be omitted if all of the following conditions are met:
   a. Work operations are 60 minutes or less.
   b. Vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating.

CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH THE AREA CLOSER THAN 15' BUT NOT CLOSER THAN 2' TO THE EDGE OF TRAVEL WAY.

LAST REVISION	REVISION	DESCRIPTION:	FDOT FY 2017-18 DESIGN STANDARDS	TWO-LANE, TWO-WAY, WORK ON SHOULDER	INDEX NO.	SHEET NO.
07/01/15					602	1 of 1

5 MAINTENANCE OF TRAFFIC – WORK ON SHOULDER

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REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	07/21/20	PDP AMENDMENT – GRADING REVISION	SCS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	03/15/18	SARMO COMMENTS DATED 03/15/18	SCS
A	02/19/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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EROSION CONTROL & M.O.T. DETAILS

FINAL DEVELOPMENT PLAN

LAKESIDE (FKA LAKE MARSHALL SUBDIVISION) PHASE 1

CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL

DESIGNED: G. SANCHEZ

CHECKED: L. CLASSON

DATE: 1/21/2020

SCALE: N.T.S.

PROJECT: ROY-001

SHEET: C2.6

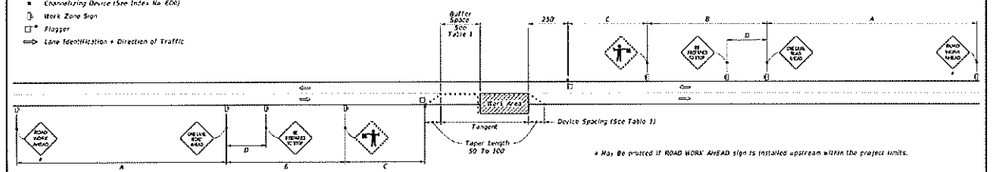
3/30/20

P:_PROJECT DRAWINGS\ROY-001 – Lake Marshall Residential Development\5.5 Drawings\59civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT – PHASE 1\Erosion Control_M.O.T. Details.dwg Modified:1/21/2020 By:asanchez

P:_PROJECT DRAWINGS\ROY-001 – Lake Marshall Residential Development\5.9 Drawings\S9civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT – PHASE 1\Erosion Control_M.O.T. Details.dwg Modified:1/21/2020 By:sanchez

SYMBOLS:

- Work Area
- Channelizing Device (See Index No. 600)
- Work Zone Sign
- Flagger
- Lane Identification + Direction of Traffic



WITHOUT TEMPORARY RAISED RUMBLE STRIPS

GENERAL NOTES:

1. Special Conditions may be required in accordance with these notes and the following sheets:
   A. Railroad Crossings:
      a. If an active railroad crossing is located closer to the Work Area than the queue length plus 300 feet, extend the Buffer Space as shown on Sheet 3.
      b. If the queuing of vehicles across an active railroad crossing cannot be avoided, provide a uniformed traffic control officer or flagger at the highway-rail grade crossing to prevent vehicles from stopping within the highway-rail grade crossing, even if automatic train warning devices are in place.
   B. If the Work Area encroaches on the Centerline, use the Layout for Temporary Lane Shift to Shoulder on Sheet 3 only if the Existing Paved Shoulder width is sufficient to provide for an 11' lane between the Work Area and the Edge of Existing Paved Shoulder. Reduce the posted speed when appropriate.
2. Temporary Raised Rumble Strips:
   A. Use when both of the following conditions are met concurrently:
      a. Existing Posted Speed is 55 mph or greater.
      b. Work duration is greater than 60 minutes.
   B. Use a consistent Strip color throughout the work zone.
   C. Place each Rumble Strip Set transversely across the lane at locations shown.
   D. Use Option 1 or Option 2 as shown on Sheet 2. Use only one option throughout work zone.
3. Additional one-way control may be provided by the following means:
   A. Flag-carrying vehicle:
   B. Official vehicle:
   C. Pilot vehicles:
   D. Traffic signals

   When flaggers use the safe means of one-way control, the flaggers must be in sight of each other or in direct communication at all times.
4. When a side road intersects the highway within the TTC zone, place additional TTC devices in accordance with other applicable TCZ Indexes.
5. The lane channelizing devices directly in front of the work area may be omitted provided vehicles in the work area have high-intensity rotating, flashing, oscillating, or strobe lights operating.
6. When Buffer Space cannot be attained due to geometric constraints, use the greatest attainable length, not less than 200 ft, for posted speeds greater than 25 mph.
7. ROAD WORK AHEAD and We Are PREPARED TO STOP signs may be omitted if all of the following conditions are met:
   A. Work operations are 60 minutes or less
   B. Speed limit is 45 mph or less.
   C. There are no sight obstructions to vehicles approaching the work area for a distance equal to the Buffer Space shown in Table 1.
   D. Vehicles in the work area have high intensity, rotating, flashing, oscillating, or strobe lights operating.
   E. Volume and complexity of the roadway has been considered.
   F. If a railroad crossing is present, vehicles will not queue across rail tracks.
   G. All AFs are not in use.
8. See Index 600 for general TCZ requirements and additional information.
9. Automated Flagger Assistance Devices (AFADs) may be used in accordance with Specifications Section 102, 990 and the AFL vendor drawings.

TABLE 1
DEVICE SPACING

Posted Speed	Maximum Spacing of Cones or Tubular Markers		Maximum Spacing of Type I or Type II Barricades/Panels/Drums		Distance Between Signs				Buffer Space
	On a Taper	On a Tangent	On a Taper	On a Tangent	A	B	C	D	
25	20'	50'	20'	50'	200'	200'	200'	100'	155'
30	20'	50'	20'	50'	200'	200'	200'	100'	200'
35	20'	50'	20'	50'	200'	200'	200'	100'	250'
40	20'	50'	20'	50'	200'	200'	200'	100'	305'
45	20'	50'	20'	50'	350'	350'	350'	175'	360'
50	20'	50'	20'	100'	500'	500'	500'	250'	425'
55	20'	50'	20'	100'	2640'	1500'	1000'	500'	495'
60	20'	50'	20'	100'	2640'	1500'	1000'	500'	570'
65	20'	50'	20'	100'	2640'	1500'	1000'	500'	645'
70	20'	50'	20'	100'	2640'	1500'	1000'	500'	720'

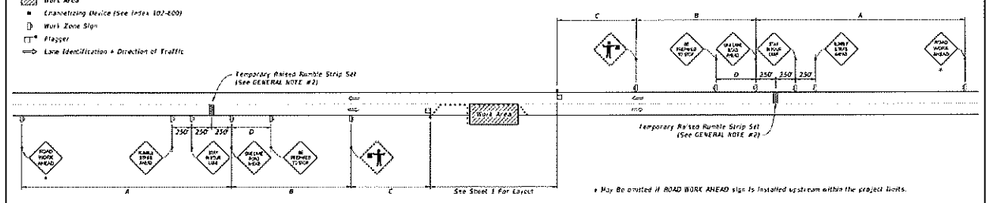
CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH THE AREA BETWEEN THE CENTERLINE AND A LINE Z OUTSIDE THE EDGE OF TRAVEL WAY.

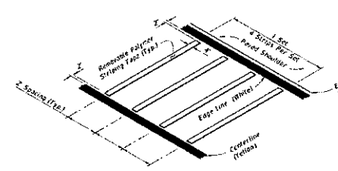
LAST REVISION	REVISION	DESCRIPTION:	FDOT FY 2017-18 DESIGN STANDARDS	TWO-LANE, TWO-WAY, WORK WITHIN THE TRAVEL WAY	INDEX NO.	SHEET NO.
01/01/16					603	1 of 3

SYMBOLS:

- Work Area
- Channelizing Device (See Index 101-600)
- Work Zone Sign
- Flagger
- Lane Identification + Direction of Traffic

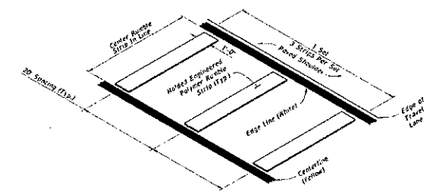


WITH TEMPORARY RAISED RUMBLE STRIPS
(When Required See GENERAL NOTE #2)



REMOVABLE POLYMER STRIPING TAPE

RUMBLE STRIP SET
OPTION - 1



MOLDED ENGINEERED POLYMER SET

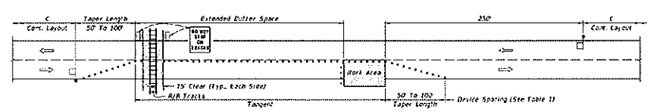
RUMBLE STRIP SET
OPTION - 2

TEMPORARY RAISED RUMBLE STRIPS

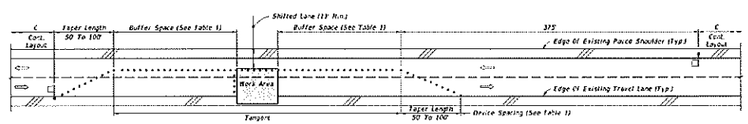
LAST REVISION	REVISION	DESCRIPTION:	FDOT FY 2017-18 DESIGN STANDARDS	TWO-LANE, TWO-WAY, WORK WITHIN THE TRAVEL WAY	INDEX NO.	SHEET NO.
11/01/17					603	2 of 3

SYMBOLS:

- Work Area
- Channelizing Device (See Index No. 600)
- Work Zone Sign
- Flagger
- Lane Identification + Direction of Traffic



TEMPORARY RAILROAD CROSSING BUFFER SPACE EXTENSION



TEMPORARY LANE SHIFT TO SHOULDER WHEN WORK AREA ENCROACHES ON THE CENTERLINE

SPECIAL CONDITIONS

Cross Reference:
1. See General Note #3, Sheet 1 for more information.

SPECIAL CONDITIONS

LAST REVISION	REVISION	DESCRIPTION:	FDOT FY 2017-18 DESIGN STANDARDS	TWO-LANE, TWO-WAY, WORK WITHIN THE TRAVEL WAY	INDEX NO.	SHEET NO.
01/01/16					603	3 of 3

6 MAINTENANCE OF TRAFFIC – WORK WITHIN THE TRAVEL WAY
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A	01/21/20	PDP AMENDMENT – GRADING REVISION	SCS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	03/19/18	SUBMITTED COMMENTS DATED 03/12/18	SCS
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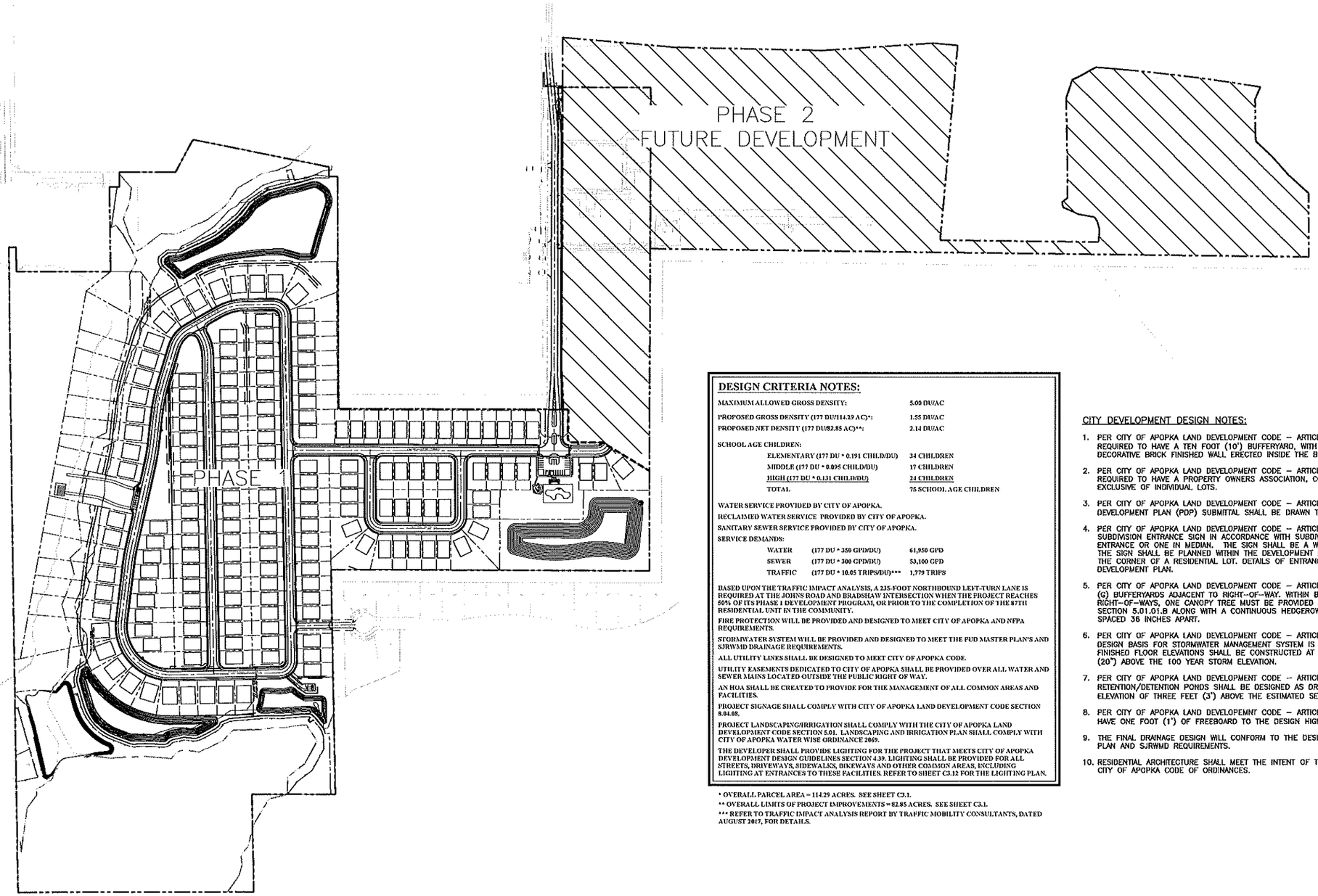
EROSION CONTROL & M.O.T. DETAILS
FINAL DEVELOPMENT PLAN
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: G. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/21/2020
SCALE: N.T.S.
PROJECT: ROY-001
SHEET: C2.7

3/30/20



GRAPHIC SCALE

200 0 100 200 400

(IN FEET)
1 inch = 200 ft.

LEGEND

- LOT LINES
- PHASING LINE
- PHASE 2

DESIGN CRITERIA NOTES:

MAXIMUM ALLOWED GROSS DENSITY:	5.00 DU/AC
PROPOSED GROSS DENSITY (177 DU/114.29 AC)*:	1.55 DU/AC
PROPOSED NET DENSITY (177 DU/82.85 AC)**:	2.14 DU/AC

SCHOOL AGE CHILDREN:

ELEMENTARY (177 DU * 0.191 CHILD/DU)	34 CHILDREN
MIDDLE (177 DU * 0.095 CHILD/DU)	17 CHILDREN
HIGH (177 DU * 0.131 CHILD/DU)	24 CHILDREN
TOTAL	75 SCHOOL AGE CHILDREN

WATER SERVICE PROVIDED BY CITY OF APOPKA.

RECLAIMED WATER SERVICE PROVIDED BY CITY OF APOPKA.

SANITARY SEWER SERVICE PROVIDED BY CITY OF APOPKA.

SERVICE DEMANDS:

WATER	(177 DU * 350 GPD/DU)	61,950 GPD
SEWER	(177 DU * 300 GPD/DU)	53,100 GPD
TRAFFIC	(177 DU * 10.05 TRIPS/DU)***	1,779 TRIPS

BASED UPON THE TRAFFIC IMPACT ANALYSIS, A 235-FOOT NORTHBOUND LEFT-TURN LANE IS REQUIRED AT THE JOHNS ROAD AND BRADSHAW INTERSECTION WHEN THE PROJECT REACHES 50% OF ITS PHASE 1 DEVELOPMENT PROGRAM, OR PRIOR TO THE COMPLETION OF THE 87TH RESIDENTIAL UNIT IN THE COMMUNITY.

FIRE PROTECTION WILL BE PROVIDED AND DESIGNED TO MEET CITY OF APOPKA AND NFPA REQUIREMENTS.

STORMWATER SYSTEM WILL BE PROVIDED AND DESIGNED TO MEET THE PUD MASTER PLAN'S AND SJRWMD DRAINAGE REQUIREMENTS.

ALL UTILITY LINES SHALL BE DESIGNED TO MEET CITY OF APOPKA CODE.

UTILITY EASEMENTS DEDICATED TO CITY OF APOPKA SHALL BE PROVIDED OVER ALL WATER AND SEWER MAINS LOCATED OUTSIDE THE PUBLIC RIGHT OF WAY.

AN HOA SHALL BE CREATED TO PROVIDE FOR THE MANAGEMENT OF ALL COMMON AREAS AND FACILITIES.

PROJECT SIGNAGE SHALL COMPLY WITH CITY OF APOPKA LAND DEVELOPMENT CODE SECTION 8.04.05.

PROJECT LANDSCAPING/IRRIGATION SHALL COMPLY WITH THE CITY OF APOPKA LAND DEVELOPMENT CODE SECTION 5.01. LANDSCAPING AND IRRIGATION PLAN SHALL COMPLY WITH CITY OF APOPKA WATER WISE ORDINANCE 2069.

THE DEVELOPER SHALL PROVIDE LIGHTING FOR THE PROJECT THAT MEETS CITY OF APOPKA DEVELOPMENT DESIGN GUIDELINES SECTION 4.39. LIGHTING SHALL BE PROVIDED FOR ALL STREETS, DRIVEWAYS, SIDEWALKS, BIKEWAYS AND OTHER COMMON AREAS, INCLUDING LIGHTING AT ENTRANCES TO THESE FACILITIES. REFER TO SHEET C3.12 FOR THE LIGHTING PLAN.

* OVERALL PARCEL AREA = 114.29 ACRES. SEE SHEET C3.1.

** OVERALL LIMITS OF PROJECT IMPROVEMENTS = 82.85 ACRES. SEE SHEET C3.1.

*** REFER TO TRAFFIC IMPACT ANALYSIS REPORT BY TRAFFIC MOBILITY CONSULTANTS, DATED AUGUST 2017, FOR DETAILS.

CITY DEVELOPMENT DESIGN NOTES:

1. PER CITY OF APOPKA LAND DEVELOPMENT CODE – ARTICLE II – SEC. 2.02.05 H.1 THE DEVELOPMENT IS REQUIRED TO HAVE A TEN FOOT (10') BUFFERYARD, WITH A MINIMUM SIX FOOT (6') BRICK, STONE OR DECORATIVE BRICK FINISHED WALL ERECTED INSIDE THE BUFFERYARD, ADJACENT TO EXTERNAL ROADWAYS.
2. PER CITY OF APOPKA LAND DEVELOPMENT CODE – ARTICLE VI – SEC. 6.01.00 B.3 THE DEVELOPMENT IS REQUIRED TO HAVE A PROPERTY OWNERS ASSOCIATION, CONVEYED IN FEE SIMPLE OWNERSHIP, FOR LAND EXCLUSIVE OF INDIVIDUAL LOTS.
3. PER CITY OF APOPKA LAND DEVELOPMENT CODE – ARTICLE XII – SEC. 12.02.04 C.1 A PRELIMINARY DEVELOPMENT PLAN (PDP) SUBMITTAL SHALL BE DRAWN TO A MAXIMUM SCALE OF 1" = 50'.
4. PER CITY OF APOPKA LAND DEVELOPMENT CODE – ARTICLE VIII – SEC. 8.04.15 ONE RESIDENTIAL SUBDIVISION ENTRANCE SIGN IN ACCORDANCE WITH SUBDIVISION PLAN APPROVAL ON EACH SIDE OF ENTRANCE OR ONE IN MEDIAN. THE SIGN SHALL BE A WALL SIGN OR MONUMENT SIGN. AN AREA FOR THE SIGN SHALL BE PLANNED WITHIN THE DEVELOPMENT PLAN AND SUCH AREA SHALL NOT TRUNCATE THE CORNER OF A RESIDENTIAL LOT. DETAILS OF ENTRANCE SIGN SHALL BE PROVIDED AT FINAL DEVELOPMENT PLAN.
5. PER CITY OF APOPKA LAND DEVELOPMENT CODE – ARTICLE V – SEC. 5.01.08 REQUIRED LANDSCAPING (G) BUFFERYARDS ADJACENT TO RIGHT–OF–WAY. WITHIN BUFFER YARDS THAT ARE ADJACENT TO RIGHT–OF–WAYS, ONE CANOPY TREE MUST BE PROVIDED AT INTERVALS AND IN A FASHION DESCRIBED IN SECTION 5.01.01.B ALONG WITH A CONTINUOUS HEDGEROW WITH THE HEDGES 24 INCHES HIGH AND SPACED 36 INCHES APART.
6. PER CITY OF APOPKA LAND DEVELOPMENT CODE – ARTICLE VI – SEC. 6.05.00 B.3 THE CITY OF APOPKA DESIGN BASIS FOR STORMWATER MANAGEMENT SYSTEM IS THE 25 YEAR/24 HOUR STORM EVENT. ALL FINISHED FLOOR ELEVATIONS SHALL BE CONSTRUCTED AT AN ELEVATION NO LESS THAN TWENTY INCHES (20") ABOVE THE 100 YEAR STORM ELEVATION.
7. PER CITY OF APOPKA LAND DEVELOPMENT CODE – ARTICLE VI – SEC 6.05.00 B.7 ALL RETENTION/DETENTION PONDS SHALL BE DESIGNED AS DRY BOTTOM PONDS WITH A MINIMUM BOTTOM ELEVATION OF THREE FEET (3') ABOVE THE ESTIMATED SEASONAL HIGH WATER TABLE.
8. PER CITY OF APOPKA LAND DEVELOPEMNT CODE – ARTICLE VI – SEC 6.05.00 D.5 ALL PONDS SHALL HAVE ONE FOOT (1') OF FREEBOARD TO THE DESIGN HIGH WATER RESULTING FROM THE DESIGN STORM.
9. THE FINAL DRAINAGE DESIGN WILL CONFORM TO THE DESIGN STANDARDS SET FORTH IN THE PUD MASTER PLAN AND SJRWMD REQUIREMENTS.
10. RESIDENTIAL ARCHITECTURE SHALL MEET THE INTENT OF THE DEVELOPMENT DESIGN GUIDELINES BY THE CITY OF APOPKA CODE OF ORDINANCES.

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SHEET 17 OF 92

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
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A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	03/15/18	SJRWMD COMMENTS DATED 03/15/18	SCS
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Notice of Corporate Certificate of Authorization Pending

PHASING PLAN
FINAL DEVELOPMENT PLAN

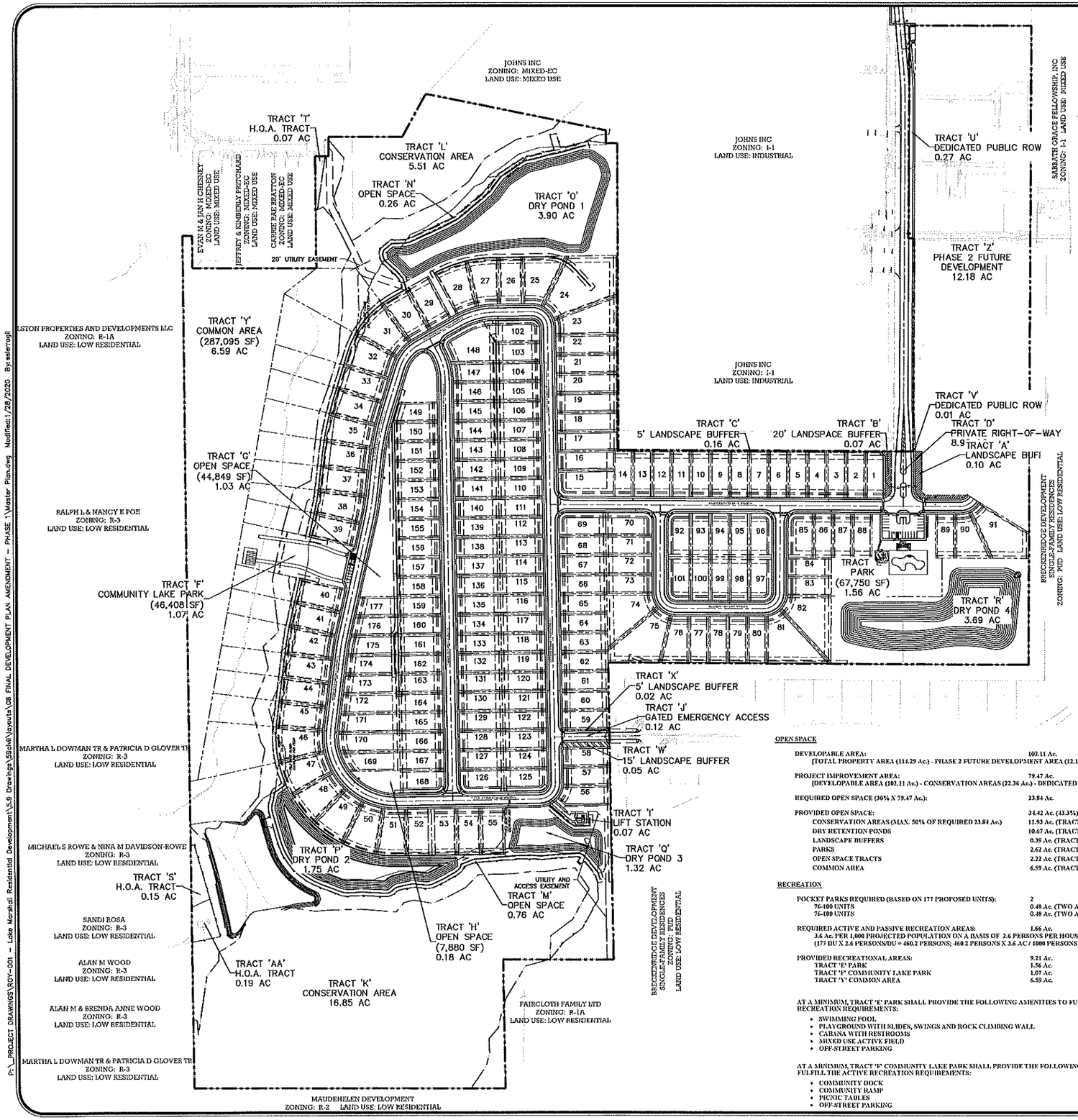
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: G. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/21/2020

SCALE: 1" = 200'
PROJECT: ROY-001
SHEET: C3.0

3/30/20

P:_PROJECT DRAWINGS\ROY-001 – Lake Marshall Residential Development\5.9 Drawings\Sheet\Layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT – PHASE 1\Phasing Plan.dwg Modified: 1/28/2020 By: salerrogil



GRAPHIC SCALE

150 0 75 150 300

(IN FEET)
1 inch = 150 ft.

LEGEND

- PARCEL BOUNDARY
- LOT LINES
- SETBACKS
- WETLAND LINE
- 15' MIN./25' AVG. WETLAND BUFFER
- 50' WETLAND OFFSET
- 5' LANDSCAPE BUFFER
- 20' LANDSCAPE BUFFER
- 10' LANDSCAPE BUFFER

SITE DATA:

OCPA - PARCEL ID #:	28-21-08-0000-00-005
PARCEL AREA:	103.11 Ac.
PROJECT IMPROVEMENT AREA:	79.46 Ac. 4
FEMA FLOOD INSURANCE RATE MAP FLOOD ZONE: FIRM PANEL #12095C0120F DATED SEPT. 25, 2009	X & AE (El. = 70.3)
FEMA FLOOD PRONE AREA (AREA BELOW BFE 70.3):	39.72 Ac.
EXISTING WETLAND AREA:	21.09 Ac. 4
EXISTING WETLAND AREA TO REMAIN:	20.71 Ac.
EXISTING WETLAND TO BE RESTORED:	0.38 Ac.
PROPOSED DEDICATED CONSERVATION TRACTS:	22.36 Ac.
WETLAND AREA TO REMAIN:	17.20 Ac.
ADDITIONAL WETLAND TO BE RESTORED:	0.96 Ac.
PROVIDED 15' MIN./25' AVG. WETLAND BUFFER:	4.20 Ac.
PROPOSED CONSERVATION EASEMENT WITHIN LOTS:	5.49 Ac.
WETLAND AREA TO REMAIN AS IS:	3.89 Ac.
PROVIDED 15' MIN./25' AVG. WETLAND BUFFER:	1.60 Ac.
EXISTING ZONING:	PUD
PROPOSED ZONING:	PUD
ADJACENT ZONING:	
NORTH	R-3
SOUTH	PUD
EAST	I-1, MIXED-EC
WEST	PUD, R-2
EXISTING FUTURE LAND USE (FLU):	LOW RESIDENTIAL
ADJACENT FUTURE LAND USE:	
NORTH	LOW RESIDENTIAL
SOUTH	LOW RESIDENTIAL
EAST	INDUSTRIAL, MIXED USE
WEST	LOW RESIDENTIAL

PROPOSED MINIMUM LOT REQUIREMENTS:

	60' LOTS	75' LOTS
MINIMUM LOT AREA	8,100 SF (*)	10,875 SF
MINIMUM LOT WIDTH	60 ft.	75 ft.
MINIMUM LOT DEPTH	135 ft. (*)	145 ft.
MAXIMUM BUILDING HEIGHT	35 ft.	35 ft.
SETBACKS		
FRONT YARD	25 ft.	25 ft.
SIDE YARD	5 ft.	7.5 ft.
REAR YARD	20 ft.	20 ft.
CORNER SIDE YARD	15 ft.	N/A

(*) LOTS 56, 57, AND 65 HAVE LOT AREAS OF 7,326 SF, 8,192 SF, AND 7,838 SF, RESPECTIVELY, AND MINIMUM LOT DEPTHS OF 114 LF, 129 LF, AND 122 LF, RESPECTIVELY (REFER TO SHEET C3.9 FOR LOT SIZING AND SETBACK DETAILS).

SITE DATA:

OCPA - PARCEL ID #:	28-21-08-0000-00-043
PARCEL AREA:	11.18 Ac.
AREA DEDICATED TO PUBLIC RIGHT-OF-WAY:	0.28 Ac.
EXISTING ZONING:	MIXED-EC
PROPOSED ZONING:	PUD
ADJACENT ZONING:	
NORTH	I-1
SOUTH	PUD, I-1
EAST	I-1
WEST	PUD
EXISTING FUTURE LAND USE (FLU):	MIXED USE
ADJACENT FUTURE LAND USE:	
NORTH	INDUSTRIAL
SOUTH	LOW RESIDENTIAL, MIXED USE
EAST	MIXED USE
WEST	LOW RESIDENTIAL
PROPOSED MINIMUM LOT REQUIREMENTS:	NO LOTS PROPOSED IN THIS PHASE

OVERALL SITE DATA:

OCPA - PARCEL ID #:	28-21-08-0000-00-005 28-21-08-0000-00-043
TOTAL PROPERTY AREA:	114.29 Ac.
PROJECT IMPROVEMENT AREA	79.47 Ac. 4
DEDICATED PUBLIC RIGHT-OF-WAY AREA	0.28 Ac.
CONSERVATION AREA	22.36 Ac. 4
PHASE 2 FUTURE DEVELOPMENT AREA	12.18 Ac.

OPEN SPACE

DEVELOPABLE AREA: [TOTAL PROPERTY AREA (114.29 Ac.) - PHASE 2 FUTURE DEVELOPMENT AREA (12.18 Ac.)]	102.11 Ac.
PROJECT IMPROVEMENT AREA: [DEVELOPABLE AREA (102.11 Ac.) - CONSERVATION AREAS (22.36 Ac.) - DEDICATED ROW'S (0.28 Ac.)]	79.47 Ac. 4
REQUIRED OPEN SPACE (30% X 79.47 Ac.):	23.84 Ac.
PROVIDED OPEN SPACE:	34.42 Ac. (43.3%)
CONSERVATION AREAS (MAX. 50% OF REQUIRED 23.84 Ac.)	11.93 Ac. (TRACTS 'K' AND 'L')
DRY RETENTION PONDS	10.67 Ac. (TRACTS 'O', 'P', 'Q' AND 'R')
LANDSCAPE BUFFERS	0.39 Ac. (TRACTS 'A', 'B', 'C', 'W' AND 'X')
PARKS	2.62 Ac. (TRACTS 'E' AND 'F')
OPEN SPACE TRACTS	2.22 Ac. (TRACTS 'G', 'H', 'M' AND 'N')
COMMON AREA	6.59 Ac. (TRACT 'Y')

RECREATION

POCKET PARKS REQUIRED (BASED ON 177 PROPOSED UNITS): 76-100 UNITS 76-100 UNITS	2 0.48 Ac. (TWO AND A HALF 60' LOTS) 0.48 Ac. (TWO AND A HALF 60' LOTS)
REQUIRED ACTIVE AND PASSIVE RECREATION AREAS: 3.6 Ac. PER 1,000 PROJECTED POPULATION ON A BASIS OF 2.6 PERSONS PER HOUSEHOLD (177 DU X 2.6 PERSONS/DU = 460.2 PERSONS; 460.2 PERSONS X 3.6 AC / 1000 PERSONS = 1.65 Ac.)	1.66 Ac.
PROVIDED RECREATIONAL AREAS: TRACT 'E' PARK TRACT 'F' COMMUNITY LAKE PARK TRACT 'Y' COMMON AREA	9.21 Ac. 1.56 Ac. 1.07 Ac. 6.59 Ac.

AT A MINIMUM, TRACT 'E' PARK SHALL PROVIDE THE FOLLOWING AMENITIES TO FULFILL THE ACTIVE RECREATION REQUIREMENTS:

- SWIMMING POOL
- PLAYGROUND WITH SLIDES, SWINGS AND ROCK CLIMBING WALL
- CABANA WITH RESTROOMS
- MIXED USE ACTIVE FIELD
- OFF-STREET PARKING

AT A MINIMUM, TRACT 'F' COMMUNITY LAKE PARK SHALL PROVIDE THE FOLLOWING AMENITIES TO FULFILL THE ACTIVE RECREATION REQUIREMENTS:

- COMMUNITY DOCK
- COMMUNITY RAMP
- PICNIC TABLES
- OFF-STREET PARKING

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SHEET 18 OF 92

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/31/20	CITY OF APOPKA COMMENTS DATED 01/07/20	SCS
A	03/05/18	SERVICE COMMENTS DATED 03/05/18	SCS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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APPIANEL.COM • 407.960.5868
2221 Lake Shade, Suite 17, Winter Park, Florida 32789
CERTIFICATE OF AUTHORIZATION NUMBER 27599

PUD MASTER PLAN
FINAL DEVELOPMENT PLAN
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: O. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/21/2020
SCALE: 1" = 150'
PROJECT: ROY-001
SHEET: C3.1

3/30/20

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.0 Drawings\SGoM\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Master Plan.dwg Modified: 1/28/2020 By: sstierrag

LAKE MARSHALL PHASE 1 MASTER PLAN DEVELOPMENT STANDARDS

A. Design Standards

1. LOT CRITERIA:

Description	Single-Family Detached 60' Lot	Single-Family Detached 75' Lot
Lot Setbacks [1]		
Front Porch[2]	15'	15'
Front	25'	25'
Rear	20'	20'
Side	5'	7.5'
Side Corner	15'	N/A
Garage	25' [6]	25' [6]
Accessory Structure Rear	5'	5'
Lot Dimensions		
Min. Average Lot Area	8,100 SF[5]	10,875 SF
Min. Lot Width	60' [3]	75' [4]
Min. Lot Depth	135'[5]	145'
Max. Lot Coverage	75%	75%
Max. Building Height	35'/2 Stories	35'/2 Stories
Min. Living Area	1,800 SF	1,800 SF

(1) See sheet titled "Curve and Lot Data Table" for depiction of conceptual typical site plans.
(2) Front porch setback as allowed per City of Apopka Development Design Guidelines 3.2.1.
(3) Minimum lot width may be reduced to 40' around curves so long as lot width at the building line is 60' minimum.
(4) Minimum lot width may be reduced to 40' around curves so long as lot width at the building line is 75' minimum.
(5) Lots 56, 57, and 65 have lot areas of 7,326 SF, 8,192 SF, and 7,838 SF, respectively, and minimum lot depths of 114', 129', and 122', respectively. See sheet titled "Curve and Lot Data Table" of the Lake Marshall Subdivision Phase 1 PUD Master Plan/Preliminary Development Plan for lot sizing and setback details for these lots.
(6) A deviation from the City of Apopka's requirement of a 30' garage setback is hereby requested.

B. Architectural, Buildings, and Accessory Structures

1. Architectural design shall meet the intent of City of Apopka Development Design Guidelines or unless otherwise stated.
2. All lots shall have detached single family homes.
3. Each individual single-family home shall have a minimum of two (2) bedrooms.
4. All lots shall have attached minimum two (2) car garages.
5. A deviation from the City of Apopka Development Design Guidelines is hereby requested to allow for side-entry, flush, recessed, and protruding garage styles throughout the Lake Marshall Subdivision.

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6. Mail delivery for all lots within both phases of the Lake Marshall Subdivision shall occur at mail kiosks with cluster mailbox units. Approval from the Postmaster of the mail kiosks and their location shall be submitted prior to approval of the Final Development Plan.
7. AC condenser units & similar equipment placed in the side yard area shall be screened with landscaping or opaque fencing.
8. Storage sheds or similar storage facilities shall not be allowed.
9. Swimming pools shall be allowed on all lots.
   a) Swimming Pools must be in-ground type. Above Ground Pools are prohibited.
   b) Swimming pools and decks are prohibited from projecting beyond the side wall facade.
10. Screen enclosures over swimming pools and their respective deck area with non-metal or non-vinyl roofs shall be allowed.
    a) Screening shall be dark mesh. Opaque, semi-opaque or clear panels on the walls or roofs are prohibited.
11. Screen enclosures with metal, vinyl, or screen mesh roofs over non-swimming pool decks are prohibited.
12. Architectural Design Standards:
    a) Architectural styles shall be determined prior to Final Development Plan approval, and these shall meet the intent of to the City of Apopka's Development Design Guidelines except as noted on these Development Standards. Modification or replacement of the exterior elevations can be approved by the Community Development Director if such changes represent equivalent architectural value. Substantial deviations from architectural rendering must be approved by City Council.
    b) A deviation from the City of Apopka Development Design Guidelines is hereby requested for all 60' lots with 50' wide homes to allow for the garage to cover a maximum of 60% of the length of the front primary façade only in the case a three (3) car garage is selected by the homebuyer.
    c) Front facade materials such as cultured stone veneer, stucco, & fiber cement siding shall be utilized to be consistent with the applicable Architectural Style.
    d) Minimum roof pitch over the main house and garage shall be 5/12. Roof pitch over porches shall be a minimum of 4/12.
    e) 30-year asphalt shingle shall be installed on all roofs. 3-tab shingles are prohibited. Single shingle color shall be used for uniformity throughout the community.
    f) Aluminum fascia and soffit shall be standard for all houses. Single Fascia and soffit color shall be used for uniformity throughout the community.
    g) Trim around windows and doors shall be painted a different color from the body of the house. Doors may be painted either the same as the trim or separate accent color.
    h) Pavers shall be installed in front yard driveways and lead walks.
13. Front Building Entrance Elevation Design Standards:
    a) Front porches & porticos at grade level.
    b) Identical model plan type shall not be constructed on neighboring lots who share a side yard property boundary line without a different elevation style type.
    c) Identical exterior paint schemes shall not be applied on neighboring lots who share a side yard property boundary line.
    d) Modification or replacement of the exterior elevations can be approved by the Community Development Director if such changes represent equivalent architectural value. Substantial deviations from architectural rendering must be approved by City Council.
14. Rear Elevation Design Standards:
    a) Large expanses of solid wall shall be avoided thru use of windows, wall features, or wall / roof jogs.
    b) Window grid patterns and window banding & trim shall match front elevation windows.

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    c) Identical exterior paint schemes shall not be applied on neighboring lots who share a side yard property boundary line
    d) Modification or replacement of the exterior elevation can be approved by the Community Development Director if such changes represent equivalent architectural value. Substantial deviations from architectural rendering must be approved by City Council.
15. Mail Kiosk Elevation Design Standards:
    a) Elevation shall be compatible with the architectural elevation styles of the homes & mail kiosks within the community.
16. Individual Lot Front & Rear Yard Fencing Standards:
    a) Maximum height of a fence shall be 6'-0" above final grade. When abutting a common area wall, the fence height shall taper to the height of the wall across a horizontal distance no less than 8'-0".
    b) Rear yard fences shall not project more than five feet (5') beyond rear side wall building corner.

C. Utilities and Infrastructure

1. Water service shall be provided by the City of Apopka. The water system shall be designed to City standards.
2. Reclaim water service shall be provided by the City of Apopka. The reclaim water system shall be designed to City standards.
3. Stormwater management system shall be designed to comply with the design standards of this Master Plan and the St. Johns River Water Management District.
4. A final drainage report and soils report will be submitted with the Final Development Plan.
5. Sanitary service shall be provided by the City of Apopka. The sanitary system shall be designed to City of Apopka standards.
6. Utility easements shall be dedicated to the City of Apopka.
7. Drainage easements to be dedicated to the Home Owners' Association unless otherwise required by the City of Apopka.
8. All stormwater and utility pipes may be moved to save existing trees in the right-of-way. Any change in the location of these pipes will be shown on the Final Development Plan.
9. On-site streets are to be constructed per City of Apopka standards.
10. Stabilized access roadways and fire hydrants must be in place before building construction may begin.
11. Solid waste collection and public safety (police and fire) provided by the City of Apopka.
12. The internal street right-of-way is to be private.
13. Five-foot (5') wide sidewalks are to be constructed adjacent to internal roads throughout the entire project in compliance with the City of Apopka Land Development Code. Sidewalk alignment may be adjusted at final development plan to preserve existing trees.
14. A five-foot (5') wide sidewalk shall be constructed within the southern side of the Johns Road right-of-way from the main entrance proposed within Parcel ID 28-21-08-0000-00-005 east until the western parcel boundary of Parcel ID 28-21-08-0000-00-043. At this point, a crosswalk will be installed across the Johns Road paved roadway to the northern side of the right-of-way, from where the proposed sidewalk will run east and connect to the existing sidewalk.
15. Right-of-way dedication along Johns Road shall be as depicted on sheet C4.0 or the Lake Marshall Subdivision Phase 1 Planned Unit Development Master Plan/Preliminary Development Plan.
16. Garages shall be accessed from the adjacent public right-of-way at the front of the lot for all lots.
17. Power service within the development shall be underground. No overhead service will be allowed.

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18. Vehicular, Pedestrian and Accent lighting shall substantially conform the Section 3.10 – Lighting of the City of Apopka Development Design Guidelines.
19. Based upon the development's daily trip generation of 1,779 vehicles, the provision of one northbound deceleration lane at the intersection of Johns Road and Bradshaw Road is warranted when the development reaches 50 percent (50%) of its Phase 1 development program, or prior to the completion of the 87th residential unit in the entire Lake Marshall Subdivision, whichever comes first.
20. A twenty-four-foot (24'), gated emergency access road shall be constructed between lots 135 and 136, connecting the Lake Marshall Subdivision Street C right-of-way to the Breckenridge Subdivision Cavan Drive right-of-way to provide an emergency-only route for both subdivisions. This access road shall be constructed within a 40-foot emergency access easement, pedestrian ingress/egress, and utility easement.
21. The potable and reclaimed water mains connecting Breckenridge to the City of Apopka utilities shall be rerouted through Lake Marshall Subdivision H.O.A.-owned tracts to remove them from the rear of lots 132 through 135. Within the Breckenridge Subdivision, these mains will run north through the 40-foot emergency access easement, pedestrian ingress/egress, and utility easement mentioned above.

D. Recreation and Open Space

1. Required project open space shall be a minimum of 30% of the developed site area in accordance with City of Apopka LDC Section 2.02.18(D)(19).
2. Required project recreation shall be provided at a rate of 3.6 acres per 1,000 population with 2.6 population per dwelling unit.
3. Tract "E" shall be an approximate 1.56-acre Park. A specific park site plan and amenities/equipment shall be provided with the Final Development Plan. Park amenities shall include a cabana with restrooms, a swimming pool, a playground, and a mixed-use active field at a minimum. The Community Building shall be a minimum of 900 SF containing, at a minimum, restroom facilities for the building and pool. The swimming pool and deck area shall be a minimum of 3,000 SF and water area a minimum of 2,000 SF. Documentation/calculations that the proposed pool size complies with state health standards will be provided at the Final Development Plan.
4. Tract "F" shall be an approximate 1.58-acre Community Lake Park. A specific park site plan and amenities/equipment shall be provided with the Final Development Plan. Community lake park amenities shall include at a minimum one community ramp, one community dock, and picnic tables.
5. Tract G and H will incorporate pedestrian circulation, benches, and open play areas. Specific park site plans and amenities/equipment shall be provided with the Final Development Plan.
6. All recreation and open space areas within the limits of Phase 1 will be accessible to all homeowners of Phase 2 of the Lake Marshall Subdivision.

E. Buffers and Landscaping

1. A twenty-foot (20') buffer for entry wall and landscaping will be provided along each side of the proposed main entrance on Johns Road. These tracts shall be dedicated to and maintained by the H.O.A. The design of these buffer tracts shall generally follow the landscape design appearing on sheets LS-04 and LS-08 of the Master Plan/Preliminary Development Plan. A six foot (6') high wall or fence is provided in these tracts to provide buffering from the adjacent roadway.
2. A five-foot (5') wide buffer tract for landscaping will be provided along the rear of lots 1-24 to provide buffering from industrial-zoned properties. This tract shall be dedicated to and maintained

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by the H.O.A. The design of this buffer shall generally follow the landscape design appearing on sheets LS-01, LS-02, LS-04, LS-05, LS-06, and LS-08 of the Master Plan/Preliminary Development Plan.

3. A ten-foot (10') wide buffer tract for landscaping will be provided along each side of the proposed emergency access tract for Lake Marshall Subdivision and Breckenridge Subdivision. These tracts shall be dedicated to and maintained by the H.O.A. The design of these buffer tracts shall generally follow the landscape design appearing on sheet LS-06 of the Master Plan/Preliminary Development Plan.
4. Entrance feature and community sign details will be provided with the Final Development Plan.
5. Final landscape plans for the buffer areas along the proposed main entrance at Johns Road will be provided with the Final Development Plan.
6. Tree Planting Conditions. Minimum of three new trees shall be planted per 60' and 75' residential lot. The new trees shall be a minimum of three inches (3") DBH at the time of planting and shall count toward the overall number of required tree replacement inches, if any.
7. Tree Protection Plan - The Final Development Plan shall include tree protection techniques to prevent harm to any trees designate to be preserved or encroachment into protected natural areas, including but not limited to tree barricades, silt fencing or other similar techniques accepted by the City Engineer.

F. Maintenance and Plat

1. The Lake Marshall Home Owners' Association will maintain common areas, fences/walls, and landscaping within the front and corner yards of all lots. The HOA shall also be responsible for maintenance of streets, street lighting, and stormwater collection systems within the right-of-way and drainage easements within the Lake Marshall Subdivision.
2. The Final Development Plan shall include the plat document, and the plat shall be in final form.

G. Wetlands and Environmental

1. There are three wetland areas within the site. These are located in the northwest, north, and northeast portions of the property.
2. According to the FEMA Flood Insurance Rate Map for Orange County, FL, Panel No. 12095-C-0120-F, dated September 25, 2009, the majority of the proposed development is located within Zone X (areas determined to outside the 500-year floodplain) and limited northern portions of Parcel ID 28-21-08-0000-00-005 fall within FEMA flood zone AE. The areas within these portions that will be developed will be removed from the floodplain.
3. An erosion control plan will be submitted with the Final Development Plan.
4. Tree removal, tree replacement, and landscaping shall comply with Water Wise Ordinance 2069 and shall be consistent with Article V of the City of Apopka Land Development Code.
5. Individual lot arbor/clearing permit is required prior to clearing or grading of any lot or issuance of building permit. Placement of the house shall preserve existing trees to the greatest extent practical. Plot plan for each lot shall illustrate tree locations as presented within the PUD Master Plan\Preliminary Development Plan.

H. Development Condition Continuity

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The PUD Development Standards shall be printed within the PUD Master Plan and the Final Development Plan.

I. Signage

Signage shall comply with Article 8 of the City of Apopka Land Development Code and with the City of Apopka Development Design Guidelines.

J. Lighting

Lighting shall comply with the City of Apopka's City Ordinance No. 2069 and Section 3.10 of the City of Apopka Development Design Guidelines. Street and parking area or pedestrian path light poles shall be decorative type. Details will be provided with the Final Development Plan.

L. Miscellaneous

1. Any existing septic tanks or wells shall be properly abandoned prior to earthwork or construction. Permits shall be applied for and issued by the appropriate agencies.
2. All acreages are subject to change with final engineering and final plat review and approval.

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REV.	DATE	DESCRIPTION	BY
	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
	01/21/20	FDP AMENDMENT – GRADING REVISION	SCS
	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
	03/15/18	SJRWMD COMMENTS DATED 03/15/18	SCS
	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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PUD DEVELOPMENT STANDARDS
FINAL DEVELOPMENT PLAN
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION) PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: O. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/21/2020
SCALE: N.T.S.
PROJECT: ROY-001
SHEET: C3.2

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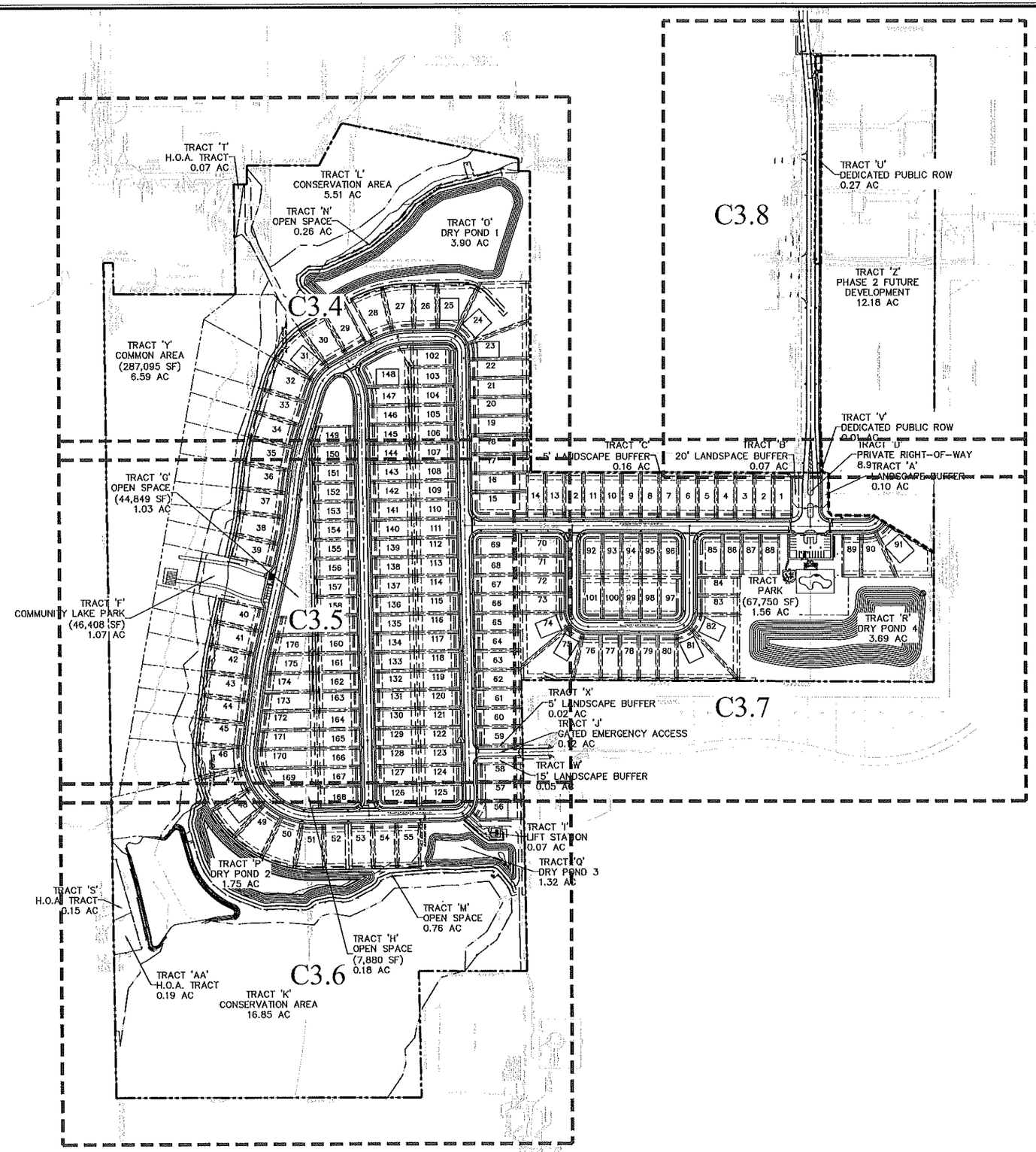
3/30/20

SHEET 19 OF 92

P:_PROJECT DRAWINGS\ROY-001 – Lake Marshall Residential Development\5.9 Drawings\59civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT – PHASE 1\Master Plan.dwg Modified:1/28/2020 By:ssierragil



GRAPHIC SCALE

(IN FEET)
1 inch = 160 ft.

LEGEND

- LOT LINES
- EASEMENTS
- SETBACKS
- FENCE
- PHASING LINE
- WETLAND LINE
- 15' MIN./25' AVG. WETLAND BUFFER
- 50' WETLAND BUILDING SETBACK OFFSET

PARCEL DATA					
PARCEL	TOTAL PARCEL AREA		PARCEL AREA WITHIN PHASE 1		OWNER
28-21-08-0000-00-043	11.18 AC	487,032 SF	0.28 AC	12,407 SF	JAMES D & DEBORAH M LYDA
28-21-08-0000-00-005	303.11 AC	4,491,316 SF	101.82 AC	4,435,415 SF	AVATAR PROPERTIES, INC

TRACT DATA				
TRACT	DESCRIPTION	AREA	AREA	OWNER
TRACT 'A'	LANDSCAPE BUFFER	0.10 AC	4,142 SF	H.O.A.
TRACT 'B'	20' LANDSCAPE BUFFER	0.07 AC	2,875 SF	H.O.A.
TRACT 'C'	5' LANDSCAPE BUFFER	0.16 AC	7,109 SF	H.O.A.
TRACT 'D'	PRIVATE RIGHT-OF-WAY	8.96 AC	390,478 SF	H.O.A.
TRACT 'E'	PARK	1.56 AC	67,750 SF	H.O.A.
TRACT 'F'	COMMUNITY LAKE PARK	1.07 AC	46,408 SF	H.O.A.
TRACT 'G'	OPEN SPACE	1.03 AC	44,849 SF	H.O.A.
TRACT 'H'	OPEN SPACE	0.18 AC	7,880 SF	H.O.A.
TRACT 'I'	LIFT STATION	0.07 AC	2,904 SF	CITY
TRACT 'J'	GATED EMERGENCY ACCESS	0.12 AC	5,075 SF	H.O.A.
TRACT 'K'	CONSERVATION AREA	16.85 AC	734,007 SF	H.O.A.*
TRACT 'L'	CONSERVATION AREA	5.51 AC	239,927 SF	H.O.A.*
TRACT 'M'	OPEN SPACE	0.76 AC	32,975 SF	H.O.A.
TRACT 'N'	OPEN SPACE	0.26 AC	11,126 SF	H.O.A.
TRACT 'O'	DRY POND 1	3.90 AC	170,064 SF	H.O.A.
TRACT 'P'	DRY POND 2	1.75 AC	76,399 SF	H.O.A.
TRACT 'Q'	DRY POND 3	1.32 AC	57,509 SF	H.O.A.
TRACT 'R'	DRY POND 4	3.69 AC	160,864 SF	H.O.A.
TRACT 'S'	H.O.A. TRACT	0.15 AC	6,453 SF	H.O.A.
TRACT 'T'	H.O.A. TRACT	0.07 AC	3,053 SF	H.O.A.
TRACT 'U'	DEDICATED PUBLIC ROW	0.27 AC	11,866 SF	CITY
TRACT 'V'	DEDICATED PUBLIC ROW	0.01 AC	541 SF	CITY
TRACT 'W'	15' LANDSCAPE BUFFER	0.05 AC	2,175 SF	H.O.A.
TRACT 'X'	5' LANDSCAPE BUFFER	0.02 AC	725 SF	H.O.A.
TRACT 'Y'	COMMON AREA	6.59 AC	287,095 SF	H.O.A.
TRACT 'Z'	PHASE 2 FUTURE DEVELOPMENT	12.18 AC	530,526 SF	AVATAR PROPERTIES
TRACT 'AA'	H.O.A. TRACT	0.19 AC	8,491 SF	H.O.A.

* Tracts 'K' and 'L' are to be owned and maintained by the home owners' association with development rights dedicated to the City of Apopka, Florida. No construction, clearing, grading or alteration of tracts 'K' and 'L' is allowed unless approved by the City of Apopka and the other applicable jurisdictional agencies. Tracts 'K' and 'L' are subject to a conservation easement in favor of the St. Johns River Water Management District pursuant to section 704.06, Florida Statutes, to be dedicated by separate instrument in the public records of Orange County, Florida.

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/21/20	PDP AMENDMENT - GRADING REVISION	SCS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/15/18	SCS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/15/18	SCS

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2221 Lee Road, Suite 17, Winter Park, Florida 32789

OVERALL GEOMETRY PLAN
FINAL DEVELOPMENT PLAN

LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: C. SANCHEZ
CHECKED: L. CLASSON
DATE: 3/24/2020
SCALE: 1" = 160'
PROJECT: ROY-001
SHEET: C3.3

3/30/20

Call 48 hours before you dig
It's the Law!
1-800-432-4770
Sunshine State One Call of Florida, Inc.

SHEET 20 OF 92

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.9 Drawings\Special\Layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Geometry Plan.dwg Modified:3/30/2020 By:sslerrogil

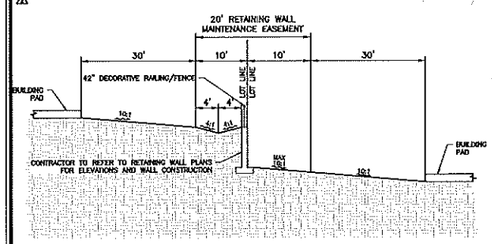
Natural Conservation Area

NO DUMPING, LAND-CLEARING, OR OTHER DISTURBANCE TO NATIVE SOILS OR VEGETATION PERMITTED BEYOND THIS POINT.

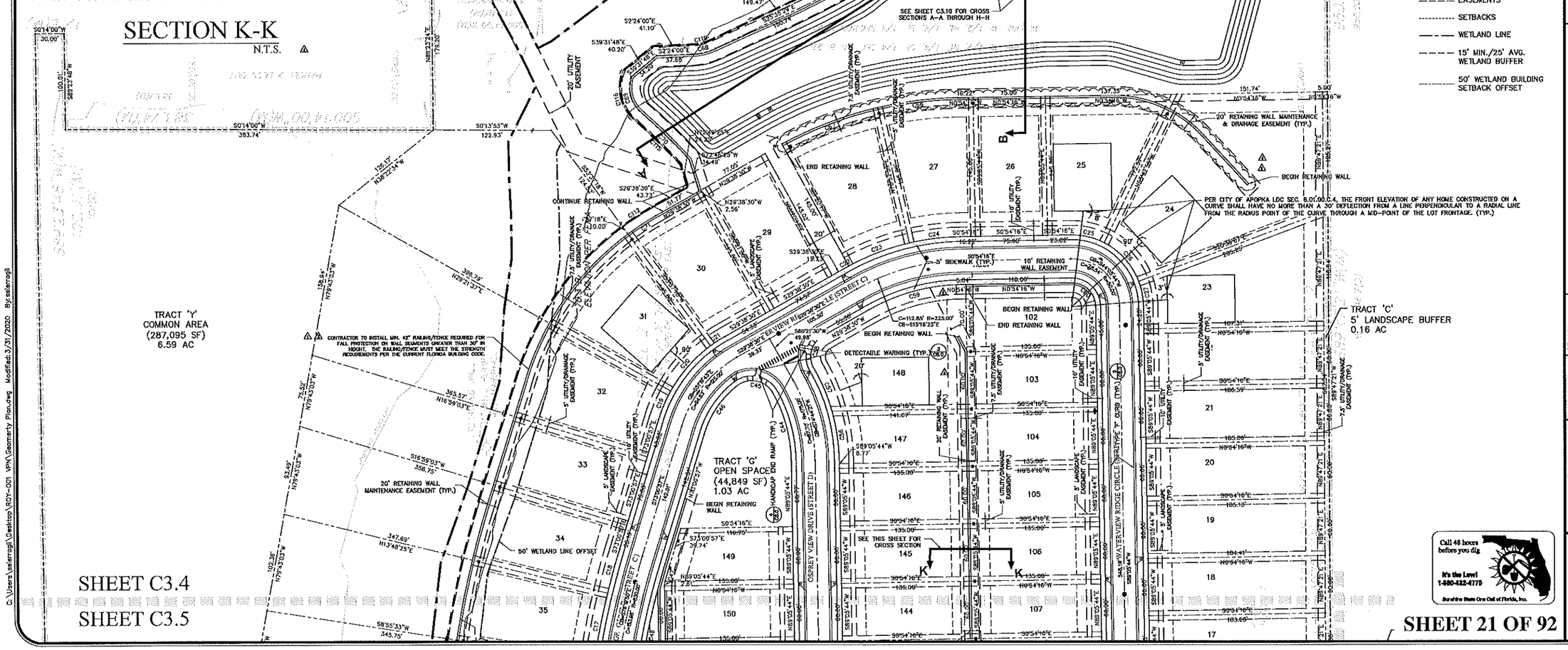
For additional information, please contact St. Johns River Water Management District (407-659-4800).

12" × 12"

1 NATURAL CONSERVATION AREA SIGN
N.T.S.



SECTION K-K
N.T.S.



SHEET C3.4
SHEET C3.5

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Sunshine State One Call of Florida, Inc.

3/31/20

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER SURVEY AND CITY COORDINATION	SGS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SGS
A	01/21/20	FDP AMENDMENT – GRADING REVISION	SGS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SGS
A	02/15/18	SATWMD COMMENTS DATED 01/26/18	SGS
A	02/15/18	CITY OF APOPKA COMMENTS DATED 02/15/18	SGS

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CERTIFICATE OF AUTHORIZATION NO. 27000

GEOMETRY PLAN – NORTHEAST
FINAL DEVELOPMENT PLAN
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

SCALE	DRAWN: S. SIERRA-GIL
1" = 50'	DESIGNED: O. SANCHEZ
PROJECT: ROY-001	CHECKED: L. CLASSON
SHEET: C3.4	DATE: 3/30/2020

C:\Users\ssierragil\Desktop\ROY-001 VPN\Geometry Plan.dwg Modified:3/31/2020 By:ssierragil

SHEET C3.4

SHEET C3.5

TRACT 'F'
COMMUNITY LAKE PARK
(46,408 SF)
1.07 AC

TRACT 'G'
OPEN SPACE
(44,849 SF)
1.03 AC

TRACT 'H'
OPEN SPACE
(7,880 SF)

TRACT 'X'
5' LANDSCAPE BUFFER
0.02 AC

TRACT 'J'
GATED EMERGENCY ACCESS
0.12 AC

TRACT 'W'
15' LANDSCAPE BUFFER
0.05 AC

SHEET C3.5

SHEET C3.7

SHEET C3.5

SHEET C3.6

SHEET 22 OF 92

GRAPHIC SCALE

(IN FEET)
1 inch = 60 ft.

LEGEND

- LOT LINES
- EASEMENTS
- SETBACKS
- WETLAND LINE
- 15' MIN./25' AVG. WETLAND BUFFER
- 50' WETLAND BUILDING SETBACK OFFSET

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REV.	DATE	DESCRIPTION	BY
7	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY CORRECTION	SCS
6	03/24/20	CITY OF APOPKA COMMENTS DATED 03/18/20	SCS
5	01/21/20	TDP AMENDMENT - GRADING REVISION	SCS
4	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
3	03/19/18	SJRWMD COMMENTS DATED 03/15/18	SCS
2	03/19/18	CITY OF APOPKA COMMENTS DATED 03/19/18	SCS
1	03/19/18	CITY OF APOPKA COMMENTS DATED 03/19/18	SCS

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2221 Lake Avenue, Suite 17, Winter Park, Florida 32789

GEOMETRY PLAN – NORTH
FINAL DEVELOPMENT PLAN

LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: O. SANCHEZ
CHECKED: L. CLASSON
DATE: 3/24/2020

SCALE: 1" = 50'
PROJECT: ROY-001
SHEET: C3.5

3/30/20

P:_PROJECT DRAWINGS\ROY-001 – Lake Marshall Residential Development\5.0 Drawings\Sheets\Layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT – PHASE 1\Geometry Plan.dwg Modified: 3/30/2020 By: asierrogil

SHEET C3.5

SHEET C3.6

TRACT 'H'
OPEN SPACE
(7,880 SF)
0.18 AC

TRACT 'P'
DRY POND 2
1.75 AC

TRACT 'Q'
DRY POND 3
1.32 AC

TRACT 'I'
LIFT STATION
0.07 AC

TRACT 'M'
OPEN SPACE
0.76 AC

TRACT 'S'
H.O.A. TRACT
0.15 AC

TRACT 'AA'
H.O.A. TRACT
0.19 AC

TRACT 'K'
CONSERVATION AREA
16.85 AC

WATERVIEW RIDGE CIRCLE (STF270.00')

RETAINING WALL CONTINUES TO THE EAST (SEE SHEET C3.5)

20' RETAINING WALL MAINTENANCE & DRAINAGE EASEMENT

20' RETAINING WALL MAINTENANCE EASEMENT (TYP.)

SEE SHEET C3.10 FOR CROSS SECTIONS A-A THROUGH H-H

SEE THIS SHEET FOR CROSS SECTION

PLEASE REFER TO LIFT STATION DETAIL ON THIS SHEET

PER CITY OF APOPKA LDC SEC. 6.01.00.C.4, THE FRONT ELEVATION OF ANY HOME CONSTRUCTED ON A CURVE SHALL HAVE NO MORE THAN A 30° DEFLECTION FROM A LINE PERPENDICULAR TO A RADIAL LINE FROM THE RADIUS POINT OF THE CURVE THROUGH A MID-POINT OF THE LOT FRONTAGE. (TYP.)

CONTRACTOR TO INSTALL MIN. 42" RAILING/FENCE REQUIRED FOR FALL PROTECTION ON WALL SEGMENTS GREATER THAN 30" IN HEIGHT

CONTRACTOR TO INSTALL MIN. 42" RAILING/FENCE REQUIRED FOR FALL PROTECTION ON WALL SEGMENTS GREATER THAN 30" IN HEIGHT. THE RAILING/FENCE MUST MEET THE STRENGTH REQUIREMENTS PER THE CURRENT FLORIDA BUILDING CODE.

NATURAL CONSERVATION AREA SIGNAGE (TYP.)

20' UTILITY EASEMENT DEDICATED TO THE CITY OF APOPKA

20' INGRESS/EGRESS EASEMENT TO REMAIN

WETLAND LINE LOCATED OFFSITE FOR CONTINUITY

GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.

KEY MAP

LEGEND
- LOT LINES
- EASEMENTS
- SETBACKS
- WETLAND LINE
- 15' MIN./25' AVG. WETLAND BUFFER
- 50' WETLAND BUILDING SETBACK OFFSET

SECTION L-L
N.T.S.

30' RETAINING WALL MAINTENANCE EASEMENT

BUILDING PAD

42" DECORATIVE RAILING/FENCE

CONTRACTOR TO REFER TO RETAINING WALL PLANS FOR ELEVATIONS AND WALL CONSTRUCTION

LIFT STATION DETAIL
1" = 30'

LIFT STATION DRIVEWAY

UTILITY EASEMENT DEDICATED TO THE CITY OF APOPKA

5' WALL EASEMENT

BEGIN RETAINING WALL

INGRESS/EGRESS EASEMENT

END RETAINING WALL

20' RETAINING WALL MAINTENANCE EASEMENT (TYP.)

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SHEET 23 OF 92

REV.	DATE	DESCRIPTION	
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/21/20	TDP AMENDMENT - GRADING REVISION	SCS
A	03/05/18	SFWMD COMMENTS DATED 03/5/18	SCS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/18/18	SCS
A	02/18/18	SFWMD COMMENTS DATED 02/18/18	SCS

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CERTIFICATE OF AUTHORIZATION NUMBER 27000

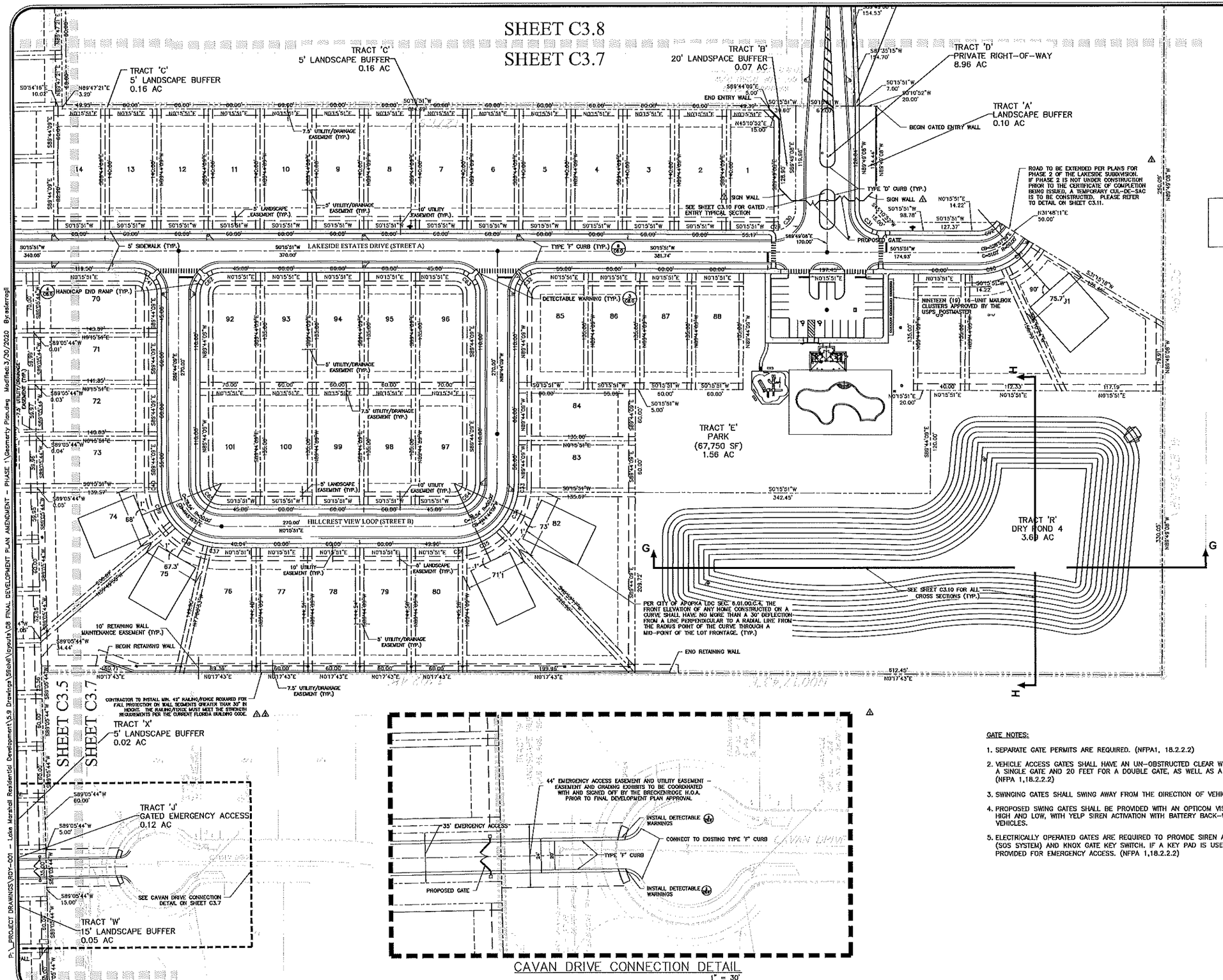
GEOMETRY PLAN – NORTHWEST
FINAL DEVELOPMENT PLAN

LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: G. SANCHEZ
CHECKED: L. CLASSON
DATE: 3/24/2020
SCALE: 1" = 50'
PROJECT: ROY-001
SHEET: C3.6

3/30/20

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.9 Drawings\59.civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Geometry Plan.dwg Modified:3/30/2020 By:salerset



GATE NOTES:

1. SEPARATE GATE PERMITS ARE REQUIRED. (NFPA1, 18.2.2.2)
2. VEHICLE ACCESS GATES SHALL HAVE AN UN-OBSTRUCTED CLEAR WIDTH OF NOT LESS THAN 14 FEET FOR A SINGLE GATE AND 20 FEET FOR A DOUBLE GATE, AS WELL AS A CLEAR HEIGHT OF 13 FEET 6 INCHES (NFPA 1,18.2.2.2)
3. SWINGING GATES SHALL SWING AWAY FROM THE DIRECTION OF VEHICLE TRAVEL (NFPA 1,18.2.2.2)
4. PROPOSED SWING GATES SHALL BE PROVIDED WITH AN OPTICOM VISUAL TYPE ACTIVATION, ONE MOUNTED HIGH AND LOW, WITH YELP SIREN ACTIVATION WITH BATTERY BACK-UP FOR ACCESS BY EMERGENCY VEHICLES.
5. ELECTRICALLY OPERATED GATES ARE REQUIRED TO PROVIDE SIREN ACTIVATED PRE-EMPTIVE SENSING DEVICE (SOS SYSTEM) AND KNOX GATE KEY SWITCH. IF A KEY PAD IS USED, CODE 1882 SHALL ALSO BE PROVIDED FOR EMERGENCY ACCESS. (NFPA 1,18.2.2.2)

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SHEET 24 OF 92

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SKS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SKS
A	07/21/20	FDP AMENDMENT - GRADING REVISION	SKS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SKS
A	03/15/18	SUBMITTED COMMENTS UNDER 3/15/18	SKS
A	02/19/18	PER CITY OF APOPKA COMMENTS DATED 2/19/18	SKS

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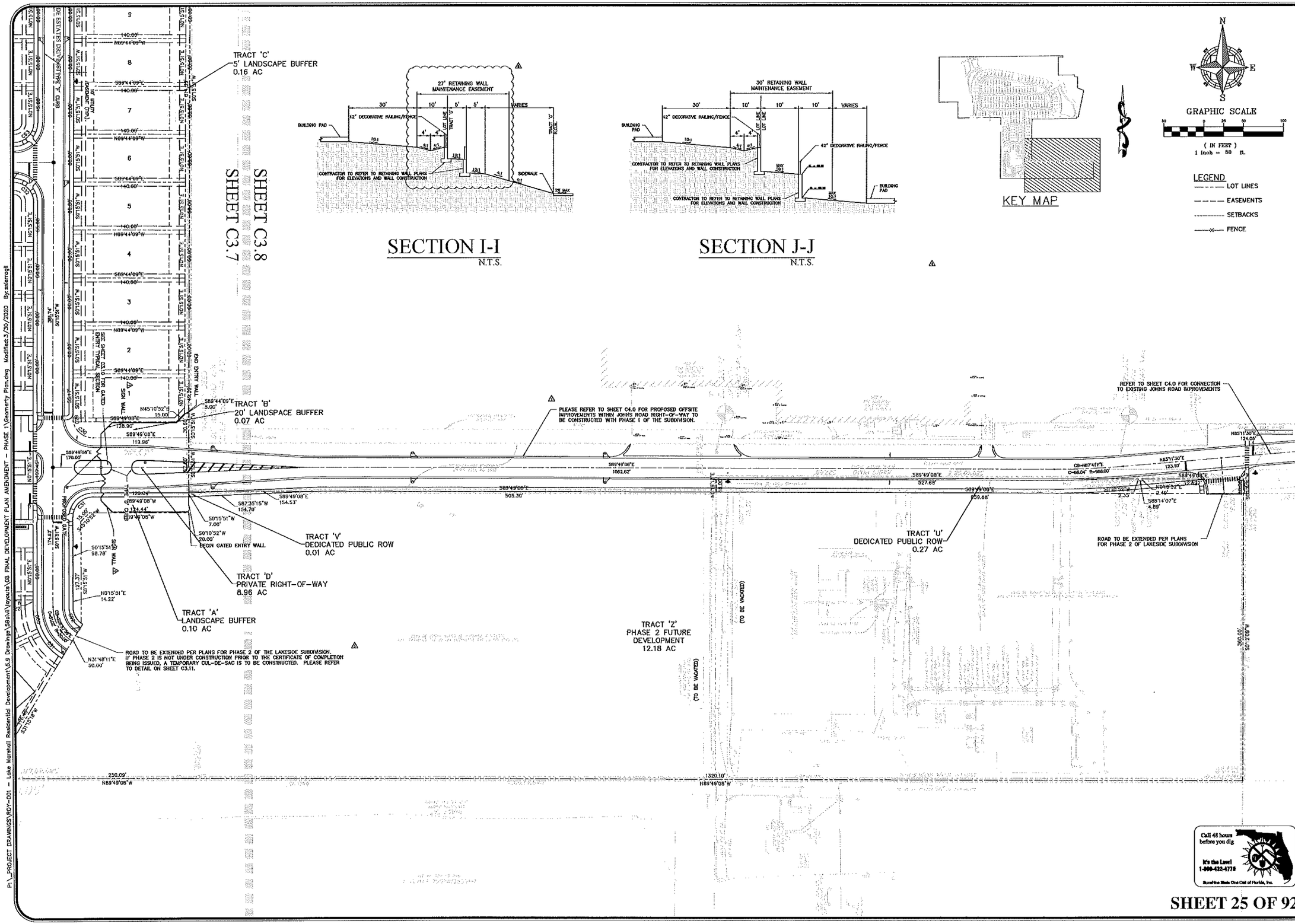
LICENSED BUSINESS CERTIFICATE OF AUTHORIZATION #7763

GEOMETRY PLAN - SOUTH
FINAL DEVELOPMENT PLAN

LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: C. SANCHEZ
CHECKED: L. CLASSON
DATE: 3/24/2020
SCALE: 1" = 50'
PROJECT: ROY-001
SHEET: C3.7

3/30/20



REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/21/20	FDP AMENDMENT - GRADING REVISION	SCS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	03/15/18	SATRAD COMMENTS DATED 03/15/18	SCS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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FIRM CERTIFICATE OF AUTHORIZATION NO. 8-413

GEOMETRY PLAN – SOUTHEAST
FINAL DEVELOPMENT PLAN

LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: G. SANCHEZ
CHECKED: L CLASSON
DATE: 3/24/2020
SCALE: 1" = 50'
PROJECT: ROY-001
SHEET: C3.8

Curve Table			
Curve #	Chord Length	Chord Direction	Radius
C1	11.70'	N86°25'52"W	75.00'
C2	42.49'	N65°30'16"W	75.00'
C3	10.02'	S45°13'11"E	75.00'
C4	31.91'	N13°11'18"W	75.00'
C5	40.31'	N4°14'06"E	225.00'
C6	66.90'	N17°55'27"E	225.00'
C7	67.14'	N35°03'16"E	225.00'
C8	66.92'	N52°11'12"E	225.00'
C9	66.90'	N69°17'18"E	225.00'
C10	66.90'	N86°23'15"E	225.00'
C11	8.82'	S83°56'21"E	225.00'
C12	48.77'	S80°16'27"E	550.00'
C13	3.40'	S77°33'21"E	550.00'
C14	79.76'	S80°14'10"E	800.00'
C15	7.71'	S83°22'10"E	800.00'
C16	38.36'	S82°21'36"E	855.00'
C17	72.82'	S78°38'02"E	855.00'
C18	47.41'	S74°36'17"E	855.00'
C19	32.18'	S66°51'31"E	150.00'
C20	63.15'	S48°32'59"E	150.00'
C21	17.68'	S33°01'12"E	150.00'
C22	4.28'	S29°09'07"E	250.00'
C23	67.69'	S20°52'54"E	250.00'

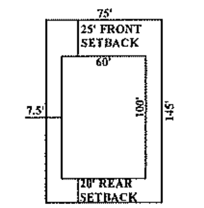
Curve Table			
Curve #	Chord Length	Chord Direction	Radius
C24	53.12'	S7°00'10"E	250.00'
C25	35.95'	S12°57'47"W	75.00'
C26	54.18'	S48°00'09"W	75.00'
C27	25.95'	S79°08'06"W	75.00'
C28	34.99'	S44°40'48"W	25.00'
C29	5.06'	S5°32'45"E	25.00'
C30	31.62'	S50°35'14"E	25.00'
C31	35.33'	S45°13'22"W	25.00'
C32	35.36'	N44°44'09"W	25.00'
C33	10.02'	N85°54'17"W	75.00'
C34	48.00'	N63°24'40"W	75.00'
C35	47.99'	N26°05'23"W	75.00'
C36	10.07'	N3°35'00"W	75.00'
C37	16.39'	N6°32'13"E	75.00'
C38	47.82'	N31°23'57"E	75.00'
C39	46.92'	N68°12'55"E	75.00'
C40	5.00'	N88°21'11"E	75.00'
C41	35.36'	N45°15'51"E	25.00'
C42	35.71'	N45°19'12"W	25.00'
C43	35.36'	S45°54'16"E	25.00'
C44	73.45'	N74°55'27"E	150.00'
C45	37.90'	N11°27'47"E	25.00'
C46	60.46'	N55°25'16"W	100.00'

Curve Table			
Curve #	Chord Length	Chord Direction	Radius
C47	20.48'	S73°44'58"E	800.00'
C48	149.13'	N78°19'50"W	805.00'
C49	92.93'	N80°30'43"W	850.00'
C50	47.43'	N80°05'49"W	500.00'
C51	9.69'	N84°24'05"W	175.00'
C52	60.23'	S84°06'14"W	175.00'
C53	66.69'	S63°12'37"W	175.00'
C54	156.52'	S25°39'38"W	175.00'
C55	35.36'	S44°05'44"W	25.00'
C56	51.67'	S81°40'27"W	200.00'
C57	48.30'	S67°19'04"W	200.00'
C58	35.35'	S74°37'45"E	25.00'
C59	99.26'	N15°16'23"W	200.00'
C60	35.36'	N44°05'44"E	25.00'
C61	35.36'	S45°54'16"E	25.00'
C62	35.36'	N44°44'09"W	25.00'
C63	35.36'	N45°15'51"E	25.00'
C64	35.36'	S44°44'09"E	25.00'
C65	35.36'	S45°15'51"W	25.00'
C66	83.97'	N7°00'21"W	395.00'
C67	106.91'	N20°53'04"W	395.00'
C68	24.75'	S13°41'24"E	60.00'
C69	40.96'	N73°00'15"E	35.00'

Curve Table			
Curve #	Chord Length	Chord Direction	Radius
C70	68.02'	N44°37'57"E	557.00'
C71	34.72'	N33°00'54"W	295.00'
C72	37.85'	S63°39'45"W	370.00'
C73	109.94'	S52°11'13"W	370.00'
C74	110.41'	S35°03'46"W	370.00'
C75	110.01'	N17°55'57"E	370.00'
C76	66.34'	S4°14'21"W	370.00'
C77	11.09'	N61°33'51"W	12.00'
C78	23.82'	N79°41'54"W	73.00'
C79	31.85'	N88°08'26"W	52.00'
C80	109.90'	S58°14'26"W	202.00'
C81	75.19'	S31°43'43"W	202.00'
C82	21.85'	S8°52'30"W	52.00'
C83	20.62'	S19°31'14"E	27.00'
C84	19.59'	S27°01'47"E	38.00'
C85	10.82'	S2°59'23"E	35.00'
C86	29.05'	S9°55'37"E	52.00'
C87	17.81'	S63°42'07"E	22.00'
C88	63.21'	S0°45'16"E	500.00'
C89	26.69'	S24°00'06"W	30.00'
C90	32.39'	S12°12'21"E	75.00'
C91	43.26'	S41°26'11"E	75.00'
C92	22.36'	N26°18'03"W	25.00'

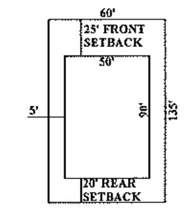
Curve Table			
Curve #	Chord Length	Chord Direction	Radius
C93	20.77'	S33°25'50"E	75.00'
C95	25.00'	N20°01'20"E	35.00'
C96	0.90'	S87°54'43"E	22.00'
C97	11.20'	N13°51'27"E	20.00'
C98	61.94'	N0°45'16"W	490.00'
C99	19.51'	N57°34'16"W	32.00'
C100	34.64'	N9°55'37"W	62.00'
C101	7.70'	N3°01'15"W	25.00'
C102	14.42'	N27°02'50"W	28.00'
C103	28.26'	N19°31'14"W	37.00'
C104	26.05'	N8°52'30"E	62.00'
C105	78.92'	N31°43'43"E	212.00'
C106	115.34'	N58°14'26"E	212.00'
C107	37.98'	S88°08'26"E	62.00'
C108	20.56'	S79°41'54"E	63.00'
C112	35.89'	S33°00'53"E	305.00'
C115	64.31'	N44°32'07"E	543.66'
C116	54.77'	N75°08'50"E	45.00'
C119	20.67'	S13°39'39"E	50.00'

TYPICAL 75' LOT SIZE/PROPOSED BUILDING PAD



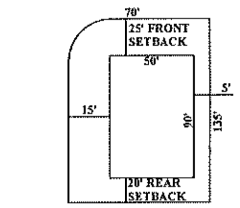
10,875 SF (0.25 AC)

TYPICAL 60' LOT SIZE/PROPOSED BUILDING PAD



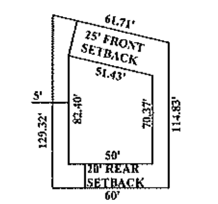
8,100 SF (0.19 AC)

TYPICAL 60' CORNER LOT SIZE/PROPOSED BUILDING PAD



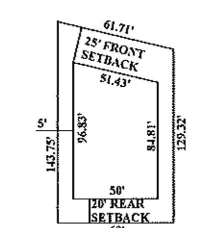
9,315 SF (0.21 AC.)

LOT 56 SIZE/PROPOSED BUILDING PAD



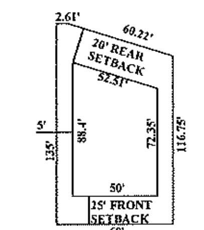
7,326 SF (0.17 AC)

LOT 57 SIZE/PROPOSED BUILDING PAD



8,192 SF (0.19 AC)

LOT 65 SIZE/PROPOSED BUILDING PAD



7,838 SF (0.18 AC)

LOT DATA TABLE				
LOT NUMBER	AREA	*BUILDABLE AREA	LOT FRONTAGE	OWNER
1	0.19 AC	4,759 SF	60.24 LF	PRIVATE
2	0.19 AC	4,750 SF	60.00 LF	PRIVATE
3	0.19 AC	4,750 SF	60.00 LF	PRIVATE
4	0.19 AC	4,750 SF	60.00 LF	PRIVATE
5	0.19 AC	4,750 SF	60.00 LF	PRIVATE
6	0.19 AC	4,750 SF	60.00 LF	PRIVATE
7	0.19 AC	4,750 SF	60.00 LF	PRIVATE
8	0.19 AC	4,750 SF	60.00 LF	PRIVATE
9	0.19 AC	4,750 SF	60.00 LF	PRIVATE
10	0.19 AC	4,750 SF	60.00 LF	PRIVATE
11	0.19 AC	4,750 SF	60.00 LF	PRIVATE
12	0.19 AC	4,750 SF	60.00 LF	PRIVATE
13	0.19 AC	4,750 SF	60.00 LF	PRIVATE
14	0.19 AC	4,750 SF	60.00 LF	PRIVATE
15	0.32 AC	6,465 SF	93.76 LF	PRIVATE
16	0.24 AC	6,366 SF	60.00 LF	PRIVATE
17	0.25 AC	6,916 SF	60.00 LF	PRIVATE
18	0.25 AC	6,952 SF	60.00 LF	PRIVATE
19	0.25 AC	6,988 SF	60.00 LF	PRIVATE
20	0.26 AC	7,025 SF	60.00 LF	PRIVATE
21	0.26 AC	7,061 SF	60.00 LF	PRIVATE
22	0.26 AC	7,097 SF	60.00 LF	PRIVATE
23	0.37 AC	10,855 SF	50.28 LF	PRIVATE
24	0.71 AC	21,869 SF	55.43 LF	PRIVATE
25	0.34 AC	8,682 SF	60.12 LF	PRIVATE
26	0.25 AC	6,000 SF	75.00 LF	PRIVATE
27	0.28 AC	7,043 SF	69.44 LF	PRIVATE
28	0.29 AC	7,324 SF	67.89 LF	PRIVATE
29	0.25 AC	6,085 SF	74.57 LF	PRIVATE
30	0.27 AC	6,583 SF	52.02 LF	PRIVATE
31	1.11 AC	8,038 SF	63.63 LF	PRIVATE
32	0.99 AC	7,234 SF	73.06 LF	PRIVATE
33	0.62 AC	5,700 SF	75.00 LF	PRIVATE
34	0.67 AC	6,073 SF	73.61 LF	PRIVATE
35	0.70 AC	6,301 SF	72.84 LF	PRIVATE
36	0.65 AC	5,904 SF	73.87 LF	PRIVATE
37	0.60 AC	5,739 SF	76.11 LF	PRIVATE
38	0.56 AC	6,401 SF	86.48 LF	PRIVATE
39	0.61 AC	6,000 SF	75.00 LF	PRIVATE
40	0.60 AC	6,000 SF	75.00 LF	PRIVATE
41	0.60 AC	6,031 SF	74.84 LF	PRIVATE
42	0.69 AC	6,334 SF	72.74 LF	PRIVATE
43	0.59 AC	6,000 SF	75.00 LF	PRIVATE
44	0.60 AC	6,000 SF	75.00 LF	PRIVATE
* BUILDABLE AREA IS EQUAL TO LOT AREA MINUS THE BUILDINGS SETBACK AREA				

LOT DATA TABLE				
LOT NUMBER	AREA	*BUILDABLE AREA	LOT FRONTAGE	OWNER
45	0.66 AC	6,198 SF	74.01 LF	PRIVATE
46	1.06 AC	7,453 SF	67.15 LF	PRIVATE
47	1.15 AC	7,453 SF	67.15 LF	PRIVATE
48	0.30 AC	7,450 SF	67.17 LF	PRIVATE
49	0.30 AC	7,485 SF	67.39 LF	PRIVATE
50	0.30 AC	7,453 SF	67.15 LF	PRIVATE
51	0.28 AC	6,862 SF	70.14 LF	PRIVATE
52	0.26 AC	6,000 SF	77.50 LF	PRIVATE
53	0.26 AC	6,000 SF	77.50 LF	PRIVATE
54	0.25 AC	6,000 SF	75.00 LF	PRIVATE
55	0.25 AC	6,000 SF	75.00 LF	PRIVATE
56	0.17 AC	3,819 SF	61.71 LF	PRIVATE
57	0.19 AC	4,541 SF	61.71 LF	PRIVATE
58	0.21 AC	5,235 SF	61.13 LF	PRIVATE
59	0.22 AC	5,713 SF	60.60 LF	PRIVATE
60	0.23 AC	6,139 SF	60.60 LF	PRIVATE
61	0.24 AC	6,565 SF	60.60 LF	PRIVATE
62	0.25 AC	6,992 SF	60.57 LF	PRIVATE
63	0.26 AC	7,163 SF	60.53 LF	PRIVATE
64	0.24 AC	6,177 SF	67.10 LF	PRIVATE
65	0.17 AC	4,262 SF	60.00 LF	PRIVATE
66	0.19 AC	4,500 SF	60.00 LF	PRIVATE
67	0.19 AC	4,500 SF	60.00 LF	PRIVATE
68	0.19 AC	4,500 SF	60.00 LF	PRIVATE
69	0.19 AC	4,500 SF	60.00 LF	PRIVATE
70	0.19 AC	4,500 SF	60.00 LF	PRIVATE
71	0.19 AC	4,500 SF	60.00 LF	PRIVATE
72	0.19 AC	4,500 SF	60.00 LF	PRIVATE
73	0.19 AC	4,500 SF	60.00 LF	PRIVATE
74	0.19 AC	4,500 SF	60.00 LF	PRIVATE
75	0.19 AC	4,500 SF	60.00 LF	PRIVATE
76	0.19 AC	4,500 SF	60.00 LF	PRIVATE
77	0.19 AC	4,500 SF	60.00 LF	PRIVATE
78	0.19 AC	4,500 SF	60.00 LF	PRIVATE
79	0.19 AC	4,500 SF	60.00 LF	PRIVATE
80	0.19 AC	4,500 SF	60.00 LF	PRIVATE
81	0.19 AC	4,500 SF	60.00 LF	PRIVATE
82	0.19 AC	4,500 SF	60.00 LF	PRIVATE
83	0.19 AC	4,500 SF	60.00 LF	PRIVATE
84	0.21 AC	4,500 SF	84.27 LF	PRIVATE
85	0.39 AC	10,201 SF	87.67 LF	PRIVATE
86	0.19 AC	4,574 SF	60.58 LF	PRIVATE
87	0.19 AC	4,500 SF	60.00 LF	PRIVATE
88	0.19 AC	4,500 SF	60.00 LF	PRIVATE
* BUILDABLE AREA IS EQUAL TO LOT AREA MINUS THE BUILDINGS SETBACK AREA				

LOT DATA TABLE				
LOT NUMBER	AREA	*BUILDABLE AREA	LOT FRONTAGE	OWNER
89	0.19 AC	4,500 SF	60.00 LF	PRIVATE
90	0.19 AC	4,500 SF	60.00 LF	PRIVATE
91	0.19 AC	4,500 SF	60.00 LF	PRIVATE
92	0.19 AC	4,500 SF	60.00 LF	PRIVATE
93	0.19 AC	4,500 SF	60.00 LF	PRIVATE
94	0.19 AC	4,500 SF	60.00 LF	PRIVATE
95	0.19 AC	4,500 SF	60.00 LF	PRIVATE
96	0.19 AC	4,500 SF	60.00 LF	PRIVATE
97	0.19 AC	4,500 SF	60.00 LF	PRIVATE
98	0.19 AC	4,500 SF	60.00 LF	PRIVATE
99	0.19 AC	4,500 SF	60.00 LF	PRIVATE
100	0.19 AC	4,500 SF	60.00 LF	PRIVATE
101	0.19 AC	4,500 SF	60.00 LF	PRIVATE
102	0.19 AC	4,500 SF	60.00 LF	PRIVATE
103	0.19 AC	4,500 SF	60.00 LF	PRIVATE
104	0.19 AC	4,500 SF	60.00 LF	PRIVATE
105	0.19 AC	4,500 SF	60.00 LF	PRIVATE
106	0.19 AC	4,500 SF	60.00 LF	PRIVATE
107	0.21 AC	4,500 SF	84.27 LF	PRIVATE
108	0.21 AC	4,500 SF	84.27 LF	PRIVATE
109	0.19 AC	4,500 SF	60.00 LF	PRIVATE
110	0.19 AC	4,500 SF	60.00 LF	PRIVATE
111	0.19 AC	4,500 SF	60.00 LF	PRIVATE
112	0.19 AC	4,500 SF	60.00 LF	PRIVATE
113	0.19 AC	4,500 SF	60.00 LF	PRIVATE
114	0.19 AC	4,500 SF	60.00 LF	PRIVATE
115	0.19 AC	4,500 SF	60.00 LF	PRIVATE
116	0.19 AC	4,500 SF	60.00 LF	PRIVATE
117	0.19 AC	4,500 SF	60.00 LF	PRIVATE
118	0.19 AC	4,500 SF	60.00 LF	PRIVATE
119	0.19 AC	4,500 SF	60.00 LF	PRIVATE
120	0.19 AC	4,500 SF	60.00 LF	PRIVATE
121	0.19 AC	4,500 SF	60.00 LF	PRIVATE
122	0.19 AC	4,500 SF	60.00 LF	PRIVATE
123	0.19 AC	4,500 SF	60.00 LF	PRIVATE
124	0.19 AC	4,500 SF	60.00 LF	PRIVATE
125	0.19 AC	4,500 SF	60.00 LF	PRIVATE
126	0.19 AC	4,500 SF	60.00 LF	PRIVATE
127	0.19 AC	4,500 SF	60.00 LF	PRIVATE
128	0.19 AC	4,500 SF	60.00 LF	PRIVATE
129	0.19 AC	4,500 SF	60.00 LF	PRIVATE
130	0.19 AC	4,500 SF	60.00 LF	PRIVATE
131	0.21 AC	4,500 SF	84.27 LF	PRIVATE
132	0.21 AC	5,512 SF	43.08 LF	PRIVATE
* BUILDABLE AREA IS EQUAL TO LOT AREA MINUS THE BUILDINGS SETBACK AREA				

LOT DATA TABLE				
LOT NUMBER	AREA	*BUILDABLE AREA	LOT FRONTAGE	OWNER
133	0.20 AC	5,000 SF	60.05 LF	PRIVATE
134	0.20 AC	5,000 SF	60.00 LF	PRIVATE
135	0.20 AC	5,000 SF	84.27 LF	PRIVATE
136	0.20 AC	5,000 SF	84.27 LF	PRIVATE
137	0.20 AC	5,000 SF	60.00 LF	PRIVATE
138	0.20 AC	5,000 SF	60.00 LF	PRIVATE
139	0.20 AC	5,000 SF	60.00 LF	PRIVATE
140	0.20 AC	5,000 SF	60.00 LF	PRIVATE
141	0.20 AC	5,000 SF	60.00 LF	PRIVATE
142	0.20 AC	5,000 SF	60.00 LF	PRIVATE
143	0.20 AC	5,000 SF	60.00 LF	PRIVATE
144	0.20 AC	5,000 SF	60.00 LF	PRIVATE
145	0.23 AC	5,142 SF	87.22 LF	PRIVATE
146	0.23 AC	4,932 SF	84.27 LF	PRIVATE
147	0.20 AC	4,871 SF	60.00 LF	PRIVATE
148	0.19 AC	4,811 SF	60.00 LF	PRIVATE
149	0.19 AC	4,750 SF	60.00 LF	PRIVATE
150	0.38 AC	10,507 SF	47.72 LF	PRIVATE
151	0.46 AC	13,689 SF	48.67 LF	PRIVATE
152	0.24 AC	6,323 SF	56.46 LF	PRIVATE
153	0.20 AC	4,975 SF	60.00 LF	PRIVATE
154	0.20 AC	4,976 SF	60.00 LF	PRIVATE
155	0.20 AC	4,978 SF	60.00 LF	PRIVATE
156	0.20 AC	4,980 SF	60.03 LF	PRIVATE
157	0.45 AC	13,014 SF	48.85 LF	PRIVATE
158	0.44 AC	12,476 SF	48.86 LF	PRIVATE
159	0.19 AC	4,500 SF	60.03 LF	PRIVATE
160	0.19 AC	4,500 SF	60.00 LF	PRIVATE
161	0.21 AC	4,500 SF	84.27 LF	PRIVATE
162	0.19 AC	4,500 SF	60.00 LF	PRIVATE
163	0.19 AC	4,500 SF	60.00 LF	PRIVATE
164	0.19 AC	4,500 SF	60.00 LF	PRIVATE
165	0.21 AC	4,500 SF	84.27 LF	PRIVATE
166	0.21 AC	4,500 SF	84.27 LF	PRIVATE
167	0.19 AC	4,500 SF	60.00 LF	PRIVATE
168	0.19 AC	4,500 SF	60.00 LF	PRIVATE
169	0.19 AC	4,500 SF	60.00 LF	PRIVATE
170	0.21 AC	4,500 SF	84.27 LF	PRIVATE
171	0.24 AC	4,500 SF	94.27 LF	PRIVATE
172	0.19 AC	4,500 SF	60.00 LF	PRIVATE
173	0.19 AC	4,500 SF	60.00 LF	PRIVATE
174	0.19 AC	4,500 SF	60.00 LF	PRIVATE
175	0.19 AC	4,500 SF	60.00 LF	PRIVATE
176	0.25 AC	6,527 SF	46.87 LF	PRIVATE
177	0.44 AC	12,350 SF	43.88 LF	PRIVATE
* BUILDABLE AREA IS EQUAL TO LOT AREA MINUS THE BUILDINGS SETBACK AREA				

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SHEET 26 OF 92

REV.	DATE	DESCRIPTION	BY
	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
	01/21/20	FDP AMENDMENT – GRADING REVISION	SCS
	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
	03/15/18	SJRWMD COMMENTS DATED 03/15/18	SCS
	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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APPIAN ENGINEERING LLC.
APPIANFL.COM • 407.960.5868
2221 Lee Road, Suite 17, Winter Park, Florida 32789

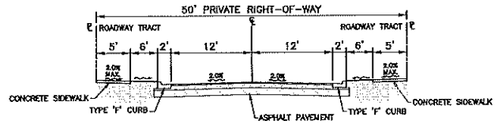
CURVE AND LOT DATA TABLE
FINAL DEVELOPMENT PLAN
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION) PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: O. SANCHEZ
CHECKED: L. CLASSON
DATE: 3/24/2020

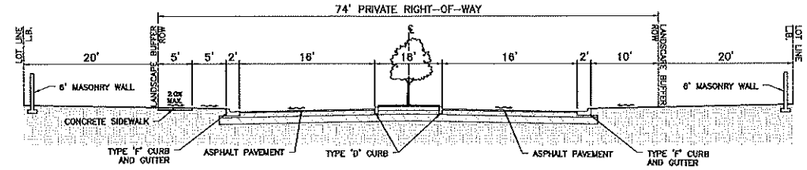
SCALE: N.T.S.
PROJECT: ROY-001
SHEET: C3.9

3/30/20

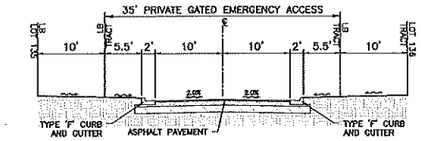
P:_PROJECT DRAWINGS\ROY-001 – Lake Marshall Residential Development\5.9 Drawings\59civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT – PHASE 1\Geometry Plan.dwg Modified: 3/30/2020 By: ssierragil



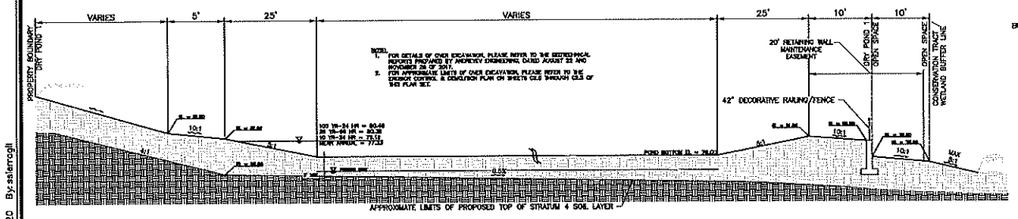
TYPICAL STREET
N.T.S.



MAIN ENTRANCE AT JOHNS ROAD
N.T.S.



EMERGENCY ACCESS TRACT
N.T.S.



SECTION A-A
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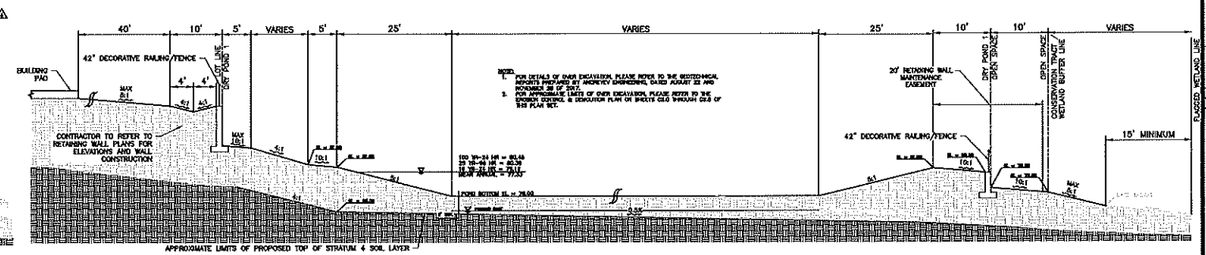

SECTION B-B
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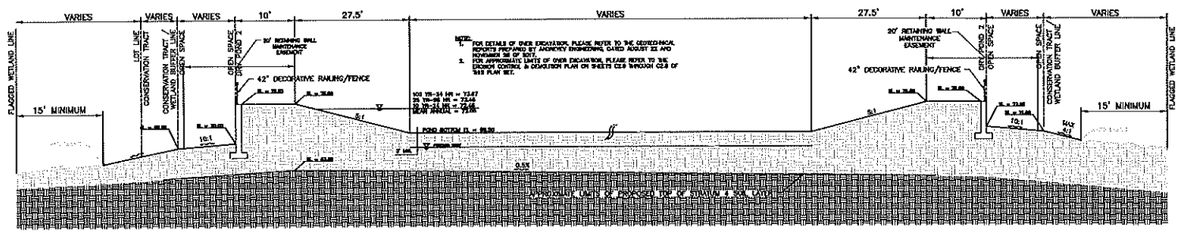

SECTION C-C
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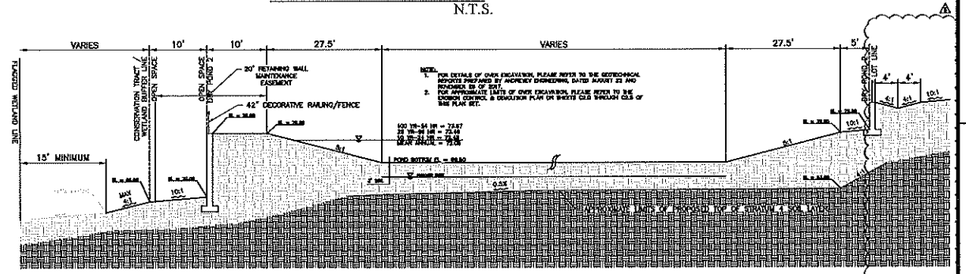
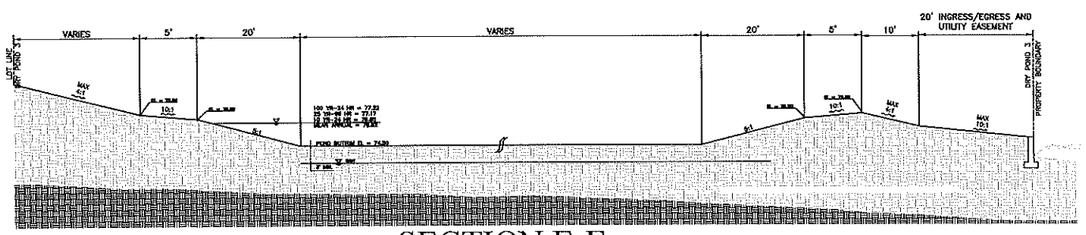


SECTION D-D
N.T.S.



SECTION E-E
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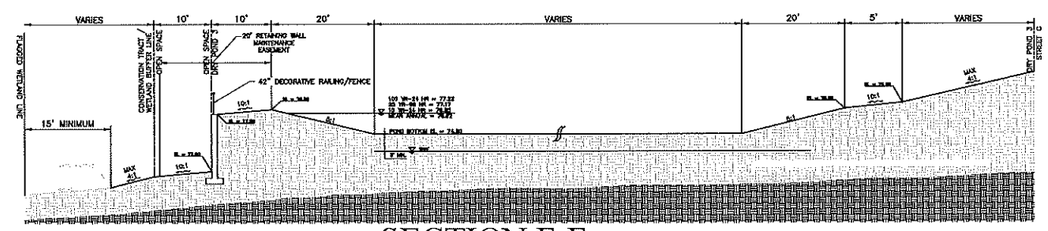

SECTION F-F
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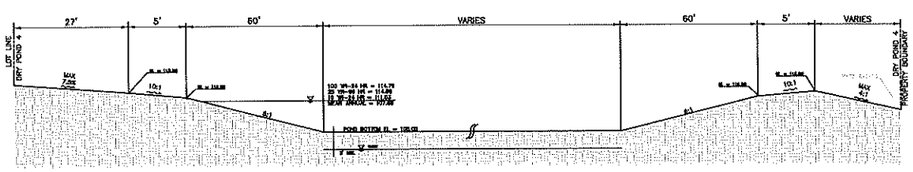
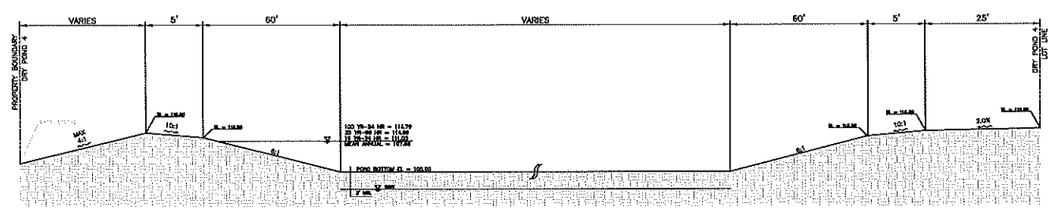


SECTION G-G
N.T.S.



SECTION H-H
N.T.S.

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SHEET 27 OF 92

REV.	DATE	DESCRIPTION	BY
A			
A			
A			
A			
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/21/20	TDP AMENDMENT - GRADING REVISION	SCS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	03/21/18	CITY OF APOPKA COMMENTS DATED 03/19/18	SCS
A	02/19/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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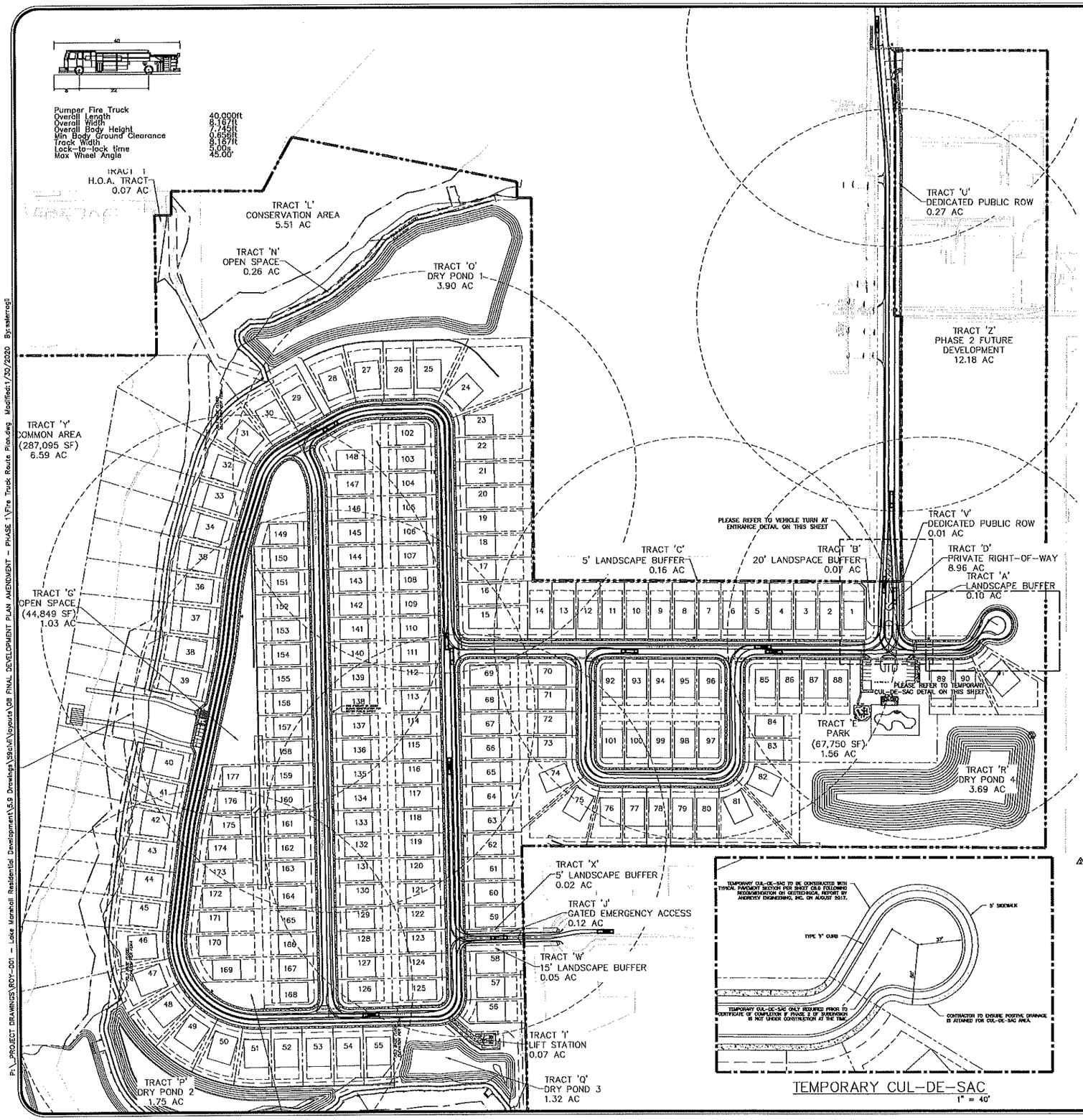
LICENSE # EC0000010812 • CERTIFICATE OF AUTHORIZATION # 31

CROSS SECTIONS
FINAL DEVELOPMENT PLAN
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: G. SANCHEZ
CHECKED: L. CLASSON
DATE: 3/24/2020
SCALE: N.T.S.
PROJECT: ROY-001
SHEET: C3.10

3/30/20

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.0 Drawings\5Civil\Layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Geometry Plan.dwg Modified:3/30/2020 By:slsierrag1



TEMPORARY CUL-DE-SAC
1" = 40'

GRAPHIC SCALE

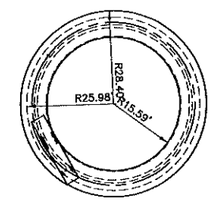
(IN FEET)
1 inch = 120 ft.

LEGEND

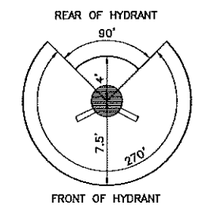
----- FIRE HYDRANT 500' RADIUS

FIRE ACCESS NOTES:

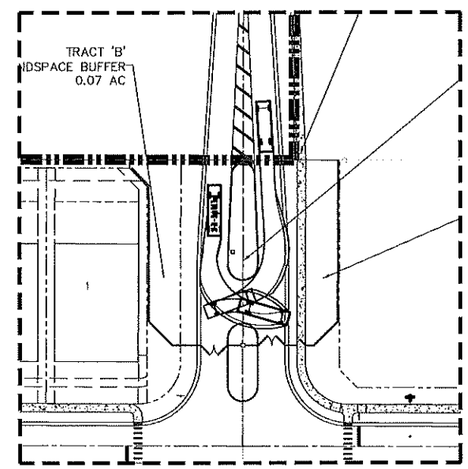
1. FIRE DEPARTMENT ACCESS ROADS SHALL BE DESIGNED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS AND SHALL BE PROVIDED WITH AN ALL WEATHER DRIVING SURFACE (NFPA 1,18.2.3.4.2).
2. THE LOCATION OF THE FIRE HYDRANTS SHALL BE IDENTIFIED BY A BLUE REFLECTIVE PAVEMENT MARKER. (NFPA 1,18.5.10.1)
3. SEE SHEET C3.7 FOR EMERGENCY VEHICLE GATE ACCESS NOTES.



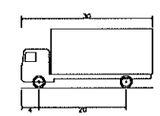
TURNING RADIUS SKETCH



FIRE HYDRANT CLEARANCE DETAIL



VEHICLE TURN AT ENTRANCE
1" = 40'



SU-30 - Single Unit Truck

Overall Length	30.000ft
Overall Width	8.000ft
Overall Body Height	13.500ft
Min Body Ground Clearance	1.387ft
Track Width	8.000ft
Lock-to-lock time	5.00s
Max Steering Angle (Virtual)	31.80°

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3/30/20

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SKS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SKS
A	01/21/20	FDP AMENDMENT - GRADING REVISION	SKS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SKS
A	05/15/18	SUBMITTED COMMENTS DATED 05/15/18	SKS
A	07/19/18	CITY OF APOPKA COMMENTS DATED 07/19/18	SKS

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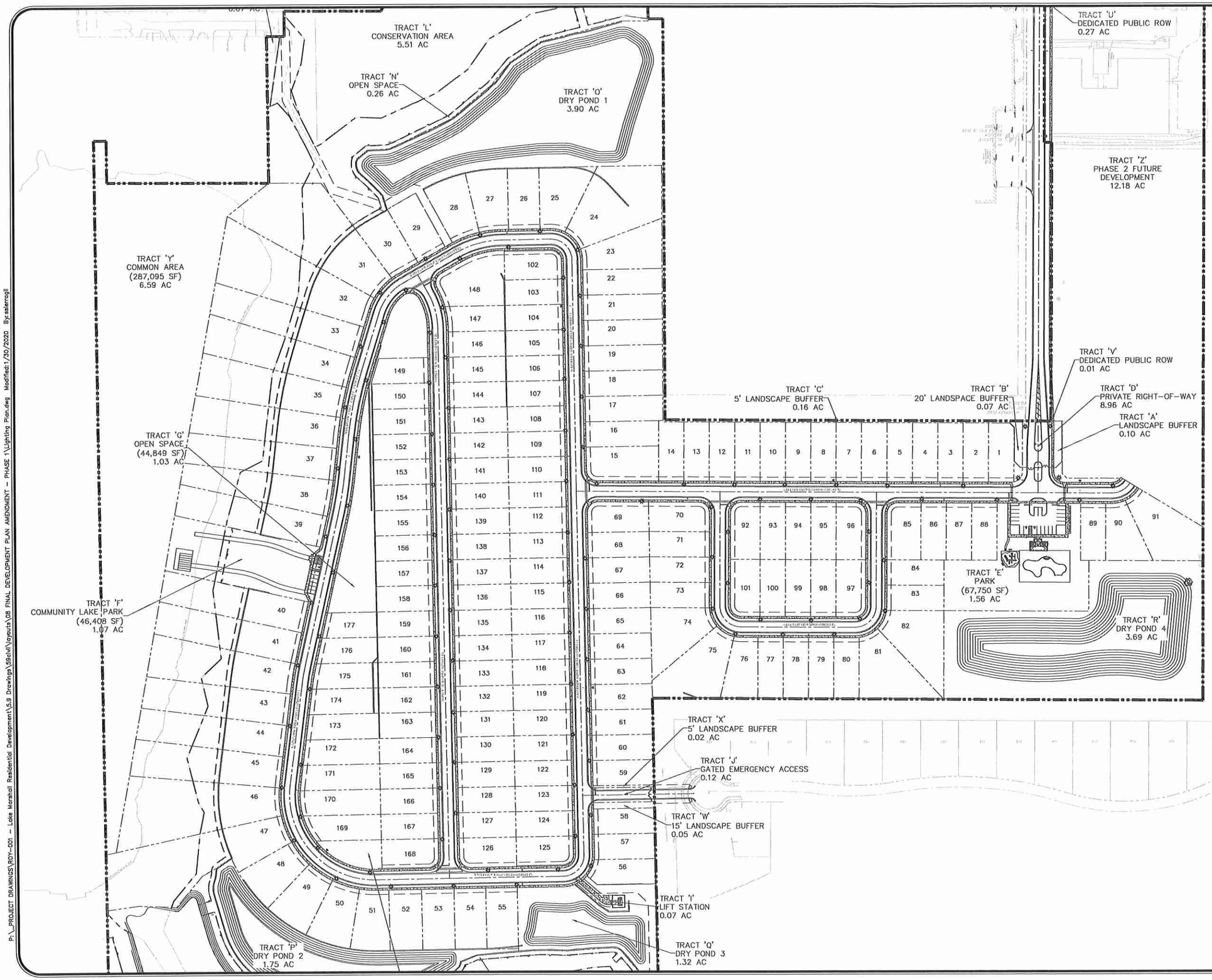
FIRE TRUCK ROUTE PLAN
FINAL DEVELOPMENT PLAN

LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL	DESIGNED: Q. SANCHEZ	CHECKED: L. CLASSON	DATE: 1/21/2020
SCALE 1" = 120'	PROJECT ROY-001	SHEET C3.11	



GRAPHIC SCALE

100 0 50 100 200

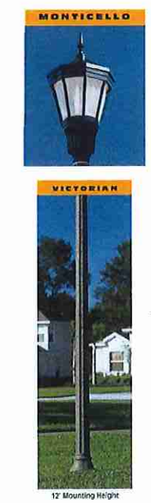
(IN FEET)
1 inch = 100 ft.

LEGEND

PROPOSED LIGHT POLE

LIGHTING NOTES:

1. STREET LIGHTS POLES SHALL BE DECORATIVE TYPE CONSISTENT WITH THE DEVELOPMENT DESIGN GUIDELINES.
2. LIGHT POLE FOOTERS CANNOT BE EXPOSED ABOVE FINISHED GRADE.
3. PROPOSED LIGHT POLES SHOWN FOR FINAL DEVELOPMENT PLAN APPROVAL. EXACT LOCATION AND TYPE OF LIGHT POLES TO BE DESIGNED, LAID OUT, AND INSTALLED BY DUKE ENERGY.



DEVIL PROVIDED FROM DUKE ENERGY

LIGHT AND POLE DETAIL

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/21/20	FDP AMENDMENT - GRADING REVISION	SCS
A	05/09/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	03/15/18	S.RIMD COMMENTS DATED 03/15/18	SCS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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STATE OF FLORIDA CERTIFICATE OF AUTHORIZATION #26-1871

LIGHTING PLAN
FINAL DEVELOPMENT PLAN

LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: O. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/21/2020

SCALE 1" = 100'
PROJECT ROY-001
SHEET C3.12

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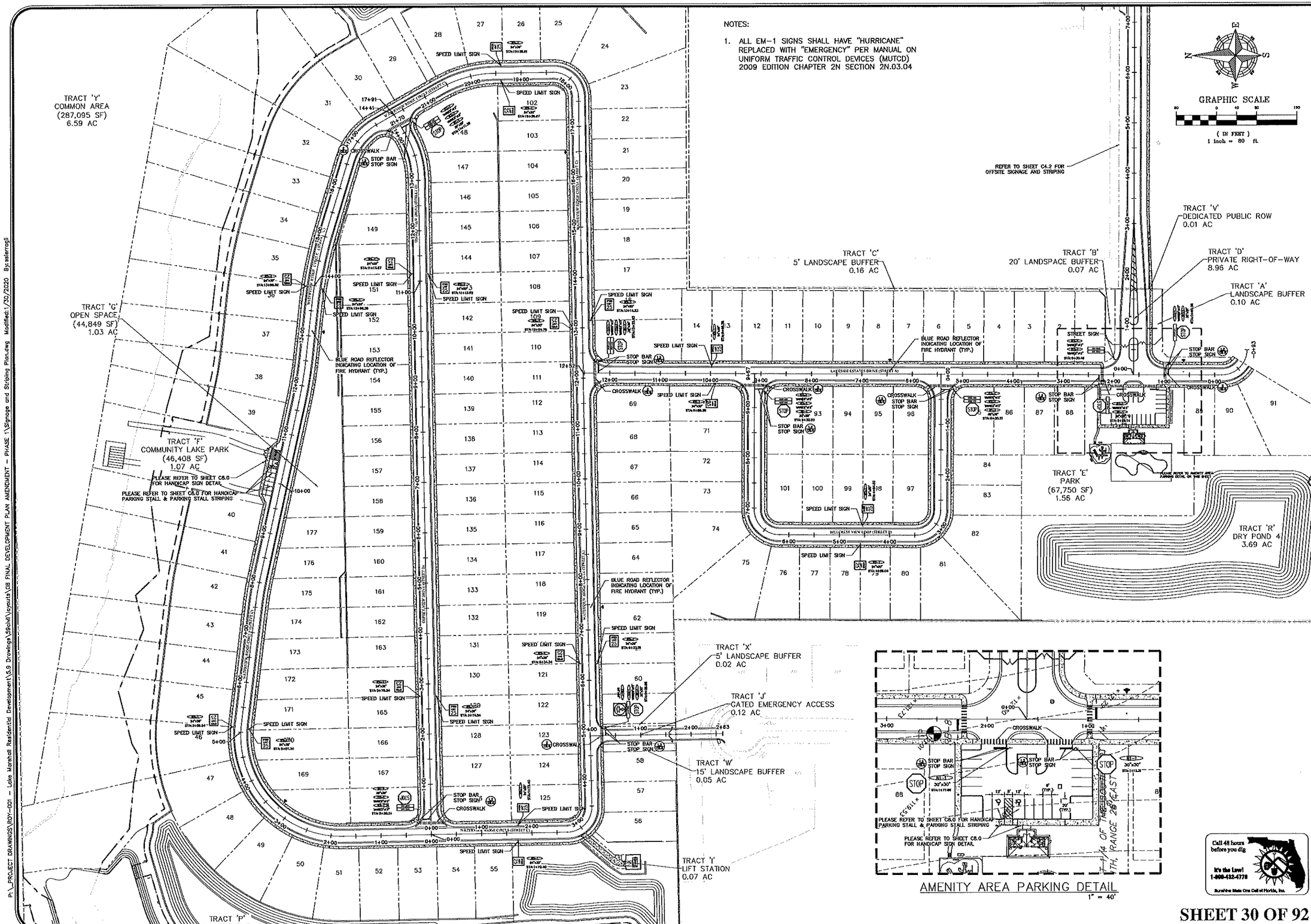
SHEET 29 OF 92

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.9 Drawings\59civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Lighting Plan.dwg Modified:1/30/2020 By:sslerrag

NOTES:

1. ALL EM-1 SIGNS SHALL HAVE "HURRICANE" REPLACED WITH "EMERGENCY" PER MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) 2009 EDITION CHAPTER 2N SECTION 2N.03.04



SHEET 30 OF 92

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER SLOPE AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/21/20	FDP AMENDMENT - GRADING REVISION	SCS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	03/15/18	SARINO COMMENTS DATED 03/13/18	SCS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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FICA of Florida Certificate of Authorization #6 Inc

SIGNAGE AND STRIPING PLAN
FINAL DEVELOPMENT PLAN

LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: C. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/21/2020

SCALE: 1" = 80'
PROJECT: ROY-001
SHEET: C3.13

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P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.0 Drawings\Sheets\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Signage and Striping Plan.dwg Modified:1/30/2020 By:sslerrag

NOTE:

1. JOHNS ROAD IMPROVEMENTS WEST OF SR 451 OVERPASS ARE TO BE CONSTRUCTED WITH PHASE 1 OF LAKESIDE DEVELOPMENT PER "LAKESIDE (FKA LAKE MARSHALL SUBDIVISION) PHASE 1 FINAL DEVELOPMENT PLAN."

LEGEND
- LOT LINES
- EASEMENTS
- SETBACKS
- FENCE

GRAPHIC SCALE
(IN FEET)
1 inch = 30 ft.

TRACT 'C'
5' LANDSCAPE BUFFER
0.16 AC

TRACT 'B'
20' LANDSPACE BUFFER
0.07 AC

TRACT 'A'
LANDSCAPE BUFFER
0.10 AC

TRACT 'V'
DEDICATED PUBLIC ROW
0.01 AC

TRACT 'U'
DEDICATED PUBLIC ROW
0.27 AC

END GATED ENTRY WALL
BEGIN GATED ENTRY WALL
PROPOSED GATES
TYPE 'D' CURB (TYP.)
SEE SHEET C4.1 FOR ALL OFFSITE CROSS SECTIONS (TYP.)
MATCHLINE A-A
3' CURB TRANSITION
TYPE 'F' CURB
VALLEY GUTTER
5' CONCRETE SIDEWALK
PROPOSED ROW LINE AFTER ROW DEDICATION
PROPOSED DRIVEWAY CONNECTION EXTENSION
12" RIBBON CURB TO BE INSTALLED WITH PHASE 1 AND REMOVED WITH PHASE 2 FUTURE ROADWAY CONNECTION
TIE INTO EXISTING TYPE 'F' CURB AND GUTTER

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REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/21/20	FDP AMENDMENT - GRADING REVISION	SCS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	03/15/18	SJRWMD COMMENTS DATED 03/15/18	SCS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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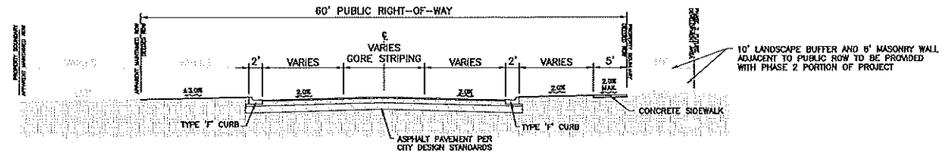
STATE OF FLORIDA CERTIFICATE OF AUTHORIZATION #27-0.1531

OFFSITE ROW IMPROVEMENT PLAN
FINAL DEVELOPMENT PLAN
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: C. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/21/2020
SCALE: 1" = 30'
PROJECT: ROY-001
SHEET: C4.0

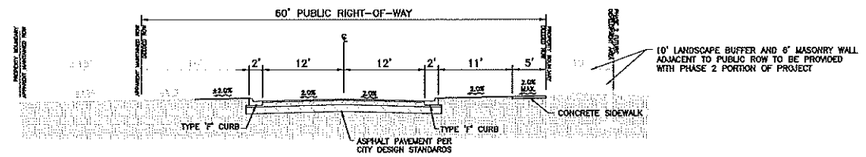
3/30/20

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.9 Drawings\59civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Offsite ROW Improvements Plan.dwg Modified:1/21/2020 By:salerrogil



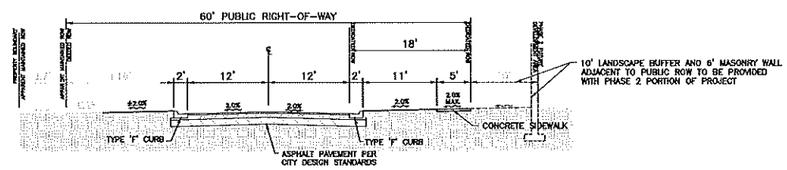
SECTION I-I

N.T.S.



SECTION J-J

N.T.S.



SECTION K-K

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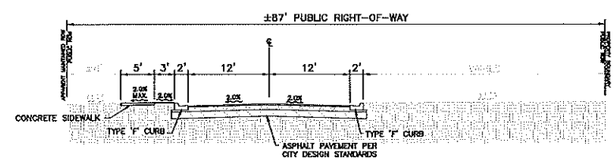
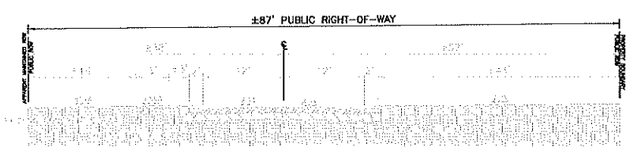


SECTION L-L

N.T.S.



SECTION M-M

N.T.S.

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SHEET 32 OF 92

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/18/20	SCS
A	01/21/20	TDP AMENDMENT - CHANGING REVISION	SCS
A	03/06/18	CITY OF APOPKA COMMENTS DATED 02/07/18	SCS
A	03/15/18	SJRWMD COMMENTS DATED 03/15/18	SCS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/13/18	SCS

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OFFSITE ROADWAY SECTIONS
FINAL DEVELOPMENT PLAN

LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

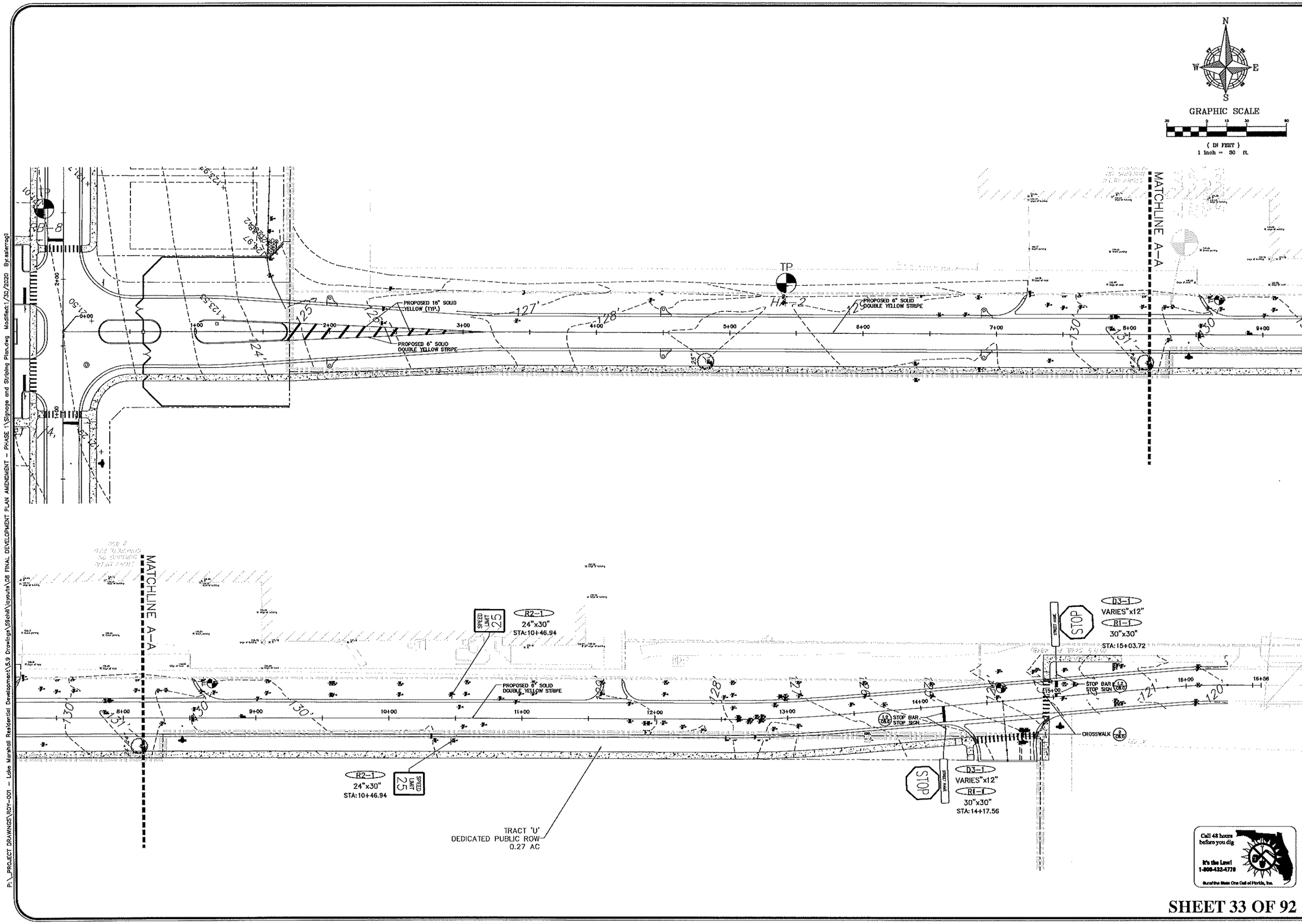
DRAWN: S. SIERRA-GIL
DESIGNED: O. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/21/2020

SCALE: N.T.S.
PROJECT: ROY-001
SHEET: C4.1

3/30/20

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.9 Drawings\39civil\layouts\DB FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Offsite ROW Improvements Plan.dwg Modified:1/21/2020 By:alarrego

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.9 Drawings\55civil\layouts\C08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Signage and Striping Plan.dwg Modified:1/30/2020 By:asierragil



REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	07/21/20	FDP AMENDMENT - GRADING REVISION	SCS
A	05/09/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	03/15/18	SAWHS COMMENTS DATED 3/14/18	SCS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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OFFSITE SIGNAGE AND STRIPING PLAN
FINAL DEVELOPMENT PLAN

LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL	DESIGNED: C. SANCHEZ
CHECKED: L. CLASSON	DATE: 1/21/2020
SCALE: 1" = 30'	PROJECT: ROY-001
SHEET: C4.2	

3/30/20

SHEET 33 OF 92

GENERAL UTILITY NOTES:

1. BACTERIOLOGICAL TESTS WITH CHLORINE RESIDUALS INDICATED (TAKEN ON TWO CONSECUTIVE DAYS) SHALL BE CONDUCTED AT EACH POTABLE WATER METER FOR EVERY BUILDING, AT EVERY WET-TAP CONNECTION AND EVERY LOCATION INDICATED WITHIN THESE PLANS. RESULTS OF THE BACTERIOLOGICAL TESTS SHALL BE PROVIDED TO THE ENGINEER OF RECORD IMMEDIATELY UPON COMPLETION. BACTERIOLOGICAL TEST RESULTS SHALL BE CONSIDERED UNACCEPTABLE IF THE TESTS WERE COMPLETED MORE THAN 30 DAYS BEFORE THE ENGINEER RECEIVED THE RESULTS. SP#
2. ALL WATERMAINS SHALL BE INSTALLED A MINIMUM OF 36" BELOW FINISHED GRADE.
3. ALL WATERMAINS AND FIRELINES PIPES SHALL BE RESTRAINED VIA MECHANICAL JOINTS.
4. WATER MAIN PVC PIPES LESS THAN 4 INCHES MUST CONFORM TO THE SPECIFICATIONS OF ASTM 1785 (SCHEDULE 40, 80, 120) OR ASTM 2241 SDR21 AND MUST BEAR THE NSF LOGO ON EACH INSTALLED LENGTH.
5. UNDERGROUND MARKING TAPE FOR ALL SANITARY FORCEMAINS SHALL BE INSTALLED 4 TO 8 INCHES BELOW THE FINISHED GRADE SURFACE DIRECTLY OVER THE PIPELINE. MARKER TAPE SHALL BE MADE OF AN INERT POLYETHYLENE MATERIAL HAVING A MINIMUM THICKNESS OF 4 MILS AND BE COLOR CODED "SAFETY GREEN".
6. CONTRACTOR SHALL CONDUCT AND PROVIDE RESULTS IMMEDIATELY TO THE ENGINEER OF RECORD FOR PRESSURE AND LEAKAGE TESTS ON THE FORCE MAIN TRUNK LINE ONCE THE PRESSURE SEWER HAS BEEN INSTALLED AND PARTLY BACKFILLED. FINAL BACKFILL AND COMPACTION SHALL NOT COMMENCE UNTIL APPROVAL OF THE PRESSURE AND LEAKAGE TESTS HAS BEEN PROVIDED BY THE ENGINEER OF RECORD.
7. FOLLOWING SATISFACTORY PRESSURE TEST RESULTS, THE CONTRACTOR SHALL DISINFECT ALL SECTIONS OF THE WATER DISTRIBUTION SYSTEM, AND RECEIVE APPROVAL THEREOF FROM APPROPRIATE AGENCIES PRIOR TO PLACING THE SYSTEM INTO SERVICE.
8. FIRE HYDRANTS SHALL BE PLACED A MINIMUM OF 3 FT. AND A MAXIMUM OF 5 FT. FROM THE CURB OR PAVED ROAD SURFACE UNLESS OTHERWISE APPROVED. NO FENCE, TREE, POST, SHRUB, OR OTHER OBJECT WHICH COULD BLOCK THE HYDRANT FROM NORMAL VIEW OR OBSTRUCT THE HYDRANT'S USE SHALL BE LOCATED WITHIN FOUR (4) FEET OF THE HYDRANT. THE FOUR-AND-ONE-HALF INCH (4-1/2") LARGE VOLUME CONNECTION SHALL FACE THE NEAREST ROADWAY. THE CENTER OF THE STEAMER PORT SHALL BE 18 INCHES MINIMUM AND 24 INCHES MAXIMUM ABOVE FINISHED GRADE.
9. ALL FIRE HYDRANT LEADS SHALL HAVE AN INSIDE DIAMETER OF AT LEAST SIX INCHES AND INCLUDE AUXILARY VALVES.
10. WHEN NECESSARY, DEWATERING SHALL BE PROVIDED TO KEEP THE GROUNDWATER ELEVATION A MINIMUM OF 6 INCHES BELOW MAIN BEING LAID.
11. ALL UTILITIES SHALL BE LAID ON A FIRM FOUNDATION WITH ALL UNSUITABLE MATERIAL (MUCK, ROCK, COQUINA, ETC.) REMOVED AND REPLACED WITH CLEAN GRANULAR MATERIAL.
12. TRENCHES SHALL BE BACKFILLED WITH MATERIAL ACCEPTABLE TO CITY OF APOPKA WITH A MINIMUM COMPACTION OF 98% IN PAVED AREAS AND 95% IN UNPAVED AREAS IN ACCORDANCE WITH AASHTO T-180 MODIFIED PROCTOR TEST.
13. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT TRENCH COMPACTION TESTS BE PROVIDED AT POINTS 12 INCHES ABOVE THE PIPE AND AT 12 INCHES VERTICAL INTERVALS TO FINISH GRADE, AT A MINIMUM SPACING OF EVERY 300 FEET.
14. ALL WATER SERVICE ENDINGS SHALL BE MARKED WITH A 2" X 4" LUMBER (PRESSURE TREATED) EXTENDING 4 FEET ABOVE GRADE, WITH WATER SERVICES SECURED 12" MAXIMUM ABOVE THE GROUND.
15. ALL WATER VALVES, INCLUDING CONCRETE COLLAR (WITH DEBRIS CAP), SHALL BE ADJUSTED TO FINISHED GRADE AND THE VALVE BOX LID, PAINTED BLUE TO MAKE THEM PLAINLY VISIBLE.
16. UPON FINAL ACCEPTANCE OF NEW WATER SYSTEMS, WATER VALVES SHALL BE COMPLETELY OPENED BY PUBLIC UTILITIES PERSONNEL. AT NO TIME SHALL CONTRACTOR OPERATE ANY EXISTING VALVES WITHOUT CITY OF APOPKA INSPECTOR PRESENT.
17. ALL WATER MAINS SHALL BE NSF-APPROVED FOR POTABLE WATER USE.
18. PIPE USED IN WATER DISTRIBUTION SYSTEMS SHALL BE EITHER POLYVINYL CHLORIDE (PVC), OR DUCTILE IRON PIPE (DIP).

    (a) ALL PVC PIPE OF NOMINAL DIAMETER FOUR (4) INCHES THROUGH TWELVE (12) INCHES SHALL BE MANUFACTURED IN ACCORDANCE WITH AWWA STANDARD C900, LATEST EDITION. THE PVC PIPE SHALL HAVE A MINIMUM WORKING PRESSURE RATING OF 150PSI AND SHALL HAVE A DIMENSION RATIO (DR) OF 18.
    (b) ALL DUCTILE IRON PIPE SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI/AWWA A21.51/C151 AND HAVE A MINIMUM 350 PRESSURE CLASS RATING

19. PIPE USED IN GRAVITY SEWER CONSTRUCTION SHALL BE POLYVINYL CHLORIDE (PVC) OR DUCTILE IRON PIPE (DIP). WHERE REFERENCE IS MADE TO AN ASTM, ANSI, OR AASHTO DESIGNATION, IT SHALL BE THE LATEST REVISION.

    (a) PVC GRAVITY SEWER PIPE (4 INCH – 15 INCH), ASTM D3034, SDR 35 – UNIFORM MINIMUM "PIPE STIFFNESS" AT FIVE (5) PERCENT DEFLECTION SHALL BE 46PSI. THE JOINTS SHALL BE INTEGRAL BELL ELASTOMERIC GASKET JOINTS MANUFACTURED IN ACCORDANCE WITH ASTM D3212 AND ASTM F477. APPLICABLE UNI-BELL PLASTIC PIPE ASSOCIATION STANDARD IS UNI-B-4. ALL PVC PIPE SHALL BEAR THE NSF-DW SEAL AND BE GREEN IN OVERALL COLOR. THE MINIMUM STANDARD LENGTH OF PIPE SHALL BE THIRTEEN (13) FEET.
    (b) DUCTILE IRON PIPE SHALL CONFORM TO ANSI/AWWA A21.51/C151, CLASS THICKNESS DESIGNED PER ANSI/AWWA A21.50/C150, WITH MECHANICAL OR PUSH ON JOINTS. AN INTERIOR PROTECTIVE LINING OF COAL TAR EPOXY SHALL BE PROVIDED WITH A MINIMUM DRY THICKNESS OF 30 MILS. DUCTILE IRON GRAVITY SEWERS, WHERE REQUIRED BY CITY OF APOPKA BASED ON GEOTECHNICAL INVESTIGATIONS, SHALL BE WRAPPED WITH POLYETHYLENE FILM, AWWA C105. SEE APPENDIX C. THE MINIMUM STANDARD LENGTH OF PIPE SHALL BE EIGHTEEN (18) FEET.

WATER SYSTEM TESTING REQUIREMENTS:

1. THE CONTRACTOR SHALL PERFORM HYDROSTATIC TESTING OF ALL WATER DISTRIBUTION SYSTEMS, AS SET FORTH IN THE FOLLOWING AND SHALL CONDUCT SAID TESTS IN THE PRESENCE OF REPRESENTATIVES FROM CITY OF APOPKA AND/OR OTHER AUTHORIZED AGENCIES. THE CONTRACTOR SHALL PROVIDE 48 HOURS ADVANCED NOTICE PRIOR TO TESTING OF THE WATER DISTRIBUTION SYSTEM.
2. ALL TESTING REQUIRED BY CITY OF APOPKA SHALL BE PAID FOR BY THE DEVELOPER / CONTRACTOR.
3. ALL PROPOSED WATER MAINS SHALL BE TESTED AND CLEARED FOR SERVICE IN ACCORDANCE WITH THE LATEST AWWA STANDARDS AND THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION REQUIREMENTS.
4. PRIOR TO HYDROSTATIC TESTING A PRELIMINARY FLUSHING SHALL BE REQUIRED THROUGH FULL DIAMETER FLUSHING OR SWABBING. PRELIMINARY FLUSHING/SWABBING SHALL BE PERFORMED PER AWWA C651 STANDARD – "DISINFECTING WATER MAINS". ALL PIPING SHALL BE THOROUGHLY CLEANED AND FLUSHED PRIOR TO TESTING TO CLEAR THE LINES OF ALL FOREIGN MATTER. WHILE THE PIPING IS BEING FILLED WITH WATER, CARE SHALL BE EXERCISED TO PERMIT THE ESCAPE OF AIR FROM EXTREMITIES ALONG THE TEST SECTION.
5. HYDROSTATIC TESTING SHALL CONSIST OF PRESSURE TEST AND LEAKAGE TEST. PIPING AND APPURTENANCES TO BE TESTED SHALL BE WITHIN SECTIONS BETWEEN VALVES, NOT EXCEEDING 2,000 FEET, UNLESS ALTERNATE METHODS HAVE RECEIVED PRIOR APPROVAL FROM CITY OF APOPKA. TESTING SHALL NOT PROCEED UNTIL CONCRETE THRUST BLOCKS ARE IN PLACE AND CURED, OR OTHER RESTRAINING DEVICES INSTALLED.
6. HYDROSTATIC TESTING SHALL BE PERFORMED AT 150 POUNDS PER SQUARE INCH PRESSURE, UNLESS OTHERWISE APPROVED BY CITY OF APOPKA, FOR A PERIOD OF NOT LESS THAN TWO (2) HOURS.
7. THE ALLOWABLE RATE OF LEAKAGE SHALL BE LESS THAN THE NUMBER OF GALLONS PER HOUR DETERMINED BY THE FOLLOWING FORMULA:

$$L = \frac{SD\sqrt{P}}{148,000}$$

WHERE:
L = ALLOWABLE LEAKAGE, IN GALLONS PER HOUR
S = LENGTH OF PIPE TESTED, IN FEET
D = NOMINAL DIAMETER OF PIPE, IN INCHES
P = AVERAGE TEST PRESSURE DURING THE LEAKAGE TEST, IN POUNDS PER SQUARE INCH (GAUGE)

8. SHOULD THE TEST FAIL, NECESSARY REPAIRS SHALL BE ACCOMPLISHED BY THE CONTRACTOR AND THE TEST REPEATED UNTIL WITHIN PASSING LIMITS. THE CONTRACTOR SHALL FURNISH ALL THE NECESSARY LABOR, PUMPS, GAUGES AND ALL OTHER ITEMS NECESSARY TO CONDUCT THE REQUIRED WATER DISTRIBUTION SYSTEM TESTING AND PERFORM NECESSARY REPAIRS.

SEWER SYSTEM TESTING REQUIREMENTS:

1. THE CONTRACTOR SHALL PERFORM TESTING OF ALL SANITARY SEWAGE GRAVITY COLLECTION SYSTEMS, AS SET FORTH IN THE FOLLOWING AND SHALL CONDUCT SAID TESTS IN THE PRESENCE OF REPRESENTATIVES FROM CITY OF APOPKA AND/OR OTHER AUTHORIZED AGENCIES. THE CONTRACTOR SHALL PROVIDE 48 HOURS ADVANCED NOTICE PRIOR TO TESTING OF THE WASTEWATER DISTRIBUTION SYSTEM.
2. ALL TESTING REQUIRED BY CITY OF APOPKA SHALL BE PAID FOR BY THE DEVELOPER / CONTRACTOR.
3. GRAVITY MAINS SHALL BE INSPECTED WITH CCTV FOR ALIGNMENT, GRADE VARIATIONS, SEPARATED PIPES, LEAKS, DEFLECTION, CRACKED, BROKEN OR OTHERWISE DEFECTIVE PIPE TO ENSURE OVERALL PIPE INTEGRITY. THE APPROVED CCTV INSPECTION CONTRACTOR SHALL SUBMIT THE REPORT TO THE UTILITIES DEPARTMENT AS REQUIRED.
4. LEAKAGE TESTING FOR GRAVITY MAINS SHALL BE BY LOW-PRESSURE AIR TEST. LEAKAGE TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH THE PROCEDURE FOR "RECOMMENDED PRACTICE FOR LOW PRESSURE AIR TESTING OF INSTALLED SEWER PIPE" AS ESTABLISHED BY THE UNI-BELL PVC PIPE ASSOCIATION.
5. EACH GRAVITY MAIN LEAKAGE TEST SECTION SHALL NOT EXCEED 400 FEET IN LENGTH AND SHALL BE TESTED BETWEEN ADJACENT MANHOLES.

FDEP UTILITY CONSTRUCTION NOTES:

1. NOTE TO THE UTILITY: PURSUANT TO 62-555.345; DO NOT PROVIDE WATER SERVICE TO THIS PROJECT (OTHER THAN FLUSHING/TESTING) UNTIL THE DEPARTMENT OF ENVIRONMENTAL PROTECTION HAS ISSUED A LETTER OF CLEARANCE OR THE UTILITY SHALL BE SUBJECT TO ENFORCEMENT ACTION.
2. THE PERMITTEE WILL PROMPTLY NOTIFY THE DEPARTMENT UPON SALE OR LEGAL TRANSFER OF THE PERMITTED FACILITY
3. ALL WATER MAINS AND APPURTENANCES SHALL BE DISINFECTED AND BACTERIOLOGICALLY EVALUATED IN ACCORDANCE WITH RULE 62-555.340, F.A.C.
4. ALL WATER MAIN PIPE, INCLUDING FITTINGS SHALL BE COLOR CODED OR MARKED USING BLUE AS A PREDOMINANT COLOR TO DIFFERENTIATE DRINKING WATER FROM RECLAIMED OR OTHER WATER. UNDERGROUND PLASTIC PIPE SHALL BE SOLID-WALL BLUE PIPE, SHALL HAVE A CO-EXTRUDED BLUE EXTERNAL SKIN, OR SHALL BE WHITE OR BLACK PIPE WITH BLUE STRIPES INCORPORATED INTO, OR APPLIED TO, THE PIPE WALL; AND UNDERGROUND METAL OR CONCRETE PIPE SHALL HAVE BLUE STRIPES APPLIED TO THE PIPE WALL. PIPE STRIPED DURING MANUFACTURING OF THE PIPE SHALL HAVE CONTINUOUS STRIPES THAT RUN PARALLEL TO THE AXIS OF THE PIPE, THAT ARE LOCATED AT NO GREATER THAN 90-DEGREE INTERVALS AROUND THE PIPE, AND THAT WILL REMAIN INTACT DURING AND AFTER INSTALLATION OF THE PIPE. IF TAPE OR PAINT IS USED TO STRIPE PIPE DURING INSTALLATION OF THE PIPE, THE TAPE OR PAINT SHALL BE APPLIED IN A CONTINUOUS LINE THAT RUNS PARALLEL TO THE AXIS OF THE PIPE AND THAT IS LOCATED ALONG THE TOP OF THE PIPE; FOR PIPES WITH AN INTERNAL DIAMETER OF 24 INCHES OR GREATER, TAPE OR PAINT SHALL BE APPLIED IN CONTINUOUS LINES ALONG EACH SIDE OF THE PIPE AS WELL AS ALONG THE TOP OF THE PIPE.

FDEP UTILITY SEPARATION REQUIREMENTS

(62-555.314, F.A.C. LOCATION OF PUBLIC WATER SYSTEM MAINS)

FOR THE PURPOSE OF THIS SECTION, THE PHRASE "WATER MAINS" SHALL MEAN MAINS, INCLUDING TREATMENT PLANT PROCESS PIPING, CONVEYING EITHER RAW, PARTIALLY TREATED, OR FINISHED DRINKING WATER; FIRE HYDRANT LEADS; AND SERVICE LINES THAT ARE UNDER THE CONTROL OF A PUBLIC WATER SYSTEM AND THAT HAVE AN INSIDE DIAMETER OF THREE INCHES OR GREATER.

(1) HORIZONTAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS, RECLAIMED WATER PIPELINES, AND ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS.

   (a) NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND THEOUTSIDE OF ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.
   (b) NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST THREE FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER.
   (c) NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST SIX FEET, AND PREFERABLY TEN FEET, BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF ANY EXISTING OR PROPOSED GRAVITY- OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN WATER MAINS AND GRAVITY-TYPE SANITARY SEWERS SHALL BE REDUCED TO THREE FEET WHERE THE BOTTOM OF THE WATER MAIN IS LAID AT LEAST SIX INCHES ABOVE THE TOP OF THE SEWER.
   (d) NEW OR RELOCATED, UNDERGROUND WATER MAINS SHALL BE LAID TO PROVIDE A HORIZONTAL DISTANCE OF AT LEAST TEN FEET BETWEEN THE OUTSIDE OF THE WATER MAIN AND ALL PARTS OF ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM" AS DEFINED IN SECTION 381.0065(2), F.S., AND RULE 64E-6.002, F.A.C.

(2) VERTICAL SEPARATION BETWEEN UNDERGROUND WATER MAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS, AND RECLAIMED WATER PIPELINES.

   (a) NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED GRAVITY- OR VACUUM-TYPE SANITARY SEWER OR STORM SEWER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST SIX INCHES, AND PREFERABLY 12 INCHES, ABOVE OR AT LEAST 12 INCHES BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
   (b) NEW OR RELOCATED, UNDERGROUND WATER MAINS CROSSING ANY EXISTING OR PROPOSED PRESSURE-TYPE SANITARY SEWER, WASTEWATER OR STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER SHALL BE LAID SO THE OUTSIDE OF THE WATER MAIN IS AT LEAST 12 INCHES ABOVE OR BELOW THE OUTSIDE OF THE OTHER PIPELINE. HOWEVER, IT IS PREFERABLE TO LAY THE WATER MAIN ABOVE THE OTHER PIPELINE.
   (c) AT THE UTILITY CROSSINGS DESCRIBED IN PARAGRAPHS (A) AND (B) ABOVE, ONE FULL LENGTH OF WATER MAIN PIPE SHALL BE CENTERED ABOVE OR BELOW THE OTHER PIPELINE SO THE WATER MAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE. ALTERNATIVELY, AT SUCH CROSSINGS, THE PIPES SHALL BE ARRANGED SO THAT ALL WATER MAIN JOINTS ARE AT LEAST THREE FEET FROM ALL JOINTS IN VACUUM-TYPE SANITARY SEWERS, STORM SEWERS, STORMWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C., AND AT LEAST SIX FEET FROM ALL JOINTS IN GRAVITY- OR PRESSURE-TYPE SANITARY SEWERS, WASTEWATER FORCE MAINS, OR PIPELINES CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.

(3) SEPARATION BETWEEN WATER MAINS AND SANITARY OR STORM SEWER MANHOLES.

   (a) NO WATER MAIN SHALL PASS THROUGH, OR COME INTO CONTACT WITH, ANY PART OF A SANITARY SEWER MANHOLE.
   (b) EFFECTIVE AUGUST 28, 2003, WATER MAINS SHALL NOT BE CONSTRUCTED OR ALTERED TO PASS THROUGH, OR COME INTO CONTACT WITH, ANY PART OF A STORM SEWER MANHOLE OR INLET STRUCTURE.

(4) SEPARATION BETWEEN FIRE HYDRANT DRAINS AND SANITARY OR STORM SEWERS, WASTEWATER OR STORMWATER FORCE MAINS, RECLAIMED WATER PIPELINES, AND ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS. NEW OR RELOCATED FIRE HYDRANTS WITH UNDERGROUND DRAINS SHALL BE LOCATED SO THAT THE DRAINS ARE AT LEAST THREE FEET FROM ANY EXISTING OR PROPOSED STORM SEWER, STORMWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.; AT LEAST THREE FEET, AND PREFERABLY TEN FEET, FROM ANY EXISTING OR PROPOSED VACUUM-TYPE SANITARY SEWER; AT LEAST SIX FEET, AND PREFERABLY TEN FEET, FROM ANY EXISTING OR PROPOSED GRAVITY- OR PRESSURE-TYPE SANITARY SEWER, WASTEWATER FORCE MAIN, OR PIPELINE CONVEYING RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.; AND AT LEAST TEN FEET FROM ANY EXISTING OR PROPOSED "ON-SITE SEWAGE TREATMENT AND DISPOSAL SYSTEM" AS DEFINED IN SECTION 381.0065(2), F.S., AND RULE 64E-6.002, F.A.C.

LOCATION OF PUBLIC WATER SYSYEM MAINS IN ACCORDANCE WITH F.A.C. RULE 62-555.314

Other Pipe	Horizontal Separation	Crossings (1)	Joint Spacing @ Crossings (Full Joint Centered)
Storm Sewer, Stormwater Force Main, Reclaimed Water (2)	Water Main 3 ft. minimum	Water Main 12 inches is the minimum, except for storm sewer, then 6 inches is the minimum and 12 inches is preferred	Alternate 3 ft. minimum Water Main
Vacuum Sanitary Sewer	Water Main 10 ft. preferred 3 ft. minimum	Water Main 12 inches preferred 6 inches minimum	Alternate 3 ft. minimum Water Main
Gravity or Pressure Sanitary Sewer, Sanitary Sewer Force Main, Reclaimed Water (4)	Water Main 10 ft. preferred 6 ft. minimum (3)	Water Main 12 inches is the minimum, except for gravity sewer, then 6 inches is the minimum and 12 inches is preferred	Alternate 6 ft. minimum Water Main
On-Site Sewage Treatment & Disposal System	10 ft. minimum	---	---

(1) Water main should cross above other pipe. When water main must be below other pipe, the minimum separation is 12 inches.
(2) Reclaimed water regulated under Part III of Chapter 62-610, F.A.C.
(3) 3 ft. for gravity sanitary sewer where the bottom of the water main is laid at least 6 inches above the top of the gravity sanitary sewer.
(4) Reclaimed water not regulated under Part III of Chapter 62-610, F.A.C.

Disclaimer – This document is provided for your convenience only. Please refer to F.A.C. Rule 62-555.314 for additional construction requirements.

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SHEET 34 OF 92

REV.	DATE	DESCRIPTION	BY
	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
	01/21/20	FDP AMENDMENT – GRADING REVISION	SCS
	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
	03/15/18	SJRWMD COMMENTS DATED 03/15/18	SCS
	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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2221 Lee Road, Suite 17, Winter Park, Florida 32789
STATE OF FLORIDA CERTIFICATE OF AUTHORIZATION NO. 31174

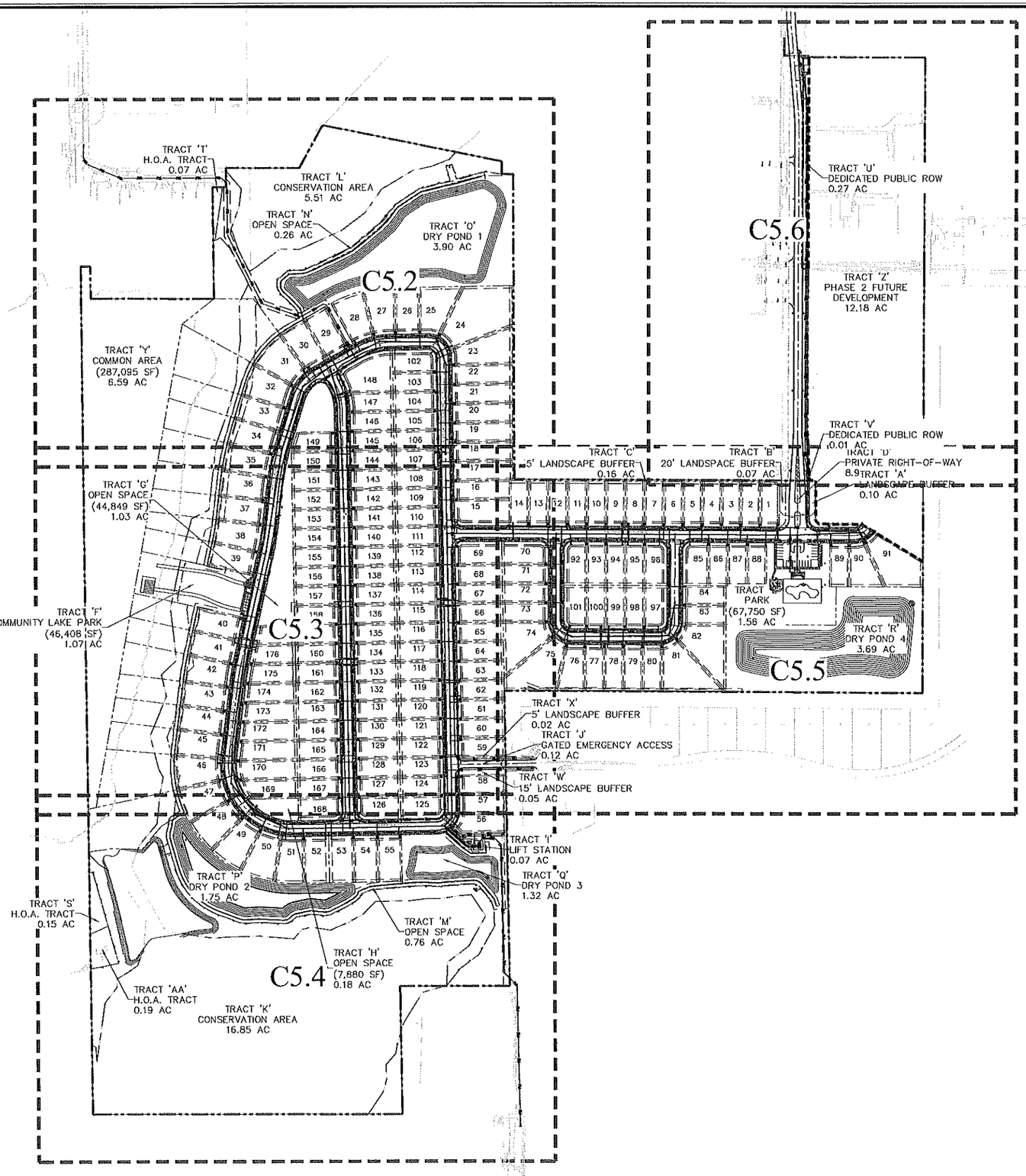
UTILITY NOTES
FINAL DEVELOPMENT PLAN
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: O. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/29/2020

SCALE: N.T.S.
PROJECT: ROY-001
SHEET: C5.0

3/30/20

P:_PROJECT DRAWINGS\ROY-001 – Lake Marshall Residential Development\5.9 Drawings\59civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT – PHASE 1\Utility Notes.dwg Modified:1/29/2020 By:ssierragil



NOTE:
1. ALL 6" PVC RECLAIMED WATER MAINS WERE UPSIZED TO 8".

GRAPHIC SCALE

(IN FEET)
1 inch = 160 ft.

LEGEND

- PROPOSED FORCE MAIN
- PROPOSED WATER MAIN
- PROPOSED RECLAIM WATER MAIN
- PROPOSED SANITARY SERVICE
- PROPOSED WATER SERVICE
- PROPOSED RECLAIM WATER SERVICE
- SANITARY MANHOLE
- FIRE HYDRANT
- STORM MANHOLE
- TYPE 3L CURB INLET
- TYPE 3R CURB INLET
- TYPE 4 CURB INLET
- MITER END SECTION
- PROPOSED GRAVITY SANITARY
- PHASING LINE

UTILITY NOTES:

1. ALL WATER MAINS LEADING TO A PROPOSED FIRE HYDRANT SHALL BE A MINIMUM OF 8".
2. FIRE FLOW REQUIREMENTS FOR BUILDINGS SHALL BE IN ACCORDANCE WITH NFPA 1, SECTION 18.4.
3. FIRE HYDRANT LOCATIONS AND DISTRIBUTION SHALL FOLLOW NFPA 1, APPENDIX I.
4. FIRE HYDRANT LOCATIONS SHALL BE IDENTIFIED BY A BLUE REFLECTIVE PAVEMENT MARKER. (NFPA 1, CHAPTER 18.5.7)
5. A FIRE FLOW TEST RESULT REPORT FROM THE NEAREST EXISTING HYDRANT THAT HAS BEEN WITNESSED BY A UTILITIES INSPECTOR WILL NEED TO BE PROVIDED.
6. DOCUMENTATION FOR FIRE FLOW TESTING SHALL INCLUDE A FIRE FLOW REPORT AND A HYDRAULIC GRAPH.
7. CONTRACTOR MUST FIELD VERIFY THE LOCATION OF THE EXISTING UTILITIES WITHIN MAUDE HELEN SUBDIVISION AND BRECKENRIDGE SUBDIVISION WITHIN CLOSE PROXIMITY TO THE PROPOSED CONNECTION POINTS. IF A DISCREPANCY IS FOUND IN THE FIELD FROM WHAT IS SHOWN ON THESE PLANS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IMMEDIATELY.
8. CONTRACTOR SHALL PROVIDE HORIZONTAL AND VERTICAL SEPARATION PER THE FLORIDA ADMINISTRATIVE CODE (F.A.C.). PLEASE REFER TO SHEET C5.0 FOR HORIZONTAL AND VERTICAL SEPARATION TABLE.
9. ALL ROADWAYS, WATER LINE INFRASTRUCTURE AND FIRE HYDRANTS SHALL BE IN PLACE BEFORE BUILDING CONSTRUCTION MAY BEGIN.
10. ALL PROPOSED POTABLE WATER AND RECLAIMED WATER MAINS SHALL HAVE A MINIMUM OF 36" OF COVER.

REV.	DATE	DESCRIPTION	BY
4	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SKS
3	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SKS
2	01/21/20	FDP AMENDMENT - GRADING REVISION	SKS
1	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SKS
0	03/15/18	SAFMND COMMENTS DATED 03/15/18	SKS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SKS

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OVERALL UTILITY PLAN
FINAL DEVELOPMENT PLAN

LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: O. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/30/2020

SCALE: 1" = 160'
PROJECT: ROY-001
SHEET: C5.1

3/30/20

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SHEET 35 OF 92

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.0 Drawings\SSchd\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Utility Plan.dwg Modified:1/30/2020 By:salerrogil

EXISTING 8" WATER MAIN
EXISTING FIRE HYDRANT
EXISTING 8" VALVE WITH CAP
TERTIARY WATER CONNECTION TO EXISTING 8" WATER MAIN. CONTRACTOR TO CONNECT WITH TAPPING VALVE AND SLEEVE. SP#1
(1) 12"X8" REDUCER
(1) 45° BEND
(2) 22.5° BEND

TRACT 'T'
H.O.A. TRACT
0.12 AC
1,331 LF OF 12" WATER MAIN

(2) 45° BEND
(1) 22.5° BEND

CONTRACTOR IS TO UTILIZE DIRECTIONAL DRILL METHOD FOR INSTALLATION OF PROPOSED WATER MAIN THROUGH PROPOSED CONSERVATION AREA AND THE EXISTING MARSHALL LAKE ROAD RIGHT-OF-WAY. CONTRACTOR IS TO REPAIR ANY DAMAGED PAVEMENT, PRIVATE DRIVEWAYS, CONCRETE SIDEWALK, SOD AND/OR OTHER IMPROVEMENTS DAMAGED DURING CONSTRUCTION ACTIVITIES.

TRACT 'L'
CONSERVATION AREA
5.51 AC

TRACT 'N'
OPEN SPACE
0.26 AC

TRACT 'O'
DRY POND 1
3.90 AC

TRACT 'Y'
COMMON AREA
(287,095 SF)
6.59 AC

20' UTILITY EASEMENT

CONTRACTOR TO PROVIDE MIN 3' COVER ON LOW SIDE OF RETAINING WALL

(2) 45° BEND
(1) 45° BEND
(1) 45° BEND

CROSSING #3
SAN. BOTTOM = 86.77
ST. TOP = 80.49

173 LF 8" PVC @ 3.55%

SAN-MH-1
48" MANHOLE
RIM = 87.50
INV SE = 83.39
INV NW = 83.29
INV W = 83.39

CROSSING #16
SAN. BOTTOM = 83.45
ST. TOP = 80.70

(1) 8" TEE
(2) 8" GATE VALVE
(4) 45° BEND (TYP.)

CROSSING #4
SAN. BOTTOM = 82.56
ST. TOP = 79.05

105 LF 8" PVC @ 2.43%

SAN-MH-2
48" MANHOLE
RIM = 88.37
INV SE = 80.75
INV W = 80.66

(3) 22.5° BEND

110 LF 8" PVC @ 0.52%

CROSSING #5
ST. BOTTOM = 80.79
SAN. TOP = 80.11

SAN-MH-3
48" MANHOLE
RIM = 84.95
INV E = 78.98
INV W = 78.88

20 LF 8" PVC @ 0.50%

TRACT 'G'
OPEN SPACE
(2,149 LF OF 8")
WATER MAIN
1.03 AC

1,469 LF OF 8" RECLAIMED WATER MAIN

CROSSING #17
ST. BOTTOM = 92.25
SAN. TOP = 90.54

CONTRACTOR TO VERIFY THE HORIZONTAL SEPARATION BETWEEN PIPES MEETS THE MINIMUM REQUIREMENTS OF THE CITY OF APOPKA & FDEP (TYP.)

344 LF 8" PVC @ 2.97%

(2) 11.25° BEND

(1) 11.25° BEND
(1) 22.5° BEND

SAN-MH-21
48" MANHOLE
RIM = 95.14
INV S = 90.14
INV NW = 90.04

SAN-MH-20
48" MANHOLE
RIM = 103.14
INV W = 98.77
INV N = 98.67

(3) 22.5° BEND

CROSSING #2
ST. BOTTOM = 100.07
SAN. TOP = 98.79

182 LF 8" PVC @ 3.60%

45° BEND (TYP.)

1,730 LF OF 12" WATER MAIN

(1) 45° BEND (TYP.)

73 LF 8" PVC @ 3.81%

(1) 12" GATE VALVE
(1) 12" TEE
(1) 12"X8" REDUCER
(1) 8" GATE VALVE
SP#2
(2) 8" GATE VALVE
(1) 8"X8" TEE

(2) 22.5° BEND

SAN-MH-19
48" MANHOLE
RIM = 106.04
INV W = 102.04
INV E = 99.54

SINGLE POTABLE WATER SERVICE (TYP.)
(2) 22.5° BEND
SINGLE RECLAIMED WATER SERVICE (TYP.)
DOUBLE SANITARY SEWER LATERAL (TYP.)

BLUE ROAD REFLECTOR (TYP.)

FIRE HYDRANT #1

3,657 LF OF 8" RECLAIMED WATER MAIN

(1) 11.25° BEND

SAN-MH-22
48" MANHOLE
RIM = 90.60
INV W = 85.20
INV E = 83.85

1,425 LF OF 8" WATER MAIN

DOUBLE POTABLE WATER SERVICE (TYP.)

CROSSING #1
ST. BOTTOM = 106.01
SAN. TOP = 105.11

DOUBLE RECLAIMED WATER SERVICE (TYP.)
SINGLE SANITARY SEWER LATERAL (TYP.)

SAN-MH-18
48" MANHOLE
RIM = 111.29
INV E = 105.77

WATERVIEW ALL 282 LF 8" PVC @ 1.53%

(2) 11.25° BEND

TRACT 'C'
5' LANDSCAPE BUFFER
0.16 AC

SHEET C5.2
SHEET C5.3

GRAPHIC SCALE
50 0 25 50 100
(IN FEET)
1 inch = 50 ft.

KEY MAP

LEGEND

—FM—	PROPOSED FORCE MAIN
—WM—	PROPOSED WATER MAIN
—RU—	PROPOSED RECLAIM WATER MAIN
	PROPOSED SANITARY LATERAL
	PROPOSED WATER SERVICE
	PROPOSED RECLAIM WATER SERVICE
	SANITARY MANHOLE
	FIRE HYDRANT
	STORM MANHOLE
	TYPE 3L CURB INLET
	TYPE 3R CURB INLET
	TYPE 4 CURB INLET
	MITER END SECTION
	PROPOSED STORM
	PROPOSED GRAVITY SANITARY

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SHEET 36 OF 92

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A	01/21/20	FDP AMENDMENT - GRADING REVISION	SCS
A	03/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	03/15/18	SERWRD COMMENTS DATED 03/14/18	SCS
A	02/15/18	CITY OF APOPKA COMMENTS DATED 02/13/18	SCS

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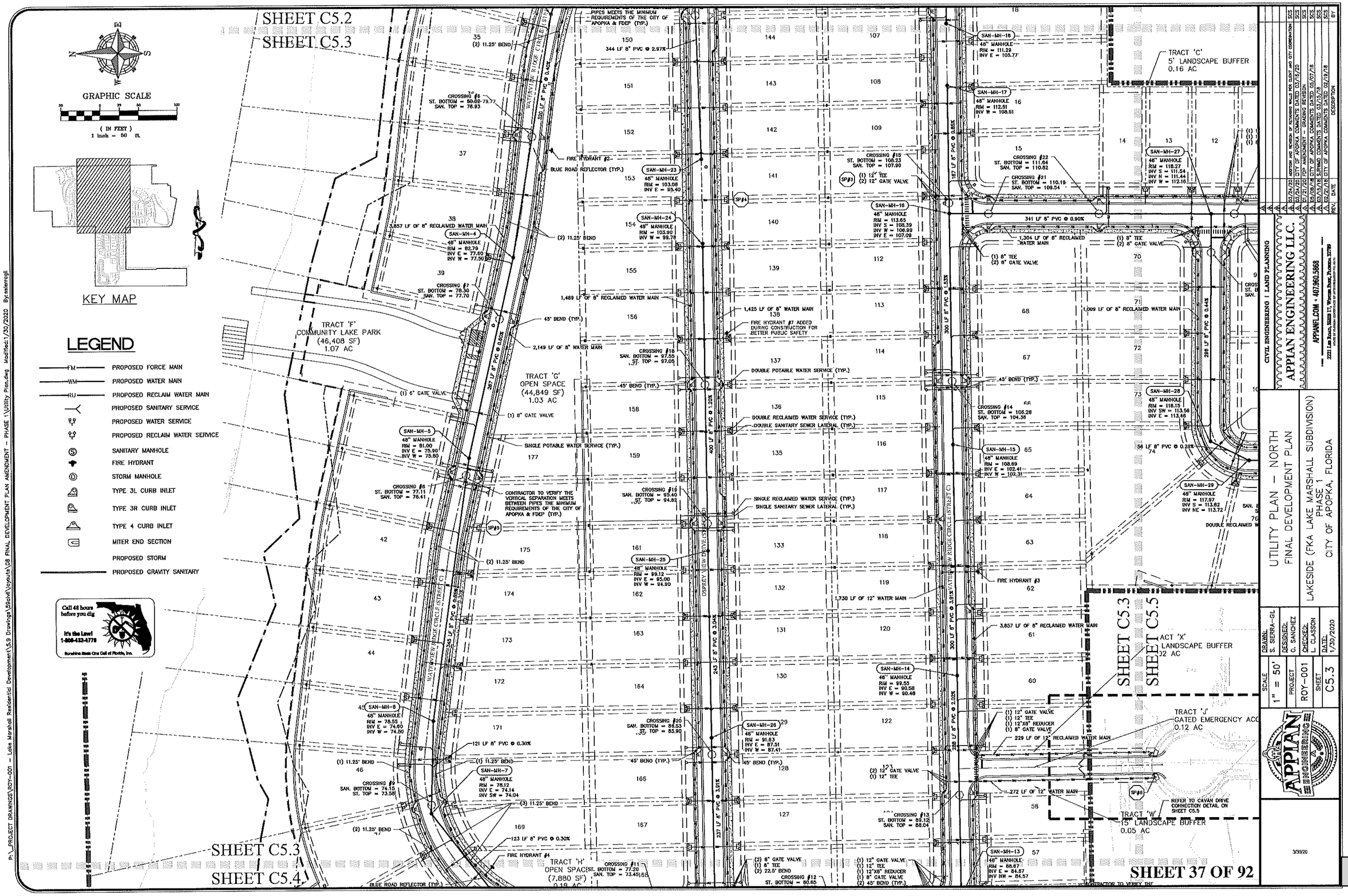
UTILITY PLAN – NORTHEAST
FINAL DEVELOPMENT PLAN
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: G. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/30/2020
SCALE: 1" = 50'
PROJECT: ROY-001
SHEET: C5.2

3/30/20

P:\PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.0 Drawings\S90\X\Layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Utility Plan.dwg Modified:1/30/2020 By:siarregil



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A	02/25/18	CITY OF APOPKA COMMENTS DATED 02/18/18	SCS
A	02/25/18	CITY OF APOPKA COMMENTS DATED 02/18/18	SCS

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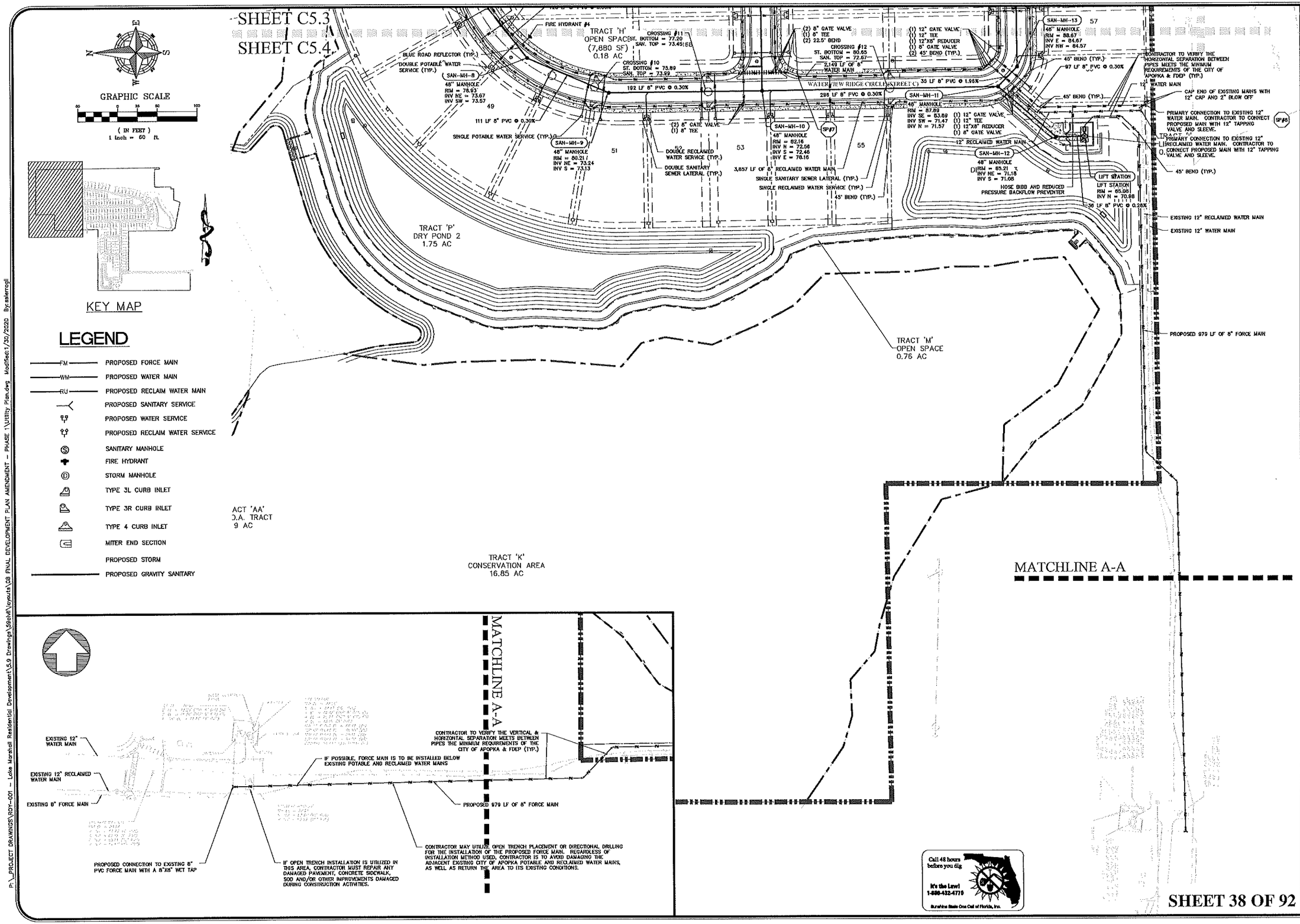
UTILITY PLAN – NORTH
FINAL DEVELOPMENT PLAN

LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL	DESIGNED: G. SANCHEZ
CHECKED: L. CLASSON	DATE: 1/30/2020
SCALE: 1" = 50'	PROJECT: ROY-001
SHEET: C5.3	

3/30/20



REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SES
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SES
A	01/21/20	FDP AMENDMENT - GRADING REVISION	SES
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SES
A	03/15/18	SJRWMD COMMENTS DATED 03/15/18	SES
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SES

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2221 I-4 Road, Suite 17, Winter Park, Florida 32789

LICENSE CERTIFICATE OF AUTHORIZATION #29-0161

UTILITY PLAN – NORTHWEST
FINAL DEVELOPMENT PLAN

LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: O. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/30/2020

SCALE: 1" = 50'
PROJECT: ROY-001
SHEET: C5.4

3/30/20

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.0 Drawings\Sheet\Layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Utility Plan.dwg Modified:1/30/2020 By:salerrogil

SHEET C5.6

SHEET C5.5

TRACT 'C'
5' LANDSCAPE BUFFER
0.16 AC

TRACT 'B'
20' LANDSPACE BUFFER
0.07 AC

TRACT 'D'
PRIVATE RIGHT-OF-WAY
8.96 AC

TRACT 'A'
LANDSCAPE BUFFER
0.10 AC

1,491 LF OF 12" WATER MAIN

1,166 LF OF 12" WATER MAIN

CONTRACTOR TO VERIFY THE VERTICAL & HORIZONTAL SEPARATION MEETS BETWEEN PIPES THE MINIMUM REQUIREMENTS OF THE CITY OF APOPKA & FDEP (TYP.)

SAN-MH-27
48" MANHOLE
RIM = 118.27
INV S = 111.54
INV N = 111.44
INV W = 112.16

(1) 12"X12"X8" TEE
(1) 12" GATE VALVE
(1) 8" GATE VALVE

CROSSING #23
ST. BOTTOM = 113.44
SAN. TOP = 112.32

FIRE HYDRANT #5

CROSSING #24
ST. BOTTOM = 114.88
SAN. TOP = 113.55

CROSSING #25
SAN. BOTTOM = 113.94
ST. TOP = 111.91

CROSSING #26
SAN. BOTTOM = 115.11
ST. TOP = 111.18

(2) 45° BEND

(1) 12" TEE
(2) 12" GATE VALVE
(1) 12"X8" REDUCER

SP#10

(2) 45° BEND

FIRE HYDRANT #6

WATER MAIN STUB OUT FOR LAKE MARSHALL SUBDIVISION PHASE 2

PROPOSED FORCE MAIN CONNECTION TO 48" MANHOLE. MANHOLE TO BE EQUIPPED WITH LINER PER CITY OF APOPKA UTILITIES DESIGN AND CONSTRUCTION STANDARDS MANUAL.

RECLAIMED WATER MAIN STUB OUT FOR LAKE MARSHALL SUBDIVISION PHASE 2

FORCE MAIN STUB OUT FOR LAKE MARSHALL SUBDIVISION PHASE 2

4" FORCE MAIN

LAKESIDE ESTATES DRIVE (STREET A)

370 LF 8" PVC @ 0.61%

382 LF 8" PVC @ 0.28%

206 LF 8" PVC @ 0.28%

(1) 8" TEE
(2) 8" GATE VALVE

45° BEND (TYP.)

DOUBLE POTABLE WATER SERVICE (TYP.)

SINGLE RECLAIMED WATER SERVICE (TYP.)

SINGLE SANITARY SEWER LATERAL (TYP.)

CROSSING #27
ST. BOTTOM = 113.57
SAN. TOP = 113.07

SAN-MH-32
48" MANHOLE
RIM = 120.30
INV S = 113.90
INV N = 113.80

(1) 8" TEE
(2) 8" GATE VALVE

1,304 LF OF 8" RECLAIMED WATER MAIN

SAN-MH-33
48" MANHOLE
RIM = 120.80
INV W = 115.72
INV N = 114.97
INV S = 115.07

163 LF OF 8" WATER MAIN

88 LF 8" PVC @ 0.28%

CABANA SAN MH
48" MANHOLE
RIM = 120.61
INV E = 115.90
INV W = 116.00

8" LATERAL

SAN-MH-34
48" MANHOLE
RIM = 118.64
INV N = 115.64
INV SW = 115.74

1,009 LF OF 8" RECLAIMED WATER MAIN

236 LF 8" PVC @ 0.44%

SINGLE POTABLE WATER SERVICE (TYP.)

972 LF OF 8" WATER MAIN

SAN-MH-31
48" MANHOLE
RIM = 119.01
INV W = 115.06

TRACT 'E'
PARK
(67,750 SF)
1.56 AC

SAN-MH-28
48" MANHOLE
RIM = 118.15
INV SW = 113.56
INV E = 113.46

22.5° BEND (TYP.)

SP#9

(4) 45° BEND (TYP.)

105 LF 8" PVC @ 0.28%

(3) 45° BEND

22.5° BEND (TYP.)

(2) 45° BEND

56 LF 8" PVC @ 0.28%

CROSSING #29
SAN. BOTTOM = 114.66
ST. TOP = 113.71

BRUCKES VIEW LOOP (STREET B)

303 LF 8" PVC @ 0.28%

SAN-MH-29
48" MANHOLE
RIM = 117.97
INV S = 113.82
INV NE = 113.72

CROSSING #28
SAN. BOTTOM = 114.08
ST. TOP = 113.67

DOUBLE RECLAIMED WATER SERVICE (TYP.)

SAN-MH-30
48" MANHOLE
RIM = 118.34
INV E = 114.77
INV N = 114.67

22.5° BEND (TYP.)

DOUBLE SANITARY SEWER LATERAL (TYP.)

TRACT 'R'
DRY POND 4
3.69 AC

GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.

KEY MAP

LEGEND

- PROPOSED FORCE MAIN
- PROPOSED WATER MAIN
- PROPOSED RECLAIM WATER MAIN
- PROPOSED SANITARY SERVICE
- PROPOSED WATER SERVICE
- PROPOSED RECLAIM WATER SERVICE
- SANITARY MANHOLE
- FIRE HYDRANT
- STORM MANHOLE
- TYPE 3L CURB INLET
- TYPE 3R CURB INLET
- TYPE 4 CURB INLET
- MITER END SECTION
- PROPOSED STORM
- PROPOSED GRAVITY SANITARY

SHEET C5.3

SHEET C5.5

TRACT 'X'
LANDSCAPE BUFFER
0.02 AC

TRACT 'J'
GATED EMERGENCY ACCESS
0.12 AC

WATER MAIN

SP#8

REFER TO CAVAN DRIVE CONNECTION DETAIL ON SHEET C5.5

TRACT 'W'
15' LANDSCAPE BUFFER
0.05 AC

PROPOSED 229 LF OF 12" RECLAIMED WATER MAIN

(1) 45° BEND

EXISTING 12" RECLAIMED WATER MAIN

SECONDARY CONNECTION TO EXISTING 12" RECLAIMED WATER MAIN WITH 12"X12" TAPPING VALVE AND SLEEVE

CAP END OF EXISTING POTABLE AND RECLAIMED WATER MAINS WITH 12" CAP WITH 2" BLOW OFF

SECONDARY CONNECTION TO EXISTING 12" WATER MAIN WITH 12" TAPPING VALVE AND SLEEVE

SP#6

PROPOSED 272 LF OF 12" WATER MAIN

EXISTING UTILITY EASEMENT

(1) 45° BEND

EXISTING 12" WATER MAIN

CAVAN DRIVE CONNECTION DETAIL
1" = 30'

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SHEET 39 OF 92

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SKS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SKS
A	01/21/20	FDP AMENDMENT - GRADING REVISION	SKS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SKS
A	03/15/18	SJRWMD COMMENTS DATED 03/15/18	SKS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SKS
A	12/18/17		BY

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EB#8722 | LB#8722 | LC#26000243

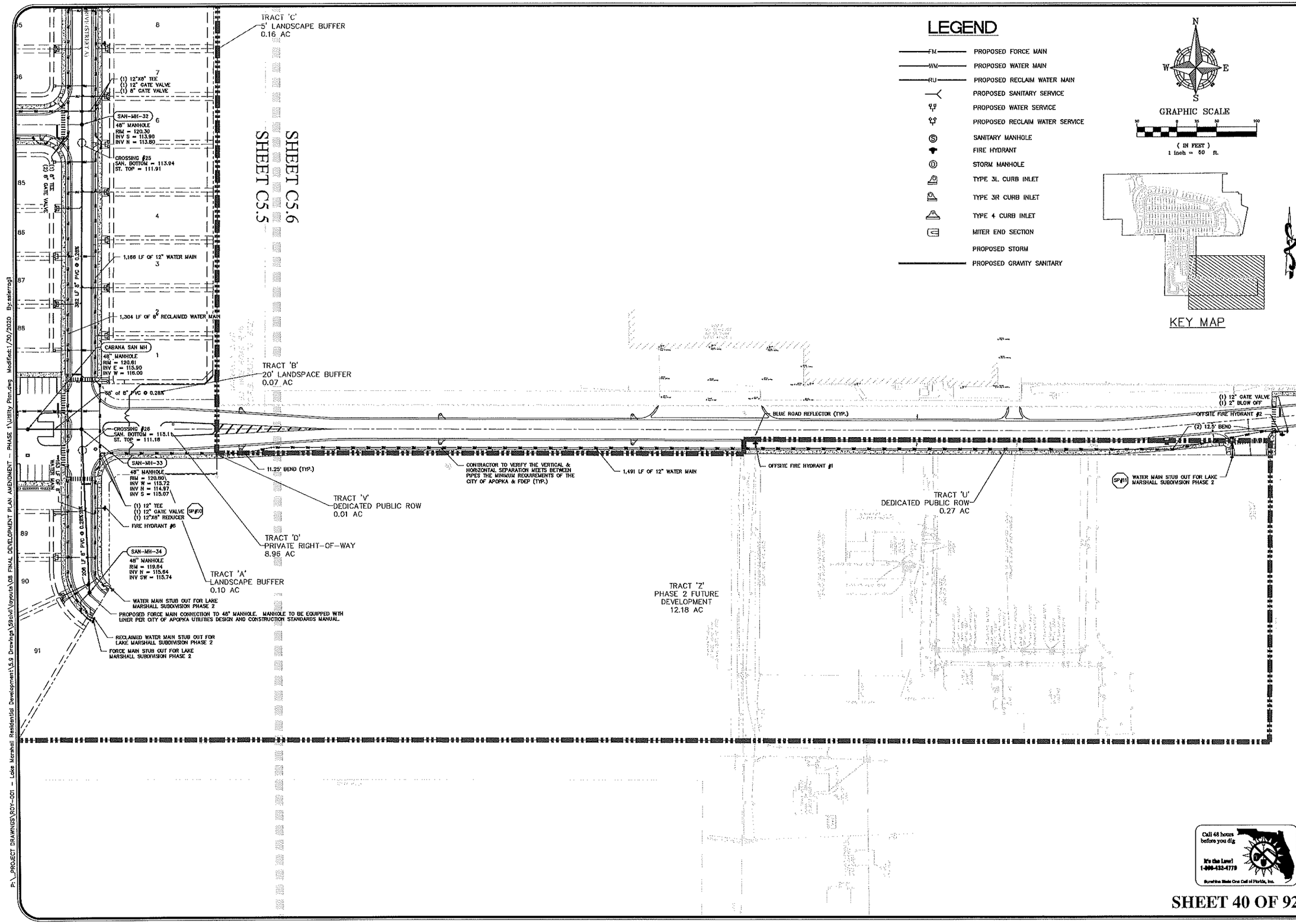
UTLITY PLAN – SOUTH
FINAL DEVELOPMENT PLAN

LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

SCALE 1" = 50'	DRAWN: S. SIERRA-GIL	DESIGNED: G. SANCHEZ	
PROJECT ROY-001	CHECKED: L. CLASSON	DATE: 1/30/2020	
SHEET C5.5			

3/30/20

P:_PROJECT DRAWINGS\ROY-001 – Lake Marshall Residential Development\5.0 Drawings\5Civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT – PHASE 1\Utility Plan.dwg Modified:1/30/2020 By:sdiergs



REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/21/20	FDP AMENDMENT - GRADING REVISION	SCS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	03/15/18	S.F.WMD COMMENTS DATED 03/13/18	SCS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/16/18	SCS

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LICENSE OF BUSINESS CERTIFICATE OF AUTHORIZATION #27-0

UTILITY PLAN – SOUTHEAST
FINAL DEVELOPMENT PLAN

LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

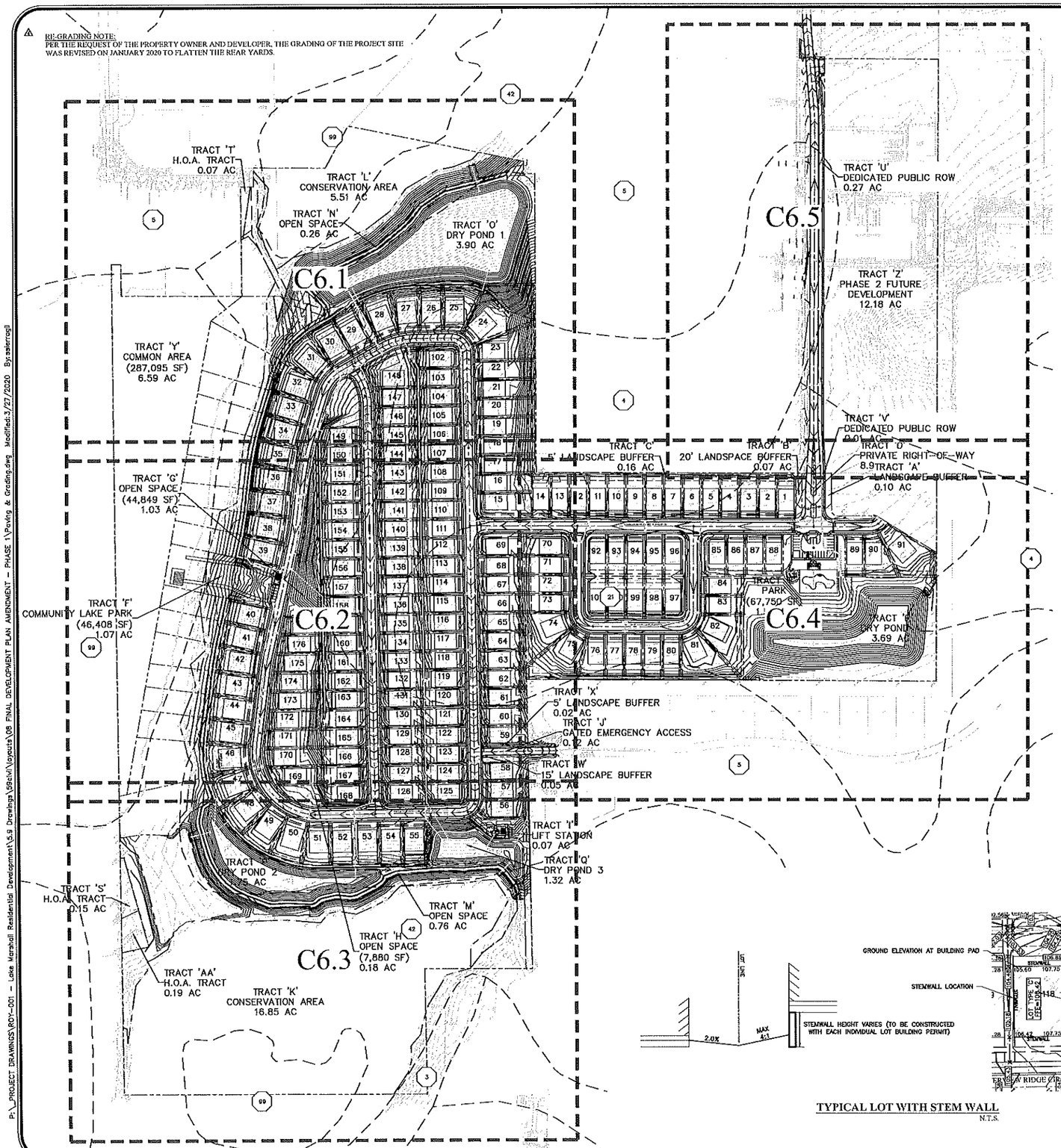
DRAWN: S. SIERRA-GIL
DESIGNED: O. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/30/2020

SCALE: 1" = 50'
PROJECT: ROY-001
SHEET: C5.6

3/30/20

P:_PROJECT DRAWINGS\ROY-001 – Lake Marshall Residential Development\5.9 Drawings\59civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT – PHASE 1\Utility Plan.dwg Modified:1/30/2020 By:sslerrogil

RE-GRADING NOTE:
PER THE REQUEST OF THE PROPERTY OWNER AND DEVELOPER, THE GRADING OF THE PROJECT SITE WAS REVISED ON JANUARY 2020 TO FLATTEN THE REAR YARDS.



SOILS LEDGEND:

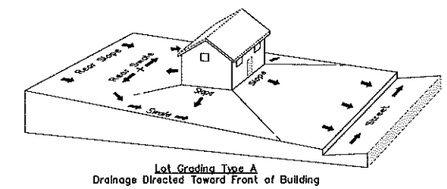
——— ———	SOILS LINE
3	BASINGER FINE SAND, DEPRESSINAL, 0 TO 1% SLOPES (HYD: A/D)
4	CANDLER FINE SAND, 0 TO 5% SLOPES (HYD: A)
5	CANDLER FINE SAND, 5 TO 12% SLOPES (HYD: A)
21	LAKE FINE SAND, 0 TO 5% SLOPES (HYD: A)
42	SANIBEL MUCK (HYD: A/D)
99	WATER

GRAPHIC SCALE

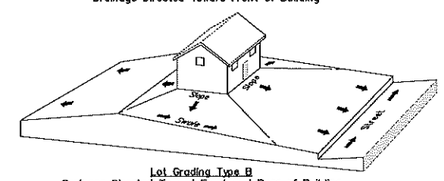
(IN FEET)
1 inch = 160 ft.

GRADING PLAN LEGEND:

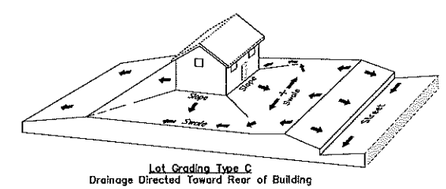
123.3	PROPOSED GRADE
123.3	EXISTING GRADE
123	PROPOSED CONTOUR
123	EXISTING CONTOUR



Lot Grading Type A
Drainage Directed Toward Front of Building



Lot Grading Type B
Drainage Directed Toward Front and Rear of Building



Lot Grading Type C
Drainage Directed Toward Rear of Building

GRADING NOTES:

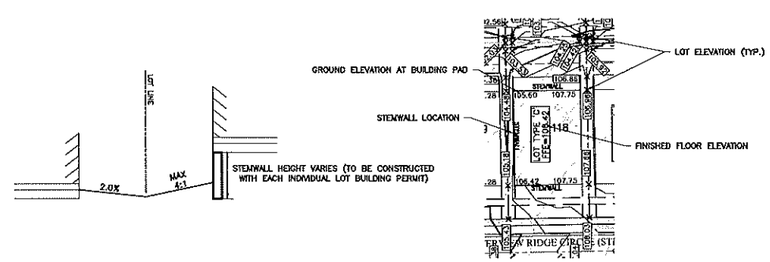
1. FINISHED FLOOR TO BE SET 18" ABOVE THE ELEVATION OF 100 YEAR FLOOD FOR THOSE SITES LOCATED IN SPECIAL FLOOD HAZARD AREA.
2. ALL GRADED LOTS SHALL PROVIDE A MINIMUM OF 2.0% SLOPE AWAY FROM THE HOUSE FOR A MINIMUM OF 5 FEET ON ALL SIDES
3. PER OWNERS REPRESENTATIVE, A THICKENED EDGE MONOLITHIC FOOTING UP TO 32" IS PERMISSIBLE AS OPPOSED TO A STEM WALL
4. PROPOSED FINISHED FLOOR WITH A STEM WALL OR THICKENED EDGE MONOLITHIC FOOTING MUST HAVE THE DRIVEWAY BE LOCATED ON HIGH SIDE OF LOT
5. FINISH FLOOR TO BE SET 1' ABOVE THE DESIGN HIGH WATER ELEVATION OF ADJACENT STORMWATER RETENTION / DETENTION PONDS
6. REFER TO EROSION CONTROL AND DEMOLITION PLANS FOR OVER EXCAVATION AREAS BASED ON GEOTECHNICAL BORING DATA
7. PER CITY OF APOPKA DESIGN GUIDELINES, NO LOTS SHALL BE ALLOWED TO DRAIN ACROSS ADJACENT LOTS.
8. A SLOPE STABILITY ANALYSIS FOR AREAS WITH A SLOPE OF 3H:1V IS PROVIDED WITH THIS FINAL DEVELOPMENT PLAN SUBMITTAL.

REAR YARD DRAIN NOTES:

1. EACH INDIVIDUAL LOT SHALL HAVE A CONVEYANCE SWALE WITH A MINIMUM DEPTH OF ONE FOOT (1') ADJACENT TO A RETAINING WALL.
2. REAR YARD DRAINS SHALL BE DESIGNED TO PREVENT STORMWATER DRAINAGE FROM FLOWING OVER TOP OF RETAINING WALLS.
3. ALL REAR YARD DRAINS SHALL HAVE A CONCRETE COLLAR (REFER TO CONCRETE COLLAR DETAIL ON SHEET C9.1).
4. ALL REAR YARD DRAINS SHALL BE A MINIMUM OF 12", AND GRATES SHALL MEET H-20 LOAD RATING FOR PEDESTRIAN TRAFFIC.

RETAINING WALL NOTES:

1. A 42" DECORATIVE RAILING/FENCE IS REQUIRED FOR ALL PORTIONS OF RETAINING WALLS DESIGNED AT GREATER THAN 30".
2. REFER TO RETAINING WALL STRUCTURAL DESIGN PLANS AND CALCULATIONS BEING SUBMITTED WITH THE FINAL DEVELOPMENT PLANS.



TYPICAL LOT WITH STEM WALL
N.T.S.

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SHEET 41 OF 92

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
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A	03/15/18	S/PROJ COMMENTS DATED 03/15/18	SCS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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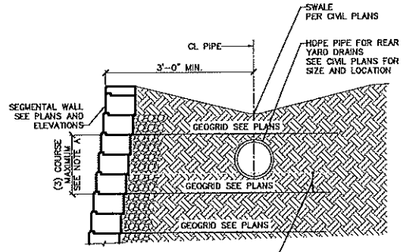
EACH OF THE COMPANIES OF APPIAN ENGINEERING GROUP

OVERALL PAVING & GRADING PLAN
FINAL DEVELOPMENT PLAN
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: C. SANCHEZ
CHECKED: L. CLASSON
DATE: 3/25/2020
SCALE: 1" = 160'
PROJECT: ROY-001
SHEET: C6.0

3/31/20

P:_PROJECT DRAWINGS\ROY-001 – Lake Marshall Residential Development\5.9 Drawings\59civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT – PHASE 1\Paving & Grading.dwg Modified:3/27/2020 By:sstierragil



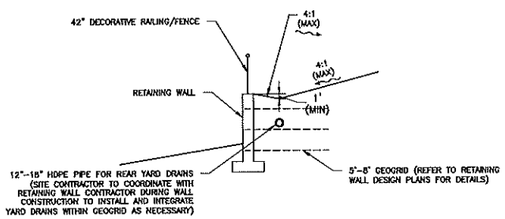
NOTES:

(A) IN NO CASE SHALL GEO-GRID SPACING EXCEED (3) COURSES.

(B) AT YARD DRAIN, WHERE PIPE RUNS VERTICAL TO PROPOSED SURFACE GRADE, GEO-GRID SHALL BE HAND-CUT TO ALLOW PASS THROUGH OF PIPE. (MAX. 24" DIA. HOLE THROUGH GRO-GRID)

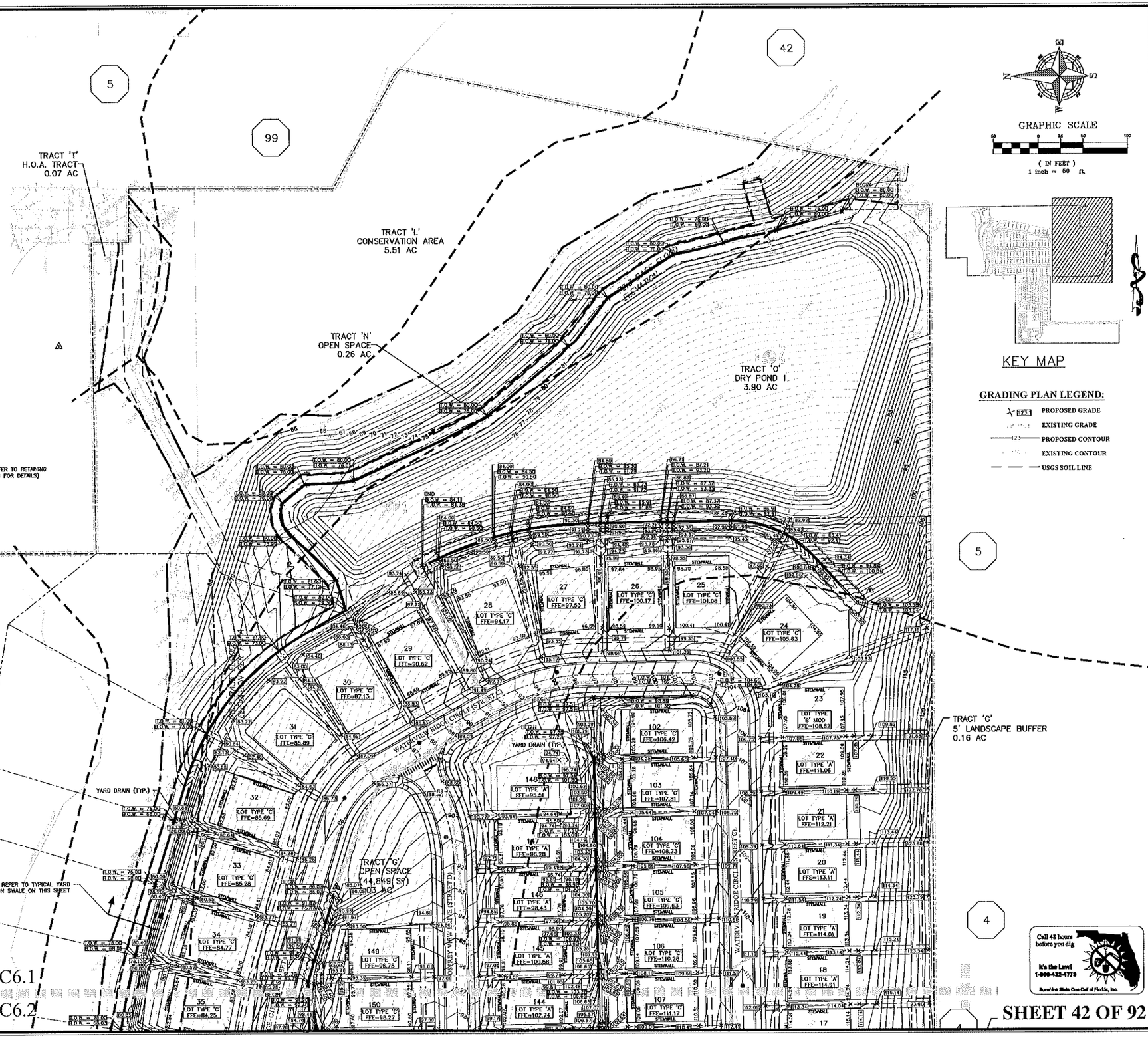
YARD DRAIN TYPICAL WALL SECTION

SCALE: N.T.S.



TYPICAL YARD DRAIN SWALE

N.T.S.



GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.

KEY MAP

GRADING PLAN LEGEND:

- PROPOSED GRADE
- EXISTING GRADE
- PROPOSED CONTOUR
- EXISTING CONTOUR
- USGS SOIL LINE

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REV.	DATE	DESCRIPTION	BY
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A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	07/21/20	FDP AMENDMENT - GRADING REVISION	SCS
A	05/06/18	CITY OF APOPKA COMMENTS DATED 05/02/18	SCS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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PAVING & GRADING - NORTHEAST FINAL DEVELOPMENT PLAN

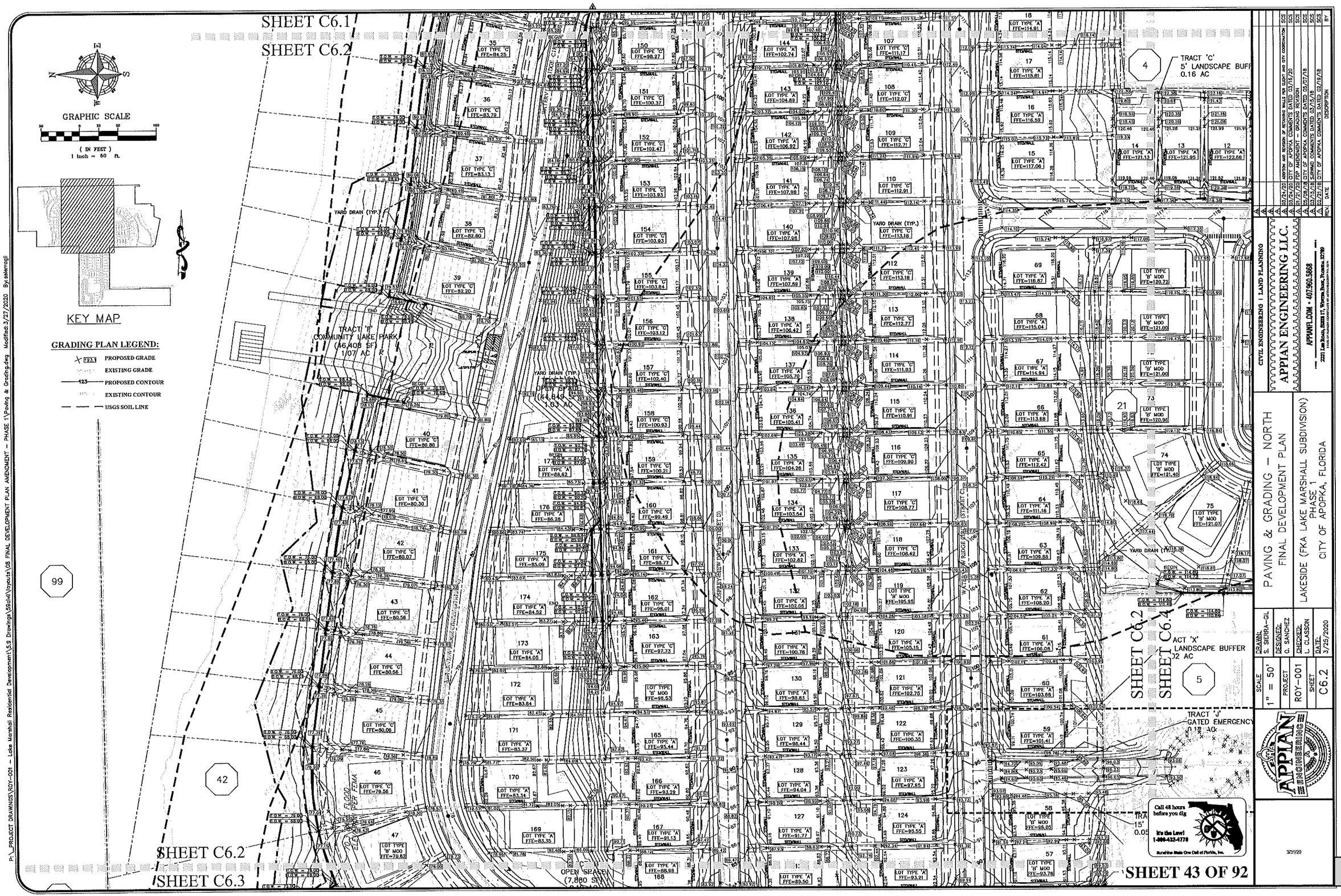
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION) PHASE 1

CITY OF APOPKA, FLORIDA

DRAWN:	S. SIERRA-GIL
DESIGNED:	O. SANCHEZ
CHECKED:	L. CLASSON
DATE:	3/25/2020
SCALE	1" = 50'
PROJECT	ROY-001
SHEET	C6.1

3/31/20

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\1.5.9 Drawings\35civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Paving & Grading.dwg Modified:3/27/2020 By:sierragil


SHEET C6.1
SHEET C6.2
GRAPHIC SCALE
(IN FEET)
1 inch = 60 ft.
KEY MAP
GRADING PLAN LEGEND:
PROPOSED GRADE
EXISTING GRADE
PROPOSED CONTOUR
EXISTING CONTOUR
USGS SOIL LINE
TRACT 'C'
5' LANDSCAPE BUFF
0.16 AC
TRACT 'F'
COMMUNITY LAKE PARK
(46,408 SF)
1.07 AC
OPEN SPACE
(44,848 SF)
1.03 AC
OPEN SPACE
(7,880 SF)
YARD DRAIN (TYP.)
SHEET C6.2
SHEET C6.4
SHEET C6.3
SHEET 43 OF 92
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PAVING & GRADING – NORTH
FINAL DEVELOPMENT PLAN
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA
DRAWN: S. SIERRA-GIL
DESIGNED: G. SANCHEZ
CHECKED: L. CLASSON
DATE: 3/25/2020
SCALE 1" = 50'
PROJECT ROY-001
SHEET C6.2
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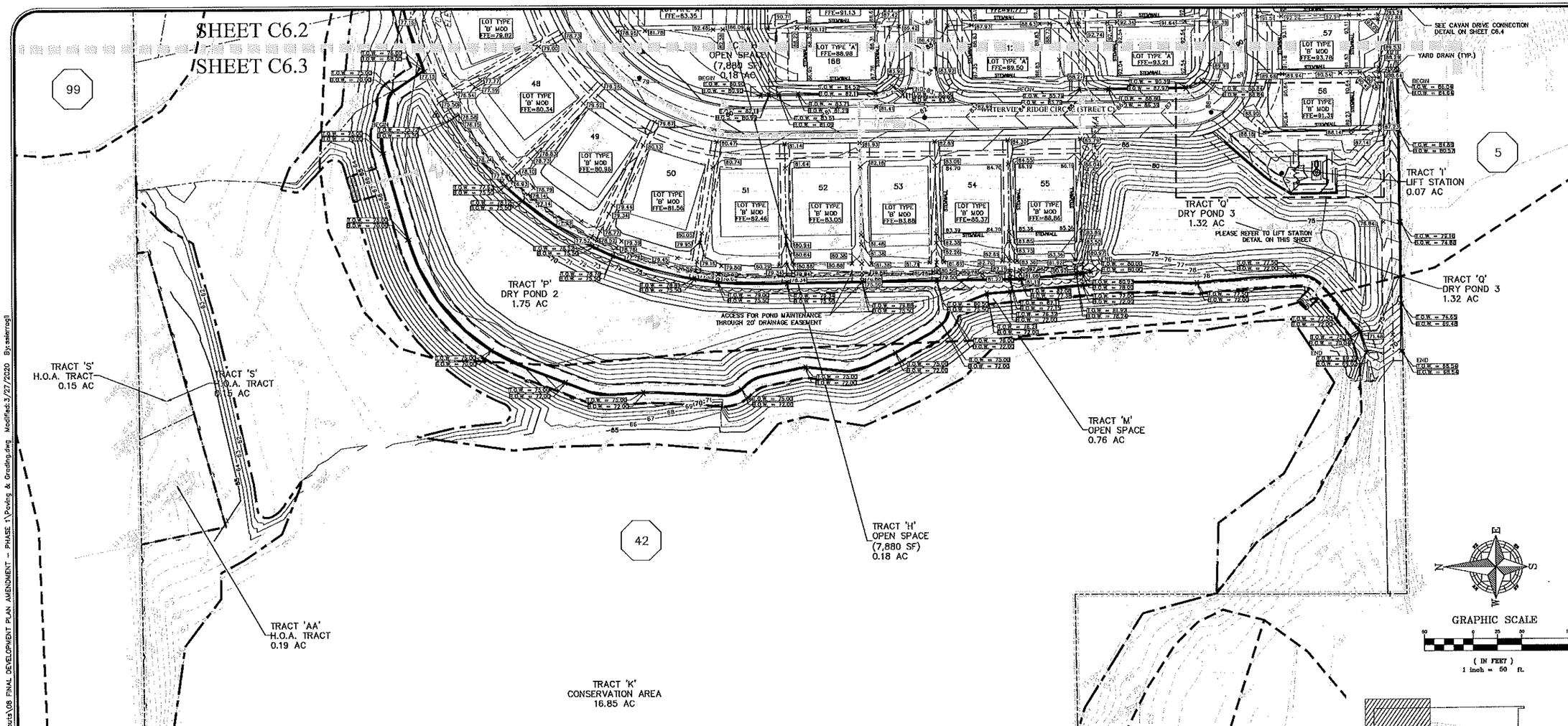
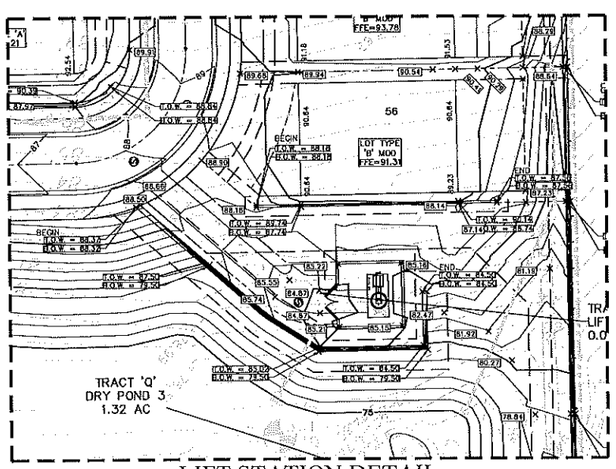
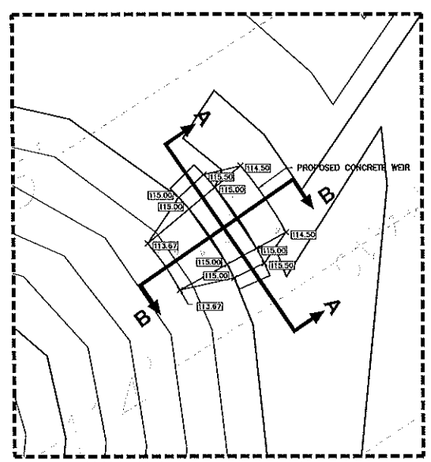
Sunshine State One Call of Florida, Inc.
3/31/20
P:_PROJECT DRAWINGS\ROY-001 – Lake Marshall Residential Development\59 Drawings\59civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT – PHASE 1\Paving & Grading.dwg Modified:3/27/2020 By:sierrag

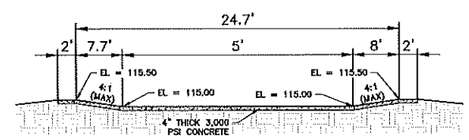




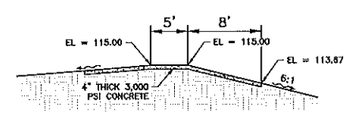
LIFT STATION DETAIL
1" = 30'



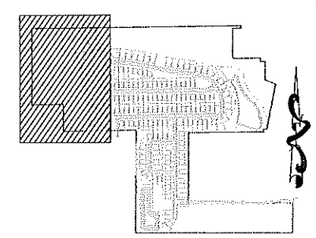
CONCRETE WEIR DETAIL
1" = 10'



WEIR SECTION A-A
N.T.S.



WEIR SECTION B-B
N.T.S.



KEY MAP

GRADING PLAN LEGEND:

- PROPOSED GRADE
- EXISTING GRADE
- PROPOSED CONTOUR
- EXISTING CONTOUR
- USGS SOIL LINE

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SHEET 44 OF 92

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	07/21/20	TRP AMENDMENT - GRADING REVISION	SCS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	03/15/18	SUBMAD COMMENTS DATED 03/12/18	SCS
A	02/19/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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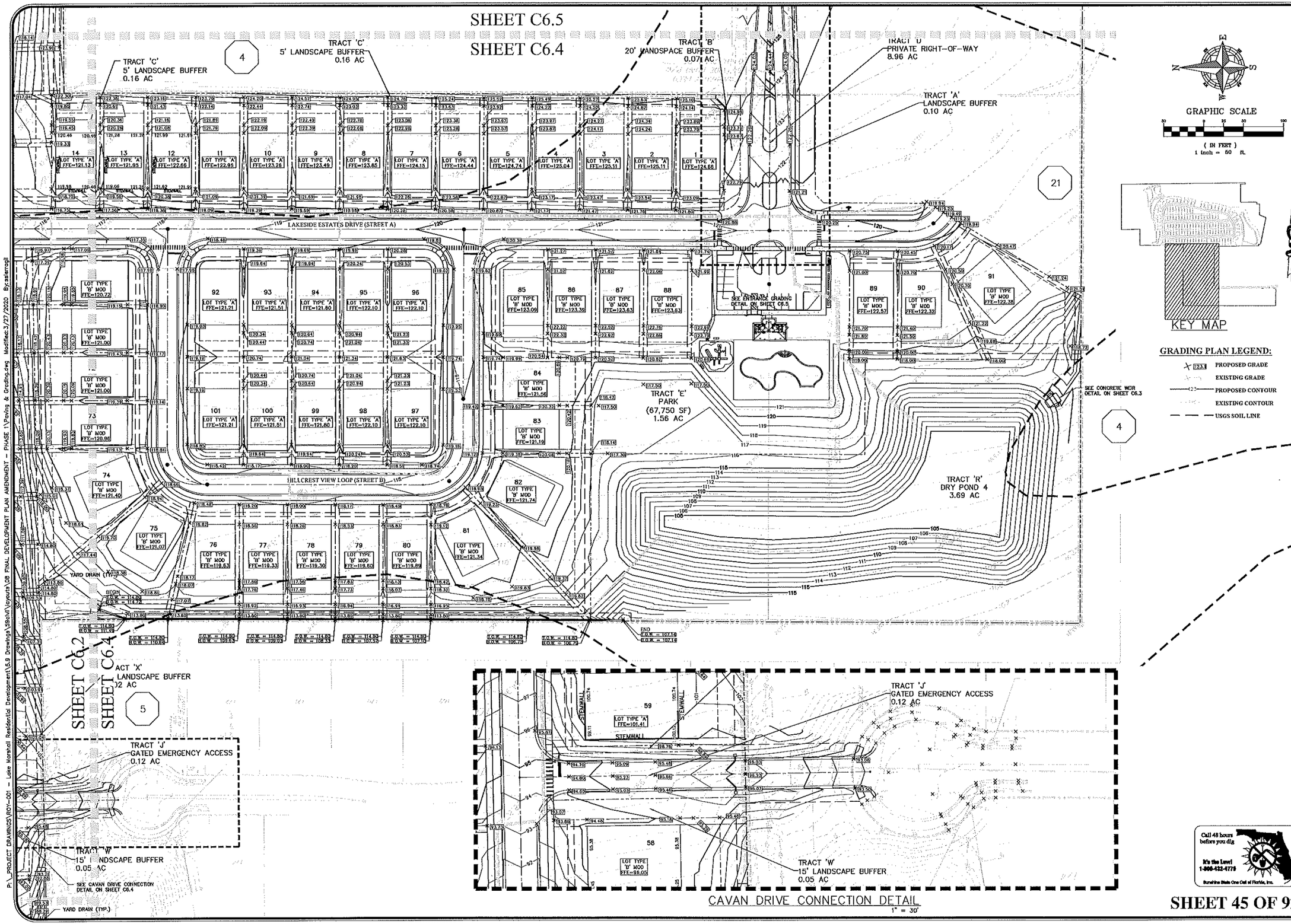
AUTH. OF FLORIDA CERTIFICATE OF AUTHORIZATION #29

PAVING & GRADING – NORTHWEST
FINAL DEVELOPMENT PLAN
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: C. SANCHEZ
CHECKED: L. CLASSON
DATE: 3/25/2020
SCALE: 1" = 50'
PROJECT: ROY-001
SHEET: C6.3

3/31/20

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.9 Drawings\59civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Paving & Grading.dwg Modified:3/27/2020 By:sesierragil



REV.	DATE	DESCRIPTION	
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/21/20	TDP AMENDMENT - GRADING REVISION	SCS
A	05/09/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	03/15/18	SUBMAND COMMENTS DATED 03/15/18	SCS
A	07/19/16	CITY OF APOPKA COMMENTS DATED 7/19/16	SCS

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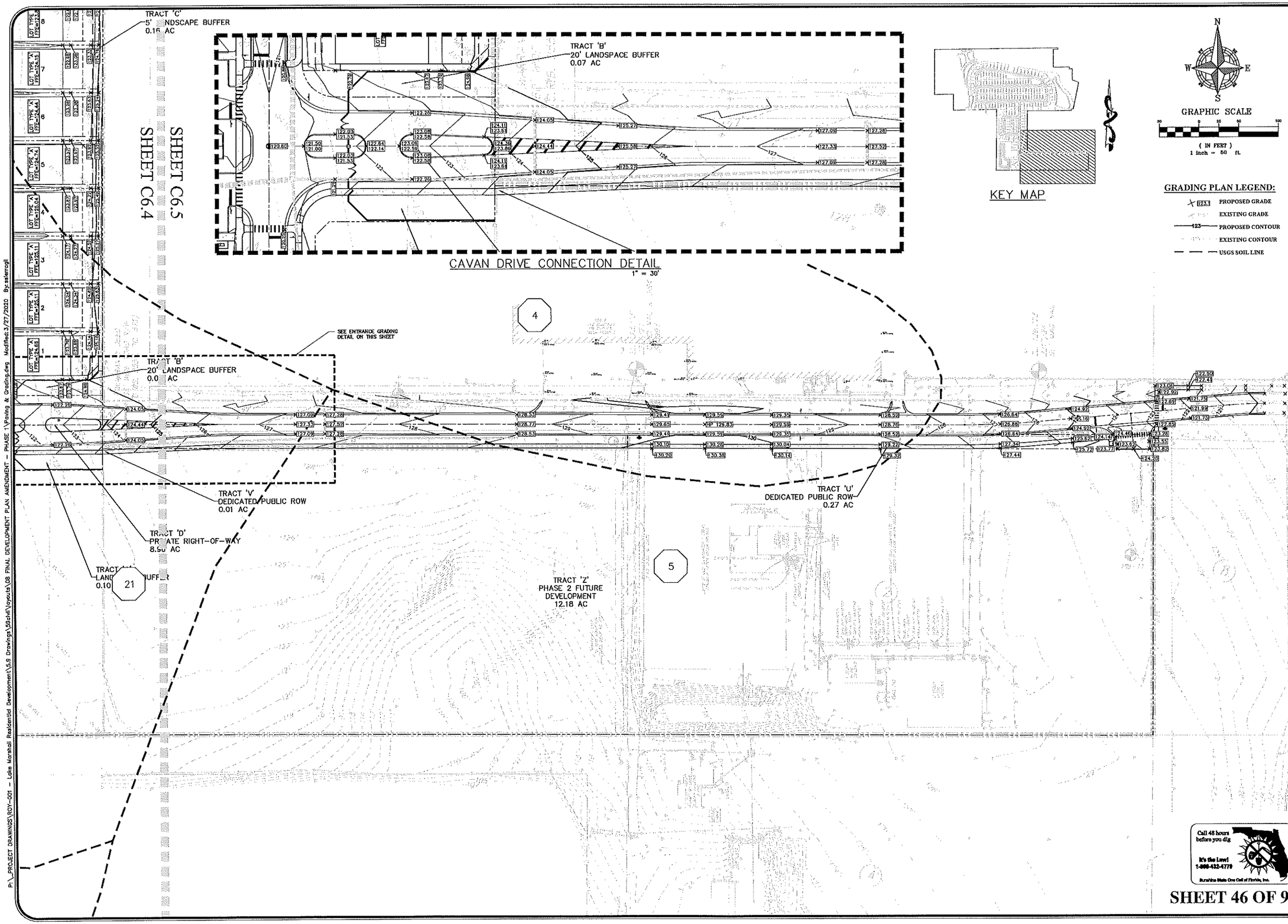
PAVING & GRADING - SOUTH
FINAL DEVELOPMENT PLAN
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

SCALE 1" = 50'	DRAWN: S. SIERRA-GIL	DESIGNED: O. SANCHEZ	CHECKED: L. CLASSON
PROJECT ROY-001	SHEET C6.4	DATE: 3/25/2020	

3/31/20

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.9 Drawings\Sheet\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Paving & Grading.dwg Modified:3/27/2020 By:sstarrogil



REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	03/04/20	CITY OF APOPKA COMMENTS DATED 02/07/20	SCS
A	03/15/18	CITY OF APOPKA COMMENTS DATED 03/07/18	SCS
A	03/15/18	SJRWMD COMMENTS DATED 03/15/18	SCS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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PAVING & GRADING – SOUTHEAST
FINAL DEVELOPMENT PLAN

LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: C. SANCHEZ
CHECKED: L. CLASSON
DATE: 3/25/2020
SCALE: 1" = 50'
PROJECT: ROY-001
SHEET: C6.5

3/31/20

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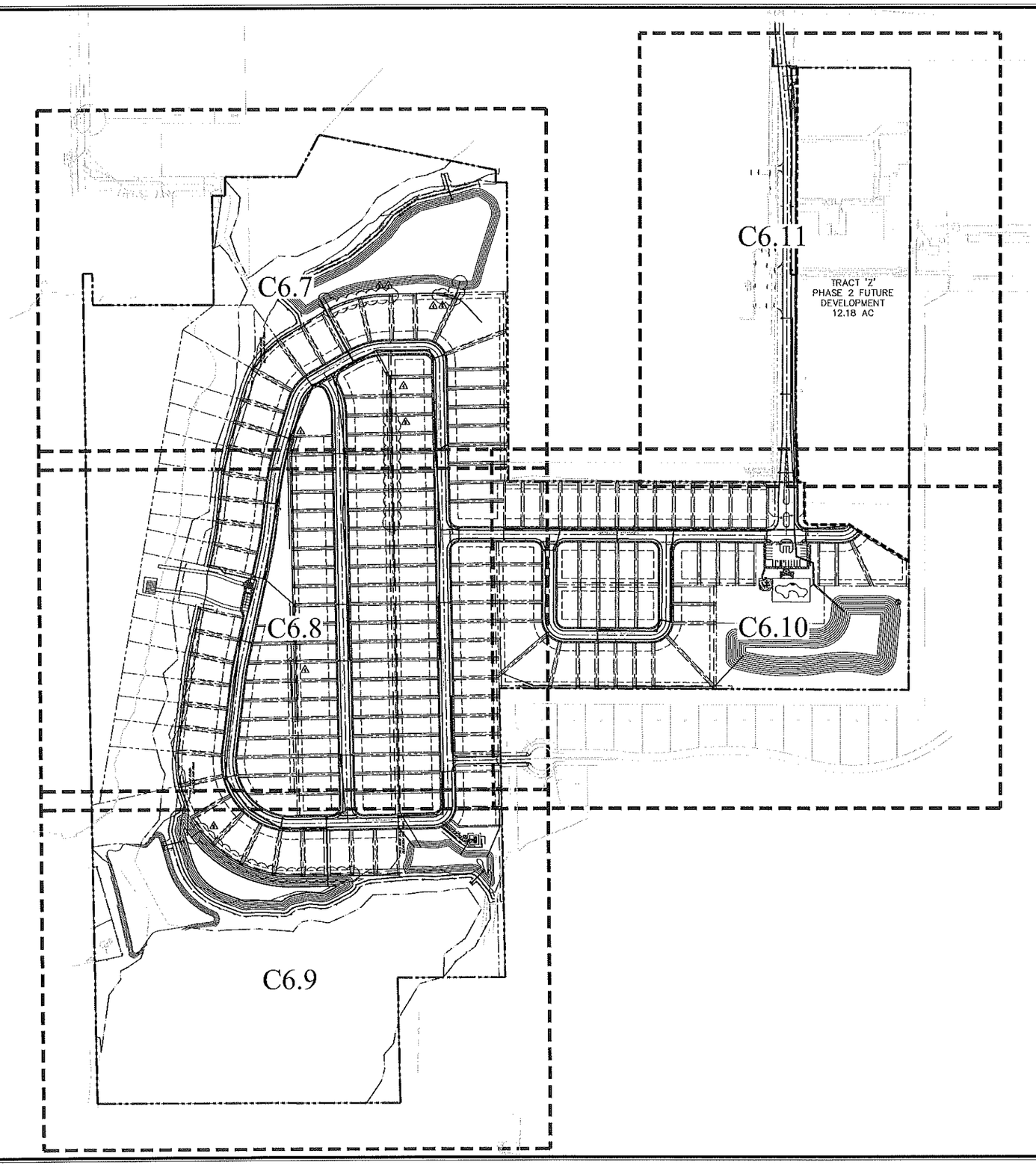
P:_PROJECT DRAWINGS\ROY-001 – Lake Marshall Residential Development\5.9 Drawings\39.civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT – PHASE 1\Paving & Grading.dwg Modified:3/27/2020 By:sierrag

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.9 Drawings\39-civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Drainage Plan.dwg, Modified:3/30/2020 By:sierrag



GRAPHIC SCALE

(IN FEET)
1 inch = 160 ft.

LEGEND

- STORM MANHOLE
- TYPE 3L CURB INLET
- TYPE 3R CURB INLET
- TYPE 4 CURB INLET
- MITERED END SECTION
- PROPOSED STORM PIPE
- 102.59* AS-BUILT ELEVATIONS
- 107.93 REVISED ELEVATIONS

SEQ.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SGS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SGS
A	01/21/20	FDP AMENDMENT - GRADING REVISION	SGS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SGS
A	03/15/18	SAFWMD COMMENTS DATED 03/14/18	SGS
A	02/19/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SGS

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Florida Certificate of Authorization No. 31000

OVERALL DRAINAGE PLAN
FINAL DEVELOPMENT PLAN

LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

SCALE	1" = 160'
PROJECT	ROY-001
SHEET	C6.6
DRAWN:	S. SIERRA-GIL
DESIGNED:	G. SANCHEZ
CHECKED:	L. CLASSON
DATE:	3/19/2020

3/31/20

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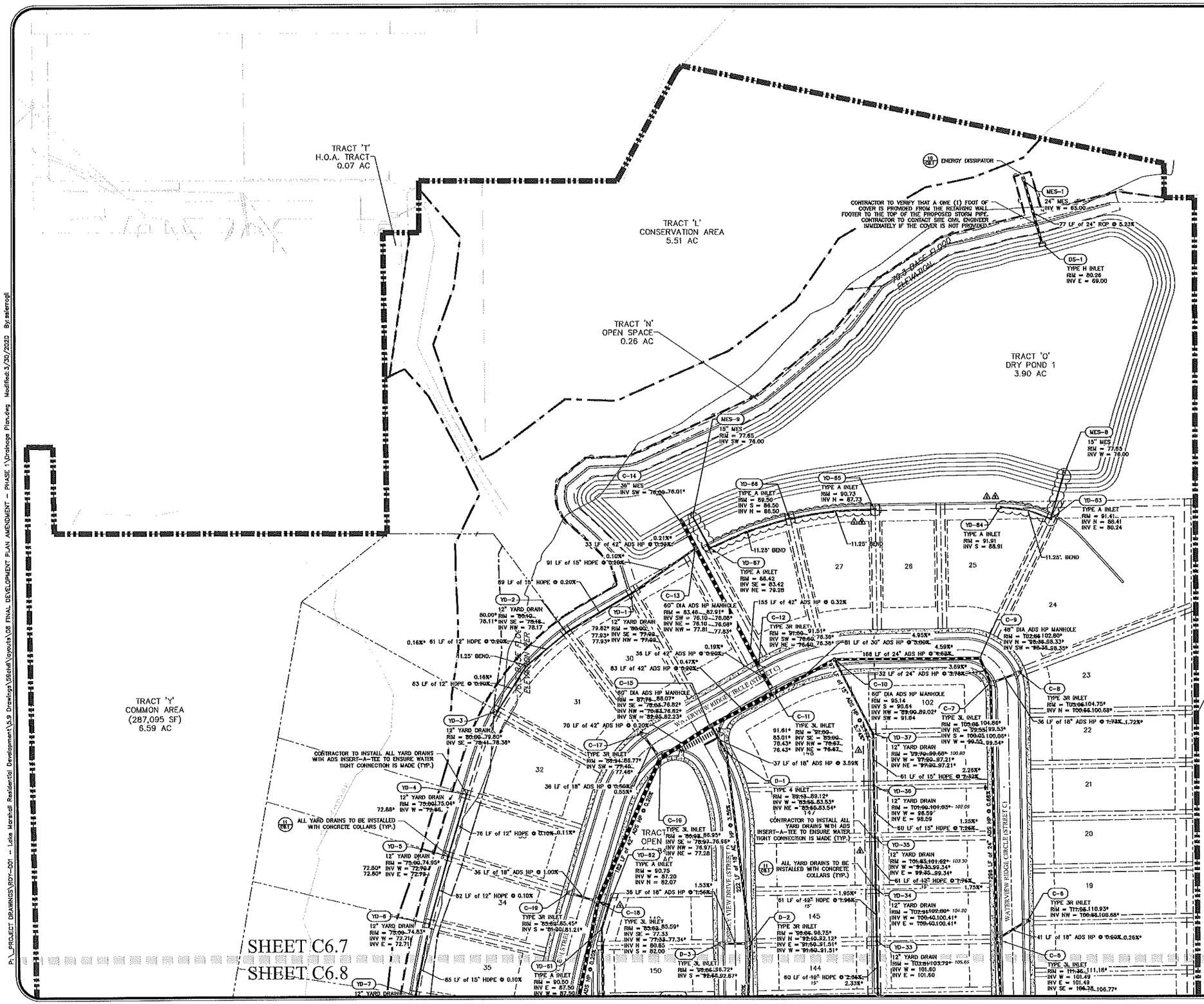
SHEET 47 OF 92



GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.

KEY MAP

LEGEND

- STORM MANHOLE
- TYPE 3L CURB INLET
- TYPE 3R CURB INLET
- TYPE 4 CURB INLET
- MITERED END SECTION
- PROPOSED STORM PIPE
- 102.59* AS-BUILT ELEVATIONS
- 107.93 REVISED ELEVATIONS

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER SUDIT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/21/20	FDP AMENDMENT - GRADING REVISION	SCS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	03/15/18	SETBACK COMMENTS DATED 03/15/18	SCS
A	02/16/18	CITY OF APOPKA COMMENTS DATED 02/13/18	SCS

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BUSINESS ORGANIZATION CERTIFICATE OF AUTHORIZATION #7761

DRAINAGE PLAN – NORTHEAST FINAL DEVELOPMENT PLAN

LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN:	S. SIERRA-GIL
DESIGNED:	Q. SANCHEZ
CHECKED:	L. CLASSON
DATE:	3/19/2020
SCALE	1" = 50'
PROJECT	ROY-001
SHEET	C6.7

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P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.9 Drawings\56civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Drainage Plan.dwg Modified:3/30/2020 By:sierrogil

GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.

KEY MAP

LEGEND

- STORM MANHOLE
- TYPE 3L CURB INLET
- TYPE 3R CURB INLET
- TYPE 4 CURB INLET
- MITERED END SECTION
- PROPOSED STORM PIPE
- 102.59* AS-BUILT ELEVATIONS
- 107.93 REVISED ELEVATIONS

SHEET C6.7
SHEET C6.8

TRACT 'C'
5' LANDSCAPE BUFFER
0.16 AC

TRACT 'G'
OPEN SPACE
(1.07 AC)

TRACT 'H'
OPEN SPACE
(7,880 SF)
0.18 AC

TRACT 'X'
LANDSCAPE BUFFER
0.02 AC

TRACT 'J'
GATED EMERGENCY ACC
0.12 AC

SHEET C6.8
SHEET C6.10

SHEET C6.8
SHEET C6.9

CONTRACTOR TO VERIFY THAT A ONE (1) FOOT OF COVER IS PROVIDED FROM THE RETAINING WALL FOOTER TO THE TOP OF THE PROPOSED STORM PIPE. CONTRACTOR TO CONTACT SITE CIVIL ENGINEER IMMEDIATELY IF THE COVER IS NOT PROVIDED.

CONTRACTOR TO INSTALL ALL YARD DRAINS WITH ADS INSERT-A-TEE TO ENSURE WATER TIGHT CONNECTION IS MADE (TYP.)

ALL YARD DRAINS TO BE INSTALLED WITH CONCRETE COLLARS (TYP.)

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SHEET 49 OF 92

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/21/20	TSP AMENDMENT - GRADING REVISION	SCS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	02/13/18	CITY OF APOPKA COMMENTS DATED 02/13/18	SCS
A	02/05/18	FINAL DEVELOPMENT PLAN	SCS

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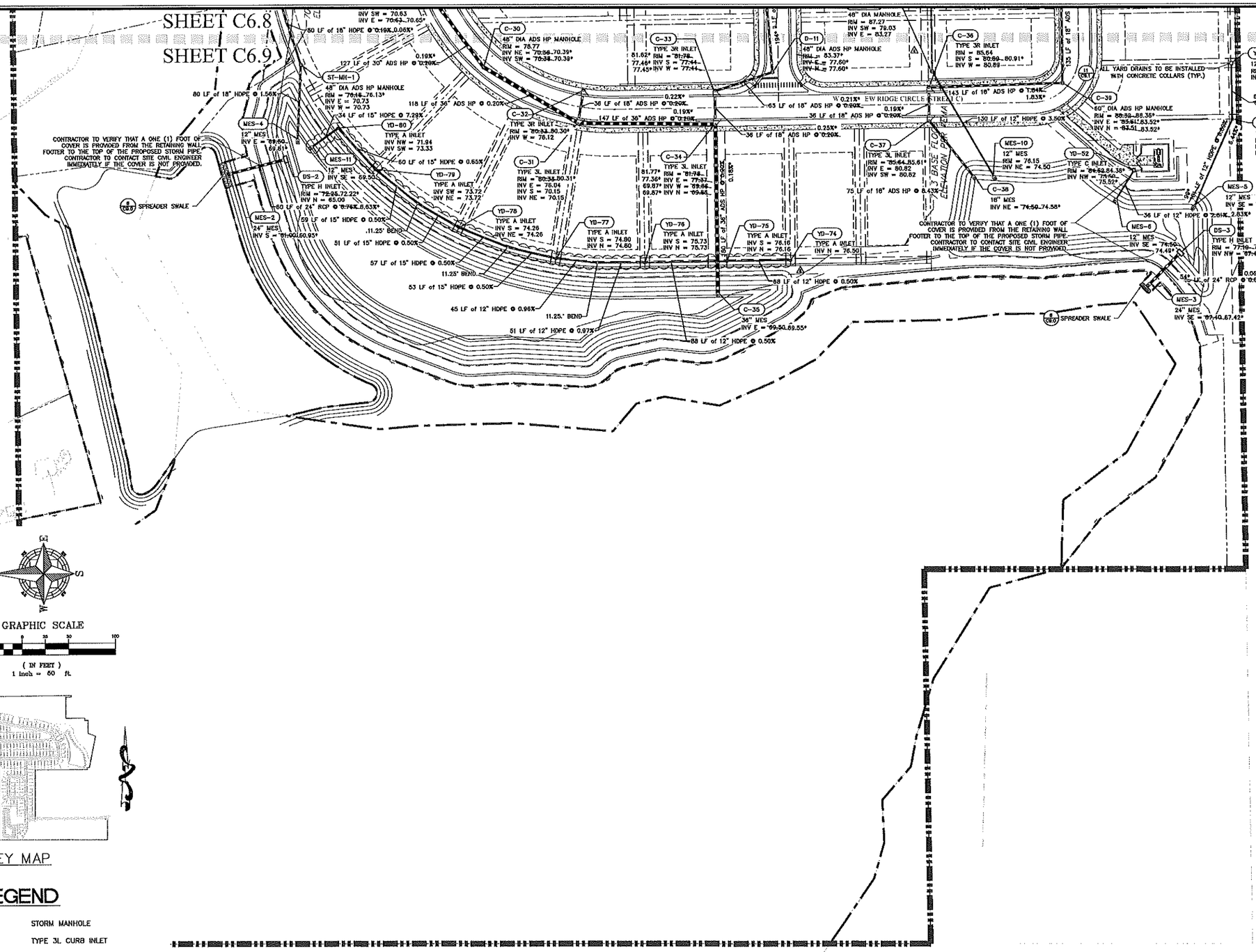
CERTIFICATE OF AUTHORIZATION #0030000

DRAINAGE PLAN – NORTH
FINAL DEVELOPMENT PLAN

LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

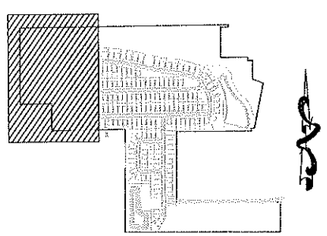
DRAWN: S. SIERRA-GIL
DESIGNED: C. SANCHEZ
CHECKED: L. CLASSON
DATE: 3/19/2020
SCALE: 1" = 50'
PROJECT: ROY-001
SHEET: C6.8

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.9 Drawings\$Social\Layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Drainage Plan.dwg Modified:3/30/2020 By:salarrogil



GRAPHIC SCALE

(IN FEET)
1 inch = 50 ft.



KEY MAP

LEGEND

- STORM MANHOLE
- TYPE 3L CURB INLET
- TYPE 3R CURB INLET
- TYPE 4 CURB INLET
- MITERED END SECTION
- PROPOSED STORM PIPE
- 102.59* AS-BUILT ELEVATIONS
- 107.93 REVISED ELEVATIONS

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SHEET 50 OF 92

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SKS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SKS
A	01/21/20	FDP AMENDMENT - GRADING REVISION	SKS
A	05/09/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SKS
A	02/15/18	CITY OF APOPKA COMMENTS DATED 02/13/18	SKS
A	02/13/18	FDP AMENDMENT	SKS

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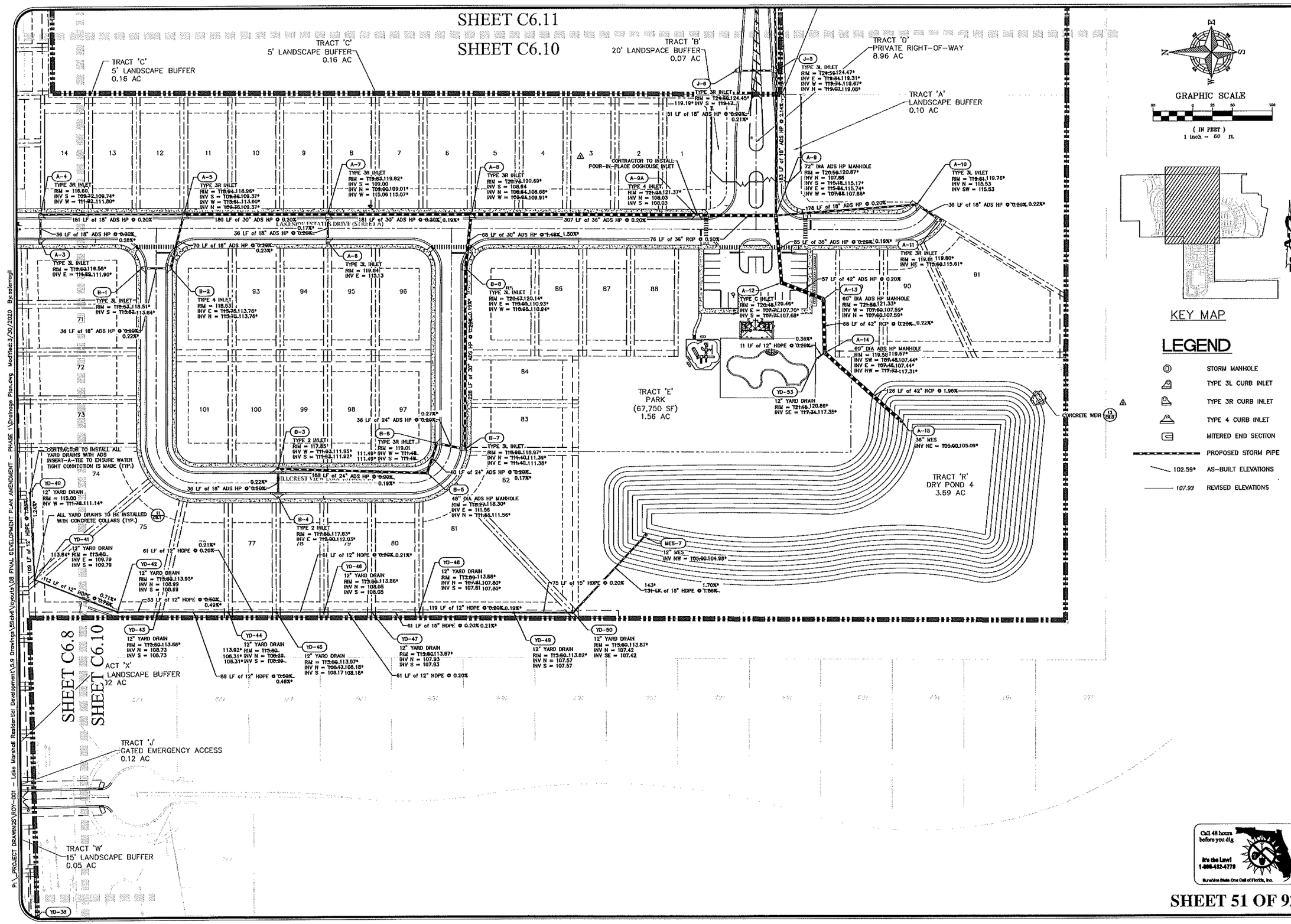
LICENSED BUSINESS CERTIFICATE OF AUTHORIZATION #27000

DRAINAGE PLAN – NORTHWEST
FINAL DEVELOPMENT PLAN
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: C. SANCHEZ
CHECKED: L. CLASSON
DATE: 3/19/2020
SCALE: 1" = 50'
PROJECT: ROY-001
SHEET: C6.9

3/31/20

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.9 Drawings\59civil\layouts\D8 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Drainage Plan.dwg Modified:3/30/2020 By:sslerrogil



REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/31/20	CITY OF APOPKA - GRADING PLAN REVISIONS	SCS
A	03/05/18	S.R.W.M.D. COMMENTS DATED 03/07/18	SCS
A	03/15/18	CITY OF APOPKA COMMENTS DATED 03/15/18	SCS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/15/18	SCS

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DRAINAGE PLAN – SOUTH
FINAL DEVELOPMENT PLAN

LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: O. SANCHEZ
CHECKED: L. CLASSON
DATE: 3/19/2020
SCALE: 1" = 50'
PROJECT: ROY-001
SHEET: C6.10

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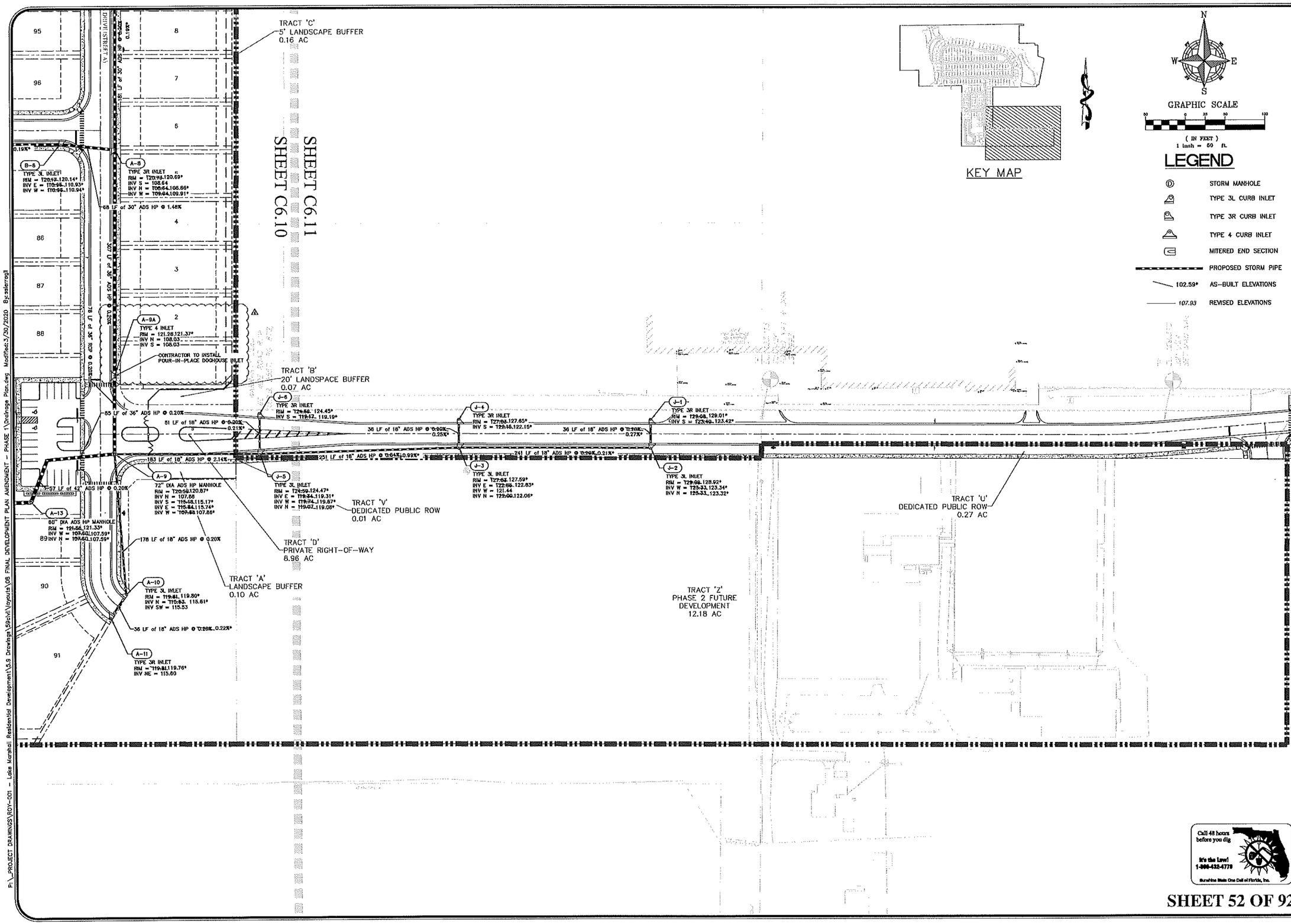
SHEET 51 OF 92

P:_PROJECT DRAWINGS\ROY-001 – Lake Marshall Residential Development\5.9 Drawings\Sitedwl\layouts\CB FINAL DEVELOPMENT PLAN AMENDMENT – PHASE 1\Drainage Plan.dwg Modified:3/30/2020 By:esierragil



SHEET 52 OF 92

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SKS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SKS
A	01/21/20	FDP AMENDMENT - GRADING REVISION	SKS
A	05/09/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SKS
A	03/15/18	SJRWMD COMMENTS DATED 03/15/18	SKS
A	03/12/18	CITY OF APOPKA COMMENTS DATED 03/12/18	SKS

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DRAINAGE PLAN – SOUTHEAST
FINAL DEVELOPMENT PLAN

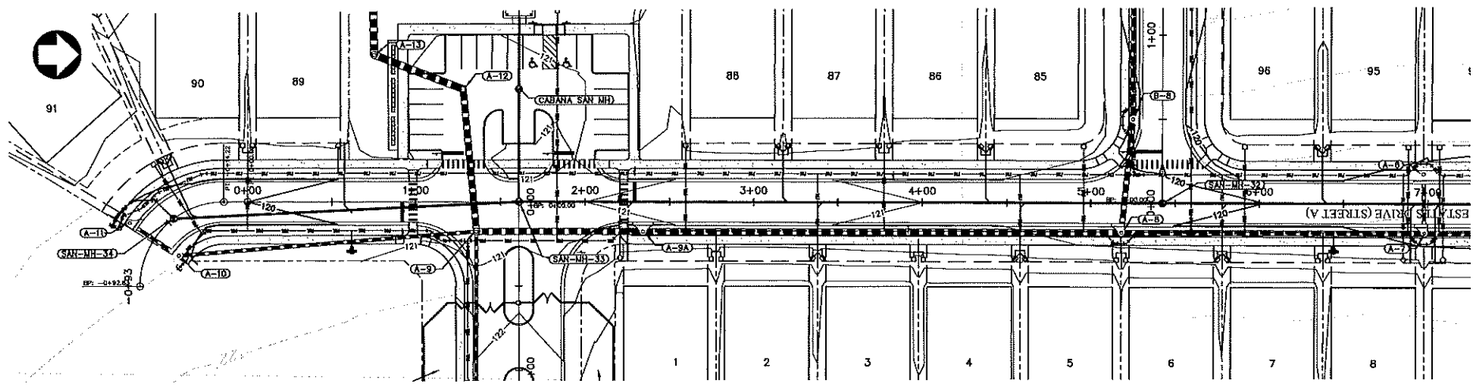
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

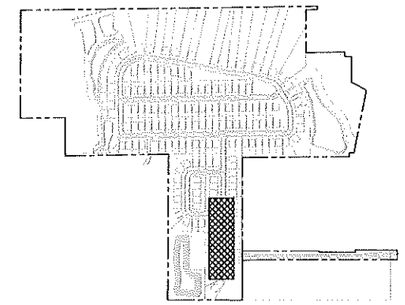
DRAWN: S. SIERRA-GIL
DESIGNED: C. SANCHEZ
CHECKED: L. CLASSON
DATE: 3/19/2020

SCALE: 1" = 50'
PROJECT: ROY-001
SHEET: C6.11

3/31/20

P:_PROJECT DRAWINGS\ROY-001 – Lake Marshall Residential Development\3.9 Drawings\59civil\layouts\06 FINAL DEVELOPMENT PLAN AMENDMENT – PHASE 1\Drainage Plan.dwg Modified:3/30/2020 By:salerogil



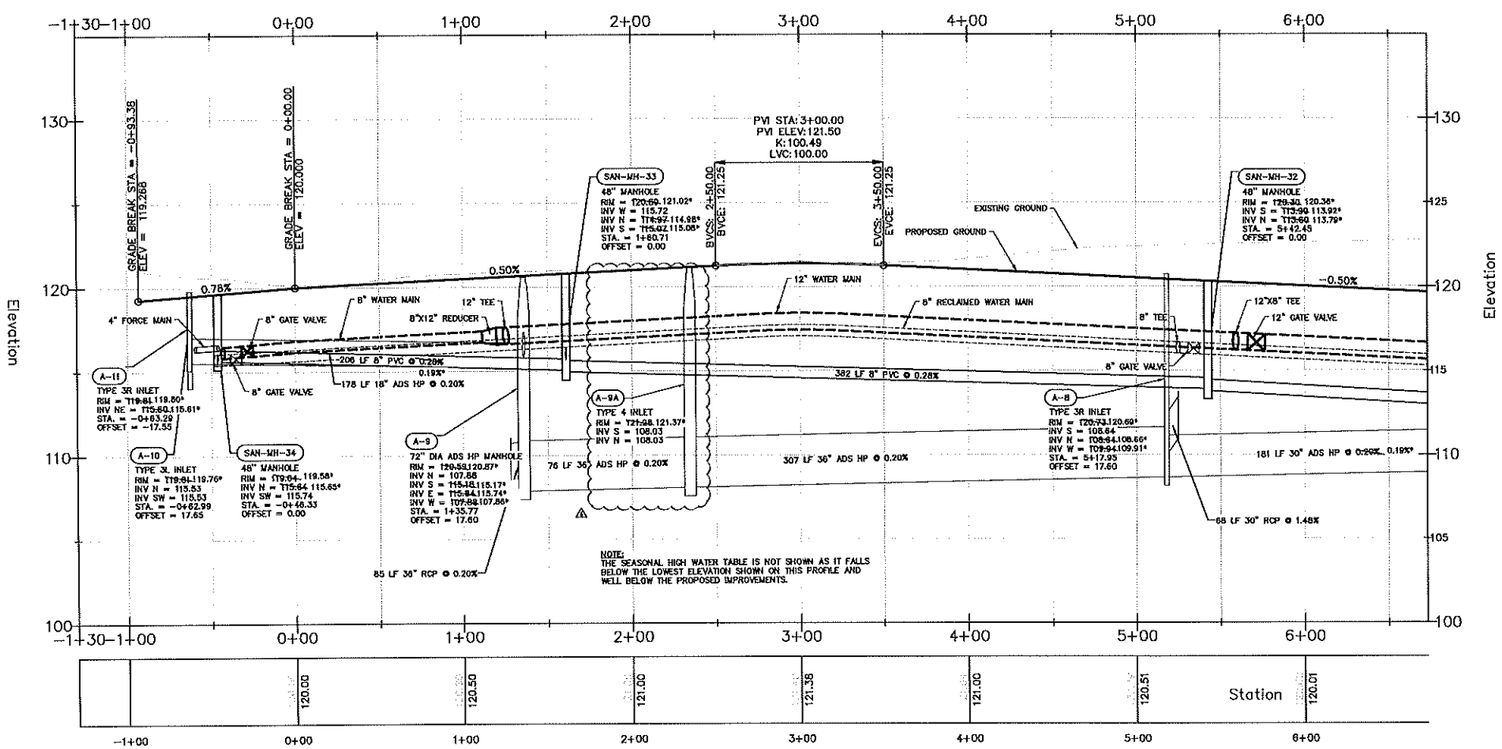


KEY MAP

LEGEND

102.59* AS-BUILT ELEVATIONS

107.93 REVISED ELEVATIONS



VERTICAL SCALE: 1" = 4'
HORIZONTAL SCALE: 1" = 40'

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SHEET 53 OF 92

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SGS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SGS
A	07/21/20	FDP AMENDMENT - GRADING REVISION	SGS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SGS
A	02/11/18	CITY OF APOPKA COMMENTS DATED 01/31/18	SGS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SGS

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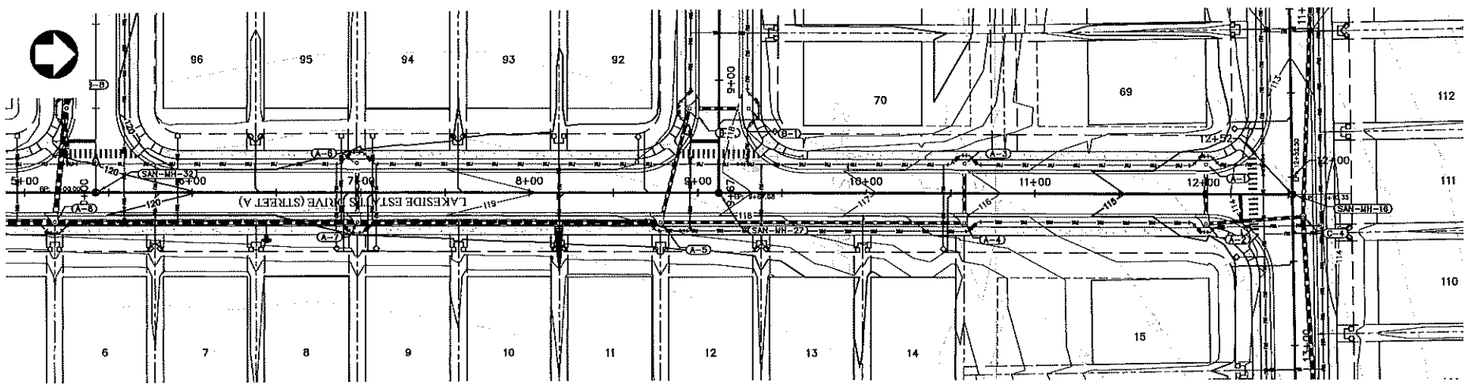
PLAN & PROFILE - STREET A - STA. -0+93 TO STA. 6+50
FINAL DEVELOPMENT PLAN

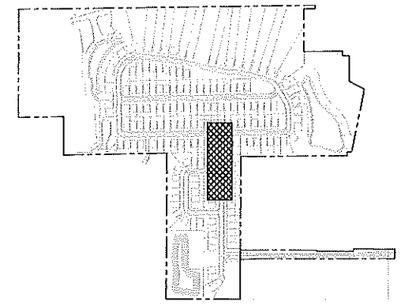
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: O. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/31/2020
SCALE: 1" = 40'
PROJECT: ROY-001
SHEET: C7.0

3/31/20

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.0 Drawings\Sgsiel\royuta\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Plan & Profile.dwg Modified:1/31/2020 By:sgsierregil



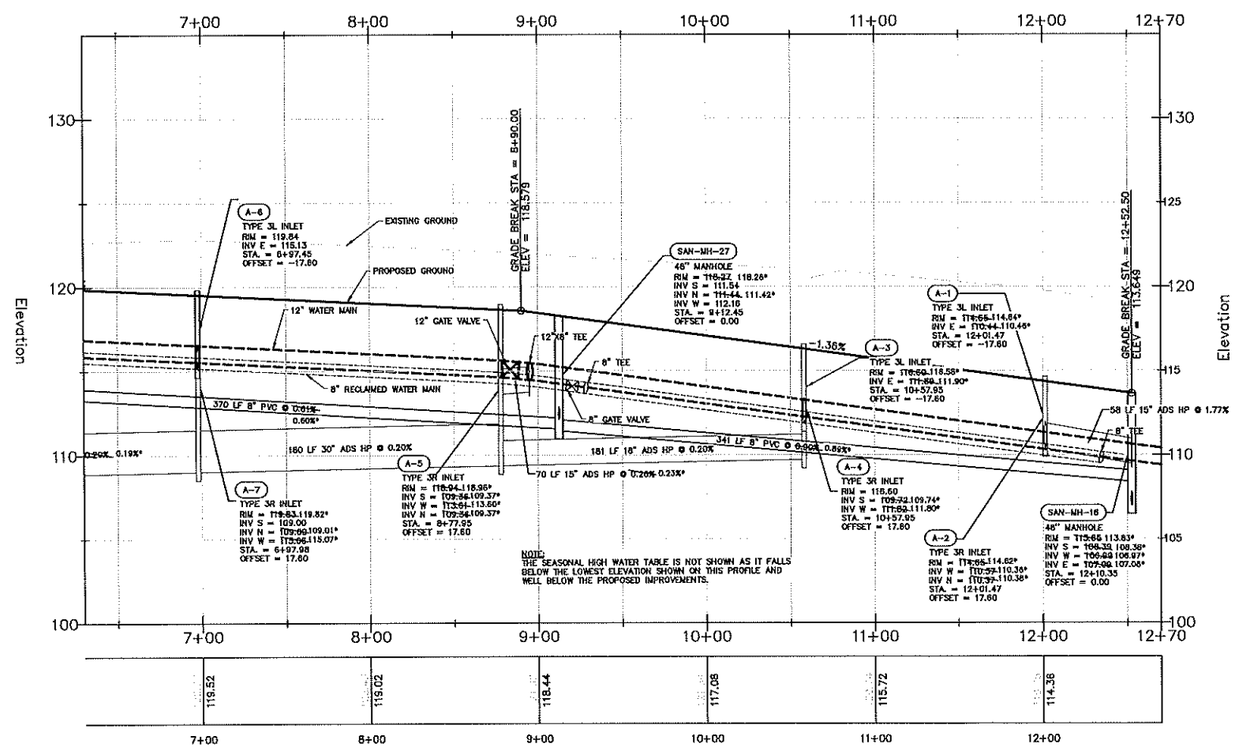


KEY MAP

LEGEND

102.59* AS-BUILT ELEVATIONS

107.93 REVISED ELEVATIONS



VERTICAL SCALE: 1" = 4'
HORIZONTAL SCALE: 1" = 40'

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SHEET 54 OF 92

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/15/20	SCS
A	01/21/20	PDP AMENDMENT - GRADING REVISION	SCS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	03/15/18	SJRWMD COMMENTS DATED 03/13/18	SCS
A	02/15/18	CITY OF APOPKA COMMENTS DATED 02/13/18	SCS

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STATE OF FLORIDA CERTIFICATE OF AUTHORIZATION #29-0-0

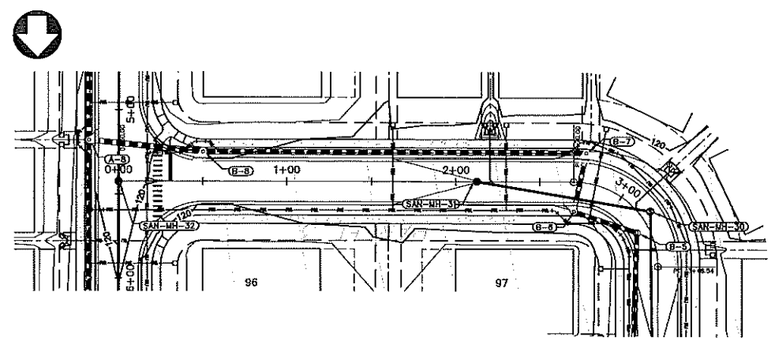
PLAN & PROFILE – STREET A –
STA. 6+50 TO STA. 12+70
FINAL DEVELOPMENT PLAN

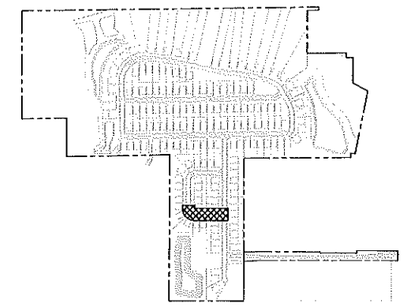
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

SCALE	DRAWN: S. SIERRA-GIL
1" = 40'	DESIGNED: O. SANCHEZ
PROJECT: ROY-001	CHECKED: L. CLASSON
SHEET: C7.1	DATE: 1/31/2020

3/31/20

P:_PROJECT DRAWINGS\ROY-001 – Lake Marshall Residential Development\5.9 Drawings\Sheet\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT – PHASE 1\Plan & Profile.dwg Modified:1/31/2020 By:sslerrogil



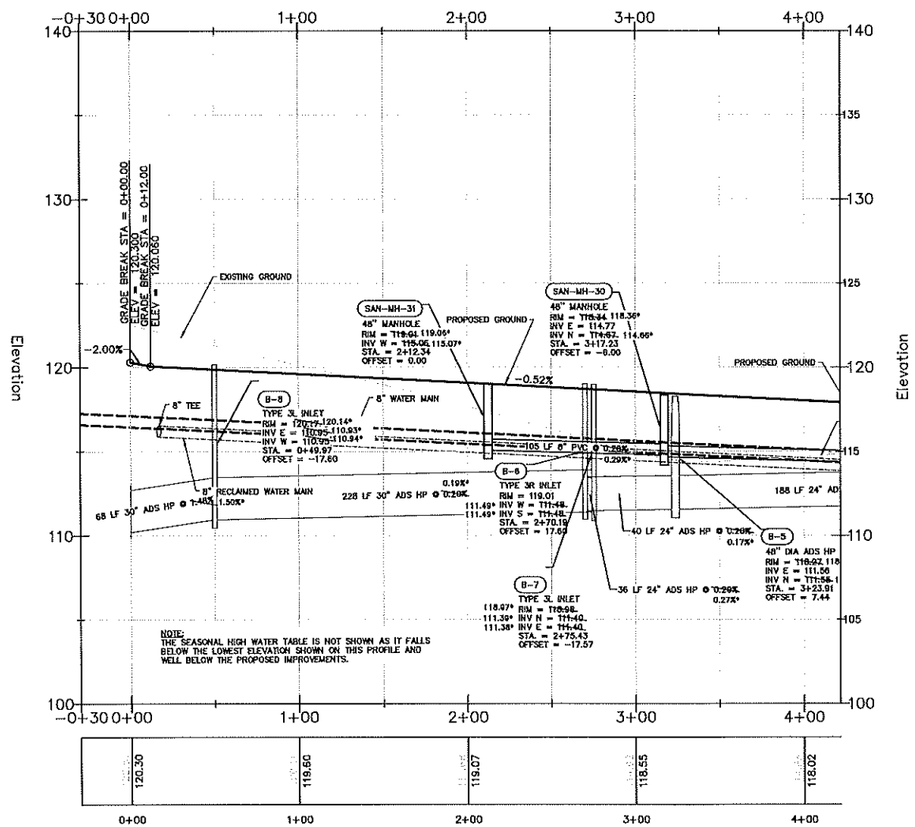


KEY MAP

LEGEND

102.59* AS-BUILT ELEVATIONS

107.93 REVISED ELEVATIONS



VERTICAL SCALE: 1" = 4'
HORIZONTAL SCALE: 1" = 40'

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SHEET 55 OF 92

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/21/20	FDP AMENDMENT – GRADING REVISION	SCS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	03/15/18	S.F.W.M.D COMMENTS DATED 03/15/18	SCS
A	02/19/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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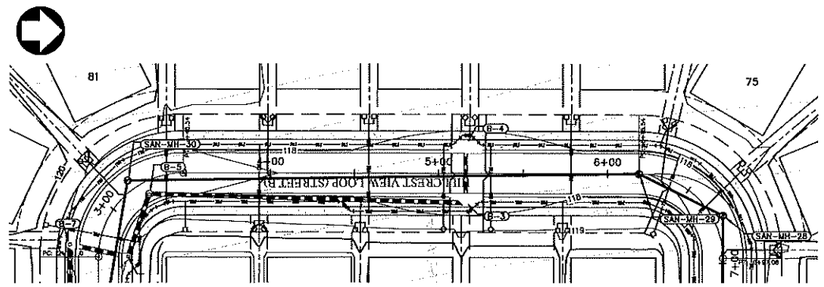
PLAN & PROFILE – STREET B –
STA. 0+00 TO STA. 3+50
FINAL DEVELOPMENT PLAN

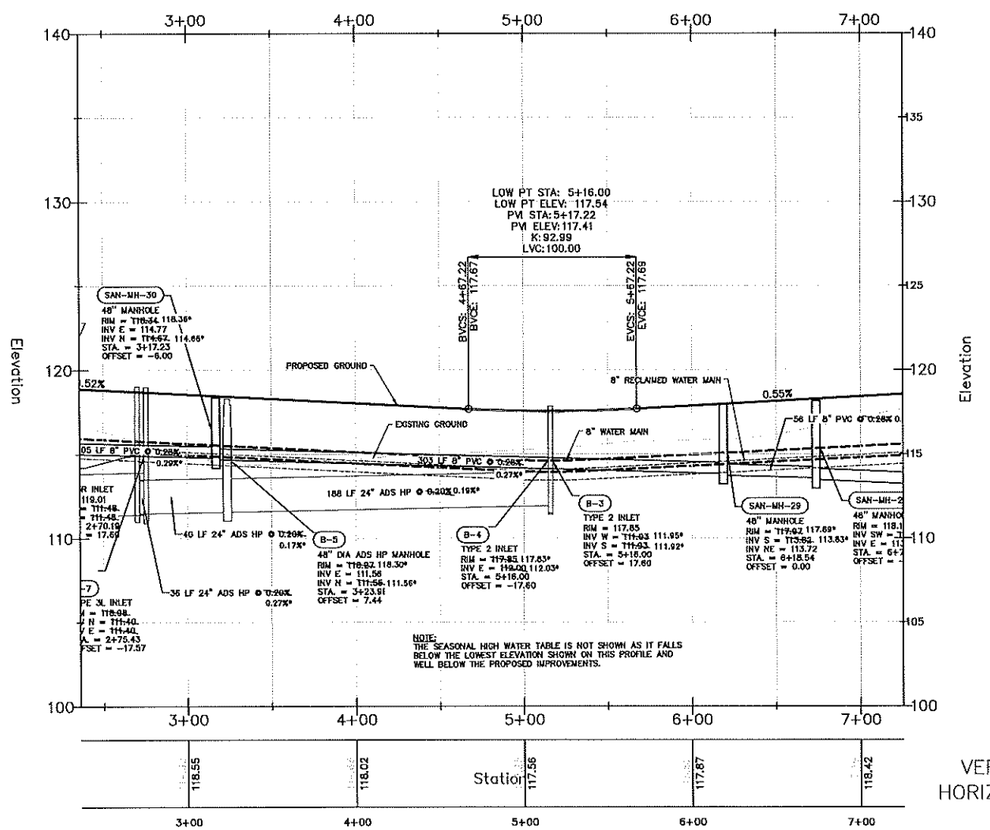
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL	SCALE: 1" = 40'
DESIGNED: O. SANCHEZ	PROJECT: ROY-001
CHECKED: L. CLASSON	SHEET: C7.2
DATE: 1/31/2020	

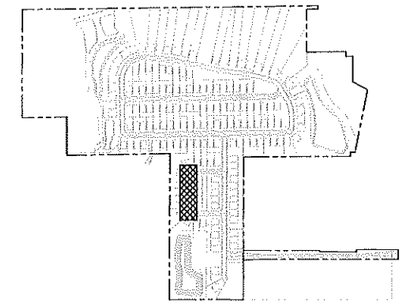
3/31/20

P:_PROJECT DRAWINGS\ROY-001 – Lake Marshall Residential Development\5.0 Drawings\Civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT – PHASE 1\Plan & Profile.dwg Modified:1/31/2020 By:saferregil





VERTICAL SCALE: 1" = 4'
HORIZONTAL SCALE: 1" = 40'



KEY MAP

LEGEND

102.59* AS-BUILT ELEVATIONS

107.93 REVISED ELEVATIONS

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/18/20	SCS
A	01/21/20	TDP AMENDMENT - GRADING REVISION	SCS
A	05/08/18	SFWMD COMMENTS DATED 05/07/18	SCS
A	03/15/18	SFWMD COMMENTS DATED 03/15/18	SCS
A	02/23/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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PLAN & PROFILE - STREET B - STA. 3+50 TO STA. 6+50
FINAL DEVELOPMENT PLAN

LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: G. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/31/2020
SCALE: 1" = 40'
PROJECT: ROY-001
SHEET: C7.3

3/31/20

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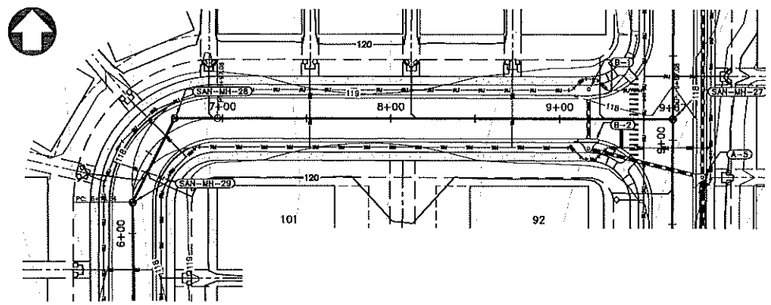
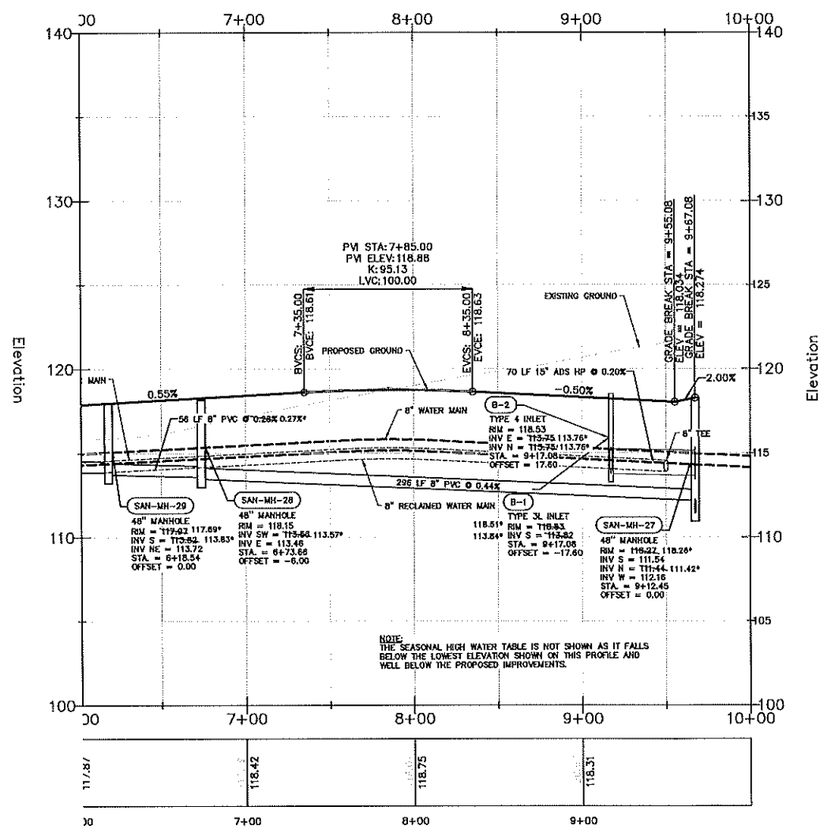
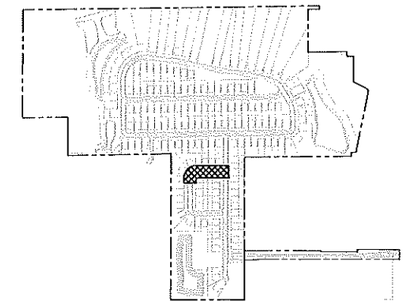
P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.9 Drawings\50civil\layouts\GB FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Plan & Profile.dwg Modified:1/31/2020 By:sierrag







KEY MAP

LEGEND

102.59* AS-BUILT ELEVATIONS

107.93 REVISED ELEVATIONS

VERTICAL SCALE: 1" = 4'
HORIZONTAL SCALE: 1" = 40'

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REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SKS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SKS
A	01/21/20	PDP AMENDMENT - GRADING REVISION	SKS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SKS
A	03/15/18	SETWOOD APOPKA COMMENTS DATED 03/14/18	SKS
A	02/13/18	CITY OF APOPKA COMMENTS DATED 02/13/18	SKS

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PLAN & PROFILE - STREET B - STA. 6+50 TO STA. 9+67
FINAL DEVELOPMENT PLAN

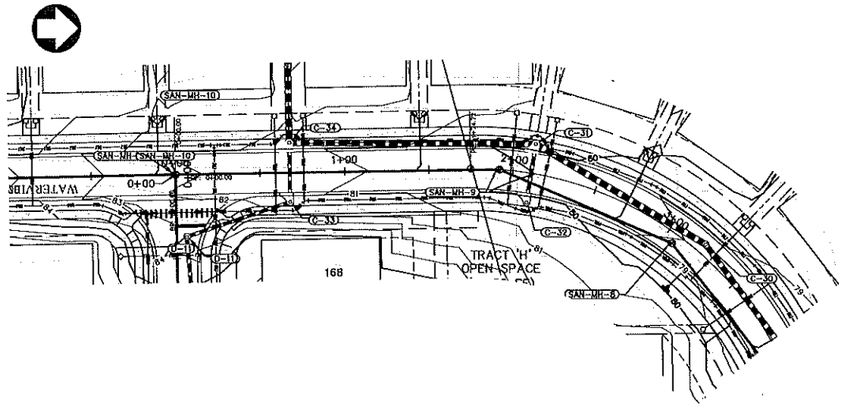
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

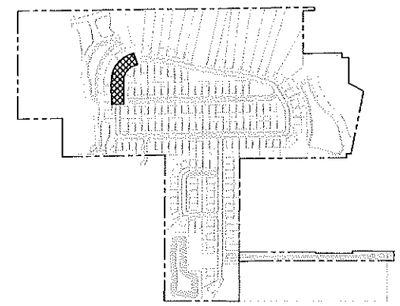
DRAWN: S. SIERRA-GIL	SCALE: 1" = 40'
DESIGNED: Q. SANCHEZ	PROJECT: ROY-001
CHECKED: L. CLASSON	SHEET: C7.4
DATE: 1/31/2020	

3/31/20

SHEET 57 OF 92

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.9 Drawings\Sac\V1\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Plan & Profile.dwg Modified:1/31/2020 By:salerrog3



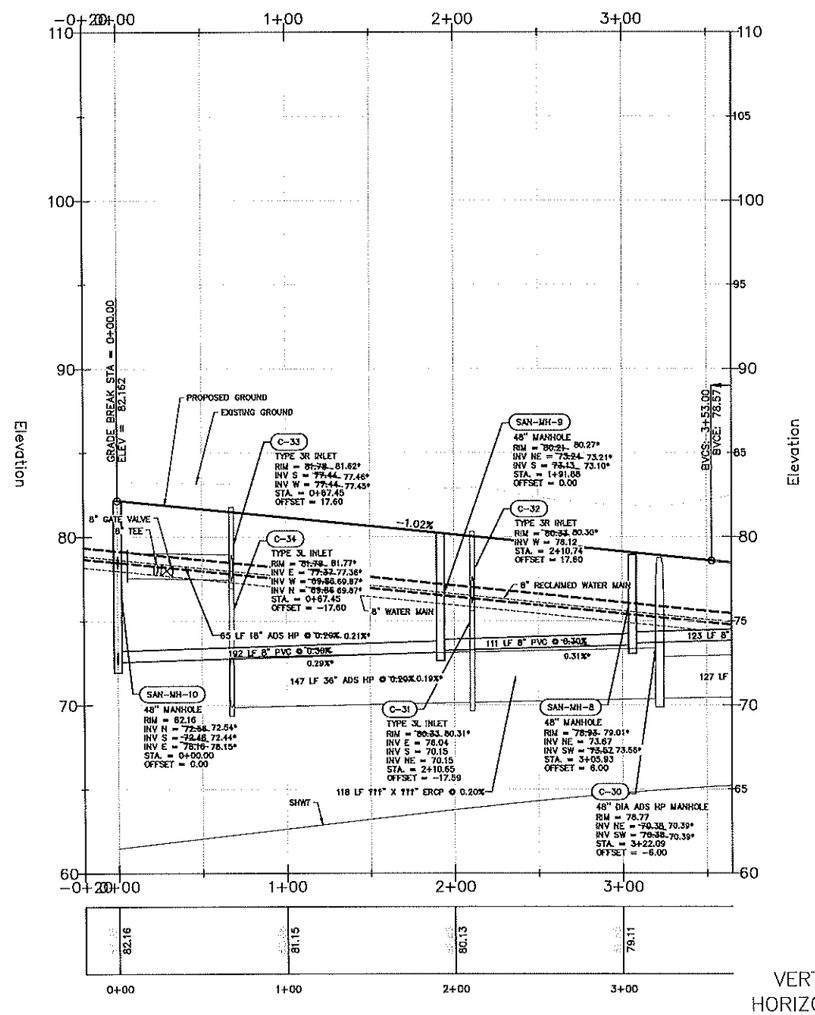


KEY MAP

LEGEND

102.59* AS-BUILT ELEVATIONS

107.93 REVISED ELEVATIONS



VERTICAL SCALE: 1" = 4'
HORIZONTAL SCALE: 1" = 40'

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SHEET 58 OF 92

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/21/20	FDP AMENDMENT - GRADING REVISION	SCS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	03/15/18	S.BRYND COMMENTS DATED 03/15/18	SCS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS
A			
A			

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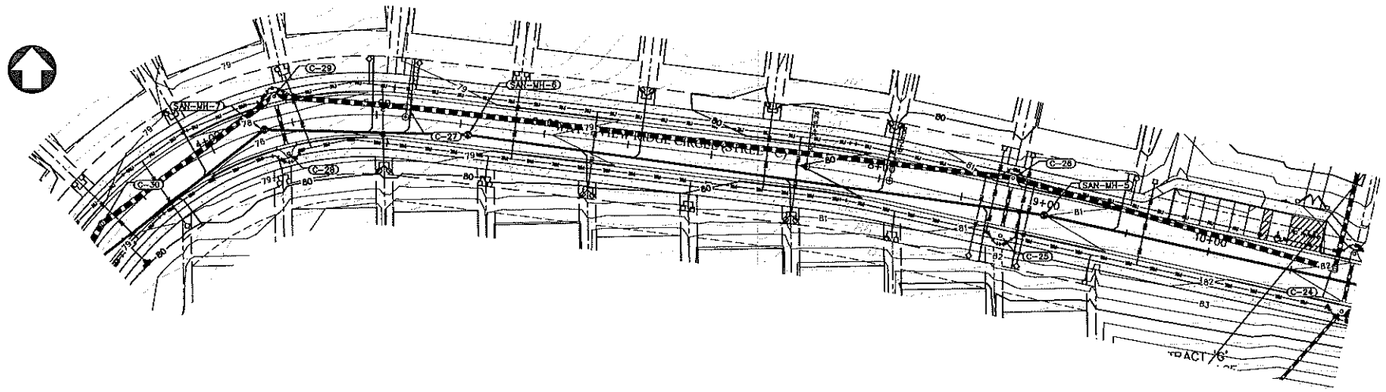
PLAN & PROFILE - STREET C NORTH - STA. 0+00 TO STA.3+50
FINAL DEVELOPMENT PLAN

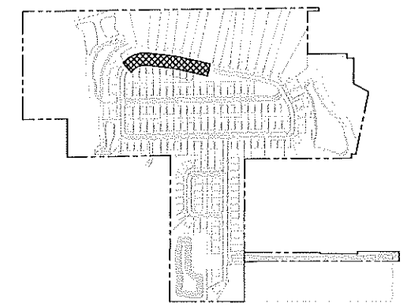
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

SCALE 1" = 40'	DRAWN: S. SIERRA-GIL	DESIGNED: C. SANCHEZ	
PROJECT ROY-001	CHECKED: L. CLASSON	DATE: 1/31/2020	
SHEET C7.5			

3/31/20

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.9 Drawings\59civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Plan & Profile.dwg Modified:1/31/2020 By:salerrogil



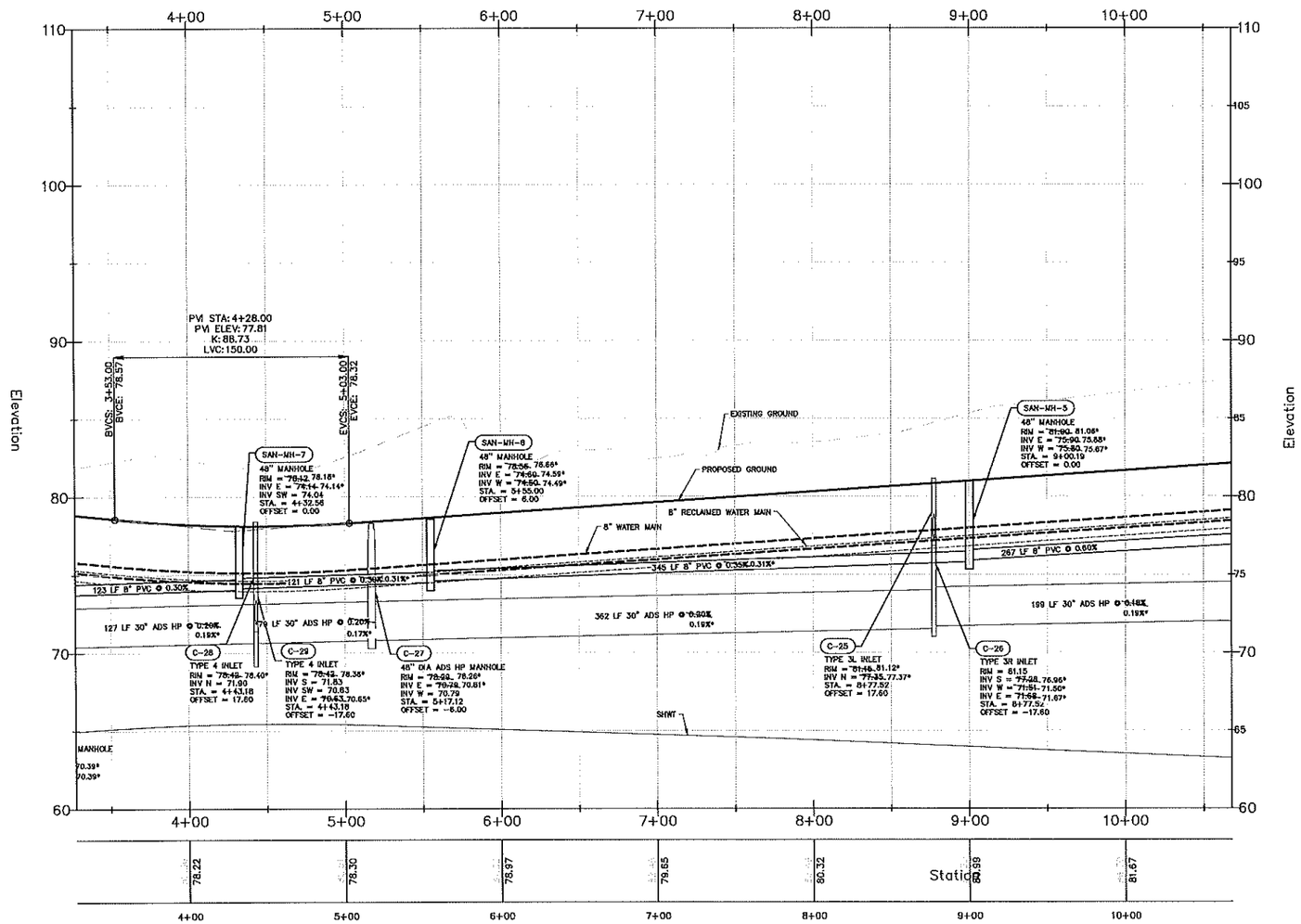


KEY MAP

LEGEND

102.59* AS-BUILT ELEVATIONS

107.93 REVISED ELEVATIONS



VERTICAL SCALE: 1" = 4'
HORIZONTAL SCALE: 1" = 40'

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SHEET 59 OF 92

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SKS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SKS
A	07/21/20	FDP AMENDMENT - GRADING REVISION	SKS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SKS
A	03/15/18	S/FRWD COMMENTS DATED 03/15/18	SKS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SKS

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AREAS OF PROFESSIONAL CERTIFICATE OF AUTHORIZATION CA-8415

PLAN & PROFILE - STREET C NORTH - STA. 3+50 TO STA. 10+50
FINAL DEVELOPMENT PLAN

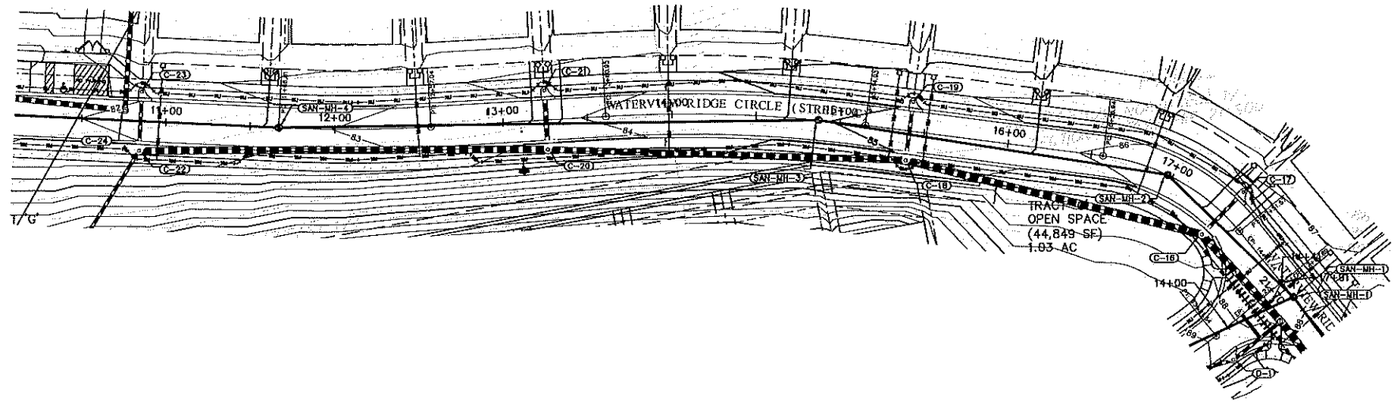
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

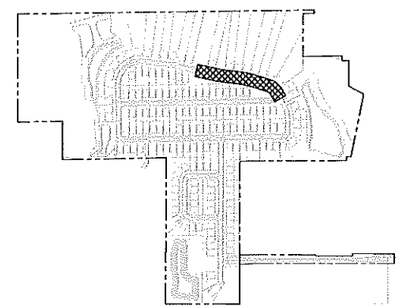
DRAWN: S. SIERRA-GIL
DESIGNED: O. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/31/2020

SCALE: 1" = 40'
PROJECT: ROY-001
SHEET: C7.6

3/31/20

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.9 Drawings\59civil\layouts\05 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Plan & Profile.dwg Modified:1/31/2020 By:salerrogil



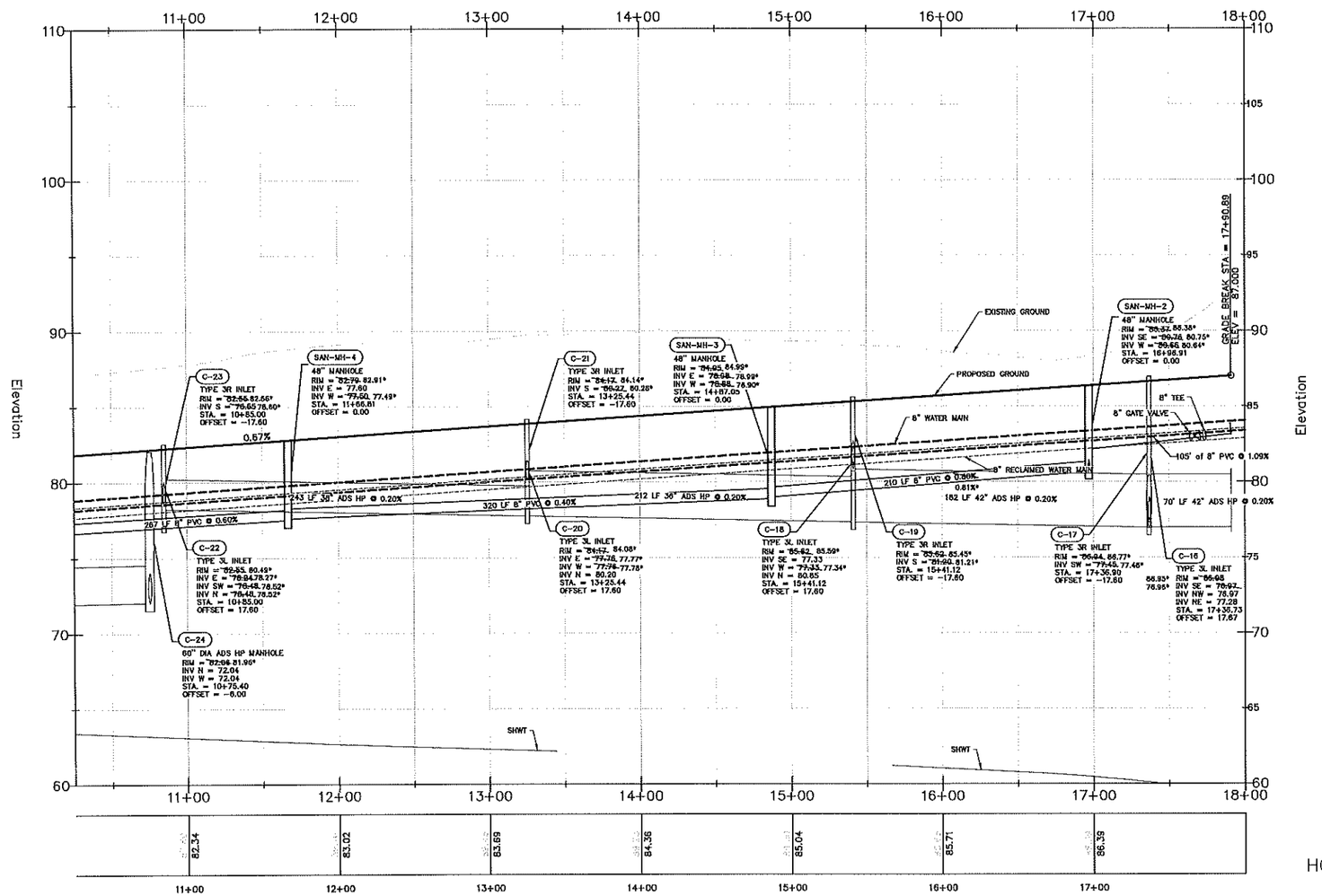


KEY MAP

LEGEND

102.59* AS-BUILT ELEVATIONS

107.93 REVISED ELEVATIONS



VERTICAL SCALE: 1" = 4'
HORIZONTAL SCALE: 1" = 40'

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SHEET 60 OF 92

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/21/20	FDP AMENDMENT – GRADING REVISION	SCS
A	05/08/19	CITY OF APOPKA COMMENTS DATED 05/07/19	SCS
A	03/15/19	SJRWMD COMMENTS DATED 03/15/19	SCS
A	02/21/19	CITY OF APOPKA COMMENTS DATED 02/19/19	SCS

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STATE OF FLORIDA CERTIFICATE OF AUTHORIZATION NO. 8678

PLAN & PROFILE – STREET C NORTH –
STA. 10+50 TO STA. 17+91
FINAL DEVELOPMENT PLAN

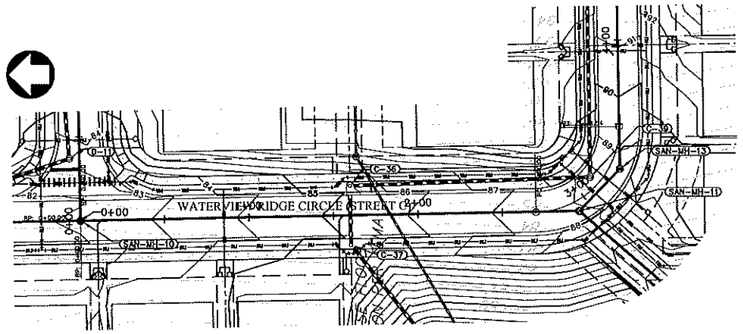
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

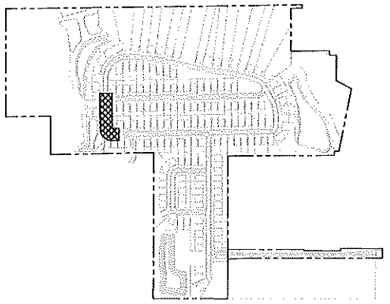
DRAWN: S. SIERRA-GIL
DESIGNED: C. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/31/2020

SCALE: 1" = 40'
PROJECT: ROY-001
SHEET: C7.7

3/31/20

P:_PROJECT DRAWINGS\ROY-001 – Lake Marshall Residential Development\5.9 Drawings\59civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT – PHASE 1\Plan & Profile.dwg Modified:1/31/2020 By:selerregil



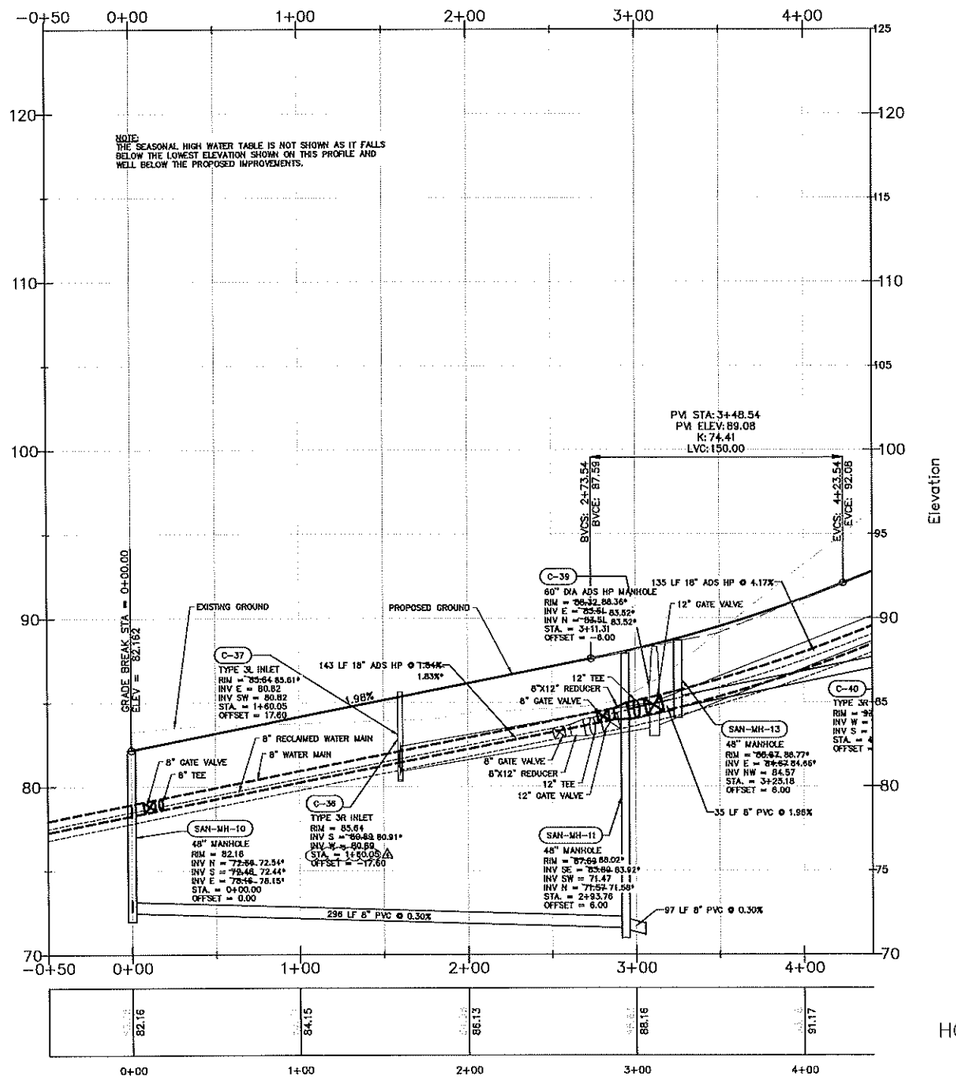


KEY MAP

LEGEND

102.59* AS-BUILT ELEVATIONS

107.93 REVISED ELEVATIONS



VERTICAL SCALE: 1" = 4'
HORIZONTAL SCALE: 1" = 40'

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SHEET 61 OF 92

REV	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY CORRESPONDENCE	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/18/20	SCS
A	01/21/20	CITY OF APOPKA COMMENTS DATED 01/07/18	SCS
A	03/15/18	SJRWMD COMMENTS DATED 03/15/18	SCS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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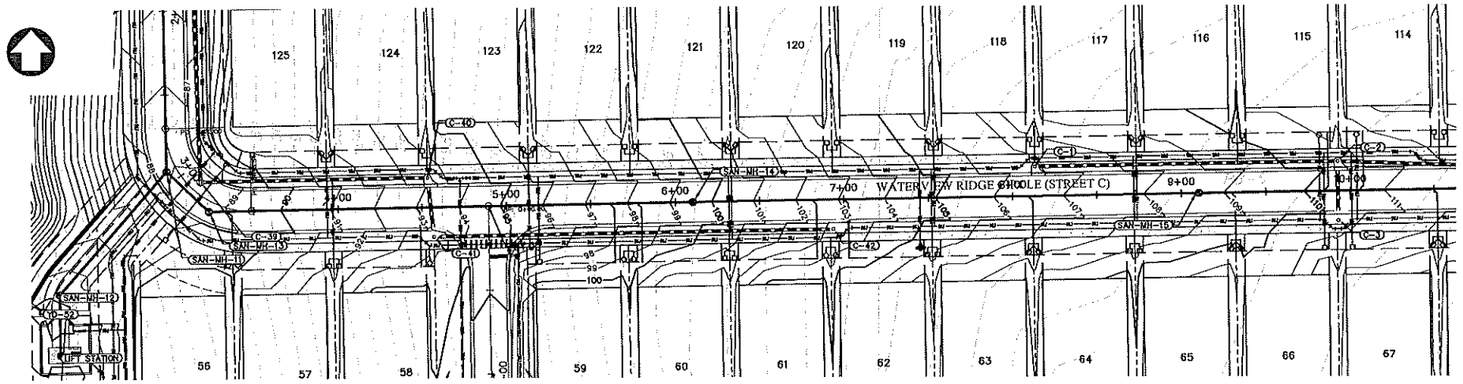
PLAN & PROFILE – STREET C SOUTH – STA. 0+00 TO STA. 3+50
FINAL DEVELOPMENT PLAN

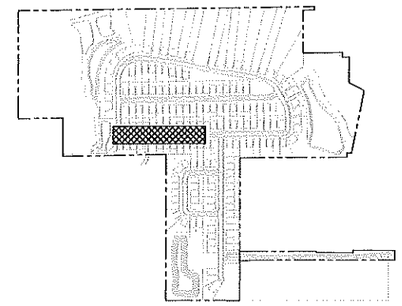
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: C. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/31/2020
SCALE: 1" = 40'
PROJECT: ROY-001
SHEET: C7.8

3/31/20

P:_PROJECT DRAWINGS\ROY-001 – Lake Marshall Residential Development\5.0 Drawings\59civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT – PHASE 1\Plan & Profile.dwg Modified:1/31/2020 By:salerregil



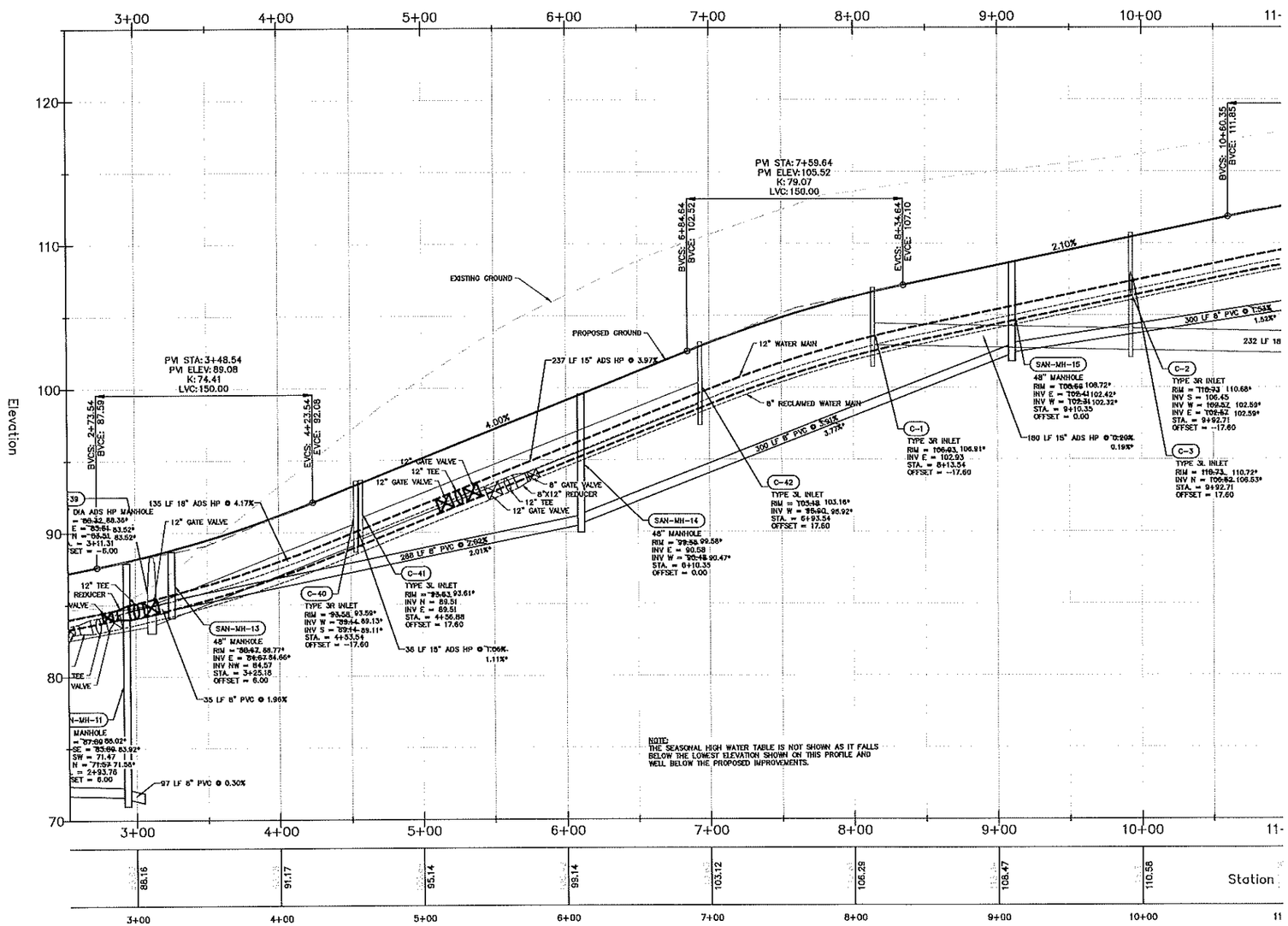


KEY MAP

LEGEND

102.59* AS-BUILT ELEVATIONS

107.93 REVISED ELEVATIONS



VERTICAL SCALE: 1" = 4'
HORIZONTAL SCALE: 1" = 40'

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SHEET 62 OF 92

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/21/20	FDP AMENDMENT - GRADING REVISION	SCS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	03/15/18	SUBMITTAL COMMENTS DATED 03/14/18	SCS
A	02/15/18	CITY OF APOPKA COMMENTS DATED 02/13/18	SCS

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CERTIFICATE OF AUTHORIZATION #27000548

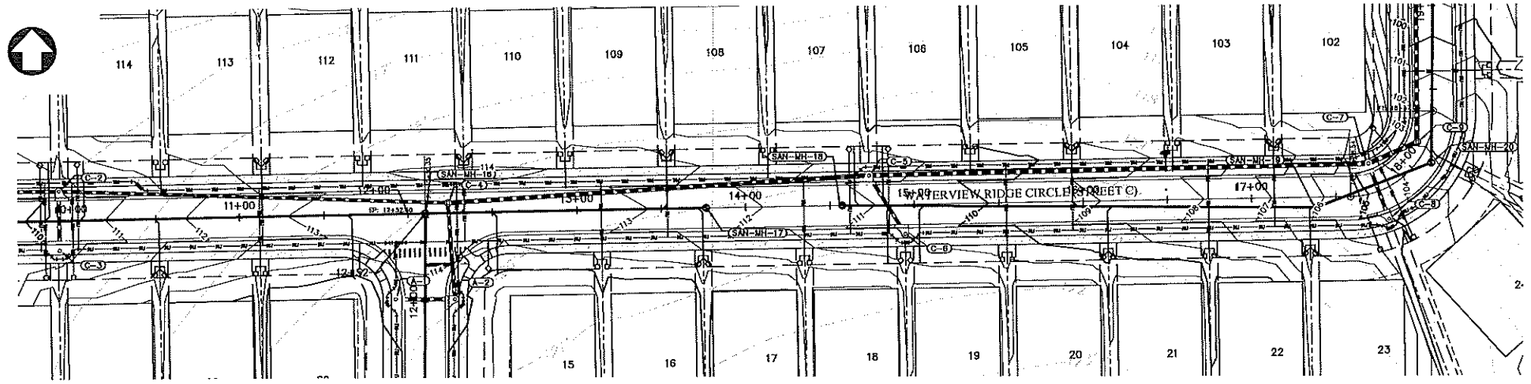
PLAN & PROFILE - STREET C SOUTH - STA. 3+50 TO STA. 10+50
FINAL DEVELOPMENT PLAN

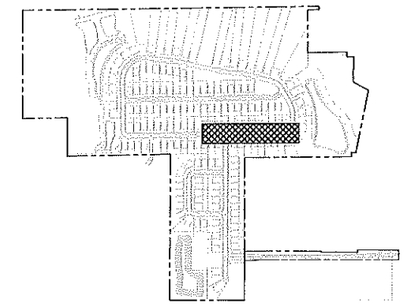
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: C. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/31/2020
SCALE: ########
PROJECT: ROY-001
SHEET: C7.9

3/31/20

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.0 Drawings\05civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Plan & Profile.dwg Modified:1/31/2020 By:salerrog



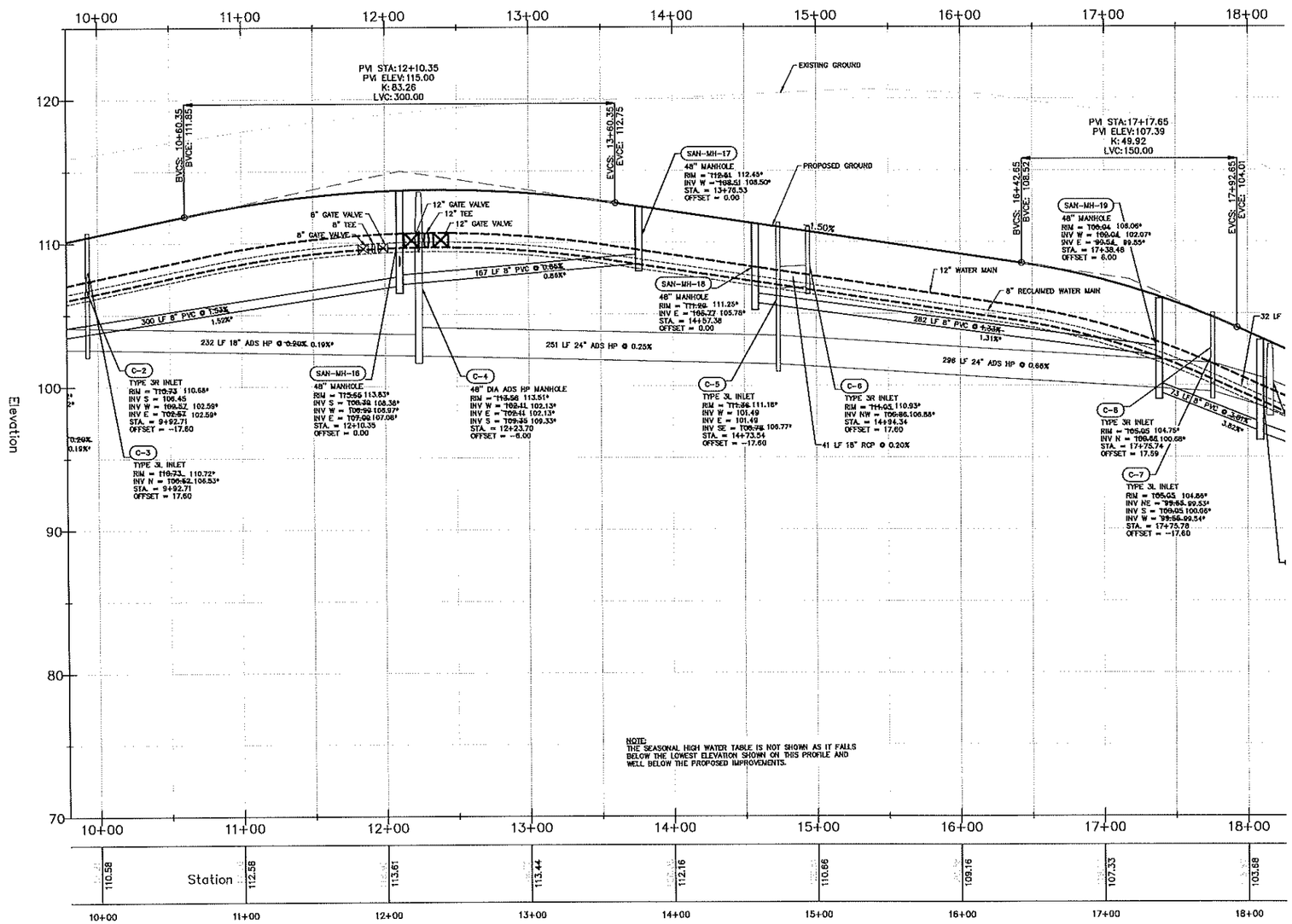


KEY MAP

LEGEND

102.59* AS-BUILT ELEVATIONS

107.93 REVISED ELEVATIONS



VERTICAL SCALE: 1" = 4'
HORIZONTAL SCALE: 1" = 40'

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SHEET 63 OF 92

REV	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/15/20	SCS
A	07/21/20	FDP AMENDMENT – GRADING REVISION	SCS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SSS
A	03/15/18	SJRWMD COMMENTS DATED 03/15/18	SSS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SSS

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STATE OF FLORIDA CERTIFICATE OF AUTHORIZATION #27183

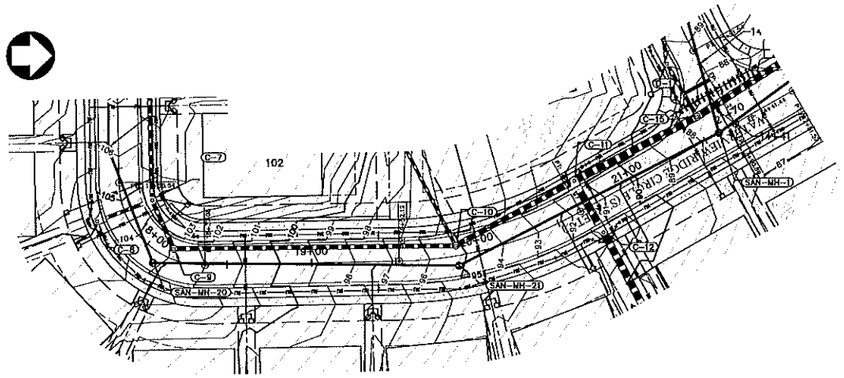
PLAN & PROFILE – STREET C SOUTH – STA. 10+50 TO STA. 18+00
FINAL DEVELOPMENT PLAN

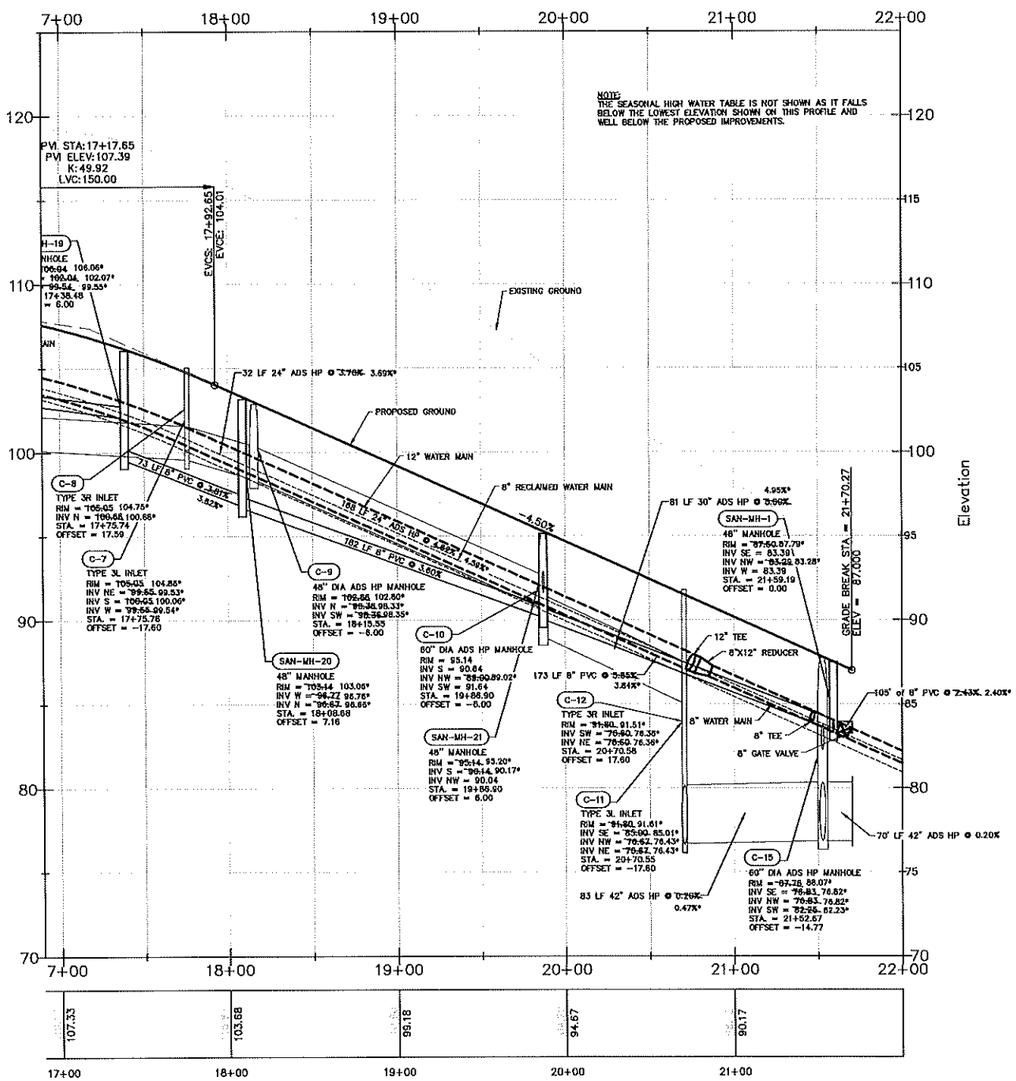
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: C. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/31/2020
SCALE: ########
PROJECT: ROY-001
SHEET: C7.10

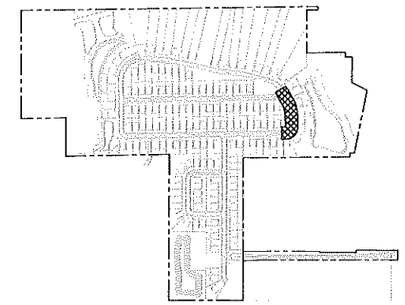
3/31/20

P:_PROJECT DRAWINGS\ROY-001 – Lake Marshall Residential Development\5.9 Drawings\55dia\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT – PHASE 1\Plan & Profile.dwg Modified:1/31/2020 By:salerregil





VERTICAL SCALE: 1" = 4'
HORIZONTAL SCALE: 1" = 40'



KEY MAP

LEGEND

102.59* AS-BUILT ELEVATIONS

107.93 REVISED ELEVATIONS

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SHEET 64 OF 92

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/19/20	SCS
A	01/21/20	FDP AMENDMENT - GRADING REVISION	SCS
A	05/09/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	03/16/18	FDP AMENDMENT - GRADING REVISION	SCS
A	02/23/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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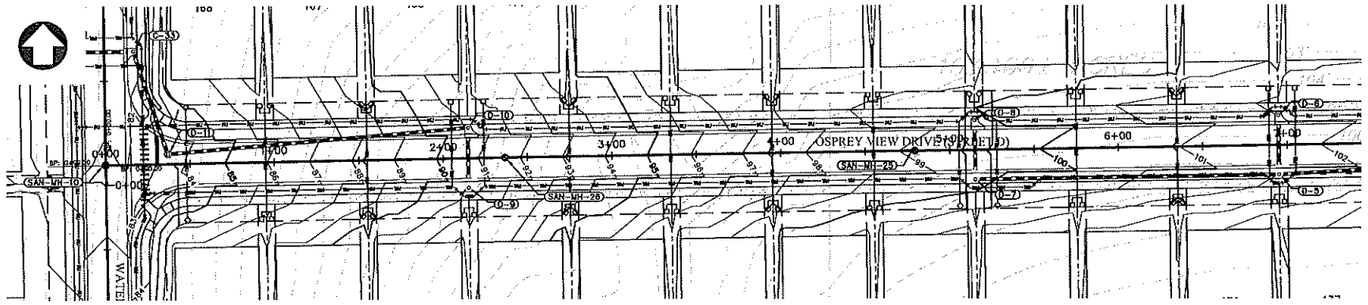
PLAN & PROFILE - STREET C SOUTH - STA. 18+00 TO STA. 21+70
FINAL DEVELOPMENT PLAN

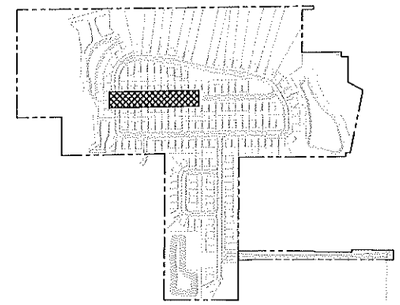
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: G. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/31/2020
SCALE: ######
PROJECT: ROY-001
SHEET: C7.11

3/31/20

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.9 Drawings\Civil\Layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Plan & Profile.dwg Modified:1/31/2020 By:sslerrogil



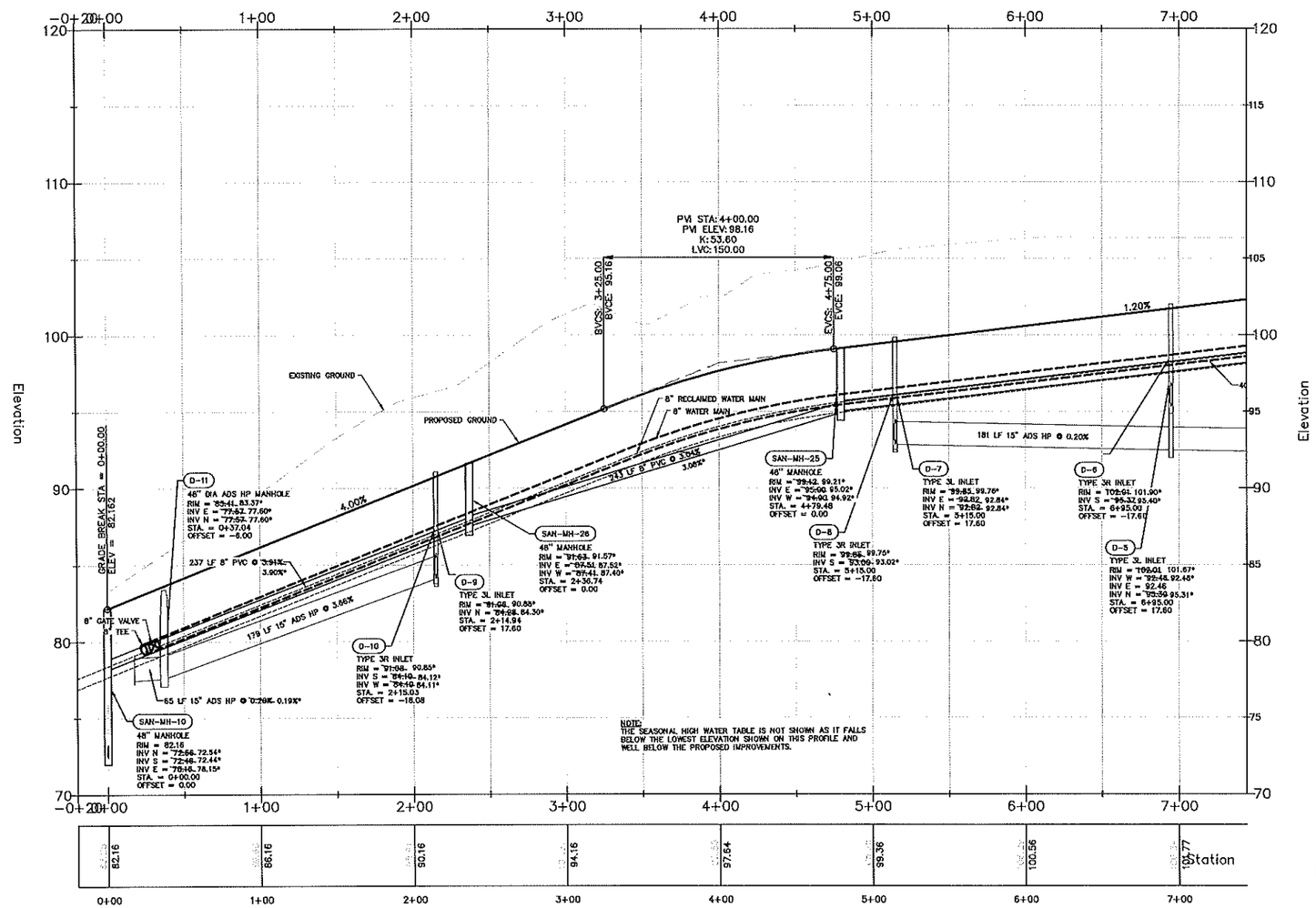


KEY MAP

LEGEND

102.59' AS-BUILT ELEVATIONS

107.93 REVISED ELEVATIONS



VERTICAL SCALE: 1" = 4'
HORIZONTAL SCALE: 1" = 40'

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SHEET 65 OF 92

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/21/20	TDP AMENDMENT - GRADING REVISION	SCS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	03/15/18	SJRWMD COMMENTS DATED 03/15/18	SCS
A	02/15/18	CITY OF APOPKA COMMENTS DATED 02/13/18	SCS

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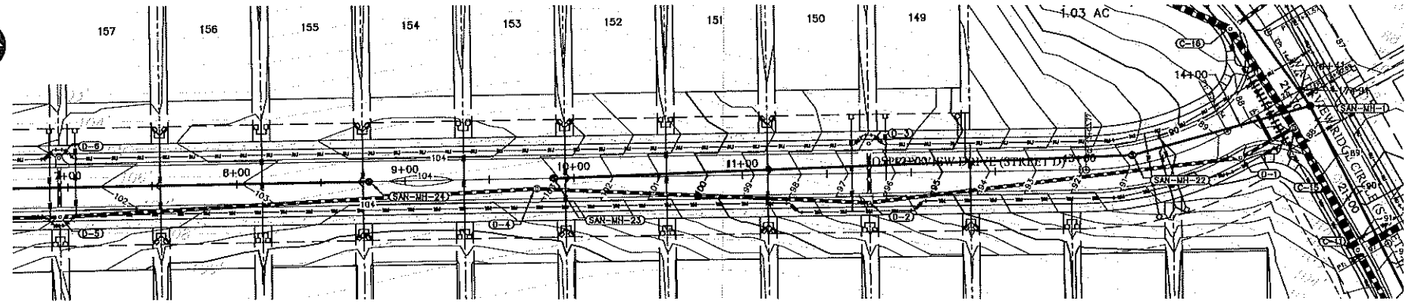
LICENSE OF BUSINESS AUTHORIZATION #CA-26476

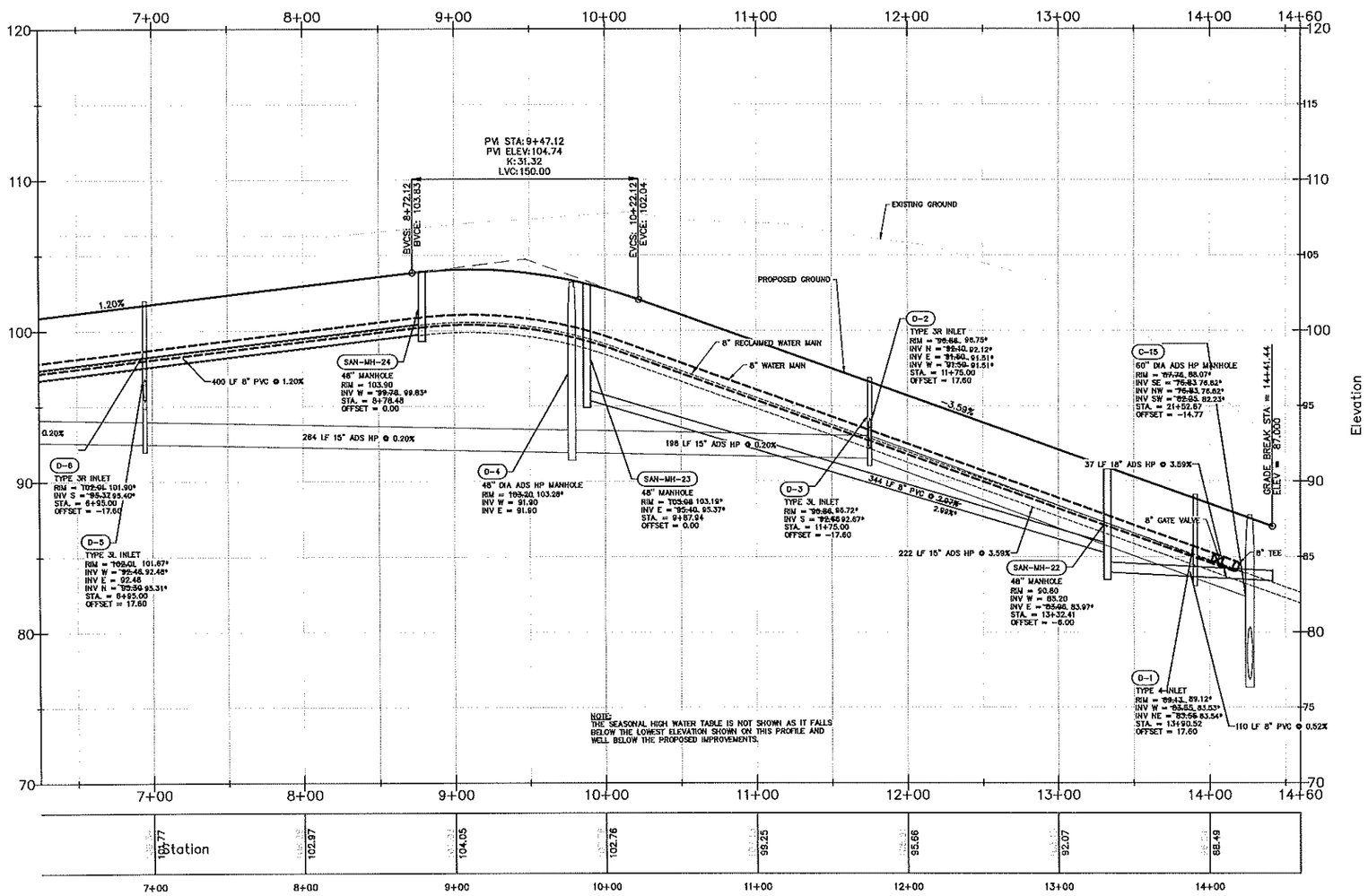
PLAN & PROFILE - STREET D - STA. 0+00 TO STA. 7+00
FINAL DEVELOPMENT PLAN
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

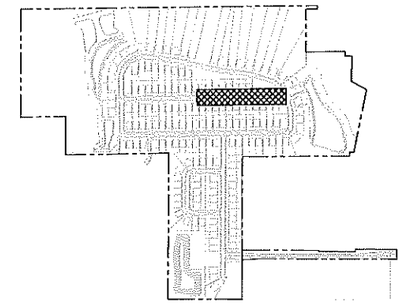
DRAWN: S. SIERRA-GIL
DESIGNED: G. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/31/2020
SCALE: ######
PROJECT: ROY-001
SHEET: C7.12

3/31/20

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.9 Drawings\S9civil\layouts\D8 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Plan & Profile.dwg Modified:1/31/2020 By:sslerrag1







KEY MAP

LEGEND

102.59* AS-BUILT ELEVATIONS

107.93 REVISED ELEVATIONS

VERTICAL SCALE: 1" = 4'
HORIZONTAL SCALE: 1" = 40'

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SHEET 66 OF 92

REV	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY CORRECTIONS	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/21/20	CITY OF APOPKA COMMENTS DATED 01/07/18	SCS
A	03/15/18	SFWMD COMMENTS DATED 03/15/18	SCS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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www.appianengineering@appianengineering.com

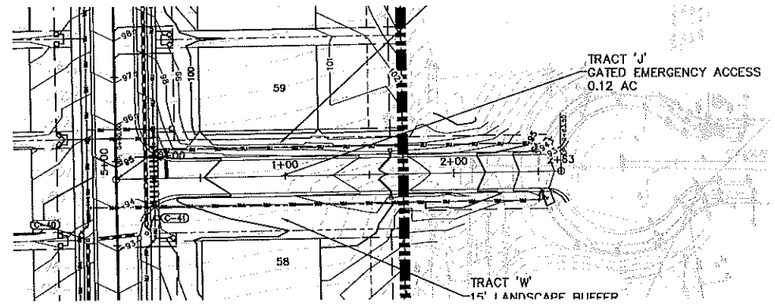
PLAN & PROFILE – STREET D – STA. 7+00 TO STA. 14+41
FINAL DEVELOPMENT PLAN

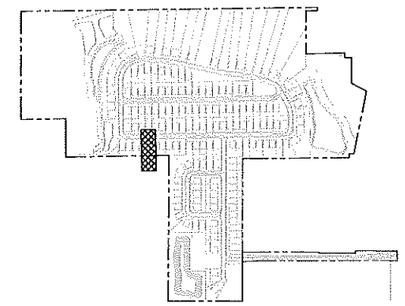
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: G. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/31/2020
SCALE: ########
PROJECT: ROY-001
SHEET: C7.13

3/31/20

P:_PROJECT DRAWINGS\ROY-001 – Lake Marshall Residential Development\3.3 Drawings\39civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT – PHASE 1\Plan & Profile.dwg Modified:1/31/2020 By:salerrag8



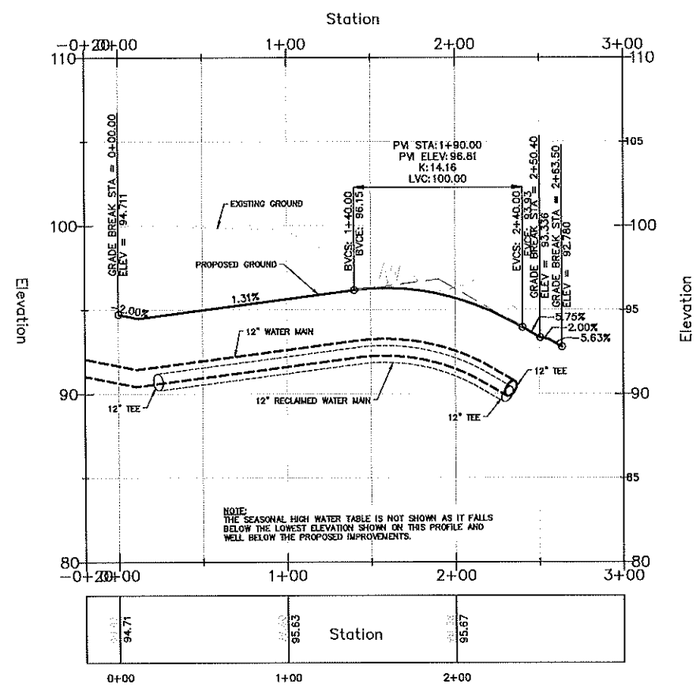


KEY MAP

LEGEND

102.59* AS-BUILT ELEVATIONS

107.93 REVISED ELEVATIONS



VERTICAL SCALE: 1" = 4'
HORIZONTAL SCALE: 1" = 40'

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SHEET 67 OF 92

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/21/20	FDP AMENDMENT - GRADING REVISION	SCS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	02/13/18	SITE PLAN SUBMITTAL COMMENTS DATED 02/13/18	SCS
A	02/12/18	CITY OF APOPKA COMMENTS DATED 02/12/18	SCS

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CERTIFICATE OF AUTHORIZATION #27000

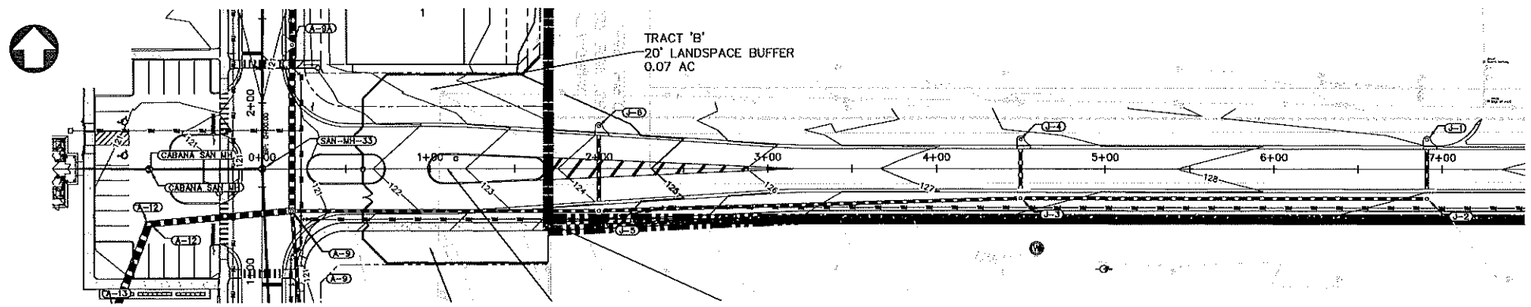
PLAN & PROFILE - EMERGENCY ACCESS - STA. 0+00 TO STA. 2+77
FINAL DEVELOPMENT PLAN

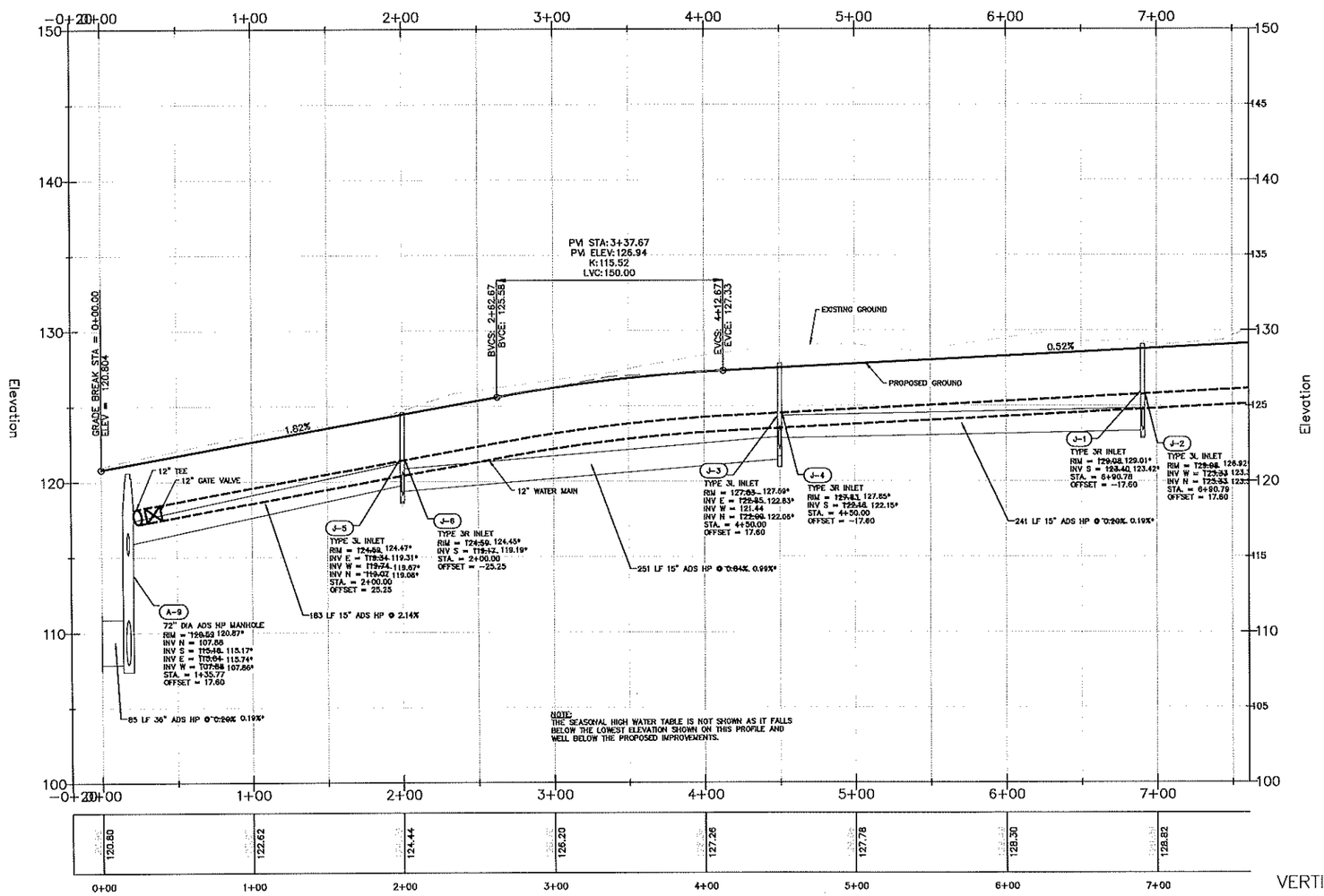
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

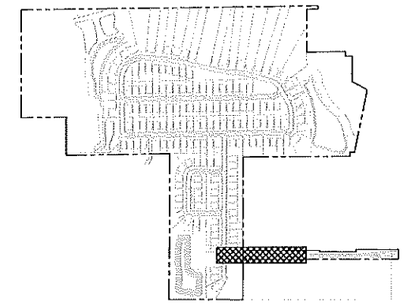
DRAWN: S. SIERRA-GIL
DESIGNED: G. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/31/2020
SCALE: ######
PROJECT: ROY-001
SHEET: C7.14

3/31/20

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.9 Drawings\59civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Plan & Profile.dwg Modified: 1/31/2020 By: salierogil







KEY MAP

LEGEND

102.59* AS-BUILT ELEVATIONS

107.93 REVISED ELEVATIONS

VERTICAL SCALE: 1" = 4'
HORIZONTAL SCALE: 1" = 40'

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SHEET 68 OF 92

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/21/20	TMP AMENDMENT - GRADING REVISION	SCS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	03/26/18	SERWIS COMMENTS DATED 03/23/18	SCS
A	02/15/18	CITY OF APOPKA COMMENTS DATED 02/15/18	SCS

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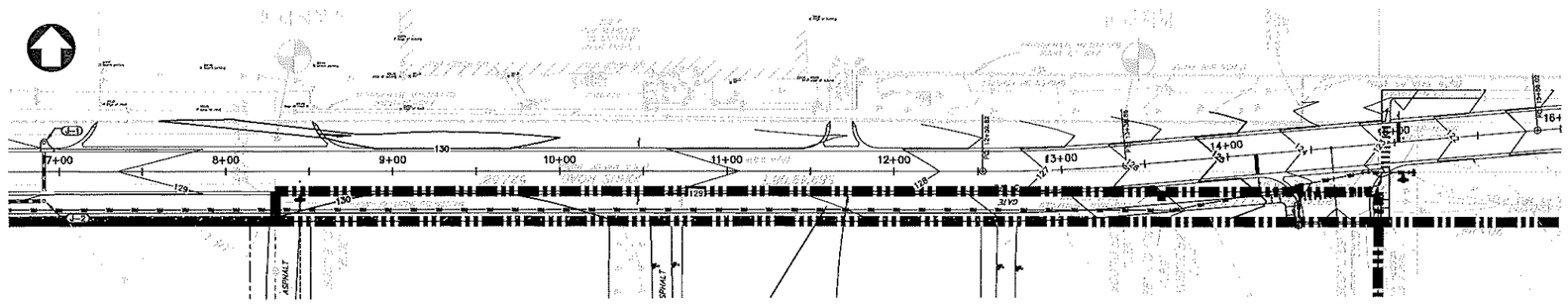
CERTIFICATE OF AUTHORIZATION NO. 27000548

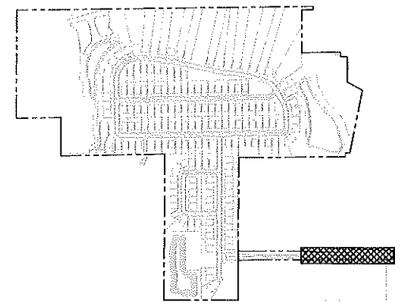
PLAN & PROFILE - OFFSITE JOHNS ROAD - STA. 0+00 TO STA. 7+00
FINAL DEVELOPMENT PLAN
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: G. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/31/2020
SCALE: ########
PROJECT: ROY-001
SHEET: C7.15

3/31/20

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.9 Drawings\59civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Plan & Profile.dwg Modified:1/31/2020 By:sslerrogil



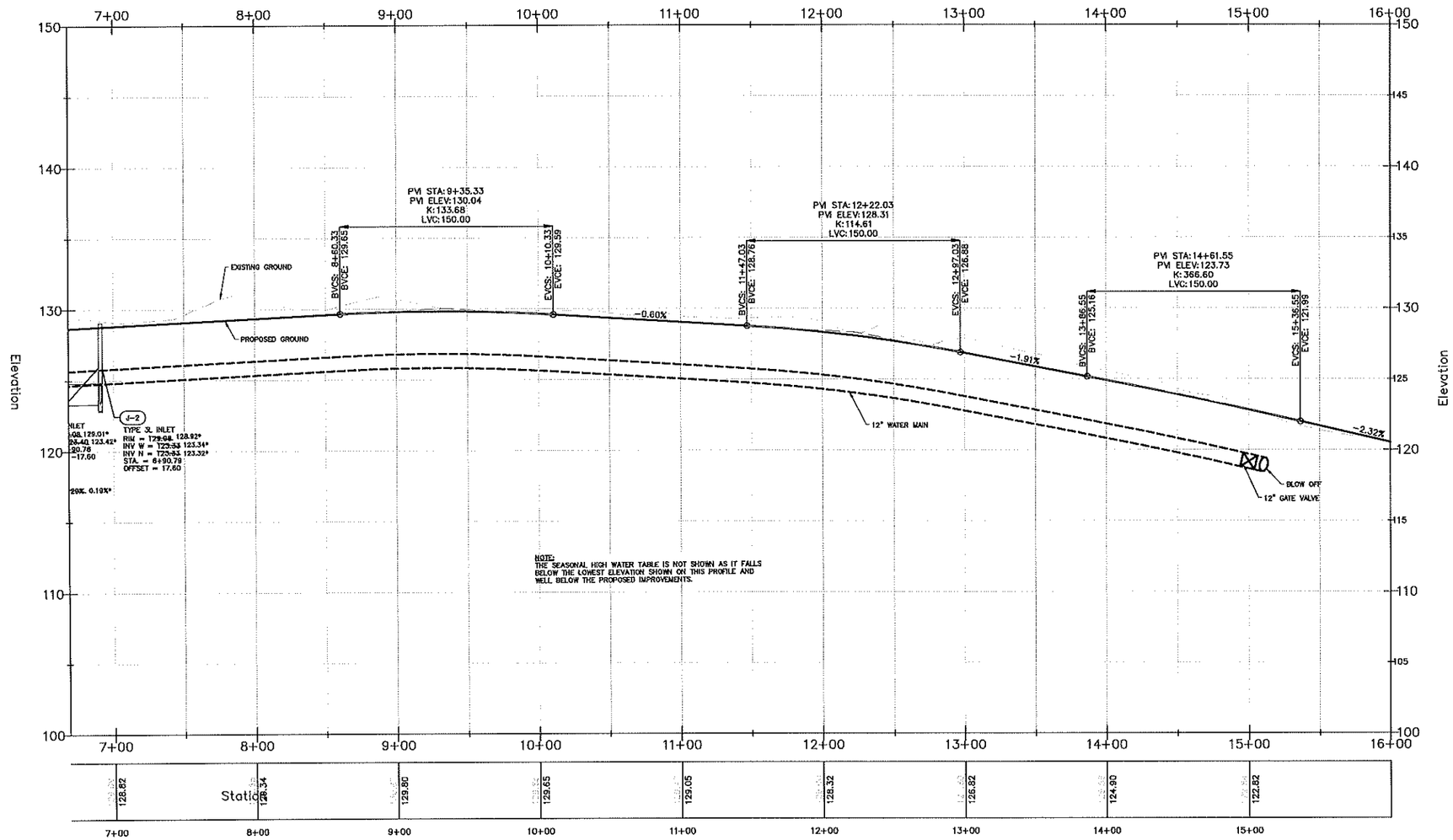


KEY MAP

LEGEND

102.59* AS-BUILT ELEVATIONS

107.93 REVISED ELEVATIONS



VERTICAL SCALE: 1" = 4'
HORIZONTAL SCALE: 1" = 40'

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Sunshine State One Call of Florida, Inc.

SHEET 69 OF 92

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SGS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SGS
A	01/21/20	TDP AMENDMENT - GRADING REVISION	SGS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SGS
A	03/15/18	SJRWMD COMMENTS DATED 02/15/18	SGS
A	03/15/18	CITY OF APOPKA COMMENTS DATED 02/15/18	SGS

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LICENSE OF BUSINESS ENGINEERING CERTIFICATE OF AUTHORIZATION #27-28

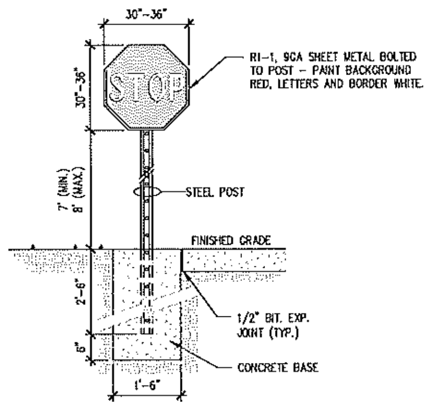
PLAN & PROFILE - OFFSITE JOHNS ROAD - STA. 7+00 TO STA. 15+76
FINAL DEVELOPMENT PLAN

LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

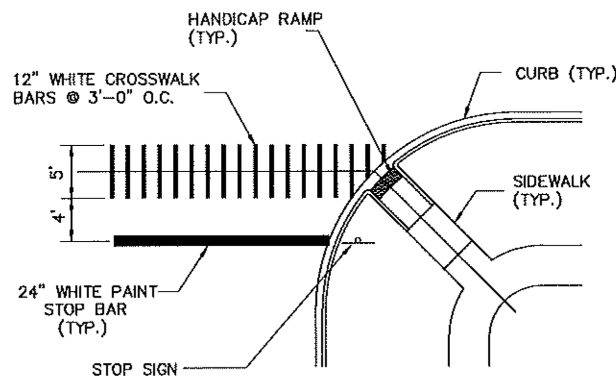
DRAWN: S. SIERRA-GIL
DESIGNED: G. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/31/2020
SCALE: ########
PROJECT: ROY-001
SHEET: C7.16

3/31/20

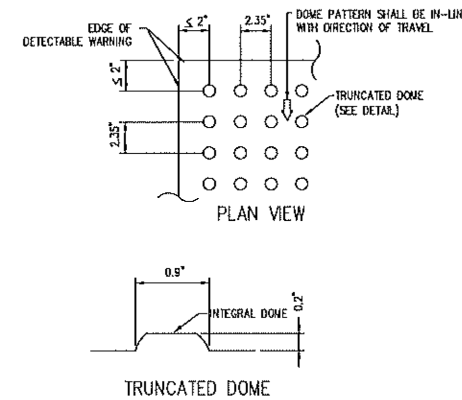
P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.0 Drawings\Sheet\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Plan & Profile.dwg Modified:1/31/2020 By:salerrog3



1 STOP SIGN
N.T.S.



2 INTERSECTION CROSSWALK/ STOP BAR DETAIL
N.T.S.



3 DETECTABLE WARNING
N.T.S.

NOTE:

1. CURB RAMP RUNNING SLOPES SHALL NOT BE STEEPER THAN 1:12 AND CROSS SLOPE SHALL BE 0.02 OR FLATTER.

2. DETECTABLE WARNING SURFACES SHALL BE CONSTRUCTED BY TEXTURING OR APPLYING A TRUNCATED DOME MATERIAL IN CONFORMANCE WITH THE U.S. DEPARTMENT OF JUSTICE A.D.A. STANDARDS FOR ACCESSIBLE DESIGN, A.D.A. ACCESSIBILITY GUIDELINES, SECTION 4.29.2. TRANSITION SLOPES ARE NOT TO HAVE DETECTABLE WARNINGS.

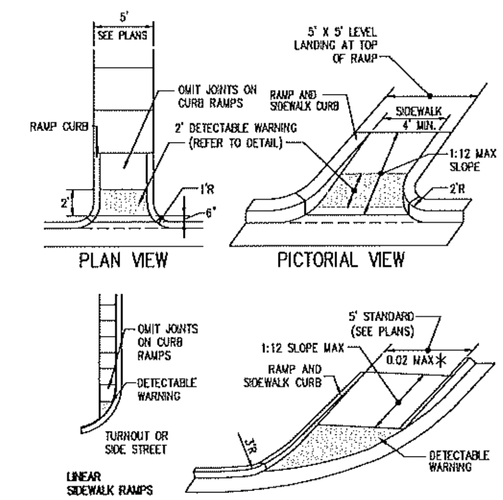
3. WHERE A CURB RAMP IS CONSTRUCTED WITHIN AN EXISTING CURB, CURB AND GUTTER AND/OR SIDEWALK, THE EXISTING CURB OR CURB AND GUTTER SHALL BE REMOVED TO THE NEAREST JOINT BEYOND THE CURB TRANSITIONS OR TO THE EXTENT THAT NO REMAINING SECTION OF CURB OR CURB AND GUTTER IS LESS THAN 5' LONG. THE EXISTING SIDEWALK SHALL BE REMOVED TO THE NEAREST JOINT BEYOND THE TRANSITION SLOPE WALK AROUND OR TO THE EXTENT THAT NO REMAINING SECTION OF SIDEWALK IS LESS THAN 5'.

4. WHERE ADJACENT WALKING SURFACES ARE COLORED OR ARE CONSTRUCTED WITH MATERIALS OTHER THAN STANDARD CLASS I PORTLAND CEMENT CONCRETE IN ACCORDANCE WITH SECTION 522 OF THE SPECIFICATIONS, THE PLAN MUST PROVIDE FOR DETECTABLE WARNING SURFACE COLORS OR MATERIALS THAT PROVIDE THE NECESSARY CONTRAST, EITHER DARK-ON-LIGHT OR LIGHT-ON-DARK. (SAFETY YELLOW OR BRICK RED)

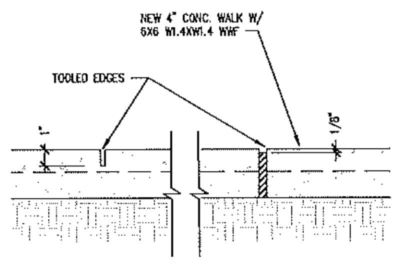
5. RECOMMENDED MANUFACTURER: ENGINEERED PLASTICS, INC. (ARMOR TILE) OLYMPIC TOWERS, 300 PEARL STREET, SUITE 200, BUFFALO, NY 14202. PHONE: (800) 682–2525

NOTE 1: REFERENCE FDOT INDEX 304, PAGE 1, GENERAL AND DESIGN NOTES FOR RAMPS IN R.O.W.

NOTE 2: CONSTRUCT RAMP TO LEAST POSSIBLE SLOPE (MAX = 1:12). CROSS SLOPE OF RAMP AND LANDING SHALL NOT EXCEED 1:50.



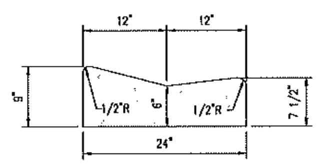
4 HANDICAP END RAMP
3000 PSI (MIN.) CONCRETE N.T.S.



NOTE:
EXPANSION JOINTS SHALL BE LOCATED AT ALL CONCRETE WALK INTERSECTIONS, AT ALL DOOR OPENINGS AND AT 12' O.C. MAXIMUM.

EXPANSION JOINT (1/4" PREMOLDED ASPHALT STRIP) SHALL BE SET 1/8" BELOW TOP OF WALK.
SCORE MARK (1" DEPTH) SHALL BE 4' (MAX.) O.C.

5 CONCRETE WALK
N.T.S.

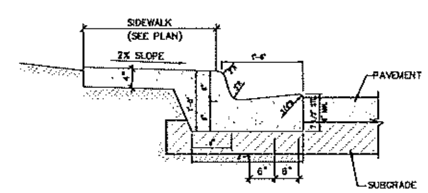


NOTES

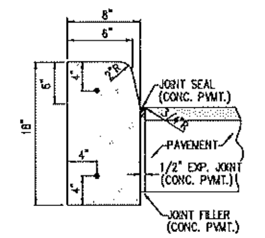
1. CONSTRUCTION JOINTS SHALL BE PLACED AT EQUAL SPACES (10' MAX.) BETWEEN NORMAL EXPANSION JOINTS. CONSTRUCTION JOINTS SHALL BE SAW CUT WITHIN 24 HRS. OF PLACEMENT.

2. FOR CURB & GUTTER CONSTRUCTED ADJCENT TO CONCRETE PAVEMENT. 1/2" EXPANSION JOINT MATERIALS SHALL BE PLACED BETWEEN THE EDGE OF GUTTER AND EDGE OF PAVEMENT.

6 MIAMI CURB AND GUTTER
(3,500 PSI (MIN)) N.T.S.



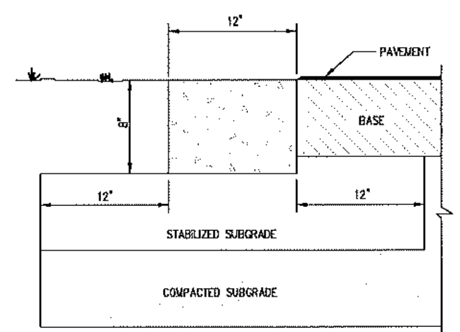
6b MONOLITHIC CURB AND SIDEWALK
(REFER TO F.D.O.T. INDEX 515) N.T.S.



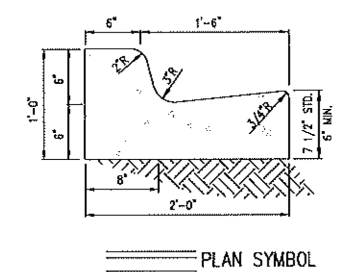
NOTES:

1. COST OF 2–#4 BARS (CONT.) SHALL BE INCLUDED.
2. PROVIDE 2–#6 SMOOTH BARS W/ EXPANSION CAPS AT EACH EXPANSION JOINT, 20'–0" O.C. MAX.
3. CONTRACTION JOINTS – CONTRACTION JOINTS SHALL BE PLACED AT EQUAL SPACES (10' MAX.) BETWEEN NORMAL EXPANSION JOINTS. CONTRACTION JOINTS SHALL BE SAW CUT IN THE UPPER 1/3 OF CURB AND GUTTER WITHIN 24 HOURS OF PLACEMENT.
4. ENDS OF VERTICAL CURB SHALL TRANSITION FROM FULL TO ZERO HEIGHTS IN 3 FEET.

7 TYPE 'D' CURB
(3,500 PSI (MIN)) N.T.S.

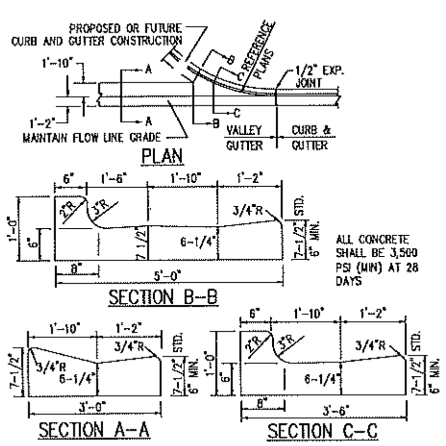


8 RIBBON CURB
3500 PSI (MIN.) N.T.S.



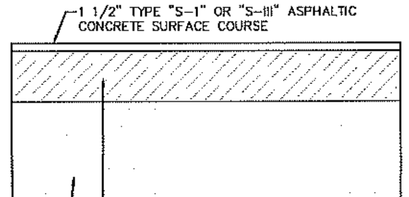
NOTE:
WHEN USED ON HIGH SIDE OF ROADWAYS, THE CROSS SLOPE OF THE GUTTER SHALL MATCH THE CROSS SLOPE OF THE ADJACENT PAVEMENT AND THE THICKNESS OF THE LIP SHALL BE 6", UNLESS OTHERWISE SHOWN ON PLANS.

9 TYPE "F" CURB AND GUTTER
N.T.S.



10 VALLEY GUTTER N.T.S.
(REFER TO F.D.O.T. INDEX 300)

1 1/2" TYPE "S–1" OR "S–III" ASPHALTIC CONCRETE SURFACE COURSE

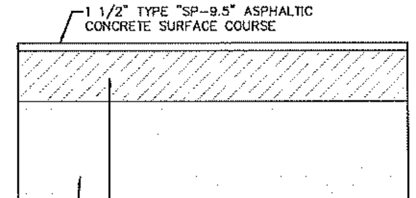


8" THICK LIMEROCK BASE COURSE WITH A MINIMUM LBR OF 100%. PLACE LIMEROCK IN MAXIMUM 6" LIFTS EACH COMPACTED TO 98% OF OF THE MODIFIED PROCTOR MAX. DRY DENSITY. PERFORM COMPLIANCE TESTING TO A DEPTH OF 1 FOOT AT INTERVALS NOT TO EXCEED 300 FEET OR A MINIMUM OF TWO TEST LOCATIONS, WHICHEVER IS GREATER.

12" THICK STABILIZED SUBGRADE. SUBGRADE MATERIALS TO BE STABAILIZED TO A MINIMUM FLORIDA BEARING VALUE (FBV) OF 75 PSI OR A LIMEROCK BEARING VALUE (LBR) OF 40%. STABALIZED SUBGRADE TO BE COMPACTED TO 98% MAX DRY DENSITY (AASHTO T–180) AND MEET REQUIREMENTS FOR FDOT TYPE B OR TYBE C STABALIZED SUBGRADE.

11 TYPICAL PAVEMENT SECTION
N.T.S.

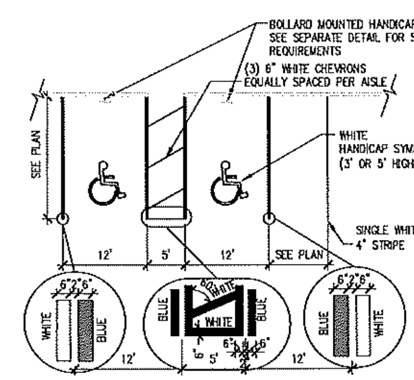
1 1/2" TYPE "SP–9.5" ASPHALTIC CONCRETE SURFACE COURSE



8" THICK LIMEROCK BASE COURSE WITH A MINIMUM LBR OF 100%. PLACE LIMEROCK IN MAXIMUM 6" LIFTS EACH COMPACTED TO 98% OF OF THE MODIFIED PROCTOR MAX. DRY DENSITY. PERFORM COMPLIANCE TESTING TO A DEPTH OF 1 FOOT AT INTERVALS NOT TO EXCEED 300 FEET OR A MINIMUM OF TWO TEST LOCATIONS, WHICHEVER IS GREATER.

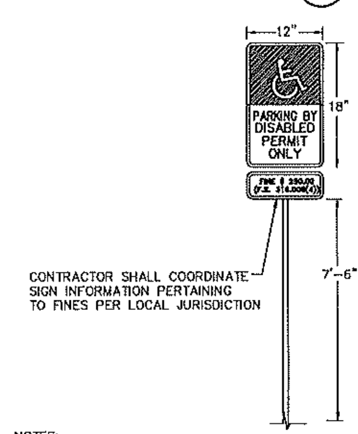
12" THICK STABILIZED SUBGRADE. SUBGRADE MATERIALS TO BE STABAILIZED TO A MINIMUM FLORIDA BEARING VALUE (FBV) OF 75 PSI OR A LIMEROCK BEARING VALUE (LBR) OF 40%. STABALIZED SUBGRADE TO BE COMPACTED TO 98% MAX DRY DENSITY (AASHTO T–180) AND MEET REQUIREMENTS FOR FDOT TYPE B OR TYBE C STABALIZED SUBGRADE.

12 TYPICAL PAVEMENT SECTION FOR JOHNS ROAD R.O.W. IMPROVEMENTS
N.T.S.



NOTE: FINISHED GRADES OF PAVEMENT IN HC PARKING AND ACCESSIBILITY AISLE SHALL NOT EXCEED 1:50 SLOPE IN ANY DIRECTION.
SEE PLAN FOR STYLE OF HANDICAP RAMP
HANDICAP STRIPING SHALL CONFORM TO FDOT INDEX 17346 SHEET 11 OF 14 (LATEST EDITION)

13 HANDICAP STRIPING
N.T.S.



NOTES:

1. ALL LETTERS ARE 1" SERIES "C", PER MUTCD.
2. TOP PORTION OF SIGN SHALL HAVE REFLECTORIZED (ENGINEERING GRADE) BLUE BACKGROUND WITH WHITE REFLECTORIZED LEGEND AND BORDER.
3. BOTTOM PORTION OF SIGN SHALL HAVE A REFLECTORIZED (ENGINEERING GRADE) WHITE BACKGROUND WITH BLACK OPAQUE LEGEND AND BORDER.
4. ONE (1) SIGN IS REQUIRED FOR EACH PARKING SPACE.
5. HEIGHT OF SIGN SHALL 7'–6" FROM FINISHED GROUND TO BOTTOM OF SIGN.

14 HANDICAP SIGN
N.T.S.

Call 48 hours before you dig
It's the Law! 1-800-432-4770
Sunshine State One Call of Florida, Inc.

SHEET 70 OF 92

REV.	DATE	DESCRIPTION	BY
	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
	01/21/20	FDP AMENDMENT – GRADING REVISION	SCS
	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
	03/15/18	SJRWMD COMMENTS DATED 03/15/18	SCS
	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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APPIAN ENGINEERING LLC.
APPIANFL.COM • 407.960.5868
2221 LEE ROAD, SUITE 17, WINTER PARK, FLORIDA 32789

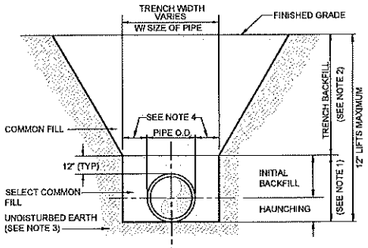
CIVIL DETAILS
FINAL DEVELOPMENT PLAN
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION) PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA–GIL
DESIGNED: O. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/21/2020

SCALE: N.T.S.
PROJECT: ROY–001
SHEET: C8.0

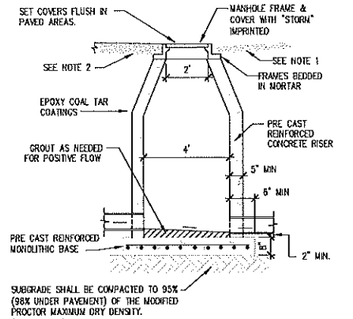
3/31/20

P:_PROJECT DRAWINGS\ROY–001 – Lake Marshall Residential Development\5.9 Drawings\59civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT – PHASE 1\Civil Details.dwg Modified:1/21/2020 By:ssierragil



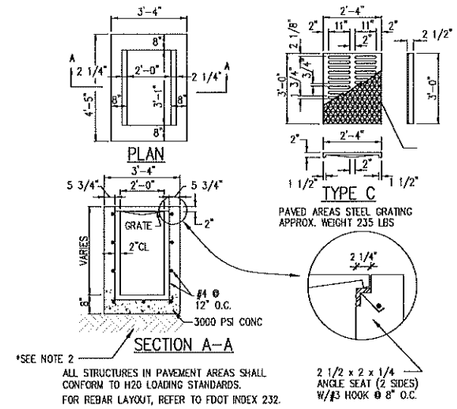
NOTES:
1. INITIAL BACKFILL AND HAUNCHING: SELECT COMMON FILL COMPACTED TO 95% (98% UNDER PAVEMENT) OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
2. TRENCH BACKFILL: COMMON FILL COMPACTED TO 95% (98% UNDER PAVEMENT) OF THE MAXIMUM DENSITY AS PER AASHTO T-180.
3. PIPE BEDDING SHALL BE COMPACTED TO 95% (MIN) OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY. BEDDING ROCK CAN BE USED FOR BEDDING IF SUBGRADE SOILS ARE TOO WET TO COMPACT, OR AS DIRECTED BY THE ENGINEER.
4. 13" MAX. (12" MIN.) FOR PIPE DIAMETER LESS THAN 24" AND 24" MAX (12" MIN) FOR PIPE DIAMETER 24" AND LARGER.
5. WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION.
6. ALL PIPE TO BE INSTALLED WITH BELL FACING UPSTREAM TO THE DIRECTION OF THE FLOW.
7. FINAL RESTORATION IN IMPROVED AREAS SHALL BE IN COMPLIANCE WITH ALL APPLICABLE REGULATIONS OF GOVERNING AGENCIES.

1 TRENCH DETAIL
N.T.S.



NOTE:
1. IN UNPAVED AREAS TOP OF FRAME SHALL BE 2" ABOVE FINISHED GRADE
2. ALL UNPAVEMENT STRUCTURES MUST CONFORM TO H20 LOADING STANDARDS
3. 12 INCHES OF STONE BEDDING (FDOT #57 STONE, NON-CALCAREOUS) CAN BE USED FOR BEDDING IF SUBGRADE SOILS ARE TOO WET TO COMPACT.

2 MANHOLE
N.T.S.



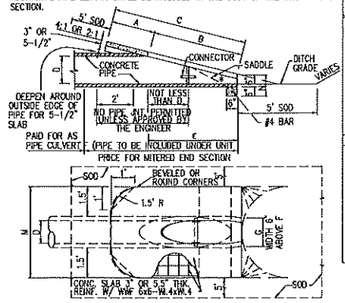
ALL STRUCTURES IN PAVEMENT AREAS SHALL CONFORM TO H20 LOADING STANDARDS.
FOR REBAR LAYOUT, REFER TO FDOT INDEX 232.

*NOTES:
1. FOR ALL USES, USE STEEL GRATE.
2. SUBGRADE SHALL BE COMPACTED TO 95% (98% UNDER PAVEMENT) OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY.

3 TYPE "C" INLET
N.T.S.

*SEE NOTE 1

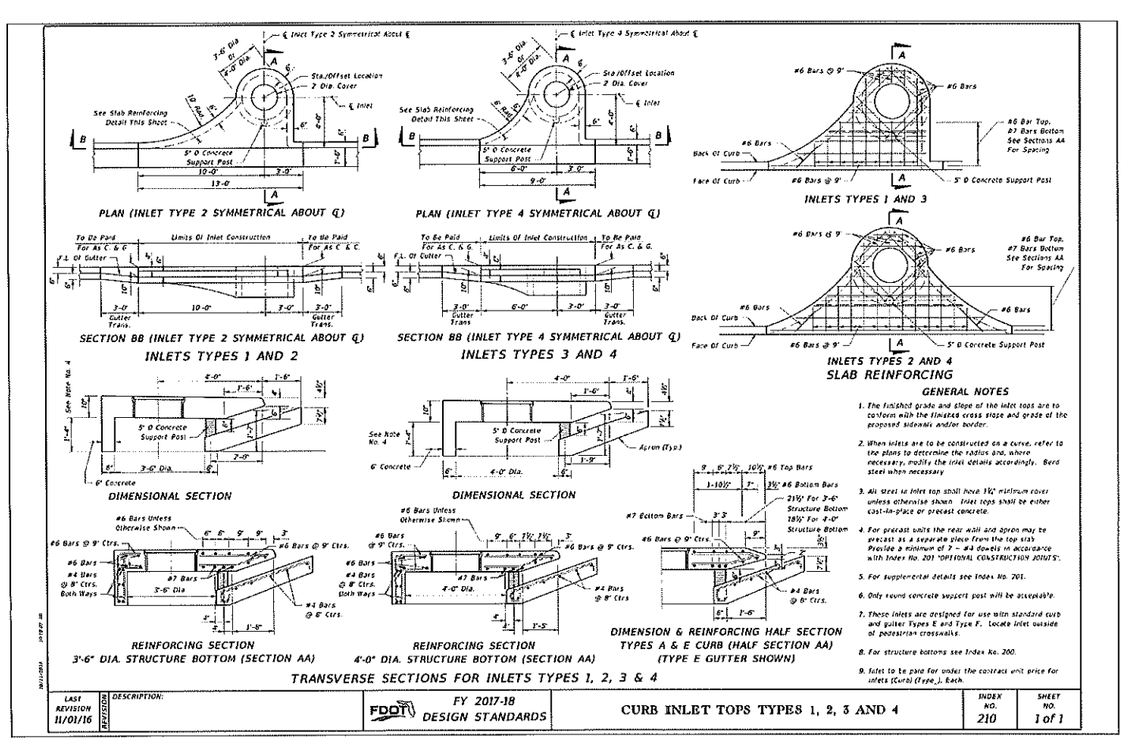
STORM SEWER PIPE LENGTHS NOTED IN THE DRAWINGS REFLECT ONLY THE PIPE ITSELF. WHERE A MITERED END SECTION IS INSTALLED ON SAID PIPE, ITS ADDITIONAL PIPE LENGTH SHALL BE INCLUDED IN THE COST OF THE MITERED END SECTION.



DIMENSIONS AND QUANTITIES											
	D	A	B	C	E	F	G	M			
								SINGLE PIPE	DOUBLE PIPE	TRIPLE PIPE	QUAD. PIPE
2:1 SLOPE	15"	1.92'	2.18'	4.10'	2.06'	5'	1.22'	4.63'	7.21'	9.79'	12.37'
	18"	1.97'	2.74'	4.71'	2.58'	6'	1.41'	4.92'	7.75'	10.58'	13.42'
	24"	2.06'	3.85'	5.91'	3.56'	7'	1.73'	5.50'	8.92'	12.33'	15.75'
	30"	2.15'	4.95'	7.10'	4.58'	8'	2.00'	6.08'	10.33'	14.58'	18.83'
	36"	2.25'	5.08'	8.33'	5.56'	9'	2.24'	6.67'	11.75'	16.83'	21.92'
	42"	2.34'	7.21'	9.55'	6.56'	10'	2.45'	7.25'	13.25'	19.25'	25.25'
	48"	2.43'	8.33'	10.76'	7.56'	11'	2.65'	7.83'	14.58'	21.33'	28.08'
	54"	2.52'	9.44'	11.96'	8.56'	12'	2.83'	8.42'	16.08'	23.75'	31.42'
	60"	2.62'	10.56'	13.18'	9.56'	14'	3.00'	9.00'	17.50'	26.00'	34.50'
	66"	2.71'	11.68'	14.39'	10.56'	15'	3.18'	9.58'	18.75'	27.92'	37.08'
	72"	2.80'	12.80'	15.60'	11.56'	16'	3.30'	10.16'	20.16'	30.16'	40.16'
4:1 SLOPE	15"	2.27'	4.09'	6.36'	4.03'	8'	1.22'	4.63'	7.21'	9.79'	12.37'
	18"	2.36'	5.12'	7.48'	5.03'	9'	1.41'	4.92'	7.75'	10.58'	13.42'
	24"	2.53'	7.18'	9.71'	7.03'	11'	1.73'	5.50'	8.92'	12.33'	15.75'
	30"	2.70'	9.25'	11.95'	9.03'	13'	2.00'	6.08'	10.33'	14.58'	18.83'
	36"	2.87'	11.31'	14.18'	11.03'	15'	2.24'	6.67'	11.75'	16.83'	21.92'
	42"	3.05'	13.37'	16.42'	13.03'	17'	2.45'	7.25'	13.25'	19.25'	25.25'
	48"	3.22'	15.43'	18.65'	15.03'	19'	2.65'	7.83'	14.58'	21.33'	28.08'
	54"	3.39'	17.49'	20.88'	17.03'	21'	2.83'	8.42'	16.08'	23.75'	31.42'
	60"	3.56'	19.55'	23.11'	19.03'	23'	3.00'	9.00'	17.50'	26.00'	34.50'
	66"	3.73'	21.62'	25.35'	21.03'	25'	3.18'	9.58'	18.75'	27.92'	37.08'
	72"	3.91'	22.68'	26.59'	23.03'	27'	3.30'	10.16'	20.16'	30.16'	40.16'

* SLOPE- 4:1 MITER – TO ℄ PIPE FOR PIPES 18" AND SMALLER
2:1 FOR PIPES 24" AND LARGER
2:1 MITER – TO ℄ PIPE FOR PIPES 18" AND SMALLER
1:1 FOR PIPES 24" AND LARGER

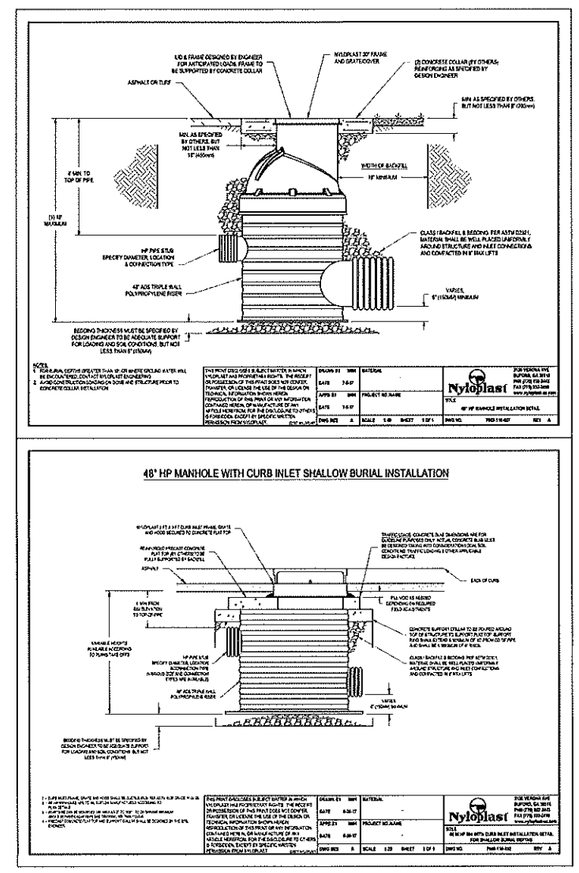
4 MITERED END SECTION (RCP)
FDOT STD. INDEX 272 N.T.S.



GENERAL NOTES
1. The finished grade and slope of the inlet tops are to conform with the finished cross slope and grade of the proposed sidewalk and/or border.
2. When inlets are to be constructed on a curve, refer to the plans to determine the radius and, where necessary, modify the inlet details accordingly. Bend steel when necessary.
3. All steel in inlet top shall have 1½" minimum cover unless otherwise shown. Inlet tops shall be either cast-in-place or precast concrete.
4. For precast units the rear wall and apron may be precast as a separate piece from the top slab. Provide a minimum of 7 – #4 dowels in accordance with Index No. 201 "OPTIONAL CONSTRUCTION JOINTS".
5. For supplemental details see Index No. 201.
6. Only round concrete support post will be acceptable.
7. These inlets are designed for use with standard curb and gutter Types E and Type F. Locate inlet outside of pedestrian crosswalk.
8. For structure bottoms see Index No. 200.
9. Inlet to be paid for under the contract unit price for inlets (Curb) (Type_). Each.

LAST REVISION 11/01/16	REVISION	DESCRIPTION:	FDOT FY 2017-18 DESIGN STANDARDS	CURB INLET TOPS TYPES 1, 2, 3 AND 4	INDEX NO. 210	SHEET NO. 1 of 1

5 TYPE 1, 2, 3, AND 4 INLETS
N.T.S.



6 ADS HP 48" MANHOLE
N.T.S.

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3/31/20

SHEET 71 OF 92

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SGS
A	01/21/20	CITY OF APOPKA COMMENTS DATED 03/19/20	SGS
A	12/20/19	CITY OF APOPKA COMMENTS DATED 06/07/19	SGS
A	03/15/18	SJRWMD COMMENTS DATED 03/15/18	SGS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SGS

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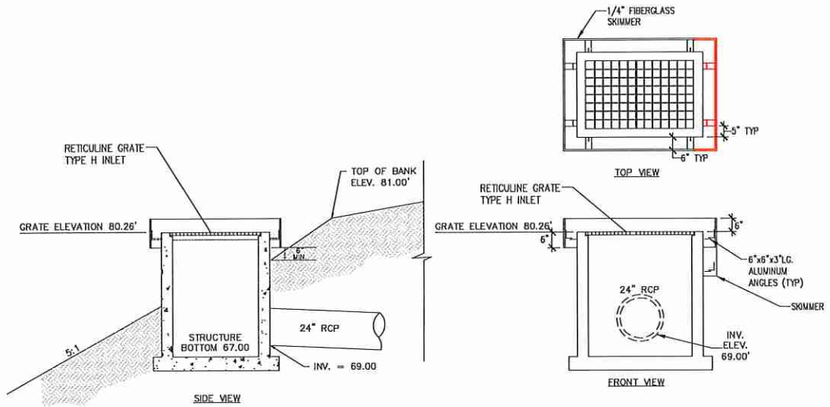
CERTIFICATE OF AUTHORIZATION NUMBER 27000

(DIVISION)

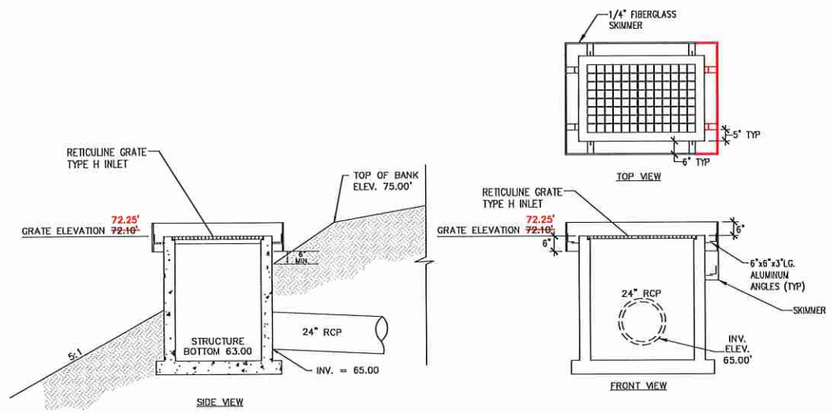
DRAINAGE DETAILS
FINAL DEVELOPMENT PLAN
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: C. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/21/2020
SCALE: N.T.S.
PROJECT: ROY-001
SHEET: C9.0

P:_PROJECT DRAWINGS\ROY-001 – Lake Marshall Residential Development\5.9 Drawings\Civil\layouts\06 FINAL DEVELOPMENT PLAN AMENDMENT – PHASE 1\Drainage Details.dwg Modified:3/31/2020 By:salarrogil



7 DS-1 CONTROL STRUCTURE
TYPE 'H' INLET
N.T.S.



8 DS-2 CONTROL STRUCTURE
TYPE 'C' INLET
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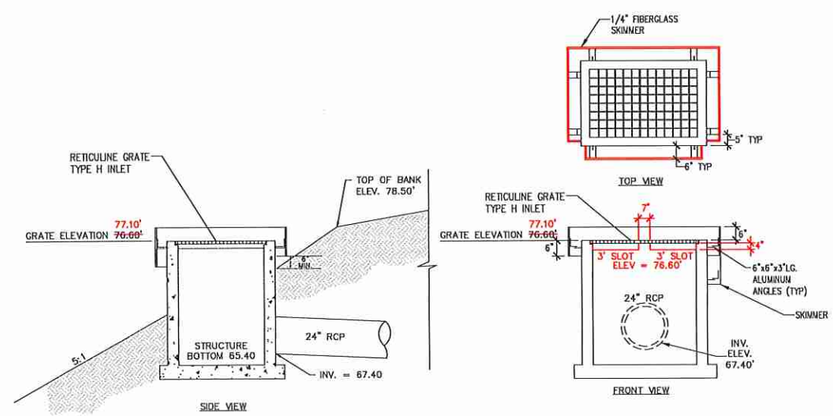

9 DS-3 CONTROL STRUCTURE
TYPE 'C' INLET
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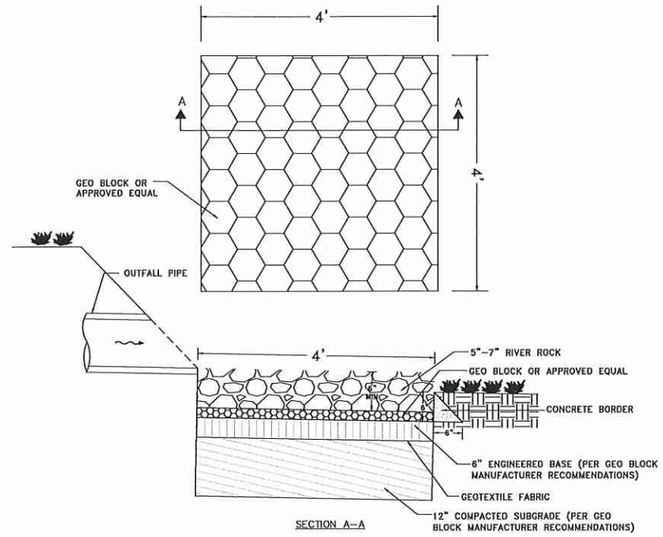
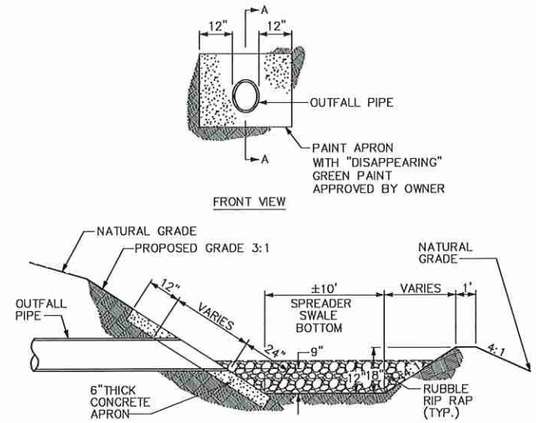


10 ENERGY DISSIPATER DETAIL
N.T.S.



11 SPREADER SWALE DETAIL
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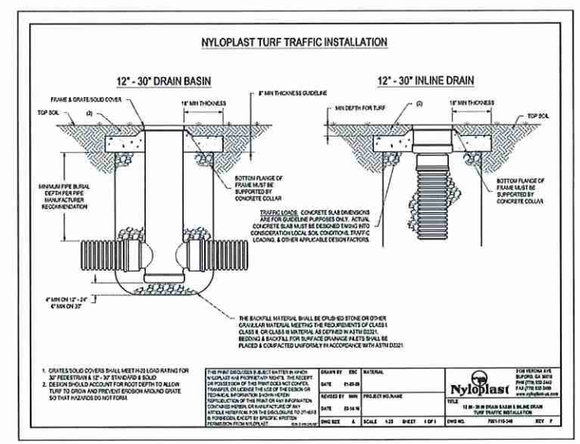
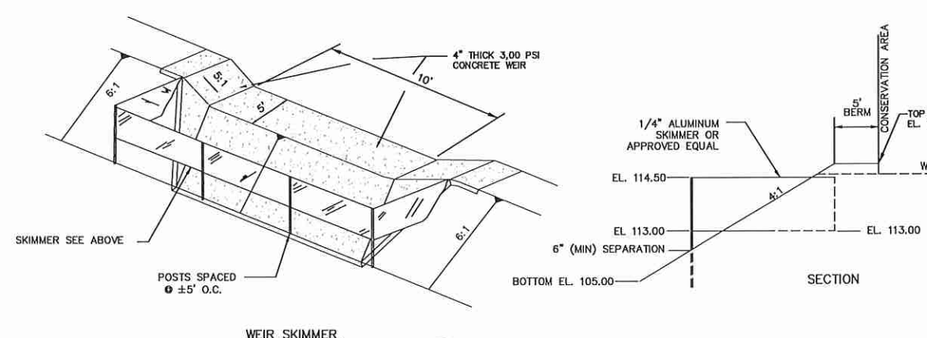


12 CONCRETE COLLAR
N.T.S.



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SHEET 72 OF 92

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A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/21/20	FDP AMENDMENT - GRADING REVISION	SCS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	03/15/18	S.R.W.MD COMMENTS DATED 03/15/18	SCS
A	02/15/18	CITY OF APOPKA COMMENTS DATED 02/15/18	SCS
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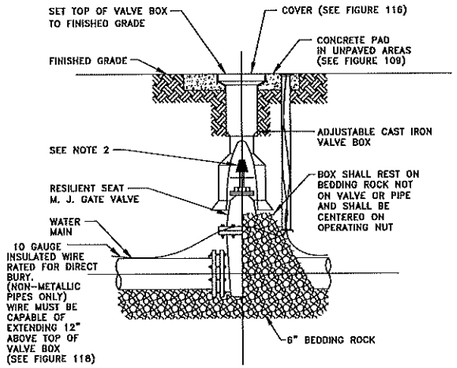
DRAINAGE DETAILS
FINAL DEVELOPMENT PLAN
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: Q. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/21/2020
SCALE: N.T.S.
PROJECT: ROY-001
SHEET: C9.1

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.9 Drawings\59civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Drainage Details.dwg Modified:1/21/2020 By:jbaker

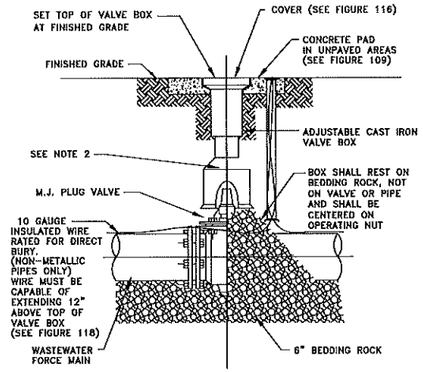


NOTES:

1. PVC EXTENSIONS MAY BE USED ON VALVE BOX INSTALLATION.
2. THE ACTUATING NUT FOR DEEPER VALVES SHALL BE EXTENDED TO WITHIN A 3 FEET BELOW FINISHED GRADE.

GATE VALVE AND BOX DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 400

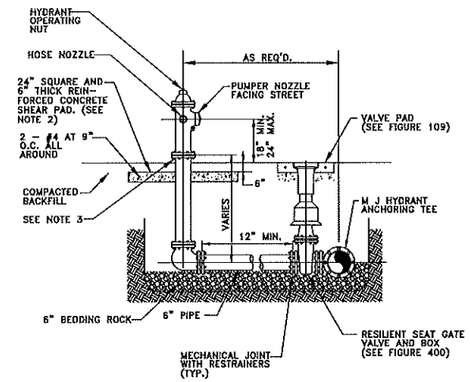


NOTES:

1. PVC EXTENSIONS MAY BE USED ON VALVE BOX INSTALLATION.
2. THE ACTUATING NUT FOR DEEPER VALVES SHALL BE EXTENDED TO WITHIN 3 FEET BELOW FINISHED GRADE.

PLUG VALVE AND BOX DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 400 A

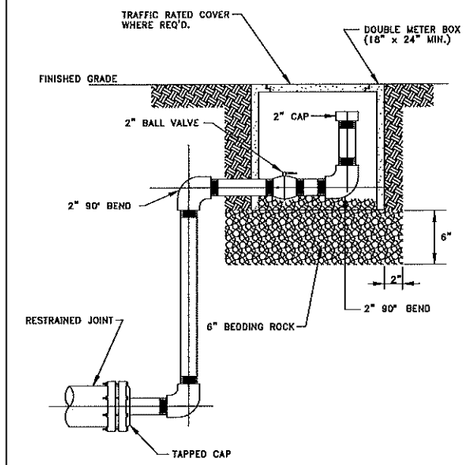


NOTES:

1. FIRE HYDRANT SHALL BE SUPPLIED WITHOUT A WEEP HOLE, OR WITH A PERMANENTLY PLUGGED WEEP HOLE.
2. THE SHEAR PAD SHALL BE RECESSED SIX (6) INCHES BELOW THE FINISHED GRADE AND THE RECESSED SECTION SODDED.
3. CLEARANCE BETWEEN BOTTOM OF BOLTS AND TOP OF SHEAR PAD SHALL BE A TWELVE (12) INCH MINIMUM.
4. FIRE HYDRANTS SHALL BE IDENTIFIED IN ACCORDANCE WITH THE CITY OF APOPKA UTILITIES DESIGN CONSTRUCTION STANDARDS MANUAL.

FIRE HYDRANT ASSEMBLY DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 402

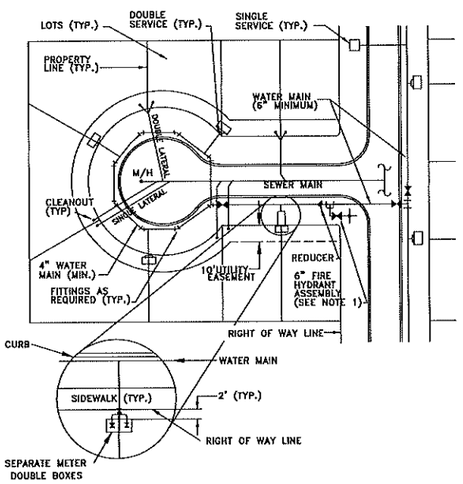


NOTES:

1. ALL 2 INCH PIPE AND FITTINGS SHALL BE SCHEDULE 40 GALVANIZED STEEL OR BRASS WITH THREADED (NPT) JOINTS. USE TEFLON TAPE ON JOINTS.
2. COLOR SHALL BE APPROPRIATE FOR USE.

BLOWOFF VALVE DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 403

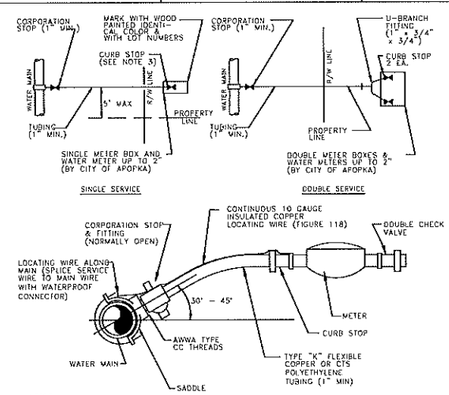


NOTES:

1. ANCHORING TYPE 90° BEND SHALL ONLY BE USED WHERE RIGHT-OF-WAY CONSTRUCTION WILL NOT ALLOW INSTALLATION OF A STRAIGHT ASSEMBLY.
2. POTABLE WATER AND RECLAIMED WATER MAINS SHALL BE LOOPED THROUGHOUT CUL-DE SAC.

TYPICAL SERVICE LOCATION DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 404

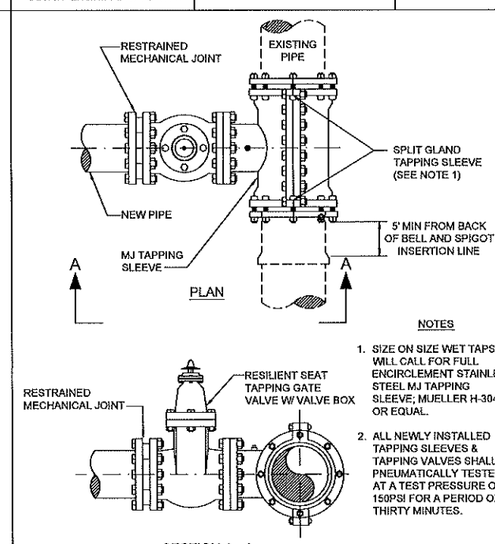


NOTES:

1. ALL FITTINGS SHALL BE BRASS WITH COMPRESSION/PACK JOINT TYPE CONNECTIONS.
2. NO SERVICE LINE SHALL TERMINATE UNDER A DRIVEWAY.
3. EACH SERVICE SHALL TERMINATE AT A CURB STOP(S) WHICH SHALL BE BURIED APPROXIMATELY 3" BELOW FINAL GRADE AND SHALL BE CLEARLY MARKED WITH A 2" x 2" x 18" STAKE WITH THE TOP PAINTED BLUE FOR POTABLE WATER AND PURPLE FOR RECLAIMED WATER, AND MARKED WITH THE NUMBER OF THE LOT(S) TO BE SERVED.
4. RECLAIMED WATER SERVICES SHALL USE PURPLE COLORED CTS POLYETHYLENE TUBING.
5. POTABLE WATER SERVICES SHALL USE BLUE COLORED CTS POLYETHYLENE TUBING.
6. ALL SERVICE UNDER EXISTING OR PROPOSED PAVEMENT SHALL BE INSTALLED IN A MINIMUM 2" PVC SLEEVE.

WATER SERVICE CONNECTION DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 405

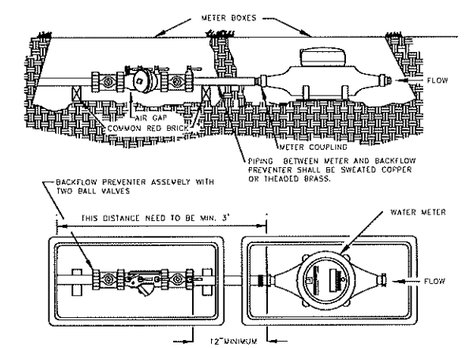


NOTES

1. SIZE ON SIZE WET TAPS WILL CALL FOR FULL ENCIRCLEMENT STAINLESS STEEL MJ TAPPING SLEEVE; MUELLER H-304, OR EQUAL.
2. ALL NEWLY INSTALLED TAPPING SLEEVES & TAPPING VALVES SHALL BE PNEUMATICALLY TESTED AT A TEST PRESSURE OF 150PSI FOR A PERIOD OF THIRTY MINUTES.

WATER AND RECLAIMED WATER MAINS WET TAP TIE-IN DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 406



1. A 3' PIECE OF STRAIGHT PIPE MUST BE CONNECTED TO METER USING THE DESIGNATED HOLES IN THE METER BOX BEFORE ANY ANGLES ARE CONNECTED. THE SAME RULES APPLY FOR DOUBLE METER HOOK-UPS.
2. BACKFLOW DEVICE AND METER ARE TO BE SET BY THE CITY FOR METERS 2-INCH OR LESS IN SIZE.

POTABLE WATER SERVICE DETAIL FOR LOTS SERVED WITH RECLAIMED WATER

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 505

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UTILITY DETAILS
FINAL DEVELOPMENT PLAN
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

SCALE	N.T.S.
DRAWN:	S. SIERRA-GIL
DESIGNED:	O. SANCHEZ
PROJECT	ROY-001
CHECKED:	L. CLASSON
SHEET	C10.0
DATE:	1/29/2020

3/31/20

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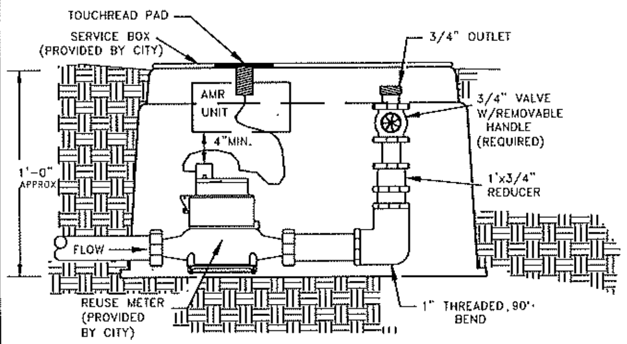


RECLAIMED WATER SERVICE CONNECTION
(FOR SERVICES W/O AN IRRIGATION SYSTEM)

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 506

MINIMUM LENGTH (FT) TO BE RESTRAINED ON EACH SIDE OF FITTING(S). *	PIPE SIZE										
	6"	8"	10"	12"	16"	18"	20"	24"	30"	36"	48"
90° BEND	33	43	51	60							
45° BEND	14	18	22	25							
22-1/2° BEND	7	9	11	12							
11-1/4° BEND	4	5	6	6							
TEE**	1	7	24	44							
REDUCER (ONE SIZE SMALLER)		41	39	40							
DEAD END	74	96	115	136							

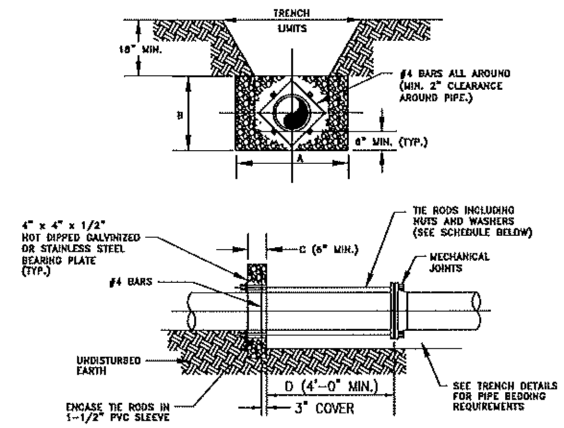
* ONLY RESTRAIN BRANCH PIPE FOR TEES. ONLY RESTRAIN LARGER PIPE FOR REDUCERS
** LENGTH ALONG RUN ASSUMED TO BE 18'

NOTES:

1. FITTINGS SHALL BE DUCTILE IRON RESTRAINED JOINT TYPE. FM FITTINGS TO BE LINED WITH PROTECTO 401.
2. INSTALL FULL LENGTHS OF PIPE WITH TOTAL LENGTH CONTAINING ONLY RESTRAINED JOINTS EQUAL TO OR GREATER THAN LENGTH SHOWN IN TABLE.
3. WHERE TWO OR MORE FITTINGS ARE TOGETHER, USE FITTING WHICH YIELDS GREATEST LENGTH OF RESTRAINED PIPE.
4. IN LINE VALVES AND THROUGH RUN OF TEES OUTSIDE LIMITS OF RESTRAINED JOINTS FROM OTHER FITTINGS NEED NOT BE RESTRAINED UNLESS OTHERWISE INDICATED.
5. LENGTHS SHOWN IN THE TABLE HAVE BEEN CALCULATED IN ACCORDANCE WITH THE PROCEDURE OUTLINED IN "THRUST RESTRAINT DESIGN FOR DUCTILE IRON PIPE" AS PUBLISHED BY DIPRA, FOR PVC WITH THE FOLLOWING ASSUMPTIONS:
   TYPE OF PIPE: PVC
   WORKING PRESSURE: 150 P.S.I.**
   SOIL DESIGNATION: SM(SAND SILT)
   LAYING CONDITIONS: 3
   ** FM = 100 P.S.I. / WM OR RWM = 150 P.S.I.
6. FOR PIPE ENCASED IN POLYETHYLENE INCREASE THE GIVEN VALUE BY A FACTOR OF 1.5.
7. VALUES NOT LISTED IN THE TABLE TO BE COMPLETED BY THE ENGINEER.

RESTRAINED PIPE TABLE (PVC)

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 105



NOTES:

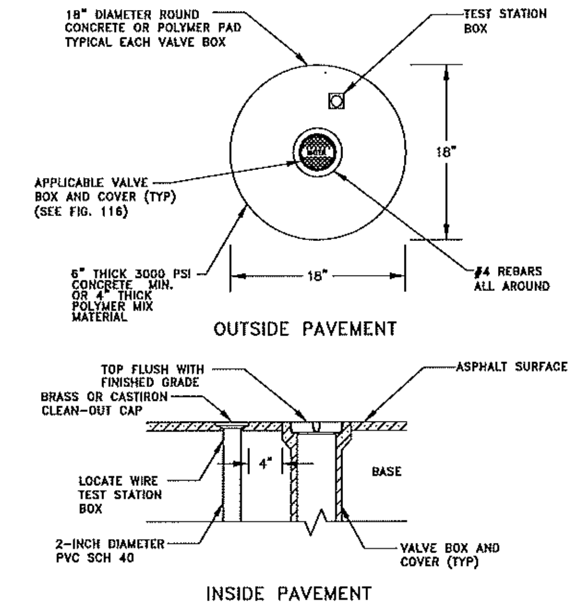
1. ADDITIONAL REINFORCEMENTS SHALL BE AS SPECIFIED BY THE ENGINEER.
2. MINIMUM COMPRESSIVE STRENGTH FOR CONCRETE SHALL BE 2500 P.S.I.
3. BEDDING, BACKFILL, AND COMPACTION SHALL BE AS SPECIFIED ELSEWHERE IN THE STANDARD DRAWINGS.
4. ALL FORM BOARDS SHALL BE REMOVED PRIOR TO BACKFILL.
5. NO ALLOWANCE SHALL BE MADE FOR FRICTION BETWEEN THE PIPE WALL AND THE THRUST COLLAR.
6. DESIGN PRESSURE: 150 P.S.I.

SCHEDULE OF DIMENSIONS AND MATERIALS *						
PIPE SIZE (INCHES)	DIMENSIONS (FT.) A	B	C	D	TIE RODS REQ'D DIA.	NO.
6	2.0	2.0	1.0		3/4	2
8	2.5	2.5	1.0		3/4	2
10	3.5	3.0	1.0		3/4	4
12	5.0	3.0	1.0		3/4	4
16	6.0	4.0	1.5		3/4	4
20	8.0	5.0	1.5		3/4	6
24	9.0	6.0	1.5		3/4	6

NOTE: THRUST BLOCK AREAS TO BE COMPUTED ON BASIS OF 2,000 LBS. PER SQ. FT. SOIL RESTRAINT BEARING. (1,500 MIN) SEE NOTE 5
* TO BE COMPLETED BY ENGINEER.

WATER MAIN THRUST COLLAR DETAIL

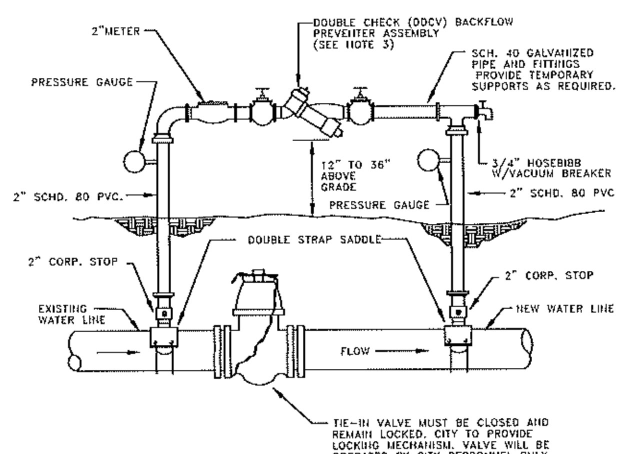
CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 107



VALVE IDENTIFICATION TAG TO BE INSTALLED BY CITY & PAID FOR BY DEVELOPER

VALVE BOX

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 109

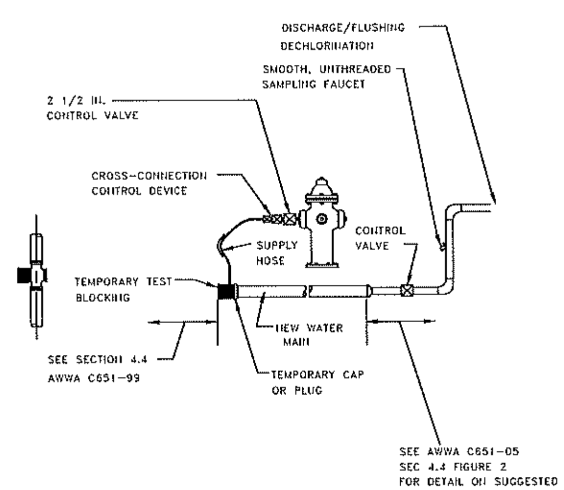


NOTE:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS, ASSEMBLY, AND THE INSTALLATION OF THE DEVICE.
2. SEE FIGURE 504C FOR PROCEDURES.
3. DDCV IS MINIMUM PROTECTION REQUIRED. A RPZ DEVICE MAY BE REQUIRED DEPENDING ON PROJECT. PROVIDE COPY OF LATEST CERTIFICATION TEST RESULTS.

TEMPORARY JUMPER CONNECTION

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 504 A



NOTE:

1. SEE FIGURE 504C FOR PROCEDURES.

TEMPORARY JUMPER CONNECTION FROM FIRE HYDRANT

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 504 B

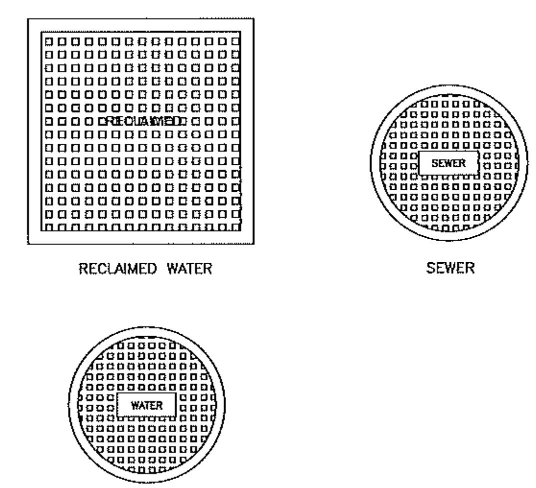
TEMPORARY JUMPER CONNECTION NOTES:

1. A temporary jumper connection is required at all connections between existing active water mains and proposed new water main improvements.
2. Figures 504 A and 504 B to be used for filling any new water main of any size from existing active water mains and for flushing of new mains up to 8 inches in diameter (2.5 FPS minimum velocity) and for pulling bacteriological samples from any new water main of any size. The jumper connection shall be maintained until after filling, flushing testing and disinfection of the new main has been successfully completed and cleared for use from the Florida Department of Environmental Protection (FDEP) and other pertinent agencies have been received. The jumper connection shall also be used to maintain a minimum pressure of 20 psi in the new mains after disinfection and until the FDEP clearance letter is obtained. Thrust blocking and/or restraints shall be provided temporarily, as required. Pipe and fittings used for connecting the new pipe to the existing pipe shall be disinfected prior to installation in accordance with AWWA C651, 2005 edition. The tapping sleeve and the exterior of the main to be tapped shall be disinfected by spraying or swabbing per section II of AWWA C651-05.
3. Flushing of 10 inches in diameter and larger water mains may be done through the tie-in valve under very controlled conditions. The following procedures shall be followed:
   A. The tie-in valves shall be operated and pressure tested in the presence of the City engineer to verify water tightness prior to tie-in. Valves which are not water tight shall be replaced with a new valve installed immediately adjacent to the leaking valve.
   B. The temporary jumper connection shall be constructed as detailed. The jumper connection shall be used to fill the new water main and for providing water for bacteriological sampling of the new main as required by the FDEP permit.
   - Flushing shall not be attempted during peak demand hours of the existing water mains.
   - All downstream valves in the system must be open prior to opening the tie-in valve.
   - Provide for and monitor the pressure in the tie-in point. The pressure in the existing main must not drop below 35 psi.
   - The tie-in valve shall be opened a few turns only, ensuring a pressure drop across the valve is greater than 10 psi.

   C. The tie-in valve shall be locked closed by the City personal until flushing begins.
   D. The tie-in valve shall be opened only for flushing of the new main. The procedure shall be directed by the City and observed by the engineer.
   E. After flushing, the tie-in valve shall be closed and locked in the closed position by the City personal.
4. The contractor shall provide documentation demonstrating that the double check backflow prevention device has been tested and is in good working order at the time of installation.
5. Except as required to flush lines of greater than 8 inches in diameter, the tie-in valve shall remain closed and shall be locked in the closed position by the City. The tie-in valve shall remain locked closed until the new system has been cleared for use by FDEP and all other pertinent agencies.
6. Upon receipt of clearance for use from FDEP and all other pertinent agencies, the contractor shall remove the temporary jumper connection. The corporation stops are to be closed and plugged with 2 inch brass plugs.
7. All installation and maintenance of the temporary jumper connection and associated backflow prevention device, fittings, valve, etc. shall be the responsibility of the contractor.

PROCEDURES FOR TEMPORARY JUMPER CONNECTION

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 504 C



TYPICAL VALVE BOX COVER DETAILS

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 116

REV.	DATE	DESCRIPTION	BY
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	03/15/18	SJRWMD COMMENTS DATED 03/15/18	SCS
	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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UTILITY DETAILS
FINAL DEVELOPMENT PLAN
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION) PHASE 1
CITY OF APOPKA, FLORIDA

SCALE: N.T.S.
PROJECT: ROY-001
SHEET: C10.1
DRAWN: S. SIERRA-GIL
DESIGNED: O. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/29/2020

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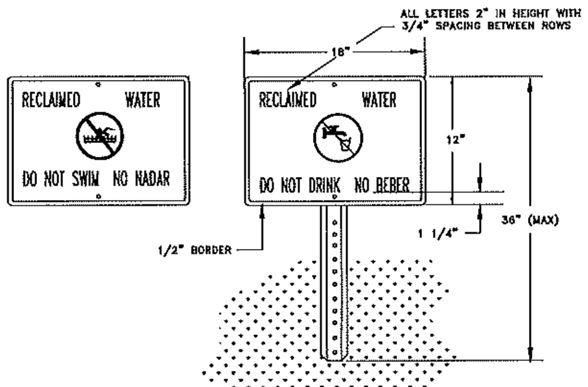
P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.9 Drawings\59civil\layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Utility Details.dwg Modified:1/29/2020 By:ssierragil

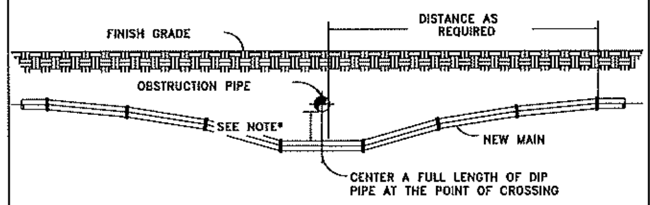


NOTES:

1. HEIGHT OF SIGN WILL DEPEND ON LOCATION AND SURROUNDING LANDSCAPE PLANT TYPES. IN ALL CASES, THE SIGN SHALL BE VISIBLE TO THE PUBLIC.
2. BACKGROUND SHALL BE WHITE. LETTERS AND FIGURES SHALL BE BLACK. PROHIBITIVE SYMBOL SHALL BE RED.
3. ENGINEERING GRADE REFLECTIVE MATERIALS SHALL BE USED.
4. POST SHALL BE U CHANNEL 12 FT. 2 LB. HOT ROLLED HIGH TENSILE RAIL OR BILLET STEEL, HOT DIP GALVANIZED PER ASTM A-123.
5. MOUNTING HARDWARE SHALL BE STAINLESS STEEL.
6. SIGNS SHALL BE PLACED BY THE CONTRACTOR IN ACCORDANCE WITH THE CITY APPROVED ENGINEERING PLANS AND/OR AS APPROVED BY PUBLIC SERVICES DEPARTMENT.

RECLAIMED WATER ADVISORY SIGN

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 115



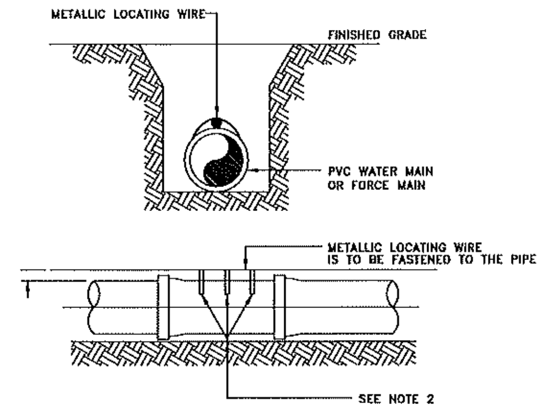
NOTES:

1. 18" MINIMUM CLEARANCE FOR WATER, SEWER AND RECLAIMED WATER MAIN CROSSINGS
2. 12" MINIMUM CLEARANCE REQUIRED FOR OTHER TYPE UTILITY CROSSINGS.
3. SEE ENCASEMENT DETAIL IF MINIMUM CLEARANCE CANNOT BE OBTAINED.

* CONSTRUCT UNIFORM PIPE DEFLECTION NOT TO EXCEED 75% OF MANUFACTURER RECOMMENDED MAXIMUM DEFLECTION PER PIPE JOINT

UTILITY CROSSING PIPE DEFLECTION DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 117

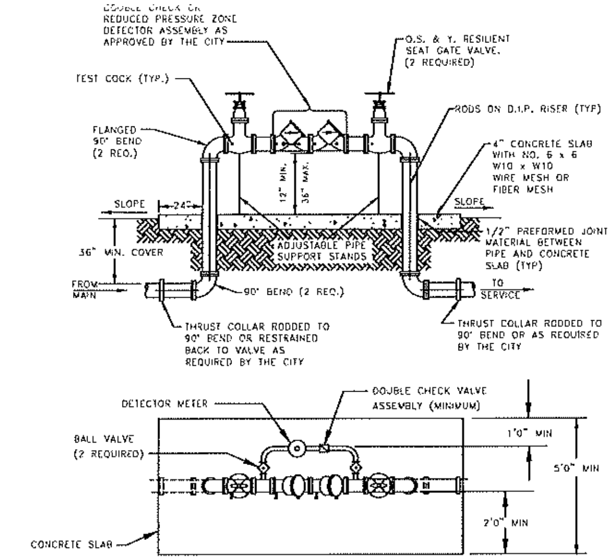


NOTES:

1. PVC PIPE SHALL REQUIRE INSULATED METALLIC LOCATING WIRE (10 AWG-SOLID CCS REINFORCED TRACER WIRE-INSULATED 30 MIL HDPE – 30 VOLT MFG. BY COPPERHEAD INDUSTRIES, LLC OR EQUAL) CAPABLE OF DETECTION BY A CABLE LOCATOR.
2. SHALL BE BURIED DIRECTLY ABOVE THE CENTERLINE OF THE PIPE AND ATTACHED WITH DUCT TAPE OR NYLON STRAPS AT 3 LOCATIONS PER JOINT. LOCATING WIRE SHALL TERMINATE AT THE TEST STATION BOX AS SHOWN IN FIG. 109.
3. BE CAPABLE OF EXTENDING 12" ABOVE TOP OF TEST STATION BOX IN SUCH A MANNER SO AS NOT TO INTERFERE WITH VALVE OPERATION.
4. SPLICES SHOULD BE MADE USING STANDARDS AND PRODUCTS DESIGNED FOR DIRECT BURIAL CONDUCTORS.
5. WIRE INSULATION SHALL BE COLOR CODED FOR THE TYPE OF PIPE BEING INSTALLED.

PVC PIPE LOCATING WIRE DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 118

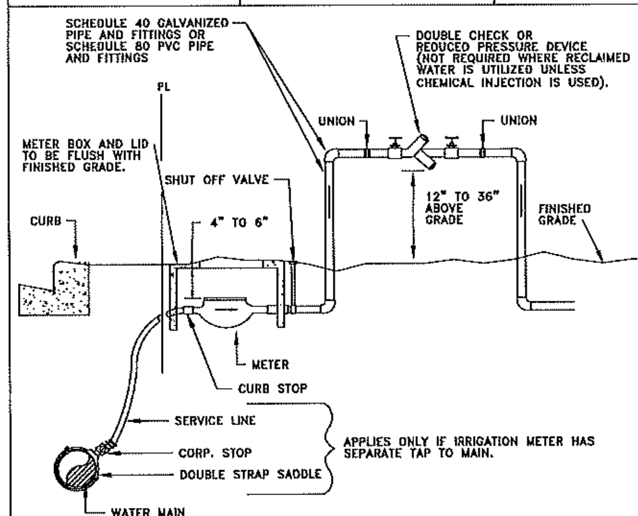


NOTES:
1. BYPASS METER MUST MEET AWWA STANDARD C700 OR C701.
2. METER MUST MEET AWWA STANDARD C707 AND TRANSMITTER MUST BE COMPATIBLE WITH THE CITY'S AMR SYSTEM.
3. ALL PIPE FITTINGS, MATERIALS, LABOR, AND APPURTENANCES SHALL BE SUPPLIED BY THE CONTRACTOR.
4. ALL PIPE AND FITTINGS TWO (2) INCHES AND SMALLER SHALL BE THREADED SCHEDULE 40 GALVANIZED STEEL, OR BRASS.

ABOVE GROUND DEVICE WITH DETECTOR BY-PASS

2 INCH AND ABOVE ASSEMBLY

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 500 B

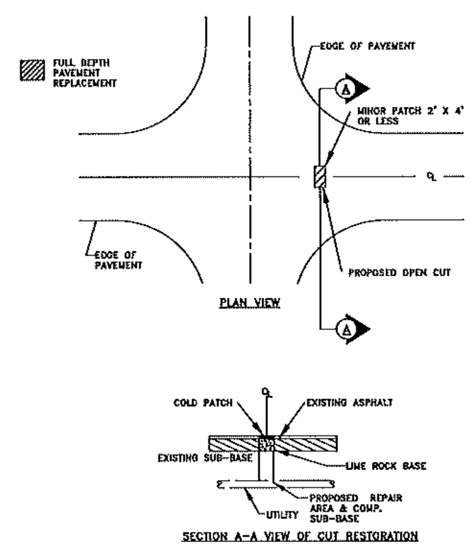


NOTES:

1. A POSITIVE DIELECTRIC CONNECTION SHALL BE MADE BETWEEN ALL GALVANIZED AND BRASS COMPONENTS.
2. METER SHALL BE INSTALLED JUST INSIDE THE ROW LINE OR PROPERTY LINE AND IN NO CASE SHALL IT BE INSTALLED IN THE SIDEWALK OR OTHER PAVED AREAS.
3. DOUBLE CHECK VALVES MAY BE USED AS LONG AS THEIR ARE NO CHEMICALS OR A WELL ON SITE.
4. A PVB DEVICE SHALL BE 12-INCHES MINIMUM ABOVE HIGHEST OUTLET OR SPRAYHEAD
5. ALL BACKFLOW PREVENTION DEVICES ARE TO BE AWWA APPROVED.

IRRIGATION METER AND DOUBLE CHECK VALVE OR REDUCED PRESSURE BACKFLOW PREVENTER

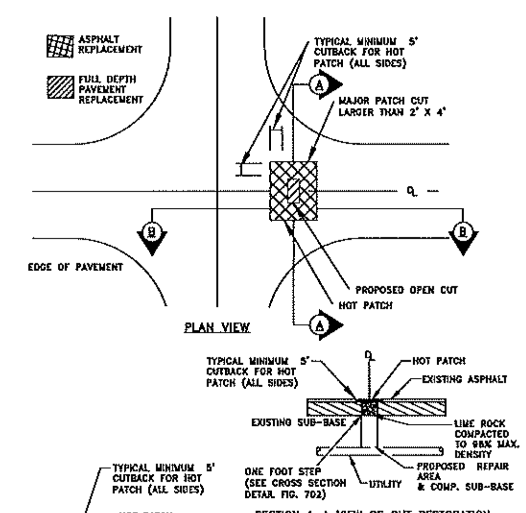
CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 502

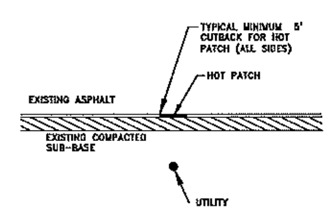


NOTE:
1. PROCTOR OF THE LIME ROCK MUST BE PROVIDED
2. DENSITIES TO BE PROVIDED BY GEOTECHNICAL ENGINEER.

OPEN-CUT DETAIL – MINOR PATCH

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2015	FIG. 700



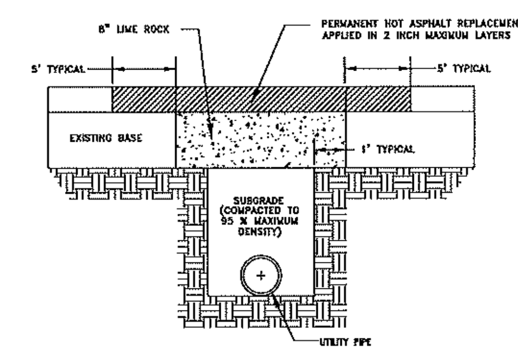


NOTE:
1. ADDITIONAL RESURFACING MAY BE REQUIRED BY THE PUBLIC SERVICES DIRECTOR.
2. HOT PATCH TO BE APPLIED IN 2 INCH MAXIMUM THICKNESS LAYERS.
3. PROCTOR OF THE LIME ROCK MUST BE PROVIDED
4. DENSITIES TO BE PROVIDED BY GEOTECHNICAL ENGINEER.

OPEN-CUT DETAIL – MAJOR PATCH

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2015	FIG. 701

NOTE:
SUB-GRADE TO BE COMPACTED TO 95% MAX. DENSITY AS DETERMINED BY AASTHO T-180 CUT TO BE REPLACED WITH 8" LIME ROCK AND COMPACTED TO 98% MAX. DENSITY TO TOP OF EXISTING BASE. CUT AREA TO BE PLATED OR PROTECTED ON THE DAY OF POUR. EXISTING SURFACE TO BE SAW CUT TO AN AREA OF FIVE FEET (5') BEYOND BASE CUT.



GENERAL NOTES:
1. BASE REPLACEMENT SHALL BE 8" LIME ROCK COMPACTED TO 98% MAX. DENSITY.
2. ASPHALTIC CONCRETE SURFACE MATERIAL SHALL BE REPLACED WITH THE SAME TYPE OF MATERIAL AT THE TIME OF REMOVAL.
3. MINIMUM ASPHALTIC CONCRETE SURFACE OVERLAY THICKNESS SHALL BE ONE (1) INCH.
4. ALL JOINT CUTS SHALL BE MECHANICALLY SAW CUT.

PAVEMENT RESTORATION:
1. LONGITUDINAL CUTS MAY REQUIRE OVERLAY/RESURFACING OF THE COMPLETE WIDTH OF THE TRAVELED WAY.
2. CUTS AT INTERSECTIONS OF STREETS GENERALLY MAY REQUIRE A COMPLETE OVERLAY/RESURFACING TO THE END OF ALL RETURN RADII. AND ALSO TO A POINT TEN FEET (10') BEYOND THE CUT WHICHEVER IS GREATER.
3. ACTUAL REQUIREMENTS WILL BE AS STATED ON THE APPROVED PERMIT.

LIME ROCK

HOT PATCH

OPEN-CUT CROSS SECTION DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2015	FIG. 702

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REV.	DATE	DESCRIPTION	BY
	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SCS
	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
	01/21/20	FDP AMENDMENT – GRADING REVISION	SCS
	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
	03/15/18	SJRWMD COMMENTS DATED 03/15/18	SCS
	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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UTILITY DETAILS

FINAL DEVELOPMENT PLAN

LAKESIDE (FKA LAKE MARSHALL SUBDIVISION) PHASE 1

CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: O. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/29/2020

SCALE: N.T.S.
PROJECT: ROY-001
SHEET: C10.2

3/31/20

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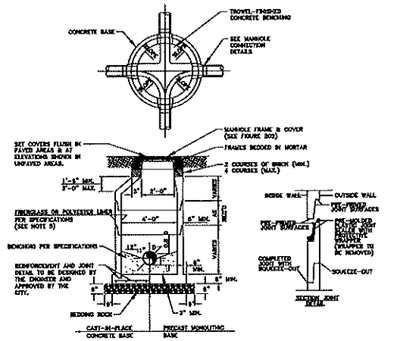


FORCE MAIN MANHOLE LINER*

DIAMETER (INCHES)	THICKNESS (INCHES) HEIGHT (FEET) 3-6	7-12	13-17	MATERIAL	MANUFACTURER
48					
60					
72					

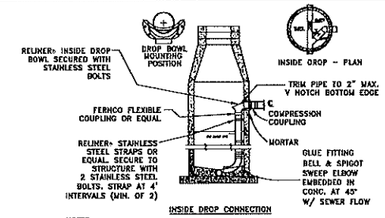
* TO BE COMPLETED BY THE ENGINEER

NOTES:

1. MANHOLE SHOWN IS FOR SEWER SIZE 8" THRU 24". SEE SECTION 20.4 OF THE MANUAL FOR MANHOLE DIAMETER FOR SEWERS LARGER THAN 24".
2. DROP CONNECTIONS ARE REQUIRED WHENEVER INVERT OF INFLUENT SEWER IS 24" OR MORE ABOVE THE INVERT OF THE MANHOLE. SEE MANHOLE CONNECTION DETAILS.
3. THE THICKNESS OF THE LINER SHALL BE 3/8" MINIMUM.
4. EACH BENCH WALL SHALL BE A MINIMUM OF 18 INCHES LONG FROM THE WALL OF THE MANHOLE TOWARD THE CENTER.
5. SANITARY SEWER MANHOLES MAY BE REQUIRED TO BE LINED IN ACCORDANCE WITH THE CITY OF APOPKA LIST OF APPROVED MATERIALS AND PRODUCTS AS DIRECTED BY THE CITY.

TYPICAL MANHOLE

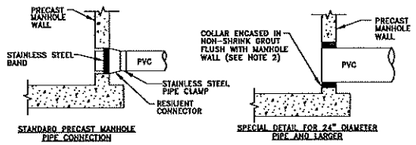
CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2015	FIG. 200



INSIDE DROP CONNECTION

NOTES:

1. ALL INSIDE DROP CONNECTIONS FOR SERVICES AND COLLECTOR SEWERS SHALL USE THE DROP BOWL AS PRODUCED BY:
   REINKER-DURAN, INC.
   53 MT. ARCHER RD.
   LYME, CT 06371
   (860)434-0277 FAX: (860)434-3195 OR EQUAL.
2. SECURE DROP PIPE TO MANHOLE WALL WITH REINKER-DURAN, INC STAINLESS STEEL ADJUSTABLE CLAMPING BRACKETS.
3. FORCE MAIN RECEIVING MANHOLES MAY BE REQUIRED TO BE LINED IN ACCORDANCE WITH THE CITY OF APOPKA LIST OF APPROVED MATERIALS AND PRODUCTS AS DIRECTED BY THE CITY.



STANDARD PRECAST MANHOLE PIPE CONNECTION

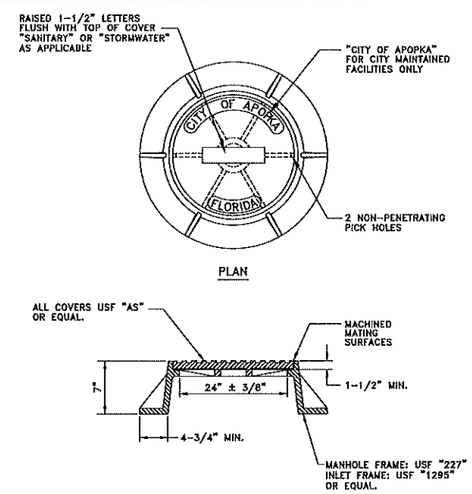
SPECIAL DETAIL FOR 24" DIAMETER PIPE AND LARGER

NOTES:

1. DROP PIPE AND FITTINGS SHALL BE OF EQUAL SIZE AND MATERIAL AS THE INFLUENT SEWER.
2. THE CITY MAY APPROVE ALTERNATE WATERTIGHT CONNECTION DETAILS FOR CONNECTION OF 24" DIAMETER PIPES AND LARGER.
3. AN INSIDE DROP CONNECTION SHALL BE REQUIRED FOR ALL INFLUENT WHICH HAVE AN INVERT 24" OR MORE ABOVE THE OUTFLOW PIPE INVERT.
4. CONCRETE TO BE MINIMUM OF 3000 PSI.

MANHOLE CONNECTION DETAILS

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2015	FIG. 201

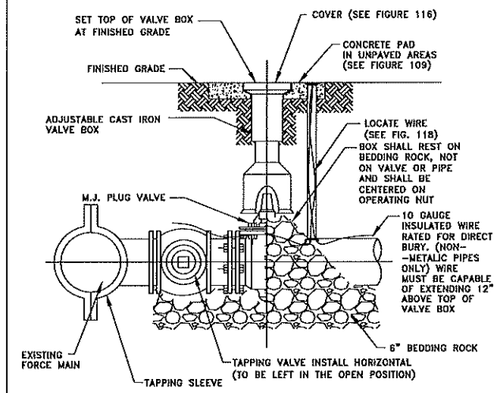


NOTES:

1. MANHOLE FRAME AND COVER ARE TO BE TRAFIC BEARING RATED H-20, CLASS 30 MEETING ASTM A 48.

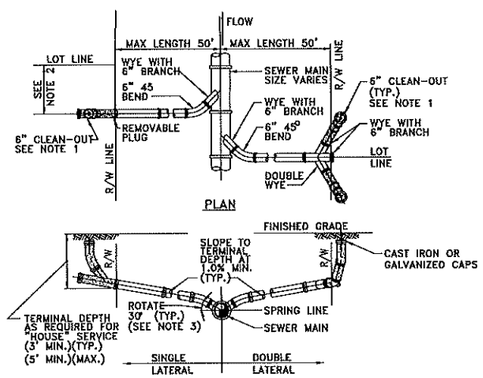
STANDARD MANHOLE FRAME AND COVER

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 202



FORCE MAIN WET TAP TIE-IN DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 206

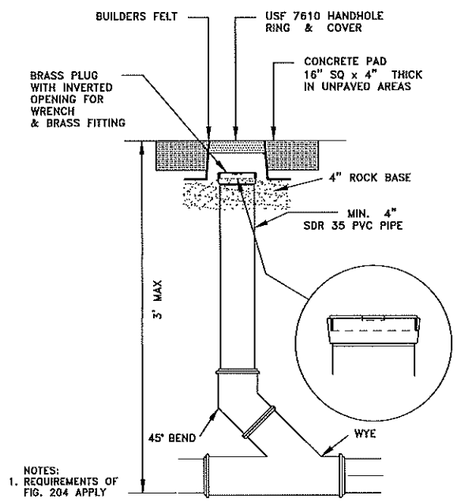


NOTES:

1. CLEAN-OUT (SHOWN SHADED) SHALL BE INSTALLED BY THE BUILDER IN ACCORDANCE WITH STANDARD PLUMBING CODE.
2. LOCATE SINGLE LATERAL AS CLOSE TO LOT LINE AS POSSIBLE.
3. INVERT OF SERVICE LATERAL SHALL NOT ENTER SEWER MAIN BELOW SPRING LINE.
4. RESIDENTIAL SERVICES SHALL BE 4 INCHES & NON-RESIDENTIAL SERVICES SHALL BE 6 INCHES IN DIAMETER AS A MINIMUM.
5. GALVANIZED, OR CAST IRON CLEAN-OUT CAP SHALL BE USED ON THE STUBOUT FOR EACH SERVICE.
6. LATERAL SHALL BE MARKED WITH AN "S" STAMPED OR CUT IN THE CURB.

SERVICE LATERAL DETAIL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 204



NOTES:
1. REQUIREMENTS OF FIG. 204 APPLY

SANITARY SEWER SERVICE TRAFFIC RATED CLEAN-OUT DETAIL

NTS

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 205

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A	01/21/20	CITY OF APOPKA COMMENTS DATED 06/07/18	SCS
A	03/15/18	SJRWMD COMMENTS DATED 03/05/18	SCS
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UTILITY DETAILS
FINAL DEVELOPMENT PLAN
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION) PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: C. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/29/2020
SCALE: N.T.S.
PROJECT: ROY-001
SHEET: C10.3

3/31/20

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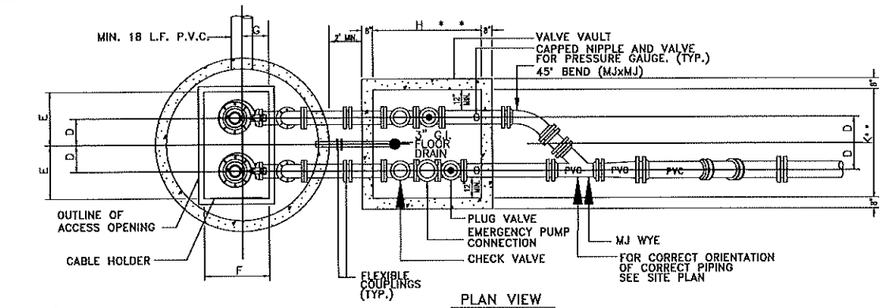
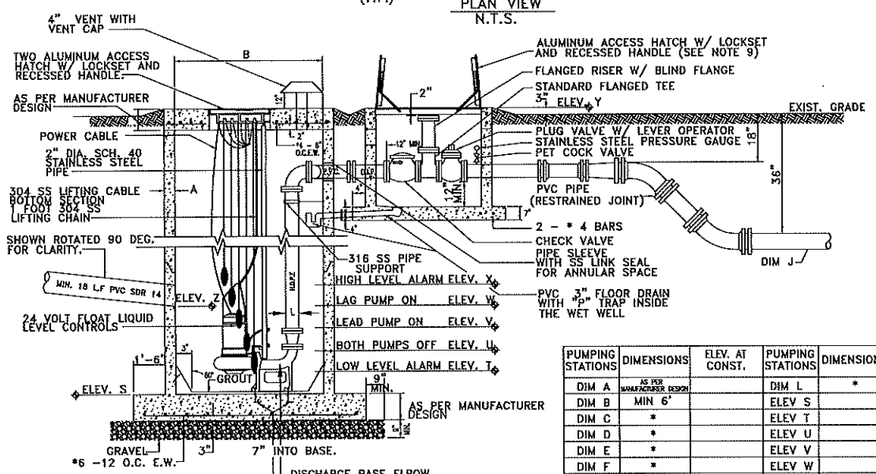


PLAN VIEW
N.T.S.



PROFILE VIEW
N.T.S.

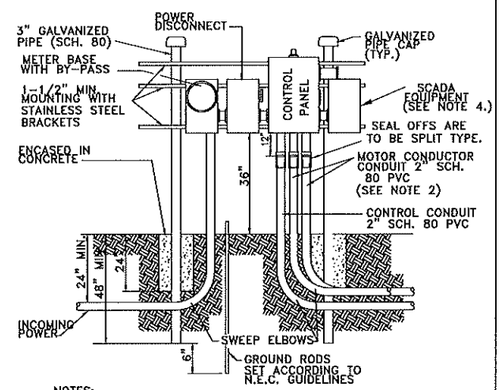
PUMPING STATIONS	DIMENSIONS	ELEV. AT CONST.	PUMPING STATIONS	DIMENSIONS	ELEV. AT CONST.
DIM A	AS PER MANUFACTURER DESIGN		DIM L	*	
DIM B	MIN 6'		ELEV S		66.38
DIM C	*		ELEV T		67.58
DIM D	*		ELEV U		68.08
DIM E	*		ELEV V		69.78
DIM F	*		ELEV W		70.28
DIM G	*		ELEV X		70.78
DIM H	6'-0" MIN.		ELEV Y		85.08
DIM J	6"		ELEV Z		70.98
DIM K	6'-0" MIN.				

* PER PUMP MANUFACTURERS REQUIREMENT

GENERAL NOTES:
1. VALVE VAULT AND WET WELL LIDS SHALL BE COATED WITH 1 COAT OF TNEMEC SERIES 66, COLOR EN03, (2-3 MILS), FOLLOWED BY TOP COAT OF TNEMEC SERIES 73, COLOR EN05, (2-3 MILS) OR EQUAL.
2.A THE WET WELL SHALL BE CONSTRUCTED OF FIBERGLASS REINFORCED POLYESTER (RFP) AND MANUFACTURED FROM COMMERCIAL GRADE POLYESTER RESIN OR VINYL ESTER RESIN, WITH FIBERGLASS REINFORCEMENTS. THE WET WELL SHALL BE A ONE PIECE UNIT AND MANUFACTURED BY L.F. MANUFACTURE, INC. OR EQUAL.
2.B IN LIEU OF RFP THE WET WELL MAY BE CONSTRUCTED OF PRECAST CONCRETE HAVING A MINIMUM WALL THICKNESS OF 8 INCHES. THE INTERIOR WALLS SHALL BE LINED USING A HIGH DENSITY POLYETHYLENE PRODUCT AS MANUFACTURED BY AGRU SURE GRIP, OR EQUAL.
3. PIPING IN THE WET WELL TO BE HDPE WITH FUSED 45 DEGREES FITTINGS FROM WET WELL TO VALVE VAULT.
4. INTERIOR OF THE VALVE VAULT AND PIPING IN THE VALVE VAULT WITH ConSeal CS-55 (OR EQUAL), TWO COATS, 4 MILS EACH. PIPING SHALL BE COATED AFTER INSTALLATION.
5. VALVE VAULT SHALL BE SIZED TO PERMIT EASY REMOVAL OF CHECK VALVE SPINDLES WITH MINIMUM CLEARANCES AS SHOWN FOR 6" DIAMETER PIPE AND SMALLER. CLEARANCES SHALL INCREASE AS REQUIRED FOR LARGER PIPE SIZES.
6. VALVE VAULT SHALL HAVE SEALED FLOOR AND DRAIN.
7. ALL LOCATIONS WHERE PIPES ENTER OR LEAVE THE WET WELL OR VALVE VAULT SHALL BE MADE WATERTIGHT WITH WALL SLEEVE AND STAINLESS STEEL LINK SEAL.
8. THERE SHALL BE NO VALVES OR ELECTRICAL JUNCTION BOXES IN WET WELL.
9. WET WELL AND VALVE VAULT COVERS SHALL BE ALUMINUM WITH 316 S.S. HARDWARE LOCK BRACKET. SIZE AS REQUIRED BY PUMP MANUFACTURER AND APPROVED BY THE CITY.
10. FLEXIBLE COUPLING SHALL BE SLEEVE TYPE, EPOXY COATED.
11. PUMPS SHALL BE:
MANUFACTURER: XYLEM ; MODEL: NP 3153 SH-3 274; DIA: 176 mm ; SPEED: 3505 RPM ; DISCHARGE SIZE: 3.94 IN.;
VOLTAGE: 200 ; HZ.: 60 ; PHASE: 3 ; H.P.: 23 ; MIN. SOLID SIZE: _____ IN.
12. OPERATING CONDITIONS SHALL BE _____ GPM AT _____ FEET TDH.
13. ALL HARDWARE IN WET WELL AND VALVE BOX TO BE 316 STAINLESS STEEL.
14. "P" TRAP TO BE INSTALLED IN WET WELL.
15. ALL PUBLIC LIFT STATIONS SHALL BE EQUIPPED WITH SCADA SYSTEM.THE DEVELOPER SHALL PAY THE CITY COST OF THE UNIT.THE CITY WILL BE RESPONSIBLE FOR INSTALLATION.
16. ALL LIFT STATIONS SHALL BE FENCED WITH DECORATIVE STONE OR BRICK OR AS DIRECTED BY THE CITY.
17. ALL LIFT STATIONS SHALL HAVE A 10 FEET WIDE CONCRETE ACCESS DRIVEWAY, 35' LONG FROM EDGE OF WET WELL TO BACK OF CURB.
18. ENGINEER SHALL PROVIDE A SCALED (1" = 20' MIN.) SITE SPECIFIC DETAIL.

PUMP STATION DETAIL

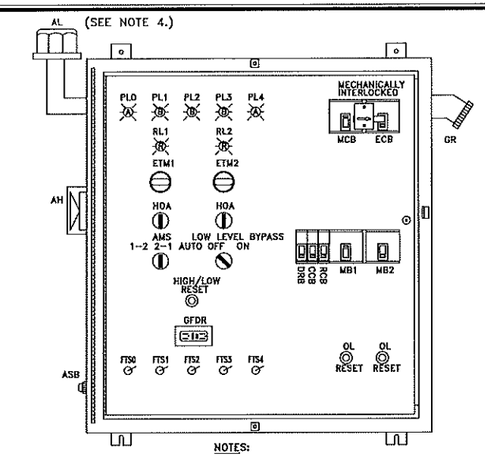
CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 301



NOTES:
1. DRAWING IS SHOWN FOR 230 VOLT POWER SUPPLY. THE LOCATION OF METER AND MAIN POWER DISCONNECT SHALL BE REVERSED FOR 480 VOLT SUPPLY.
2. WHEN TWO (2) SEPARATE CONDUCTOR-TYPE MOTORS ARE USED, CONDUIT SHALL BE INCREASED TO THREE (3) INCH.
3. POWER SUPPLY SHALL BE UNDERGROUND TO THE PUMP STATION AND SHALL BE THREE (3) PHASE FROM A THREE (3) PHASE SOURCE ONLY.
4. STUB OUT UNISTRUT LONG ENOUGH TO ACCOMODATE A 24"x24" SCADA EQUIPMENT CABINET. CITY TO INSTALL SCADA EQUIPMENT CABINET.

DUPLEX PUMP STATION CONTROL PANEL INSTALLATION DETAIL

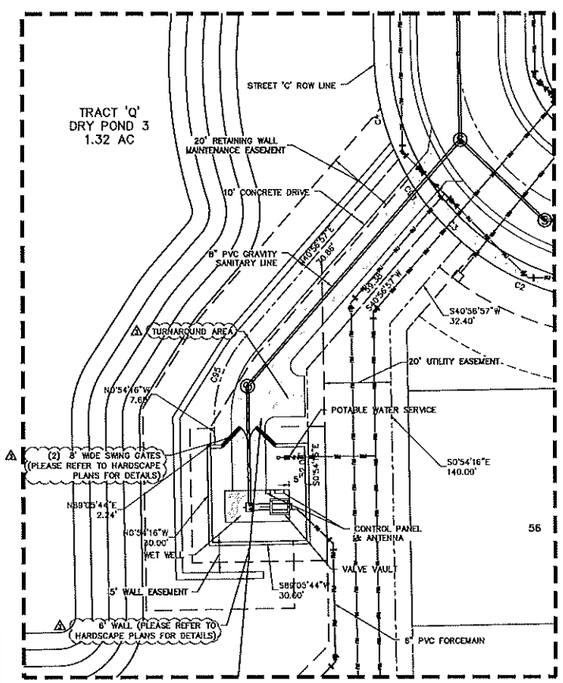
CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 302



NOTES:
1. OUTER DOOR REMOVED TO SHOW DEADFRONT LAYOUT NEMA TYPE 3R 304 S.S. ENCL. WITH CONTINUOUS HINGE ALL HARDWARE STAINLESS STEEL TYPICAL, ACTUAL LAYOUT MAY VARY WITH HORSEPOWER
2. SERIES 3 (Q-FRAME) CIRCUIT BREAKERS
3. GENERATOR OUTLET FOR 230V - PYLE NATIONAL MODEL JRE4100/460V - CROUSE HINDS MODEL AR 2042.
4. THE HEIGHT OF THE ALARM LIGHT WILL NEED TO BE MADE VISIBLE FROM OUTSIDE THE LIFT STATION.

DUPLEX PUMP STATION CONTROL PANEL FRONT LAYOUT

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 303



TRACT 'T'
LIFT STATION

CONTROL PANEL AND ELECTRICAL INFORMATION IS FOR CONCEPTUAL PURPOSES. LIFT STATION MANUFACTURER IS REQUIRED TO PROVIDE SIGNED AND SEALED DRAWINGS FROM AND ELECTRICAL ENGINEER FOR CONTROL PANEL AND ELECTRICAL SPECIFICATIONS. THE ENGINEER OF RECORD'S SIGNATURE AND SEAL ON THIS SHEET IS ONLY FOR THE CIVIL ENGINEERING PORTION.

NOTES:
1. CONTRACTOR TO GRADE LIFT STATION SITE SUCH THAT WET WELL AND VALVE VAULT ARE A MIN OF 3" ABOVE SURROUNDING GRADE ELEVATION. ALSO, DRAINAGE IS SLOPED AWAY FROM THESE STRUCTURES.
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3. CONTRACTOR TO VERIFY ELECTRICAL SERVICE PHASE, CURRENT AND VOLTAGE AVAILABILITY AND INCLUDE VERIFICATION OF SUCH IN SHOP DRAWING SUBMITTAL PRIOR TO PURCHASE AND/OR INSTALLATION OF PUMP AND CORRELATED ELECTRICAL LIFT STATION COMPONENTS.

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SHEET 77 OF 92

REV.	DATE	DESCRIPTION	BY
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A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SCS
A	01/21/20	TPP AMENDMENT - GRADING REVISION	SCS
A	05/08/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SCS
A	02/21/18	SFWMD COMMENTS DATED 02/15/18	SCS
A	02/21/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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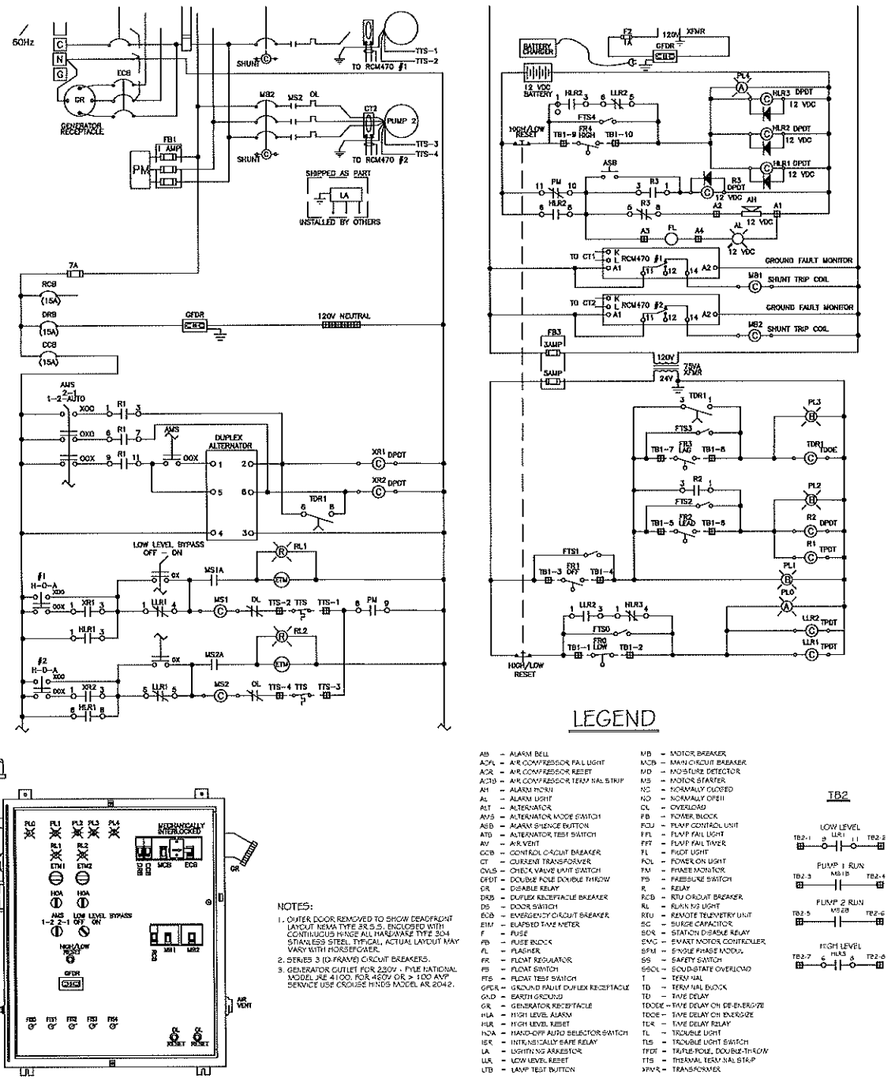
FICA CERTIFICATE OF AUTHORIZATION #27-00

LIFT STATION DETAILS
FINAL DEVELOPMENT PLAN
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL	DESIGNED: Q. SANCHEZ	CHECKED: L. CLASSON	DATE: 1/21/2020
SCALE: N.T.S.	PROJECT: ROY-001	SHEET: C10.4	

3/31/20

P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.0 Drawings\Sheets\Layouts\08 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\LIft Station Details.dwg Modified:1/21/2020 By:sslerrag



LEGEND

AB – ALARM BELL
ACFL – AIR COMPRESSOR FAIL LIGHT
ACR – AIR COMPRESSOR RESET
ACTB – AIR COMPRESSOR TERMINAL STRIP
AH – ALARM HORN
AL – ALARM LIGHT
ALT – ALTERNATOR
AMS – ALTERNATOR MODE SWITCH
ASB – ALARM SILENCE BUTTON
ATB – ALTERNATOR TEST BUTTON
AV – AIR VENT
CCB – CONTROL CIRCUIT BREAKER
CT – CURRENT TRANSFORMER
CVLS – CHECK VALVE LIMIT SWITCH
DPDT – DOUBLE POLE DOUBLE THROW
DR – DISABLE RELAY
DRB – DUPLEX RECEPTACLE BREAKER
DS – DOOR SWITCH
ECB – EMERGENCY CIRCUIT BREAKER
ETM – ELAPSED TIME METER
F – FUSE
FB – FUSE BLOCK
FL – FLASHER
FR – FLOAT REGULATOR
FS – FLOAT SWITCH
FTS – FLOAT TEST SWITCH
GFCR – GROUND FAULT DUPLEX RECEPTACLE
GND – EARTH GROUND
GR – GENERATOR RECEPTACLE
HLA – HIGH LEVEL ALARM
HLR – HIGH LEVEL RESET
HOA – HAND-OFF-AUTO SELECTOR SWITCH
ISR – INTRINSICALLY SAFE RELAY
LA – LIGHTNING ARRESTOR
LLR – LOW LEVEL RESET
LTB – LAMP TEST BUTTON
MB – MOTOR BREAKER
MCB – MAIN CIRCUIT BREAKER
MD – MOISTURE DETECTOR
MS – MOTOR STARTER
NC – NORMALLY CLOSED
NO – NORMALLY OPEN
OL – OVERLOAD
PB – POWER BLOCK
PCU – PUMP CONTROL UNIT
PFL – PUMP FAIL LIGHT
PFT – PUMP FAIL TIMER
PL – PILOT LIGHT
POL – POWER ON LIGHT
PM – PHASE MONITOR
PS – PRESSURE SWITCH
R – RELAY
RCB – RTU CIRCUIT BREAKER
RL – RUN NO LIGHT
RTU – REMOTE TELEMETRY UNIT
SC – SURGE CAPACITOR
SDR – STATION DISABLE RELAY
SMC – SMART MOTOR CONTROLLER
SPM – SINGLE PHASE MODUL
SS – SAFETY SWITCH
SSOL – SOLID-STATE OVERLOAD
T – TERMINAL
TB – TERMINAL BLOCK
TD – TIME DELAY
TDOE – TIME DELAY ON DE-ENERGIZE
TDOE – TIME DELAY ON ENERGIZE
TDR – TIME DELAY RELAY
TL – TROUBLE LIGHT
TLS – TROUBLE LIGHT SWITCH
TPDT – TRIPLE-POLE, DOUBLE-THROW
TTB – THERMAL TERMINAL STRIP
XFMR – TRANSFORMER

TB2
LOW LEVEL
PUMP 1 RUN
PUMP 2 RUN
HIGH LEVEL

NOTES:
1. OUTER DOOR REMOVED TO SHOW DEADFRONT LAYOUT NEMA TYPE 3R,S,S. ENCLOSED WITH CONTINUOUS HINGE ALL HARDWARE TYPE 304 STAINLESS STEEL. TYPICAL ACTUAL LAYOUT MAY VARY WITH MANUFACTURER.
2. SERIES 3 CO-FRAMED CIRCUIT BREAKERS.
3. GENERATOR OUTLET FOR 230V - PYLE NATIONAL MODEL JRE 4100. FOR 480V OR > 100 AMP SERVICE USE CROUSE HINDS MODEL AR 2042.

DUPLEX PUMP CONTROL PANEL GENERAL LAYOUT & SCHEMATIC

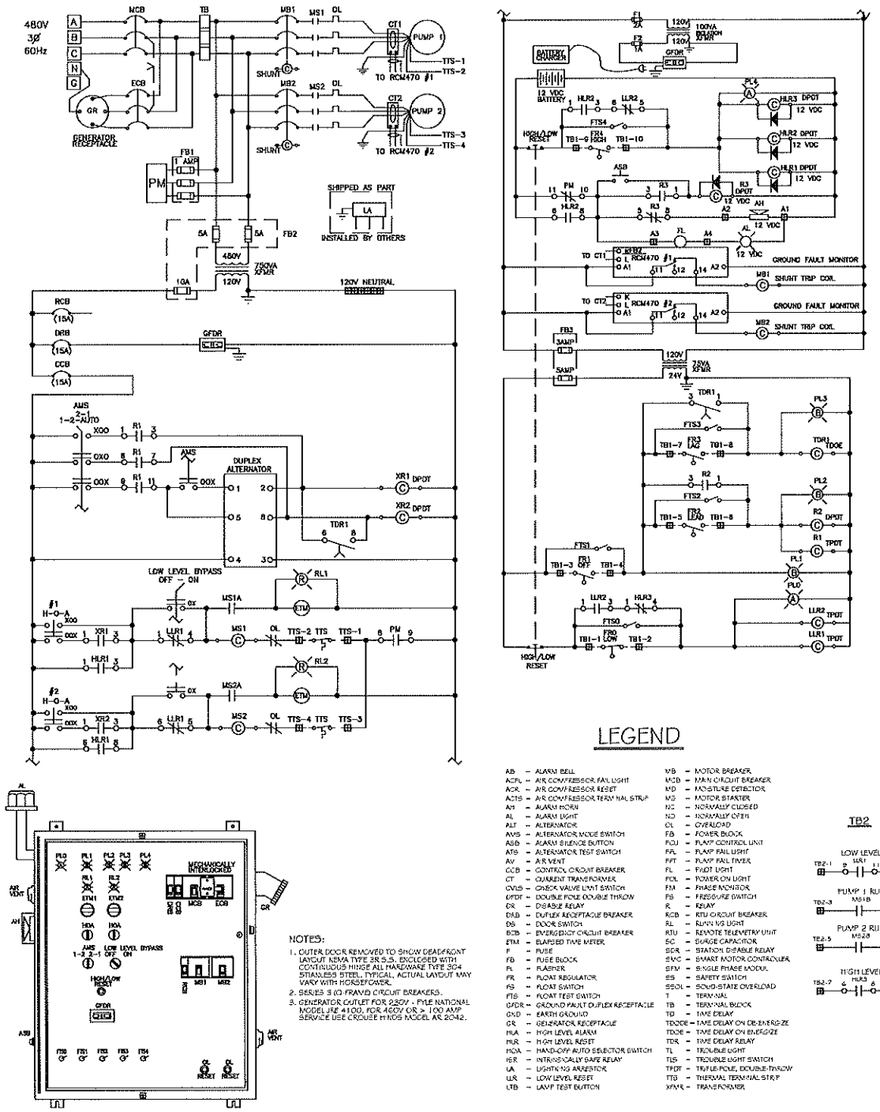
(230V–3PH)

WITH GENERATOR RECEPTACLE

CITY OF APOPKA
DESIGN ENGINEERING DIVISION

JANUARY 2014

FIG. 305 A



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PUMP 1 RUN
PUMP 2 RUN
HIGH LEVEL

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DUPLEX PUMP CONTROL PANEL GENERAL LAYOUT & SCHEMATIC

(480V–3PH)

WITH GENERATOR RECEPTACLE

CITY OF APOPKA
DESIGN ENGINEERING DIVISION

JANUARY 2014

FIG. 305 C

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SHEET 78 OF 92

REV.	DATE	DESCRIPTION	BY
A	03/24/20	ADDITION AND REVISION OF RETAINING WALLS PER CLIENT AND CITY COORDINATION	SGS
A	03/24/20	CITY OF APOPKA COMMENTS DATED 03/16/20	SGS
A	01/21/20	FDP AMENDMENT - GRADING REVISION	SGS
A	05/09/18	CITY OF APOPKA COMMENTS DATED 05/07/18	SGS
A	03/15/18	SERVICE COMMENTS DATED 03/15/18	SGS
A	02/19/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SGS

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EMAIL: info@appianengineering.com

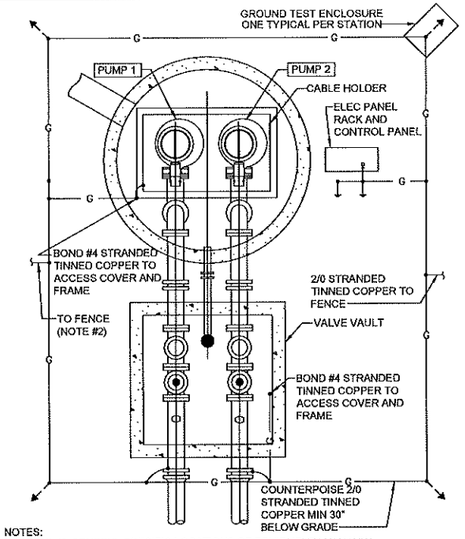
LIFT STATION DETAILS
FINAL DEVELOPMENT PLAN

LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

DRAWN: S. SIERRA-GIL
DESIGNED: O. SANCHEZ
CHECKED: L. CLASSON
DATE: 1/21/2020
SCALE: N.T.S.
PROJECT: ROY-001
SHEET: C10.5

3/31/20

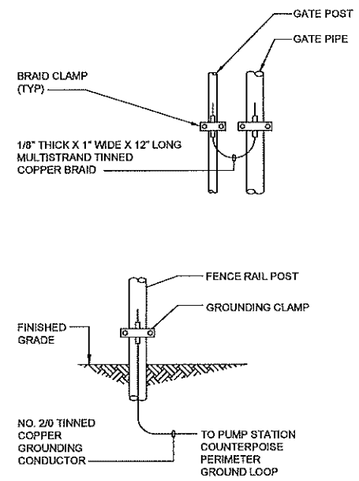
P:_PROJECT DRAWINGS\ROY-001 - Lake Marshall Residential Development\5.9 Drawings\50sld\layouts\05 FINAL DEVELOPMENT PLAN AMENDMENT - PHASE 1\Lift Station Details.dwg Modified:1/21/2020 By:sslerrogil



NOTES:
1. DETAIL IS GENERIC. SPECIFIC LOCATIONS OF EQUIPMENT MAY VARY.
2. TIE TO FENCE, MINIMUM 2 LOCATIONS. NOT REQUIRED WHERE PVC COATED OR BLOCK FENCE IS INSTALLED.
3. PROVIDE EXOTHERMIC WELDS UNLESS NOTED OTHERWISE.

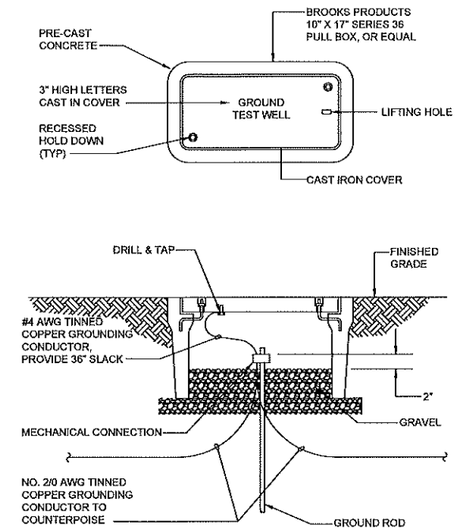
PUMP STATION GROUNDING (TYPICAL)

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 307



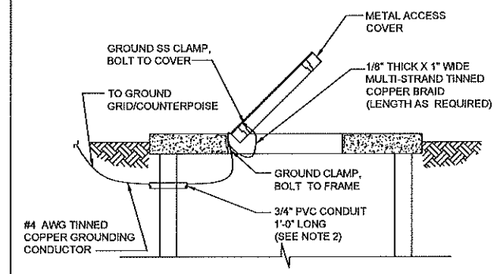
FENCE POST GROUNDING (TYPICAL)

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 307 A



GROUND TEST WELL

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 307 B



NOTES:
1. ON COVERS WITH MULTIPLE DOORS, PROVIDE BRAID FROM FRAME TO DOOR ON EACH DOOR. PROVIDE WATERPROOF CAULKING WHERE GROUND CABLE AND CONDUIT PENETRATES WETWELL TO PREVENT INTRUSION OF GROUNDWATER AND ESCAPE OF VAPORS FROM WETWELL.
2. INSTALL GROUND WIRE SO THAT IT WILL NOT CROSS CLEAR OPENING OR PREVENT OR IMPEDE NORMAL METHOD OF REMOVING FLOATS OR PUMPS.

COVER AND DOOR GROUNDING

CITY OF APOPKA DESIGN ENGINEERING DIVISION	JANUARY 2014	FIG. 307 C

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A	02/27/18	CITY OF APOPKA COMMENTS DATED 02/19/18	SCS

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LIFT STATION DETAILS
FINAL DEVELOPMENT PLAN
LAKESIDE (FKA LAKE MARSHALL SUBDIVISION)
PHASE 1
CITY OF APOPKA, FLORIDA

SCALE	N.T.S.
PROJECT	ROY-001
SHEET	C10.6
DRAWN:	S. SIERRA-GIL
DESIGNED:	G. SANCHEZ
CHECKED:	L. CLASSON
DATE:	1/21/2020

3/31/20

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